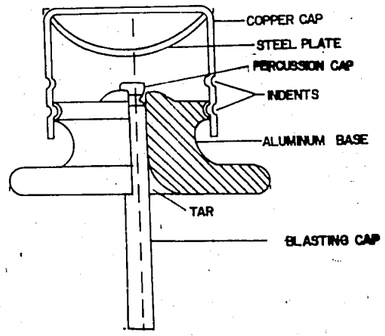
VC HOMEMADE PRESSURE FUZE



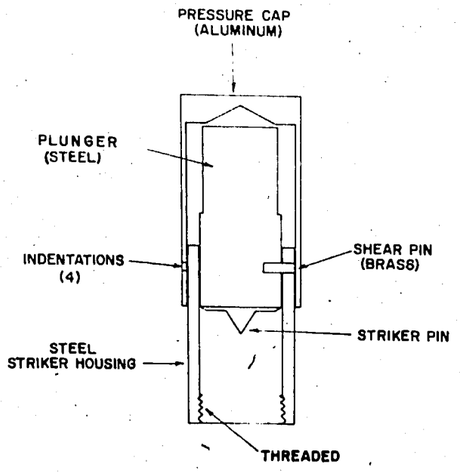
U/I PRESSURE FIRING DEVICE

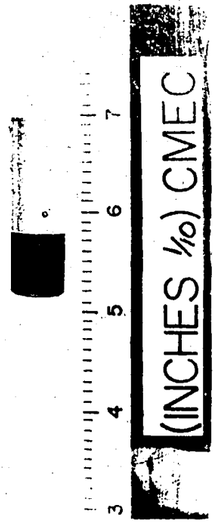
This unidentified firing device resembles the Soviet MV-5 Pressure Fuze in appearance and can be used in lieu of it in Soviet TM-41 and TM-46 antitank mines. It consists of a pressure cap, plunger, housing, and shear pin. The hollow, alumimum pressure cap is cylindrical and four indentations, evenly spaced around the circumference of its lower body, hold the pressure cap to the housing and keep the pressure cap from resting directly on the plunger. The striker pin is located on the bottom of the solid steel plunger. The hollow, steel, cylindrical housing contains the plunger and is threaded on the bottom to receive a detonator. Both the plunger and housing have a hole drilled in their sides to receive a brass shear pin. Pressure on the pressure cap depresses the plunger, shearing the shear pin, and allowing the striker pin to drive into the detonator.

CHARACTERISTICS

Type	Pressure, mechanical
Shape	Cylindrical
Diameter	1.6 cm
Height	4.5 cm
Weight	34 gm

U/I PRESSURE FIRING DEVICE





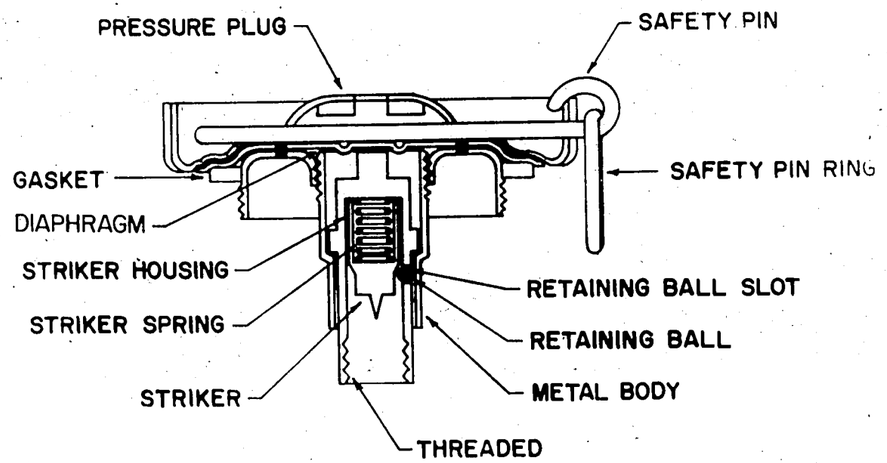
PRESSURE FUZE, MVM (SOVIET)

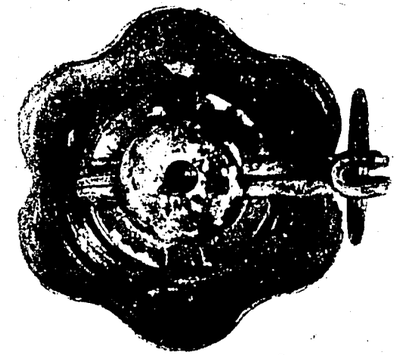
The MVM Pressure Fuze is designed primarily to be used in antitank mines that are laid by mechanical means, and mines which are transported while armed. This fuze consists of a modified TM-46 pressure plug, a threaded, cylindrical metal body, diaphragm, striker housing, striker spring, striker, retaining ball, and a two-pronged safety pin. The safety pin, which is inserted through the pressure plug, acts as a bridge and is a positive safety protecting the diaphragm. With the safety pin removed, pressure on the pressure plug will collapse the diaphragm, forcing the pressure plug downward, compressing the striker spring and releasing the retaining ball which escapes into the cavity between the striker housing and the metal body. The spring-driven striker, thus released, hits the percussion cap and in turn sets off the detonator and explodes the mine.

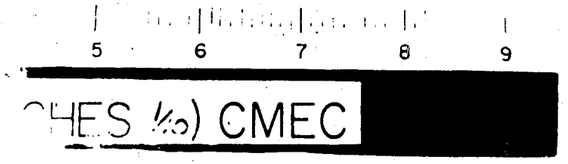
CHARACTERISTICS

Type	Pressure, mechanical
Diameter	8.7 cm
Height	4.8 cm
Weight	178 grams

PRESSURE FUZE, MVM (SOVIET)







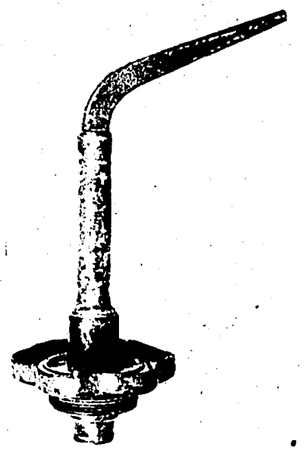
TILT/PRESSURE FUZE (SOVIET)

The three main components of the tilt/pressure fuze are the steel body, a metal tube, and a metal tilt/pressure handle. The body, threaded to fit the TM/TMN-46 Antitank Mine, houses the striker assembly. The metal tube houses three steel rods through which the striker retaining rod passes. The tilt/pressure handle is angled at about 20 degrees and its base is threaded to accept the striker retaining rod. Pressure in any direction on the tilt/pressure handle lifts the striker retaining rod about 3 millimeters. This releases the striker retaining balls allowing the striker spring to drive the striker into the percussion cap, firing the mine.

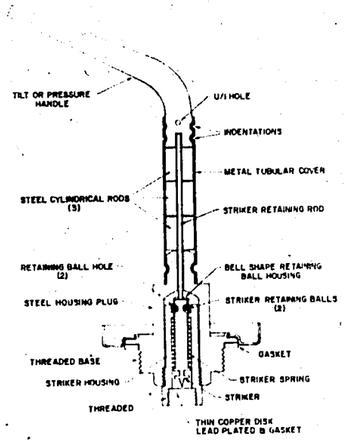
CHARACTERISTICS

Weight	526 gm
Height	20.2 cm
Diameter	7.7 cm

FUZE, TILT/PRESURE(SOVIET)



SIDE VIEW

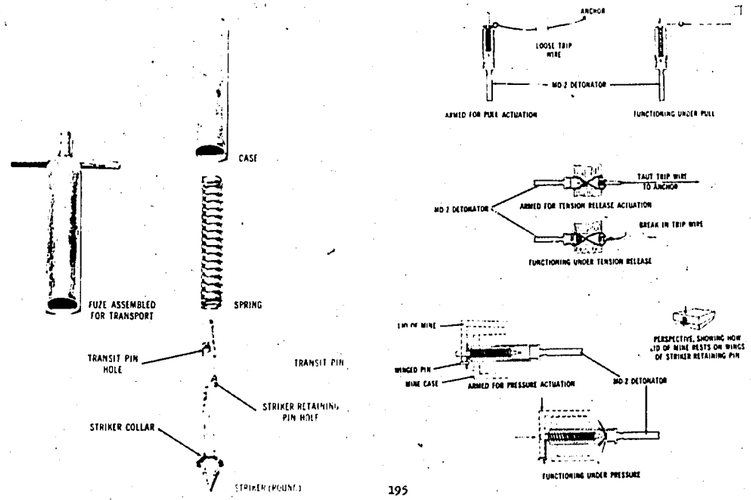


(INCHES ½) CMEC

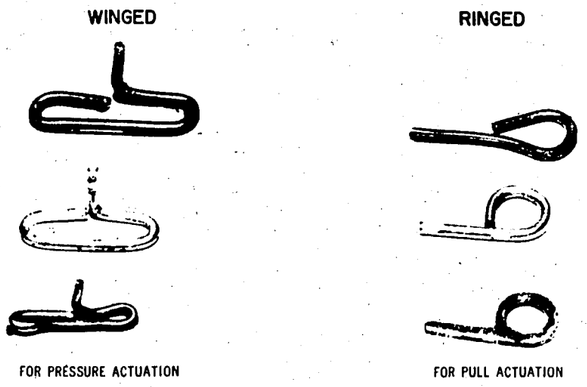
PULL FUZE, MUV (USSR)

The MUV is one of the fuzes most widely used by the VC/NVA. The MUV is a mechanical fuze of simple design. It consists of a case, striker, spring, and striker-retaining pin. The lower end of the cylindrical case is threaded internally to receive the standard MD-2 detonator. The top end of the case is closed with a round hole to receive the striker. The striker is a rod pointed on the lower end and has two holes on the blunt end. The lower hole, for the striker-retaining pin, is approximately two thirds of the distance from the point to the blunt end; the upper hole is about half way between the lower hole and the blunt end. The upper hole has two possible uses: for attachment of a trip wire when the fuze is set for tension release; and to receive a transit pin for holding the fuze components assembled for transport. The striker has a triangular collar above the pointed end, which serves as a striker guide and a spring-retaining collar. The fuze may be fitted with a variety of striker-retaining pins formed of wire or stamped from flat metal stock. Whether the "winged" or "ringed" pins are used depends on the type of mine which is employed. The functioning of the fuze is very simple. Removal of the striker-retaining pin by pull allows the spring-loaded striker to fire the MD-2 detonator assembly. The fuze may also be used as a tension release fuze by fixing it firmly to an object and retaining the striker in the cocked position by a taut trip wire. When rigged in this manner, cutting or breaking the trip wire will allow the striker to fire the detonator. When using the "winged" striker-retaining pin, pressure on the hinged lid of a mine pushes the pin out of the fuze.

