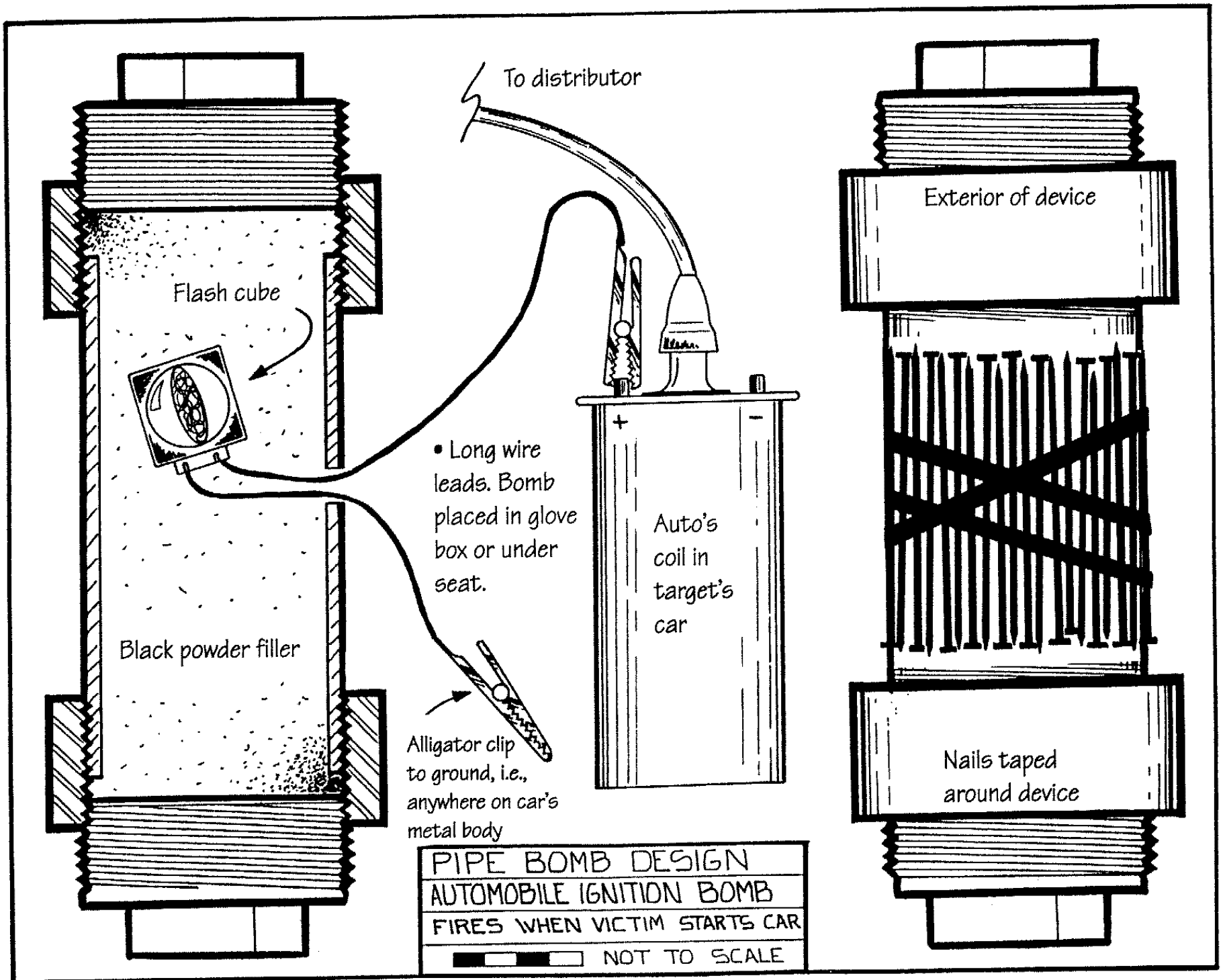