PULL FUZE, MUV(USSR)



STRIKER-RETAINING PINS



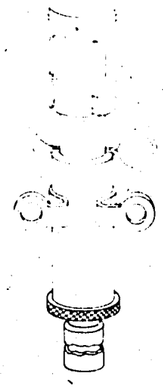
PULL FUZE, VPF (USSR)

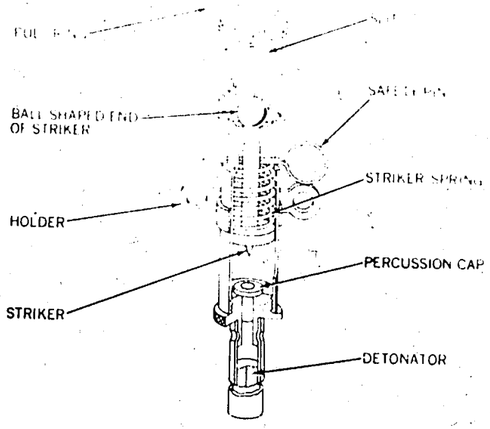
The VPF is widely used in the Soviet Army for initiating tripwire, standard, and improvised mines of all kinds. It generally functions by a pull on the pull ring; but it also may be fitted with a rod projecting from the clamp top for functioning by lateral pressure or axial pull. The top of the fuze is a clamp that holds the spring-driven striker under tension after the safety pin is removed. Lateral force or axial pull on the clamp top pulls the clawlike base from the ball-shaped end of the striker, releasing it.

CHARACTERISTICS

Shape	Tubular
Case	Metal
Internal Action	Pull, mechanical, spring loader striker
Operating Force	Lateral pull, 1.1 to 1.6 kg; axial pull 3.6 to 6.3 kg
Height	7.6 cm
Diameter	1.5 cm

Pull Fuze, VPF (U.S.S.R.)





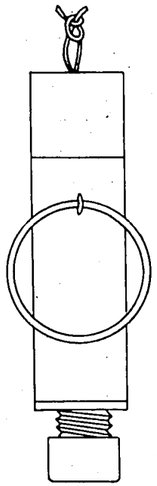
PULL FUZE, MODEL 1951 (FRANCE)

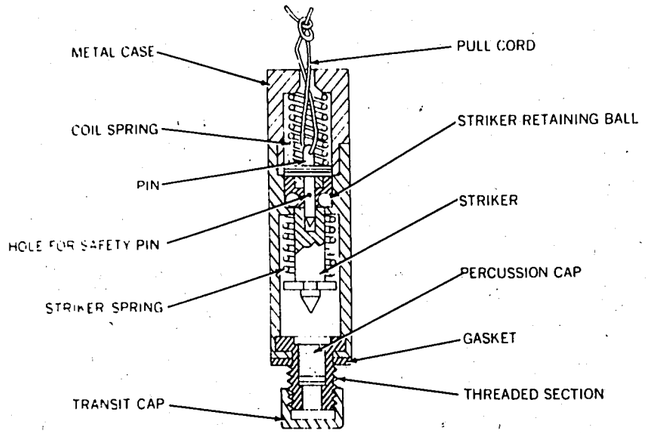
This pull-type fuze, model 1951, is of French origin and was probably captured during the French - Viet Minh War. This spring-actuated, ball-retained striker device is in a metal case, the lower end of which is threaded and protected by a transit cap. The two retaining balls are held in place by a pin fitted into the hollow upper end of the striker. This pin, with its pull cord, is held in position by a coiled spring and drilled to receive the safety pin that passes through it and the case. When adequate pull is applied to the pull cord, it compresses the resistance spring and withdraws the pin from the interior of the striker, which permits the displacement of the retainer balls and the slamming down of the striker on the percussion cap.

CHARACTERISTICS

Shape	Cylindrical
Case	Metal
Internal Action	Mechanical, with pin and ball release
Operating Force	1.1 to 3.5 kg
Height	7.0 cm
Diameter	1.5 cm

Pull Fuze, Model 1951





FUZE, CHEMICAL DELAY, MY-8

The MY-8 Chemical Delay Fuze is probably of Soviet origin. The fuze consists of a two-part, metallic, tubular case, the upper tube made of thin copper, and the lower tube made of thin brass. The two tubes are joined by a copper coupling. Inside the copper tube is an ampul of chemical solution. Inside the lower tube are the striker pin, striker spring, and detonator. A flat safety band, passing through the center of the lower case between the striker and detonator, acts as a positive safety. A restraining wire, held by a screw on top of the copper tube, passes alongside the ampul and is attached to the striker spring. When the safety band is removed and the glass ampul crushed, the chemical solution slowly dissolves the restraining wire until it breaks, allowing the striker spring to drive the striker pin into the detonator causing it to explode. Each fuze is packed in a plastic tube and five fuzes are packed in a tin container. Normally the container is olive drab in color and marked in gray paint with Vietnamese writing, the English translation of which is "5 MY-8 Time Fuze." There are three types of these fuzes which are identified by numerals stamped on the tip of the brass tube of the fuze, by numerals etched in the chemical solution ampul, by painted dots on the body of the plastic tube, and by numerals stamped on the lid of the tin container. At a temperature of 31° to 32° C, the time delay of each type of fuze is as follows:

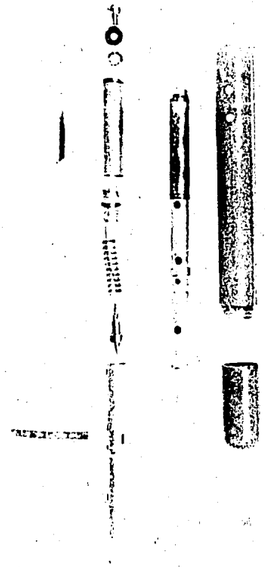
1 or 1 dot:	approximately 15 minutes
2 or 2 dots:	approximately 25 minutes
3 or 3 dots:	approximately 60 minutes

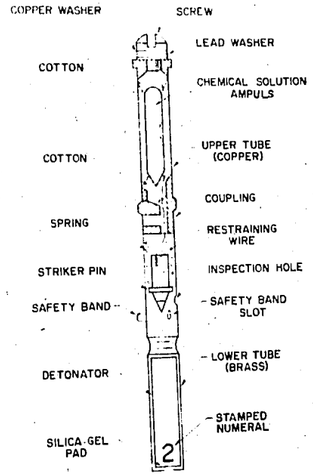
The time delay will vary with the temperature; the colder the weather the longer the delay.

DIMENSIONS:

MY-8 Fuze:	Length	10.8 cm
	Diameter	.8 cm
Plastic tube:	Length	13.3 cm
	Diameter	1.6 cm
Tin container:	Height	14.3 cm
	Width	8.3 cm
	Thickness	1.7 cm

FUZE, CHEMICAL DELAY, MY-8 (SOVIET ORIGIN(?))

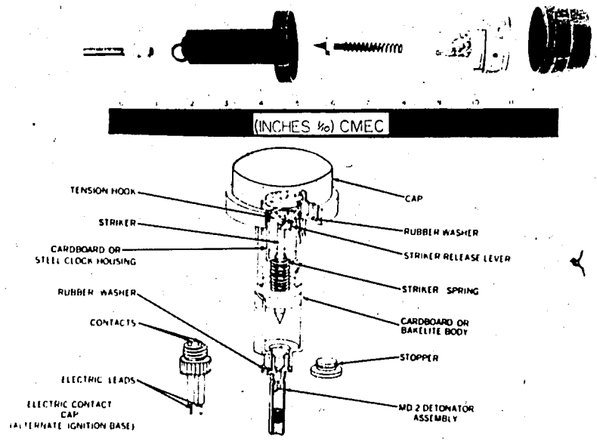




DELAY FUZES ChMV-10 AND ChMV-16 (USSR)

These fuzes are of the mechanical or electrical, spring-loaded, striker type, with a clockwork mechanism. The ChMV-10 has a 10-day delay, and the ChMV-16 a 16-day delay. The two are identical in appearance except for the numerals on the dial. The clockwork is housed in the mushroom-shaped head of the fuze. A striker release lever, geared to the clockwork, holds the spring-loaded striker under tension in the narrow base of the fuze. A standard MD-2 detonator or an electric contact can with leads for wiring into an electric circuit is screwed into the bottom of the fuze. The joint is made watertight by a rubber washer. A recent model found in Vietnam has a bakelite body 11.4 cm in height and 5.3 cm in diameter. At the end of the delay period, the striker release lever trips the spring-loaded striker, which either fires the detonator or closes the electric circuit between the two contacts on top of the contact cap.

DELAY FUZES CHMV-10 AND CHMV-16 (USSR)



LEAD BREAK DELAY FUZE

This lead break delay fuze is of probable Soviet origin. Its configuration is similar to the fuze used in the Soviet BPM-2 Limpet Mine. The fuze is made of anodized aluminum except for the lead tab and the safety pin, lead tab retainer cap, steel spring, and steel striker. The fuze functions on the principle of a wire cutting through a soft metal. A spring encircles the striker and applies tension to the striker. A safety pin retains the striker. On the end of the striker shaft, which protrudes through the striker-spring retainer, is a loop opening where a lead density tab is inserted. The lead tab is held in place by a retainer cap placed on the end of the striker-spring retainer. When the safety pin is removed, the wire loop cuts through the lead tab until it eventually breaks and frees the striker. The striker-spring drives the striker into the percussion cap, which in turn fires the MD-2 detonator, detonating the mine. The four lead density tabs received with the fuze had the following markings and dimensions:

Tab #1: No color and no notches - .86mm thick x 5mm length x 4mm width

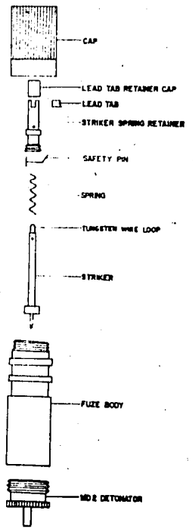
Tab #2: Red paint one end, one notch other end - 1.09mm thick x 5mm length x 4mm width

Tab #3: Black paint one end, two notches other end - 1.37mm thick x 5mm length x 4mm width

Tab #4: White paint one end, three notches other end - 1.45mm thick x 5mm length x 4mm width

The thickness of the lead density tabs determines the length of the time delay.