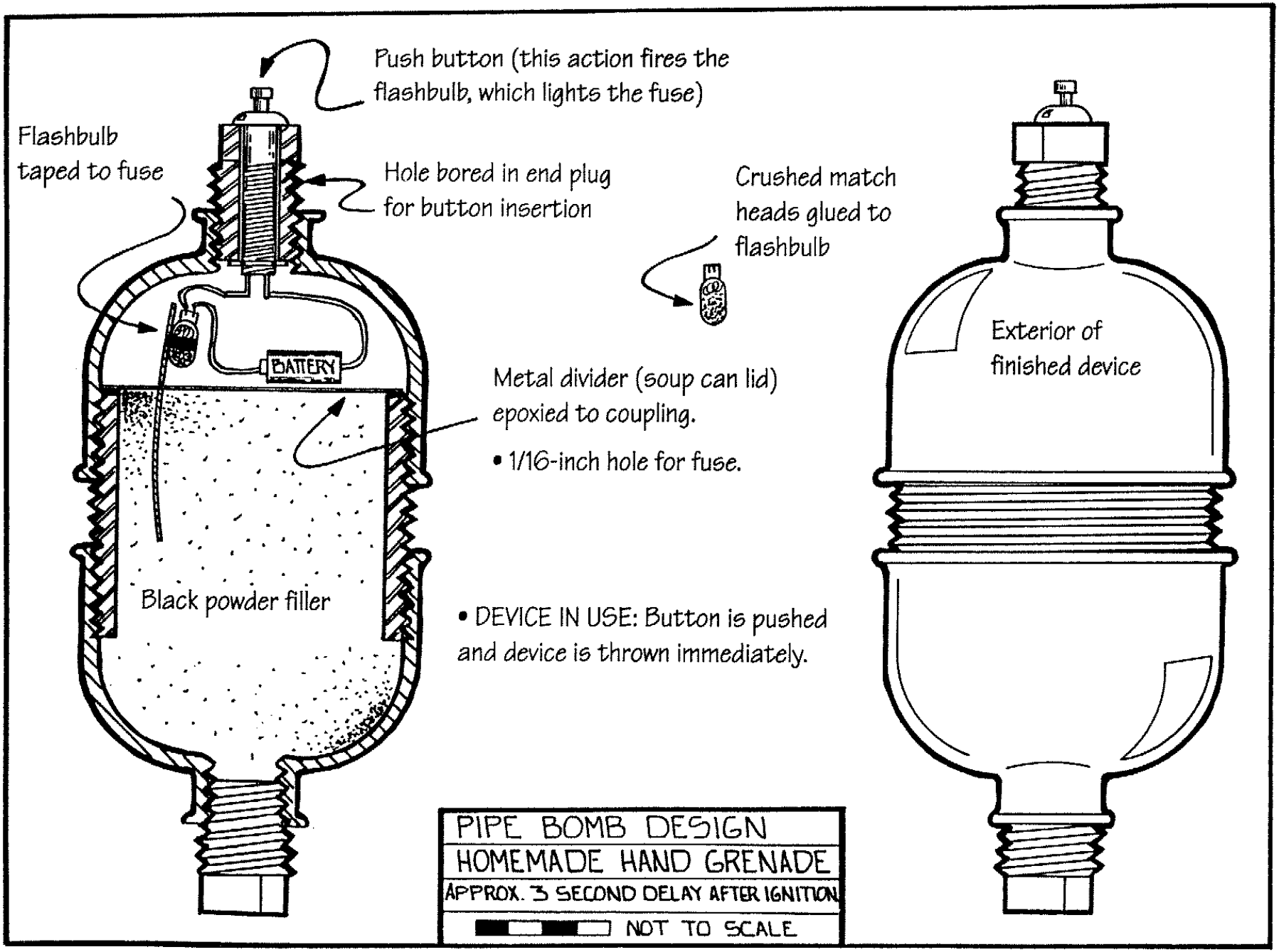
FOR ACADEMIC STUDY ONLY