LEAD BREAK DELAY FUZE



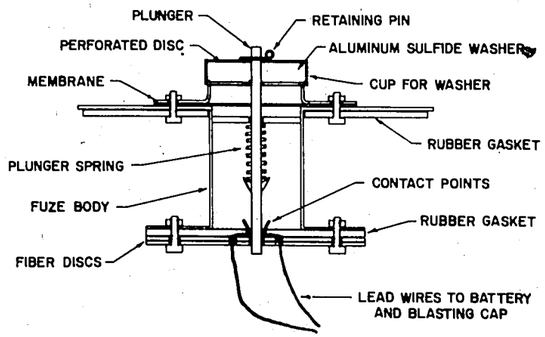
WATER SOLUBLE WASHER TIME DELAY FUZE

The water soluble time delay fuse is used with various types of water mines. The fuse consists of a sheet metal body which contains a spring-loaded plunger restrained by an aluminum sulfide washer. When submerged in water the washer slowly dissolves, allowing the plunger to move downward until it closes an electrical circuit, detonating the mine. A rubber diaphragm around the plunger prevents water from entering the mine. The delay time will vary. It is known that the fuse may delay detonation as long as 29 hours.

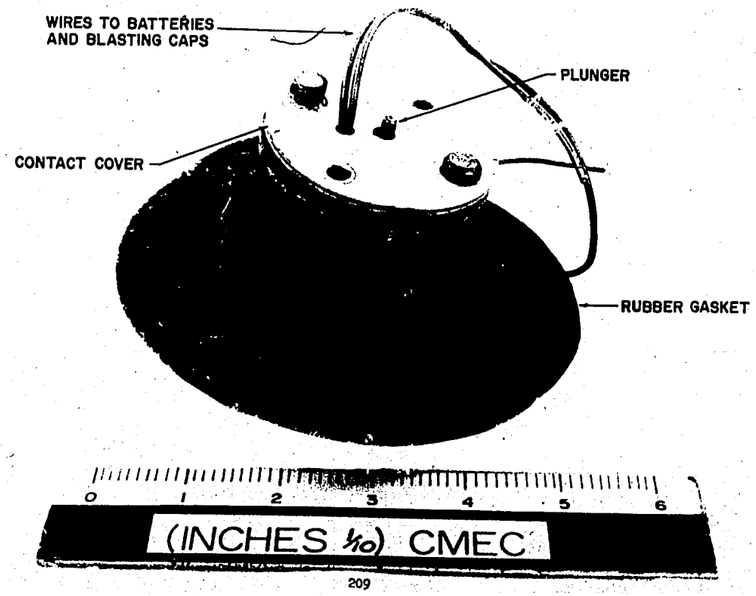
CHARACTERISTICS

Diameter	13.3 cm
Height	7.37 cm
Weight	425 gm
Delay Element	Water soluble aluminum sulfide washer.

WATER SOLUBLE WASHER TIME DELAY FUZE SECTION



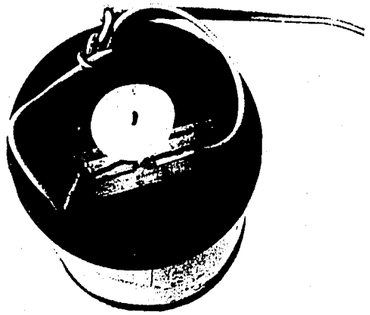
UNDER SIDE OF DELAY FUZE



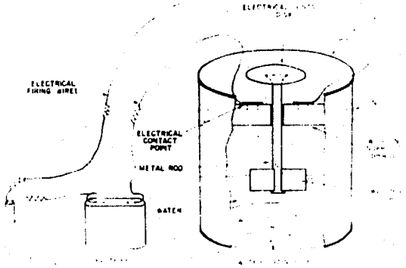
WATER DELAY FUZE

This crude, but effective, water delay fuze is used for the detonation of mines and the firing of rockets. It consists of a tin can, a battery for source of power, electric firing wires, and an electrical blasting cap. A wooden float with a metal rod is attached to a tin metal disk which acts as a contact to complete an electrical circuit. A wooden brace inside the can has a hole drilled through it to serve as a guide for the metal rod and allow the float to slide up or down. Two electrical contact points are nailed on the top of the wooden brace. Draining holes are punched on the bottom of the can to allow the water to seep out, causing the wooden float to descend. When the metal disk touches the electrical contact, the electrical circuit is completed. The number and size of the draining holes govern the time delay of the fuze.

WATER DELAY FUZE



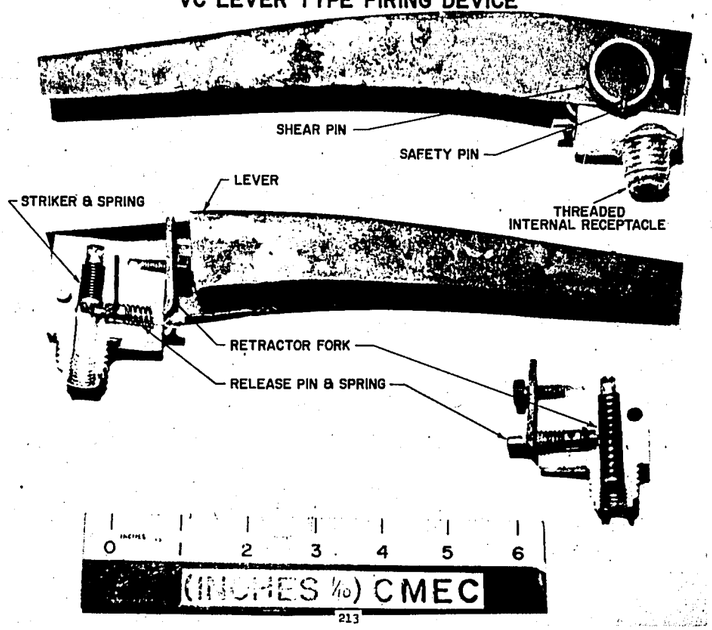
WATER DELAY FUZE



VC LEVER-TYPE FIRING DEVICE

The Viet Cong lever-type firing device is designed to be used with a mine or explosive charge equipped with a threaded internal receptacle, which receives the threaded base of the firing device. The device is armed by the removal of the safety pin. Once the safety pin is removed, pressure exerted on the lever will cause it to pivot downward, breaking the shear pin. Continued downward pressure on the pivoted lever causes the retractor fork to pull the release pin and the spring to the rear. Once the release pin clears the spring-loaded striker, the striker is forced downward and strikes a percussion cap, which is screwed into the base of the mine or explosive charge.

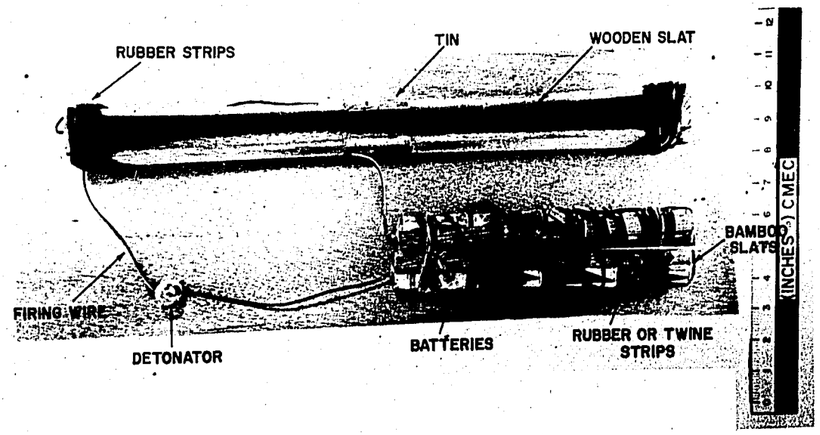
VC LEVER TYPE FIRING DEVICE



VC HOMEMADE ELECTRIC FIRING DEVICE

This electric firing device is of local VC manufacture and consists of two wooden slats or bamboo, two blocks of wood or wooden dowels, two metal contacts, rubber strips, a battery pack, an electric blasting cap, and electric wire, The device is used as an initiating action for mines, grenades, dud shells, and booby traps. When a vehicle passes over the device or a person steps on it, the two metal contacts come together completing the electrical circuit, which fires the electric blasting cap and the main charge.

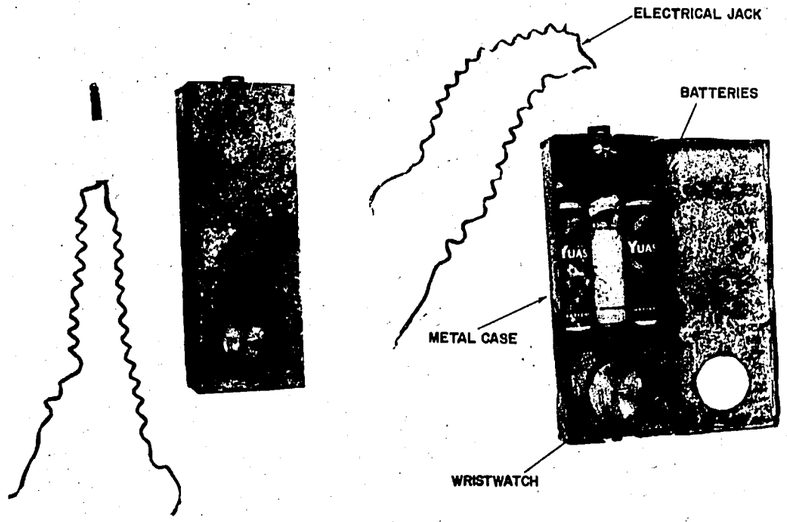
VC HOMEMADE ELECTRIC FIRING DEVICE



WRISTWATCH FIRING DEVICE

The wristwatch firing device is of local manufacture by the Viet Cong. It consists of a wristwatch, an electric blasting cap, an explosive charge, and a source of power (batteries). It is used to provide a time delay for the firing of mines or rockets. The delay period can range from a few minutes to 12 hours according to how the watch is altered and set. Either the minute hand (if the desired delay is in hours) or the hour hand (if the desired delay is in minutes) is broken off. One electric lead is connected to the stem or case of the watch and the second lead is connected to a screw passing through a hole in the crystal. When the remaining hand touches the screw the circuit is completed, firing the detonator.