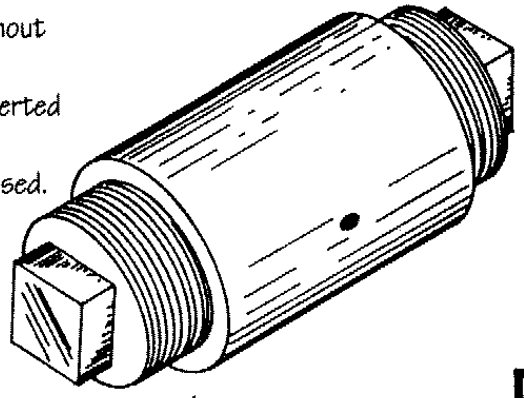


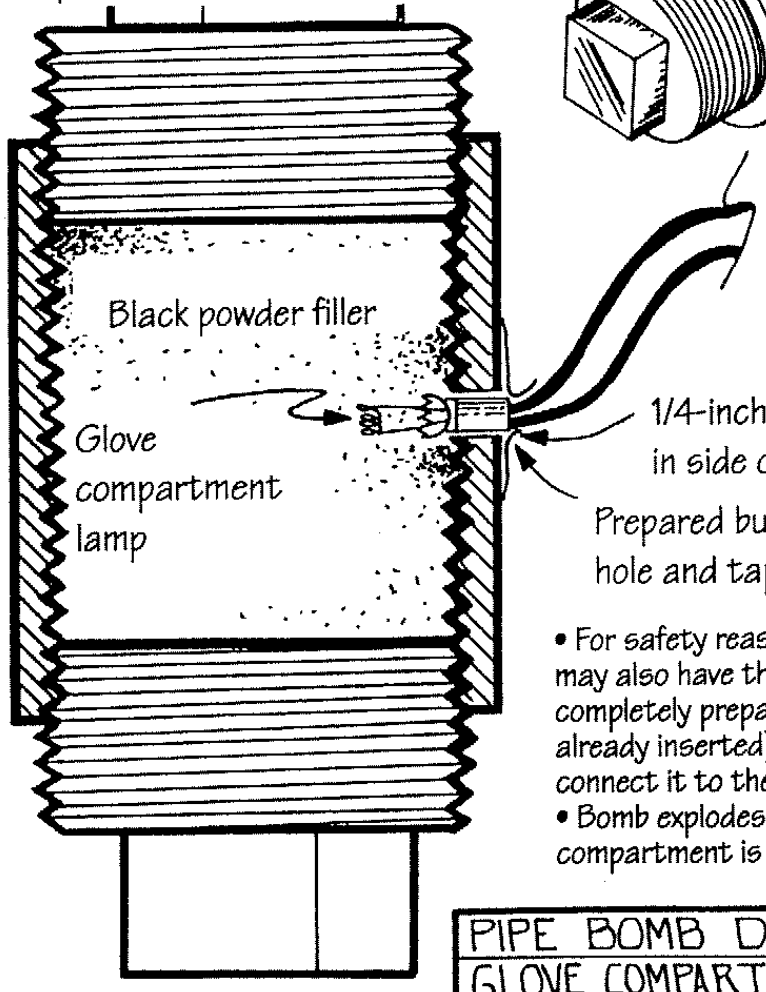
FOR ACADEMIC STUDY ONLY

FOR ACADEMIC STUDY ONLY

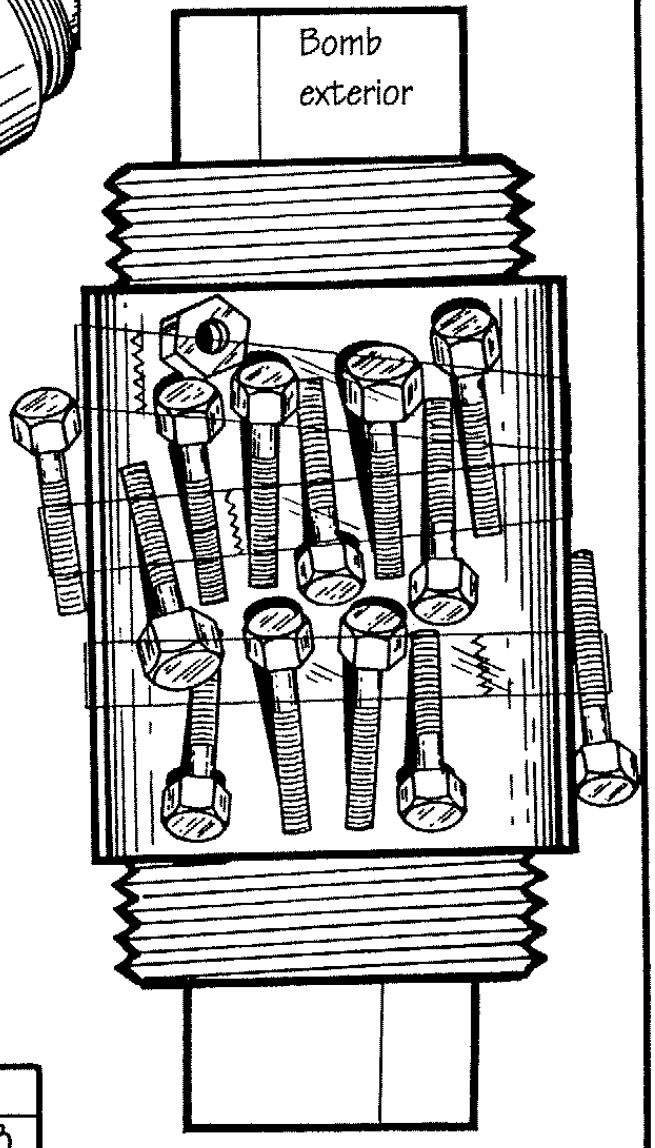
HOW DEVICE IS USED

- Automotive fuse under dashboard is removed.
- Lamp and wire leads are pulled out as far as possible without breaking leads off.
- Lamp glass is broken with filament intact and lamp is inserted directly into black powder.
- Bomb placed in glove compartment and compartment closed.
- Auto fuse is replaced. The bomb is set.



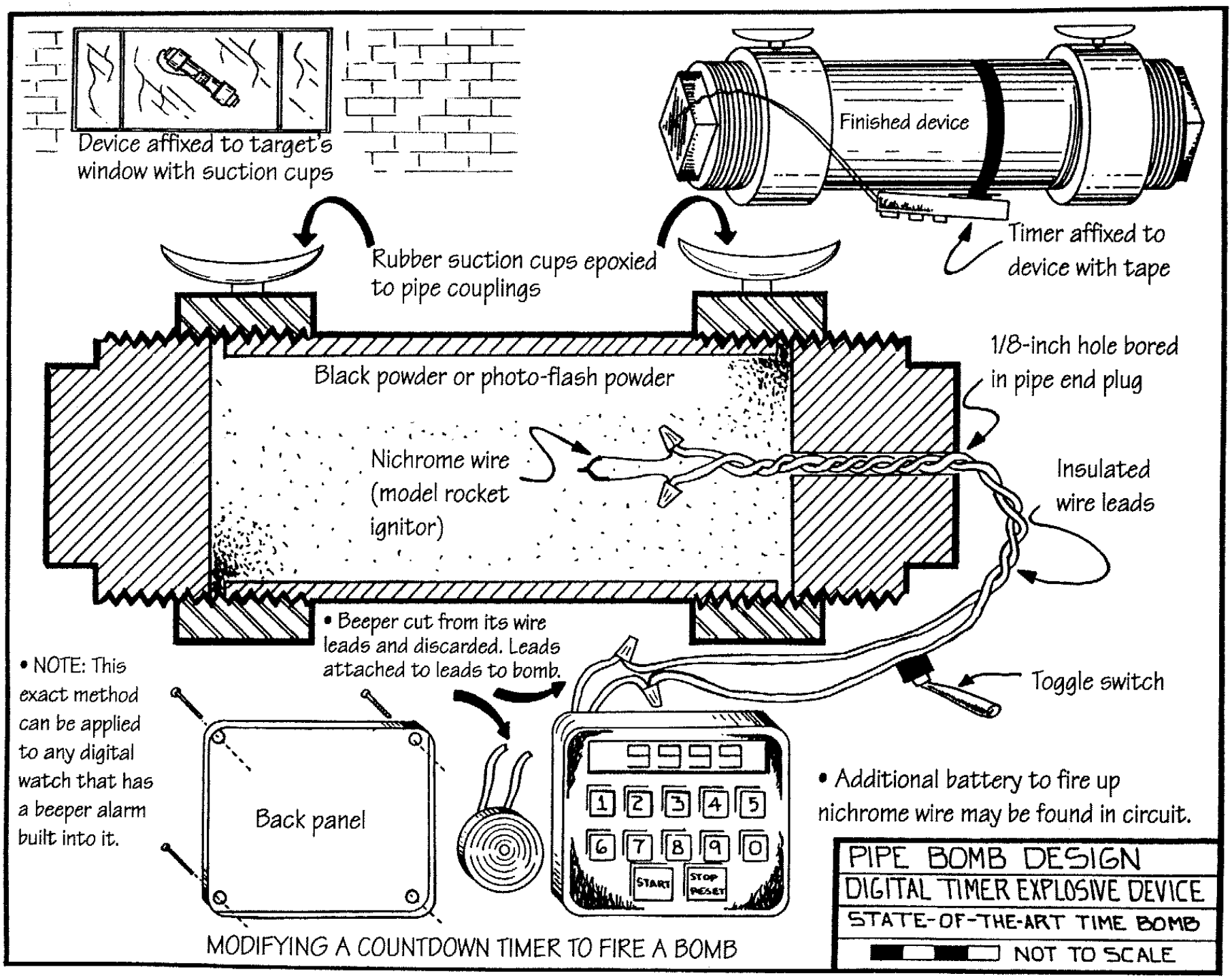


- For safety reasons, the builder may also have the device completely prepared (lamp bulb already inserted) and simply connect it to the lead wires.
- Bomb explodes when glove compartment is opened.