WRISTWATCH FIRING DEVICE



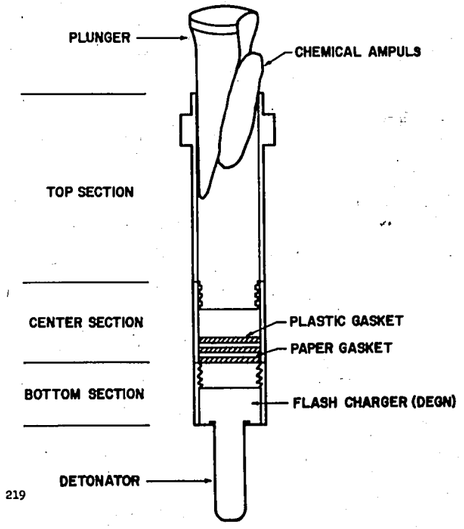
VC CHEMICAL DELAY FUZE

This chemical delay fuse of Viet Cong manufacture consists of three threaded aluminum sections. The top section contains a tapered plunger and a chemical ampul. The center section contains plastic and paper gaskets. The bottom section contains three flash charges made of deithyleneglecal denitrate (DEGN) and a detonator. The fuze is activated by forcing the tapered plunger downward, crushing the acid-filled glass ampul. The acid flows downward until it pools on the plastic and paper gaskets, which act as delay elements. The greater the number of gaskets, the longer the delay. When the acid has sufficiently dissolved the plastic and paper gaskets it flows onto the DEGN flash charge. This reaction causes the DEGN to flash, initiating the detonator.

CHARACTERISTICS

Shape	Tubular
Diameter	1.6 cm
Length	11.4 cm
Case Material	Aluminum
Internal Action	Chemical

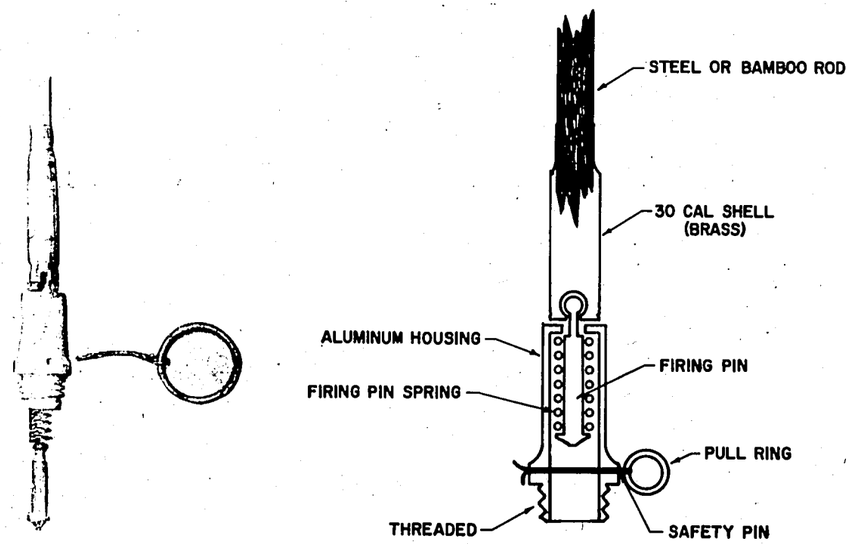
VC CHEMICAL DELAY FUZE



VC TILT ROD FIRING DEVICE

This tilt rod firing device is usually employed with antivehicular, anti-helicopter, or antipersonnel mines. It is a Viet Cong homemade device of simple but efficient design. The firing device is made from a .30 caliber cartridge case, with a standard blasting cap inserted. Captured tilt rods have been steel or bamboo of various lengths. The tilt rod is inserted into the projectile end of the cartridge case. The head of the cartridge is modified so that it has four claws which hold the spring-loaded striker in the cocked position. When the tilt rod is subjected to lateral movement, the holding claws of the cartridge case release their grip on the striker head allowing the striker spring to drive the striker into the primer, detonating the explosive train.

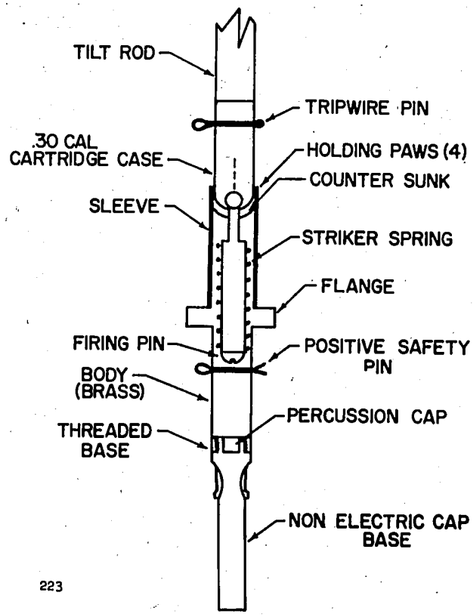
VC TILT ROD FIRING DEVICE



VC TILT ROD FIRING DEVICE

This tilt rod firing device is usually employed with antipersonnel, antivehicular, or anti-helicopter mines. It has four major components: tilt rod holder, body, firing pin and spring, and sleeve. The tilt rod holder is made from an expended .30 caliber cartridge case. The upper end of the cartridge case is cut off for insertion of a tilt rod of steel or bamboo. When the sleeve is in the down position, it is a locking safety. When the sleeve is held in the up position by the cotter pin, the device is armed. If the tilt rod is inclined 10 degrees in any direction, the firing pin is released. When the device is placed in helicopter landing zones, and a palm frond or similar item is used as the tilt rod, the force of air from the helicopter rotor blade is strong enough to move the branch and activate the device. An axial pull of two kilograms will also release the firing pin. When employed as a tripwire device a lateral pull of one half kilogram releases the firing pin.

VC TILT ROD FIRING DEVICE



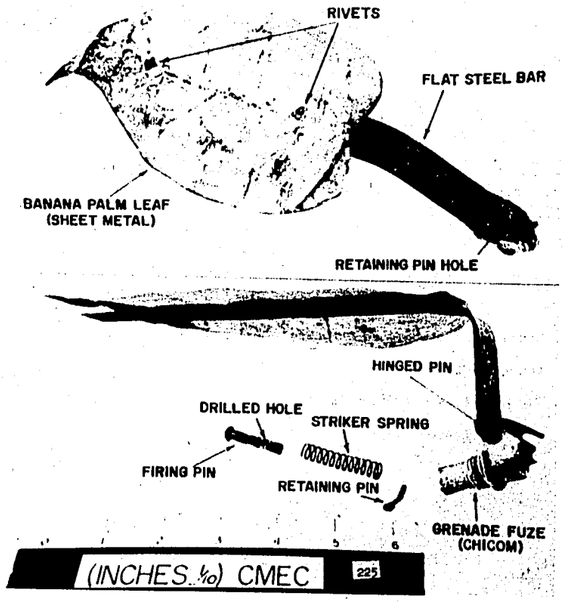
BANANA PALM LEAF FIRING DEVICE

This simple, but effective booby trap consists of a piece of thin metal that is shaped and colored like a palm leaf, a flat steel bar that acts as a stem for the palm leaf, and a ChiCom hand grenade fuze. The palm leaf serves as the handle for the hand grenade fuse. The stem is hinged to the fuse of the hand grenade where the safety pin is normally inserted. The ChiCom fuse is modified by drilling a hole through the firing pin, and, a retaining pin is inserted through a hole in the tip of the stem and the hole in the firing pin. A force of 4 to 6 kilograms on the palm leaf extracts the retaining pin, releasing the firing pin and detonating the hand grenade. It is employed along trails in the jungle, where because of its natural appearance it is difficult to detect visually.

CHARACTERISTICS

Type Fuse	Pressure, mechanical
Length of Palm Leaf	36 cm
Width of Palm Leaf	12.3 cm

BANANA PALM LEAF BOOBY TRAP DEVICE



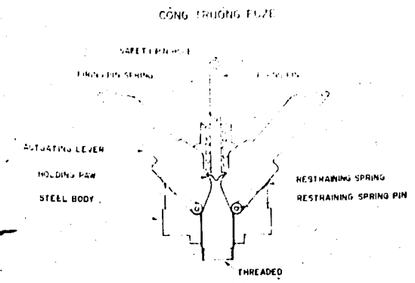
VC "CONG TRUONG" FUZE

The "Cong Truong" fuze consists of a metallic tubular body that houses the firing pin and the firing pin spring, two actuating levers that serve as holding paws for the firing pin and as blades for the attachment of two leaf-shaped pressure plates, two restraining springs and restraining spring pins that hold the pressure plates in the firing position, and a safety pin. The fuze body is threaded to accept the percussion cap and detonator. The fuze is armed by compressing the firing pin spring and removing the safety pin. Forty grams of pressure on each of the pressure leaves rotates the actuating arms and the holding paws release the firing pin, which detonates the device. Pressure on only one of the leaves will not fire the device. This fuze, coupled with a fragmentation directional mine, is employed in helicopter landing zones. The rotor wash of a helicopter, when directly over the device, applies enough pressure on both leaves to actuate the fuze and explode the directional mine. The feature of both leaves having to be depressed before the fuze actuates insures a hit on the helicopter. Because of its natural appearance, it is difficult to detect visually.