Nuts and bolts taped around device

PIPE BOMB DESIGN
GLOVE COMPARTMENT BOMB
INGENIOUS HOOK UP
NOT TO SCALE



MODIFYING A COUNTDOWN TIMER TO FIRE A BOMB

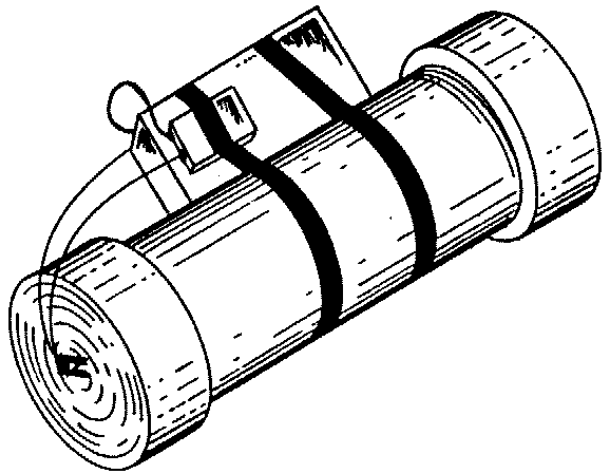
FOR ACADEMIC STUDY ONLY

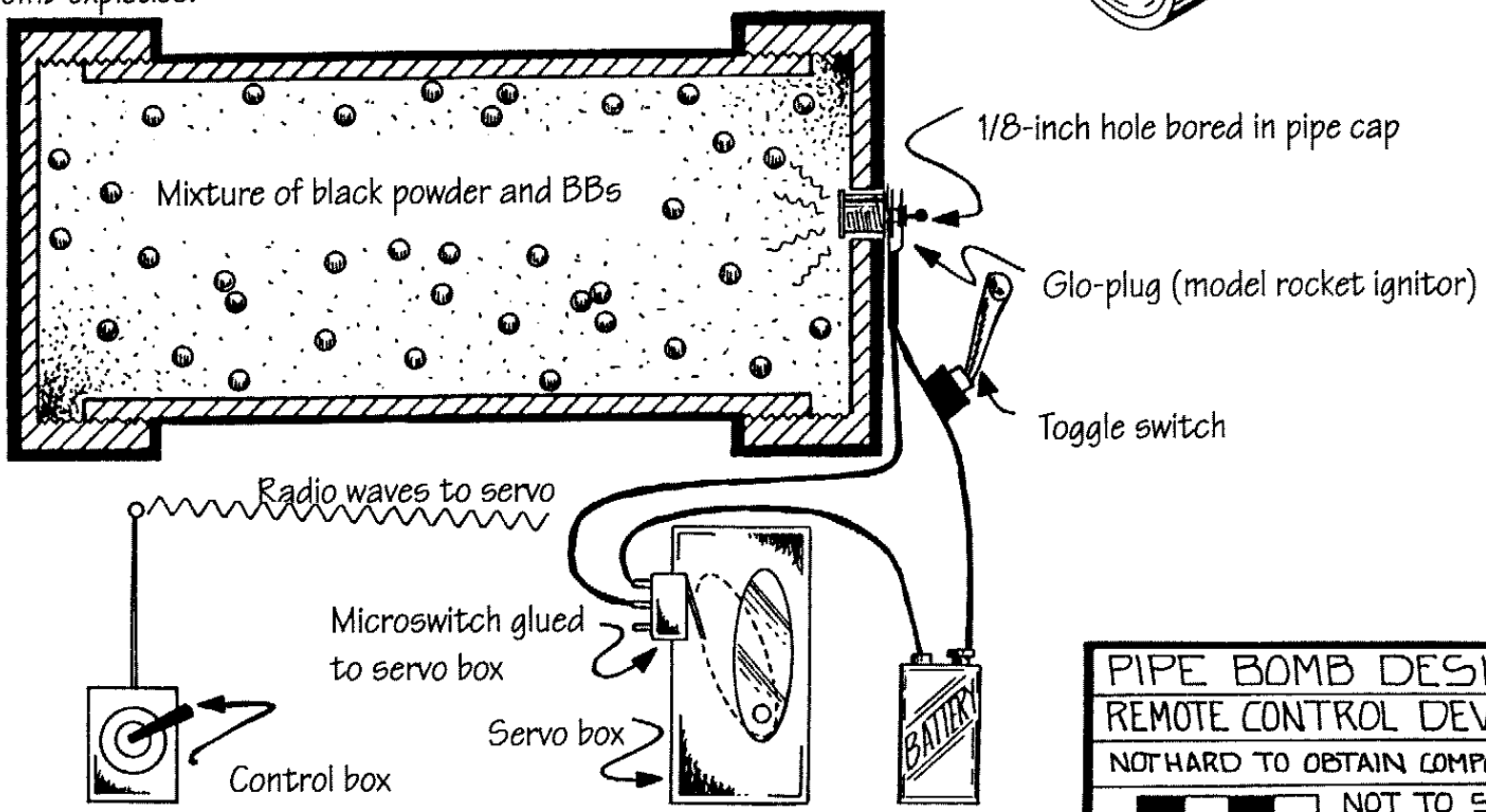
FOR ACADEMIC STUDY ONLY

- A remote-control bomb is the ultimate improvised explosive device.
- The bomber has complete control of the situation while remaining well out of the scene.