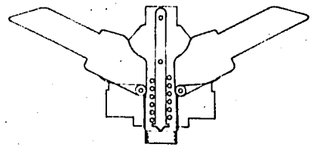
CHARACTERISTICS

Height of Body	5 cm
Width of Body	5 cm
Width with Both Leaves Attached	47 cm
Length of Leaves	17 cm
Width of Leaves (Widest Point)	12.8 cm
Color of Leaves	Olive drab

VC "CÔNG TRƯỜNG" FUZE



ARMED POSITION



FIRED POSITION

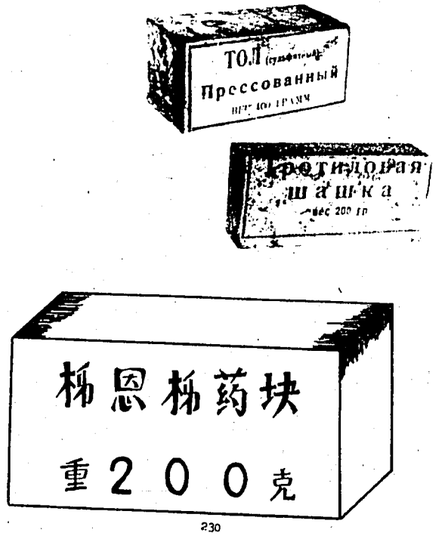
X. DEMOLITIONS. Described in this section are the explosives, satchel charges, time fuses, fuse lighters, blasting caps, and blasting machines presently in use by the VC/NVA forces in Vietnam. Enemy sappers and engineers make extensive use of demolitions to cut lines of communication, to attack public buildings, and other targets as a part of his terrorist activities, and to breach fortifications as part of coordinated attacks on Allied positions.

SOVIET AND CHICOM TNT BLOCKS

The VC/NVA use both USSR and ChiCom TNT blocks. They are issued in rectangular, paper-wrapped blocks weighing either 200 or 400 grams. A purple spot on the wrapper usually indicates the location of the blasting cap well. In general, these blocks are used in the demolition of objects or structures, in improvising bangalore torpedoes, and as the booster or main charge in some standard land mines and booby traps.

	CHARACTERISTICS	
Block	200 grams	400 grams
Shape	Rectangular	Rectangular
Length	10.2 cm	10.2 cm
Width	5.1 cm	5.1 cm
Height	2.54 cm	5.1 cm
Explosive	TNT	TNT

SOVIET AND CHICOM TNT BLOCKS



CHICOM RED PHOSPHORUS

ChiCom red phosphorus is a powder type product having only slight sensitivity. The temperature required to burn in air is 260°C. At normal temperature this substance is mixed with potassium chlorate or potassium nitrate to increase its sensitivity. The mixture is used as an explosive filler in mines, grenades, flying bombs, mortars, and artillery shells, and will provide a thick screen of smoke and a mild explosive effect.

CHARACTERISTICS

Case	Sheet metal
Color	Gray
Length	15 cm
Width	15 cm
Height	23 cm
Net Weight	5 kg
Markings	Label "Red Horse" in English and Chinese characters

CHICOM RED PHOSPHROUS

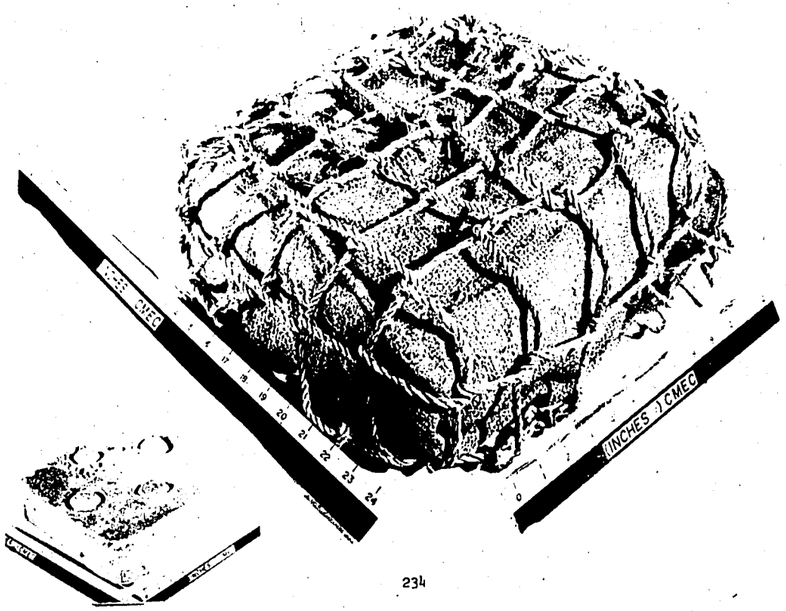
MODIFIED BLU-3/B SATCHEL CHARGE

The Viet Cong modified BLU-3/B satchel charge has the external appearance of a burlap wrapped package tied with twine and smooth wire. The satchel charge contains a combination of broken 200 gram blocks of ChiCom TNT mixed with cast tritonal. Inside the charge are four tin cans, which have modified BLU-3/B bomblets placed in them for added fragmentation effect. Two cap wells for fusing are in the top surface of the satchel charge.

CHARACTERISTICS

Weight	Approximately 13.6 kg
Length	36 cm
Width	36 cm
Height	13 cm

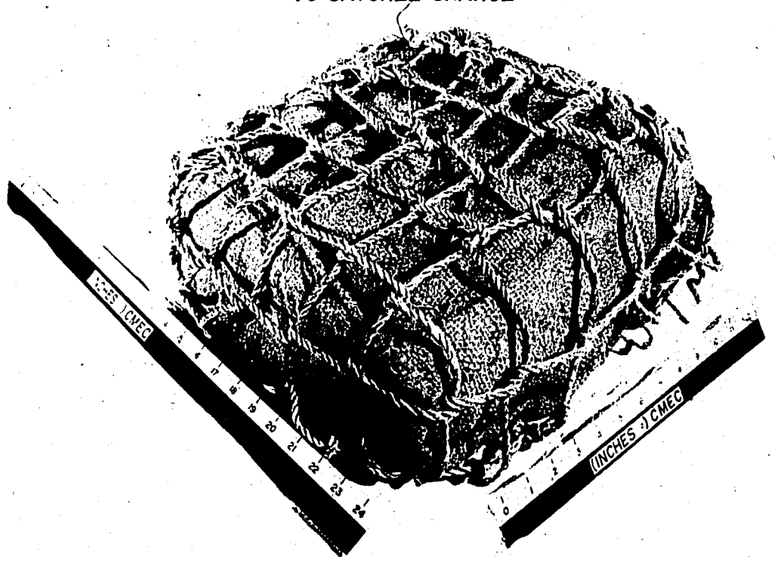
MODIFIED BLU-3/B SATCHEL CHARGE



VC SATCHEL CHARGE

This VC charge is made from waterproof cloth, strips of rope, wire or bamboo, and 3 to 5 kg of explosive. The detonator is in the handle of a stick grenade. Extreme caution must be exercised when handling these charges, because potassium chlorate (a sensitive explosive) may be found in them. These charges have been used for destroying bunkers and fortifications during enemy assaults and for other types of demolition work.

VC SATCHEL CHARGE



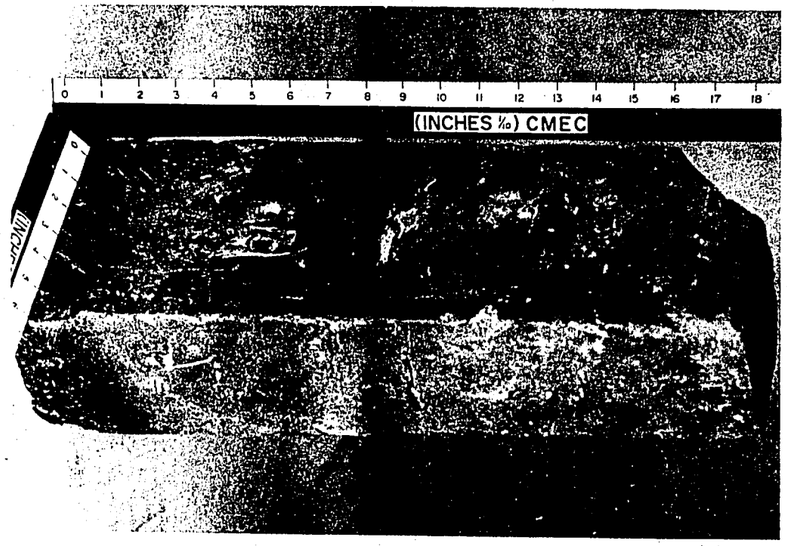
VC "BUILDING BLOCK" EXPLOSIVE CHARGE

The general appearance of the explosive charge is designed to resemble a concrete building block. The explosive charge consists of tritonal with two TNT booster charges. The booster charge consists of two standard, 200 gram blocks of ChiCom TNT. Each of the booster TNT blocks have a cap well.

CHARACTERISTICS

Color	Gray (color of mixed concrete)
Total Weight	13.6 kg
Lenght	48.3 cm
Width	17.1 cm
Depth	11.4 cm

VC "BUILDING BLOCK" EXPLOSIVE CHARGE

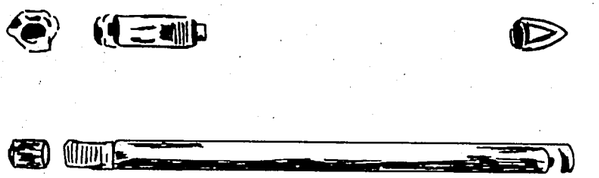


VC BANGALORE TORPEDOS

Although the bangalore torpedo was designed originally for the breaching of barbed wire defenses, the VC have made extensive use of it as an antitank and an antipersonnel mine. The illustrations give an idea of the general construction of a bangalore. The appearance and the construction of all bangalores are generally the same. The bangalore may be made of either bamboo or metal. Enemy troops lay the torpedoes on a likely vehicle or troop approach, conceal themselves some 12 to 15 meters away, and upon the approach of vehicles or assaulting troops detonate the torpedo.

BANGALORE TORPEDOES

SCRAP METAL



BAMBOO

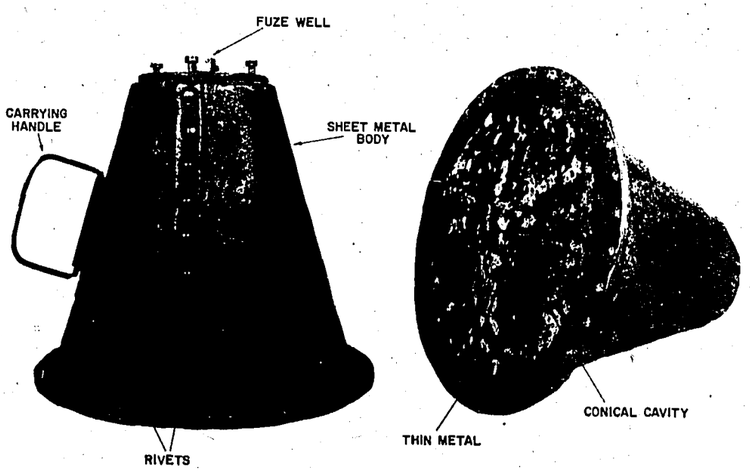
VC/NVA SHAPED CHARGES

Shaped charges are used to destroy large, massive targets, such as concrete fortifications and suspension bridge cables, to blast holes in paved roads for the placement of cratering charges, and as command detonated antivehicular or antiboat mines. The NVA employ two sizes of manufactured shaped charges, 5 and 10 kg. In addition, the VC produce many shaped charges, of varying size and weight, in their jungle worksites. Shaped charges are usually command electrical detonated, but can be employed with mechanical or various time delay detonators. When employed as a mine, shaped charges are usually buried in a roadway and command electrical detonated when the target vehicle is directly over the shaped charge.

CHARACTERISTICS

	5 kg Shaped Charge	10 kg Shaped Charge
Maximum Diameter	22.9 cm	27.9 cm
Length	24.1 cm	25.4 cm
Total Weight	8.6 kg	18 kg
Explosive Weight	5 kg	10 kg
Explosive	TNT	TNT

VC/NVA SHAPED CHARGES



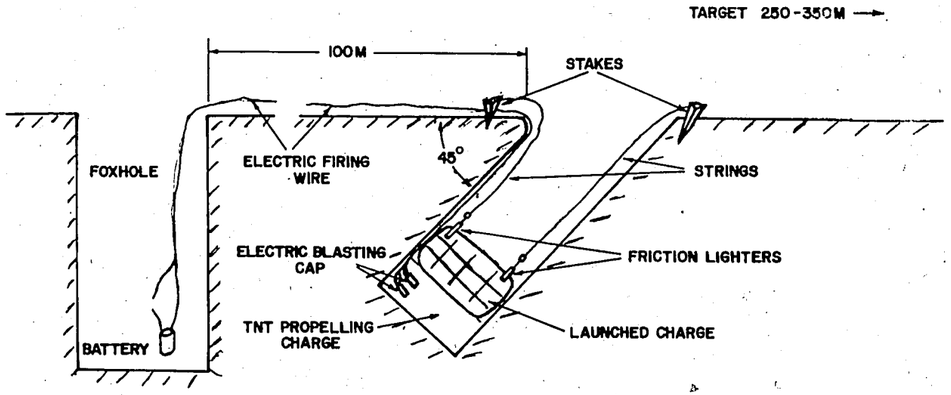
VC/NVA LAUNCH BOMBS AND CHARGES

This technique is aimed at base camps, either as harassing fire or as preparation for a ground attack. It is employed to launch dud bombs, satchel charges, or containers of CS agent over a base camp perimeter. This technique is normally employed with charges of 30 kg or less, but in at least one instance a 500 lb bomb has been thrown into a base camp. A hole is dug the same size as the charge and at an angle of 45° towards the target. The hole is usually about 80 cm deep (for a 20 kg charge). A propelling charge is placed at the bottom of the hole and the dud or prepared charge placed on top of it. The propelling charge is usually fired electrically. The launched bomb or charge usually has two or more friction fuse lighters, which are attached to stakes driven in the ground by string or wire. When the propelling charge is fired it propels the launched charge out of the hole. The strings activate the fuse lighters which light lengths of time fuse. When the time fuse burns down it sets off the nonelectric blasting cap and detonates the charge.

CHARACTERISTICS

Launching Charge:	
Weight	2 to 3 kg
Explosive	TNT
Firing System	2 ea electric blasting caps
Launched Charge:	
Weight	20 kg
Contents	TNT, broken glass, scrap metal
Size	60 cm X 30 cm X 40 cm
Range	250 to 350 m

VC/NVA LAUNCH CHARGE

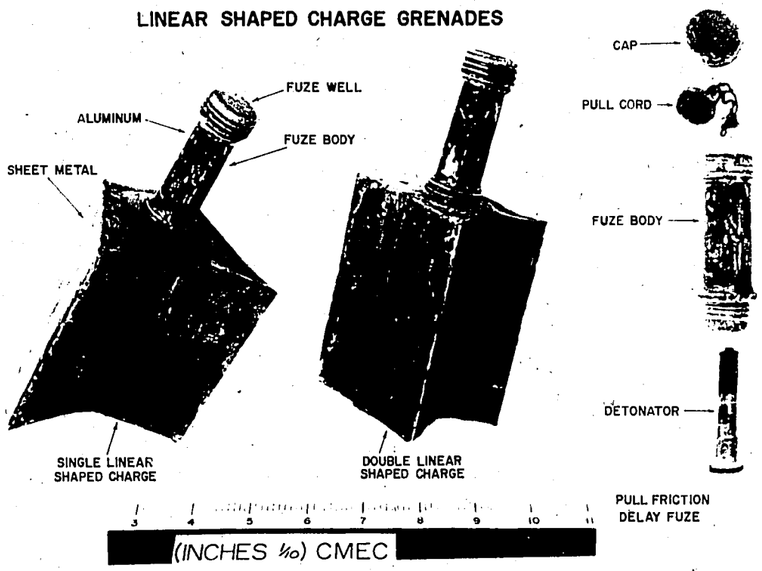


LINEAR SHAPED-CHARGE GRENADES

These grenades are constructed of thin sheet metal, painted olive drab. The fuze body, which also serves as a handle, is made of tubular aluminum and is threaded at both ends. The fuze is the pull friction type having a delay of 4.5 seconds. These grenades are probably used as demolition charges and as sabotage devices. Due to their design they lend themselves to being placed on or between bombs, artillery shells, or POL dumps, but also have the capability of being employed as trip wire booby traps and of accepting an electric blasting cap for command detonation. The grenade is detonated by unscrewing the cap and pulling on the pull cord. This action pulls the friction wire through a chemical compound that ignites the delay charge. The delay charge burns through, firing the detonator and the main charge.

	CHARACTERISTICS	
	Single, Linear Shaped Charge	Double, Linear Shaped Charge
Height	5.98 cm	5.71 cm
Width	7.42 cm	5.98 cm
Length with Fuze Handle	16.5 cm	16.5 cm
Weight	650 gm	532 gm
Filler	TNT	TNT
Filler Weight	435 gm	342 gm

LINEAR SHAPED CHARGE GRENADES



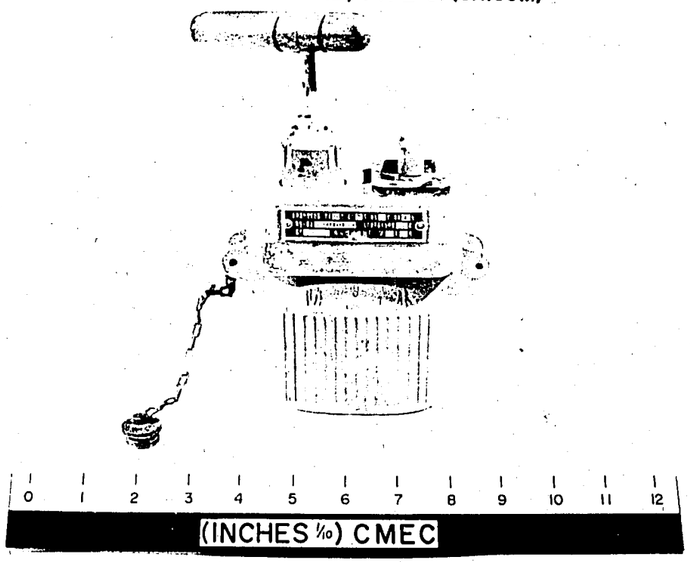
BLASTING MACHINE, TYPE 61 (CHICOM)

The ChiCom Type 61 blasting machine is a hand-held, electric impulse type generator, capable of firing up to 25 electric blasting caps connected in series. The machine is operated in the same manner as the US 10 cap blasting machine: by holding the machine in one hand and turning the handle clockwise (approximately 1/3 turn) with the other.

CHARACTERISTICS

Capacity	25 Caps
Height with Handle	19.8 cm
Height without Handle	8.5 cm
Length	13 cm
Weight with Handle	3.9 kg
Case Material	Cast aluminum or aluminum alloy
Color of Case	Gray or olive drab

BLASTING MACHINE, TYPE 61 (CHICOM)



BLASTING MACHINE MFD-25 (CHICOM)

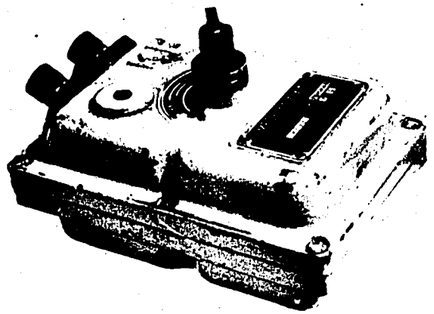
This machine is a 25 cap blasting machine. The source of power is three BA-3D (D-cell) batteries or the equivalent. The key is inserted into the slot and turned counterclockwise until it stops (about one-quarter of a turn). This closes the switch and allows current to flow from the batteries to a capacitor. The indicator light will glow when the capacitor is fully charged. The key is then turned clockwise until it clicks (one-quarter turn), opening the charging circuit and discharging the capacitor through the firing circuit.

CHARACTERISTICS

Length	17 cm
Width	10.8 cm
Height	9.5 cm
Weight	1.842 kg
Color	Light gray

BLASTING MACHINE MFD-25(CHICOM)

BLASTING MACHINE MFD-25(CHICOM)

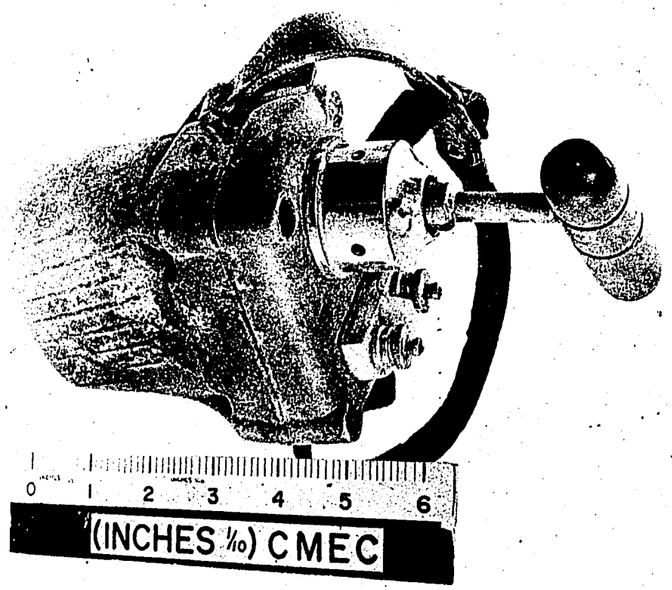


BLASTING MACHINE, LA 2B (CHICOM)

The LA 2B blasting machine is a hand-held, electric-impulse type generator, capable of firing up to 10 electric blasting caps connected in series. The machine is operated in the same manner as the ChiCom Type 61.

CHARACTERISTICS

Capacity	10 cap
Width	7.7 cm
Height with Handle	24.8 cm
Height without Handle	17.5 cm
Length	16.9 cm
Weight with Handle	2.3 kg
Case Material	Cast aluminum or aluminum alloy
Color of Case	Gray or green



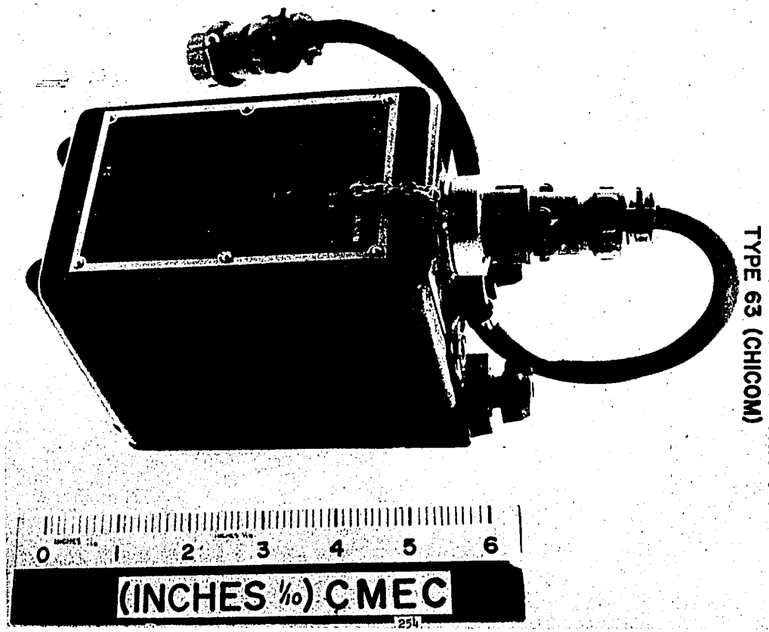
BLASTING MACHINE, LA 2B (CHICOM)

DYNAMO CONDENSOR DETONATOR, TYPE 63 (CHICOM)

The Type 63 is a compact, powerful blasting machine suitable for all military and civilian uses. The machine is housed in a bakelite, waterproof, plastic case. On the top of the case are two terminals for the blasting wire, an indicator light, a clamp to hold the detachable crank, and a receptacle which allows two machines to be connected in series to increase the power. On the back of the machine is the socket for the crank and firing button. The machine has a leather carrying case with a shoulder strap (not shown here). The firing wires are attached to the terminals, and the crank is inserted in the socket and turned until the indicator light glows brightly. The glowing light indicates that the capacitors are charged. When the button is depressed the capacitors discharge through the firing circuit.

CHARACTERISTICS

Height	17.2 cm
Width	8.6 cm
Length	10.8 cm
Weight	2 kg
Power Pulse	1,500 volts DC, at 2 milliampere
Capacity	350 caps
Color	Reddish brown



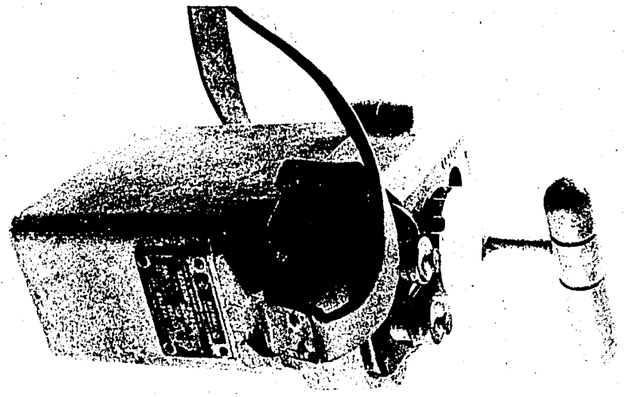
DYNAMO CONDENSER DETONATOR
TYPE 63 (CHICOM)

BLASTING MACHINE
(CZECHOSLOVAKIA)

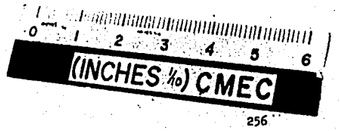
This blasting machine, manufactured in Czechoslovakia, is hand-wound, spring-released, armature type, capable of firing up to 100 blasting caps connected in series. It has two sockets for the firing handle; one is used for winding the spring loaded armature, and the other is used to release it, sending an electrical current to the two external connecting terminals.

CHARACTERISTICS

Capacity	100 caps
Height without Handle	20.3 cm
Width	10.8 cm
Length	14 cm
Weight with Handle	6 kg
Case Material	Cast aluminum or aluminum alloy
Color	Gray or green



BLASTING MACHINE
(CZECHOSLOVAKIA)



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BLASTING MACHINE M-524 (EAST GERMAN)

The M-524 is a compact, powerful blasting machine suited to all military and civilian uses. The machine is housed in a waterproof aluminum case. On one side is a detachable crank and on top are terminals for the firing wires, an indicator lamp window, and a protected firing button. The firing wires are attached to the terminals, and the crank is attached to the machine. As the crank is turned, a direct current generator charges the capacitors. When the indicator light glows brightly the capacitors are charged. To discharge the capacitors the cover is removed from the firing button and the button is depressed.

CHARACTERISTICS

Length	11.5 cm
Width	9.0 cm
Height	14.5 cm
Weight	2.35 kg
Capacity	100 caps

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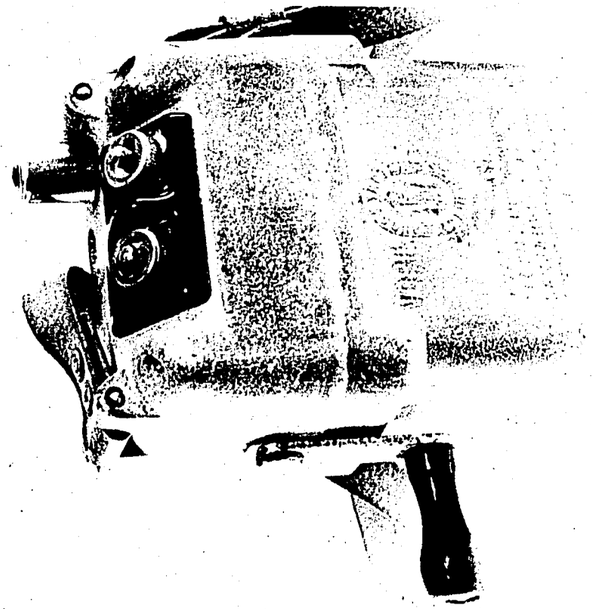
BLASTING MACHINE M 524
EAST GERMAN



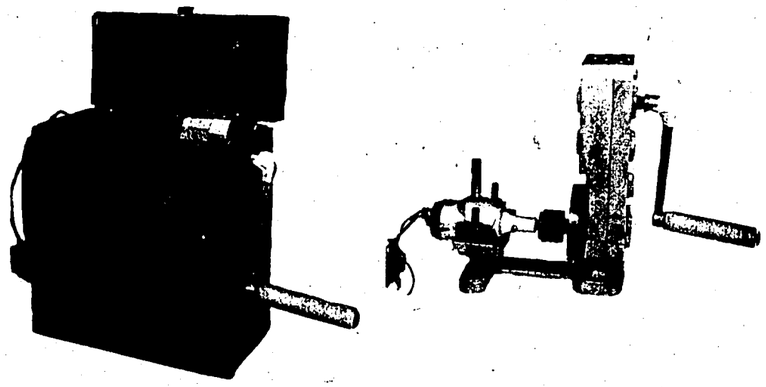
VC BLASTING MACHINE

This VC blasting machine is housed in a wooden carrying case with a canvas carrying strap. The mechanism consists of a bicycle generator and a four-stage gear train mounted on a cast aluminum base. The machine has a detachable, cast aluminum crank which is inserted through the side of the carrying case. The components of this machine are well made and show evidence of extensive machining, as well as aluminum and brass founding. Due to the limitation of the generator this machine has a small capacity for its size. It is capable of detonating only one blasting cap with 38 meters of firing wire.

CHARACTERISTICS

Carrying Case:	
Height	25.5 cm
Width	11.3 cm
Length	21.8 cm
Weight	1.5 kg
Blasting Machine:	
Height	22.4 cm
Width	8.8 cm
Length	19.6 cm
Length with Crank	34.1 cm
Weight	2.4 kg

VC BLASTING MACHINE

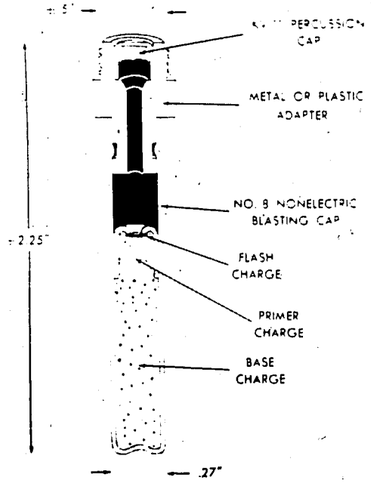


DETONATOR, MD-2 (USSR)

This detonator was first used by the Soviet Army during World War II. It consists of a No. 8 nonelectric blasting cap and a KV-11 percussion cap assembled to a threaded metallic or plastic adapter. The detonator is screwed into the base of the standard Soviet mine fuze (the MUV pull and MV-5 pressure fuzes). This detonator has been recovered in considerable quantities in Republic of Vietnam. Impact on the percussion cap (usually by a spring-driven striker) sets if off, creating a flame. The flame ignites the flash charge of the blasting cap, then the primer charge, which detonates the base charge.

Detonator, MD-2

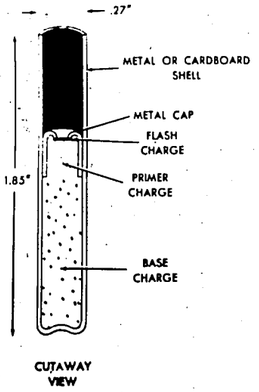
(Mechanical Detonator, MD-2)

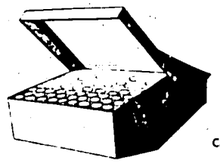


NONELECTRIC BLASTING CAP, NO. 8 (USSR)

There are six different models of the Soviet No. 8 nonelectric blasting cap differing in the explosive filling and the material of the shell. The six models are classified into three general groups: GRT, TAT, and TAG, according to the explosive charge. The abbreviation GRT designates the two explosives, mercury fulminate, and tetryl; TAT designates TNRS, lead azide, and tetryl; and TAG designates TNRS, lead azide, and hexogen. The No. 8 nonelectric cap is also combined with a KV-11 percussion cap in a threaded adapter to form the MD-2 detonator. Soviet nonelectric blasting caps are exploded by the flame from a percussion cap (as in the MD-2 detonator) or from a burning time fuse.

Nonelectric Blasting Cap, No. 8

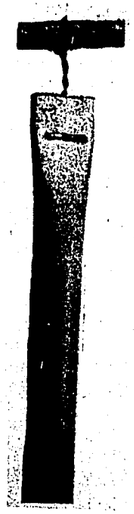


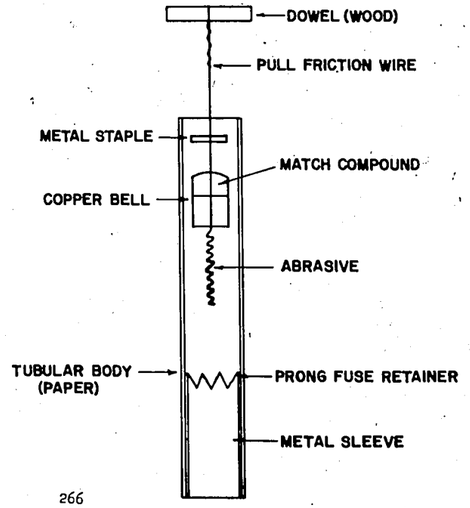


PULL FRICTION FUSE LIGHTER

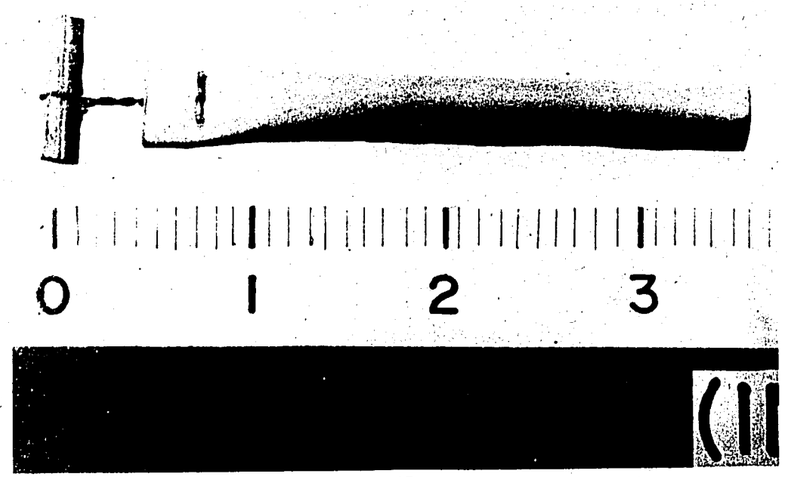
This fuse lighter is constructed of tubular paper. The tube is stapled at one end and acts as a retainer for the pull friction wire assembly, which consists of a wooden handle, friction wire, and a copper cup containing a chemical compound. The opposite end of the tube contains a metal sleeve into which a time fuse is inserted. A pull on the wooden handle pulls the friction wire through the chemical compound creating a flame which lights the time fuse. Due to the high humidity in Vietnam, proper functioning of this pull friction fuse lighter is very unreliable because the friction wire normally rusts away from the chemical compound cup.

FRICTION FUSE LIGHTER





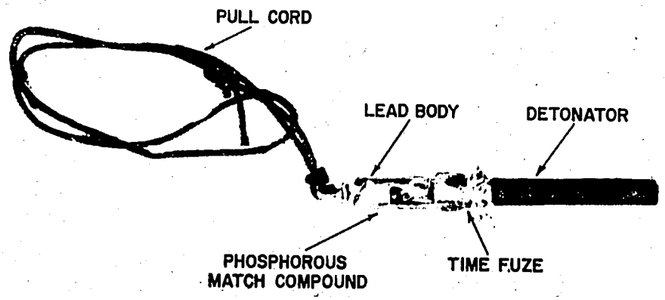
PULL FRICTION FUSE LIGHTER



PULL FRICTION FUSE LIGHTER

This fuse lighter is probably made by the VC in their jungle worksites. The fuse lighter consists of a cylindrical lead body containing a copper bell cup filled with a phosphorous match compound and a coiled copper wire, a length of time fuse, a detonator (nonelectric cap), and a pull cord. A three kilogram pull draws the copper wire through the phosphorous match compound creating a flame which ignites the fuse. The fuse burns through and fires the detonator, which explodes the main charge. The delay depends upon the type and the length of fuse used.

PULL FRICTION FUSE LIGHTER



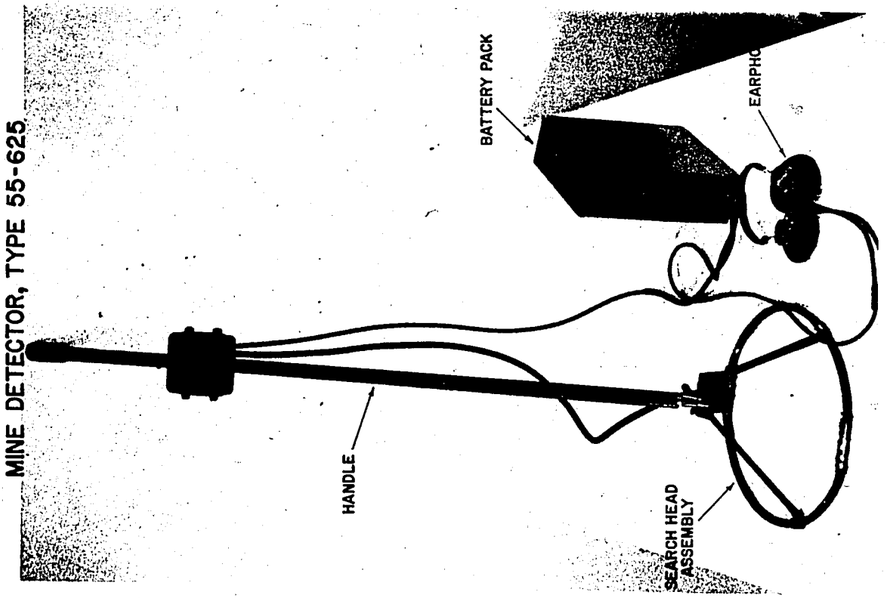
XI. MINE DETECTORS. There are two basic types of mine detectors employed by the VC and NVA main force troops. They are discussed in this section.

MINE DETECTOR, TYPE 55-625 (CHICOM)

The Mine Dectector, Type 55-625, is a ChiCom copy of the Soviet Model VIM-203 metallic mine detector. The detector has a circular coil search head. The detector is lightweight and simple to operate, and a minimum of time is required to train operating personnel. This detector employs a two tube oscillator-amplifier circuit. The detector's battery pack has a 30 hour continuous operating life and a detection range for buried mines of 20 to 30 centimeters. As is common with most ChiCom mine detectors, there is a device on the search coil which permits its use on either a search head handle or rifle muzzle. It can be repaired under field conditions with a minimum of spare parts and technically qualified personnel. This mine detector is ideally suited to the needs of the NVA operations in RVN.

CHARACTERISTICS

Type	Metallic detector
Overall Length	160 cm
Total Weight	7.15 kg
Search Head Assembly	33.1 cm in diameter



MINE DETECTOR MODEL IMP (USSR)

The Model IMP is a portable, lightweight, all transistorized mine detector of Soviet design and manufacture. Although not as sensitive as the US P153, the IMP is effective against metallic mines at depths up to 22 centimeters in Vietnamese soil conditions. It will also detect non-metallic mines with metallic fuses at depths up to 10 centimeters. The IMP is completely waterproof and will operate in water up to one meter deep. The operation of this mine detector is identical with that of the US P153. Operators can effectively use the detector for 15 minutes at a time. The power supply is four, BA-30 type, 1.6 volt, dry cell batteries, and the mine detector will operate effectively for 70 to 80 hours between battery changes.

CHARACTERISTICS

Type	Mine detector, induction semi-conductor
Number of Transistors	5
Weight of Carrying Case (Empty)	1.6 kg
Weight Complete Detector	6.3 kg
Weight Search Head Assembly	2.3 kg
Length of Search Head Assembly	40.8 cm
Length of Assembled Handle (4 Sections)	1.56 m
Dimensions of Amplifier	18 cm X 4.2 cm X 16.8 cm
Weight of Amplifier plus Batteries	2 kg
Dimensions of Carrying Case	18 cm X 20.4 cm X 45.6 cm
Weight of Carrying Case	2 kg

MINE DETECTOR MODEL IMP (USSR)