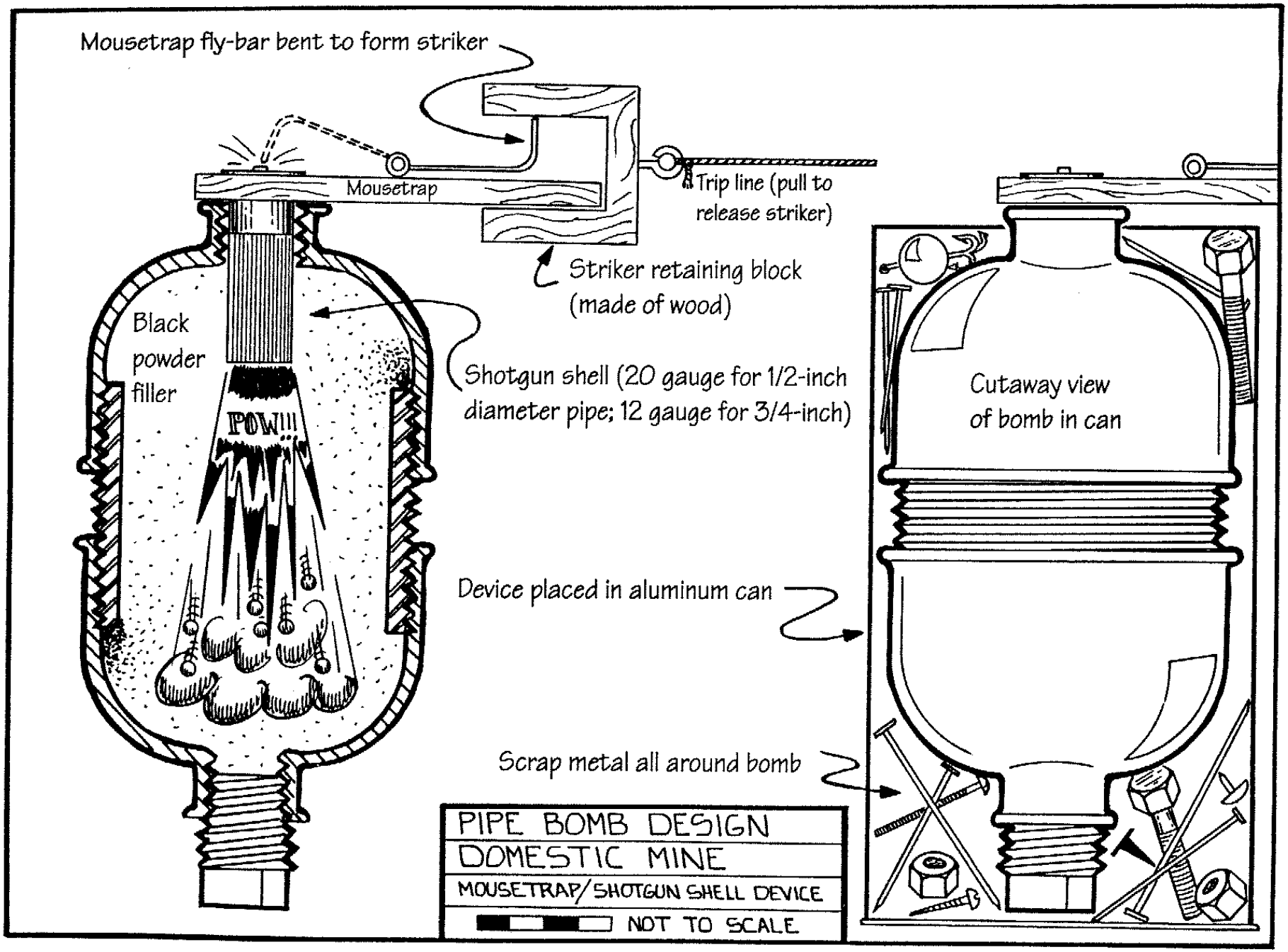
HOW DEVICE IS USED

- Control box sends signal to servo box. Servo arm pivots and activates microswitch lever.
- Glo-plug flares up and lights black powder confined in pipe.
- Bomb explodes.



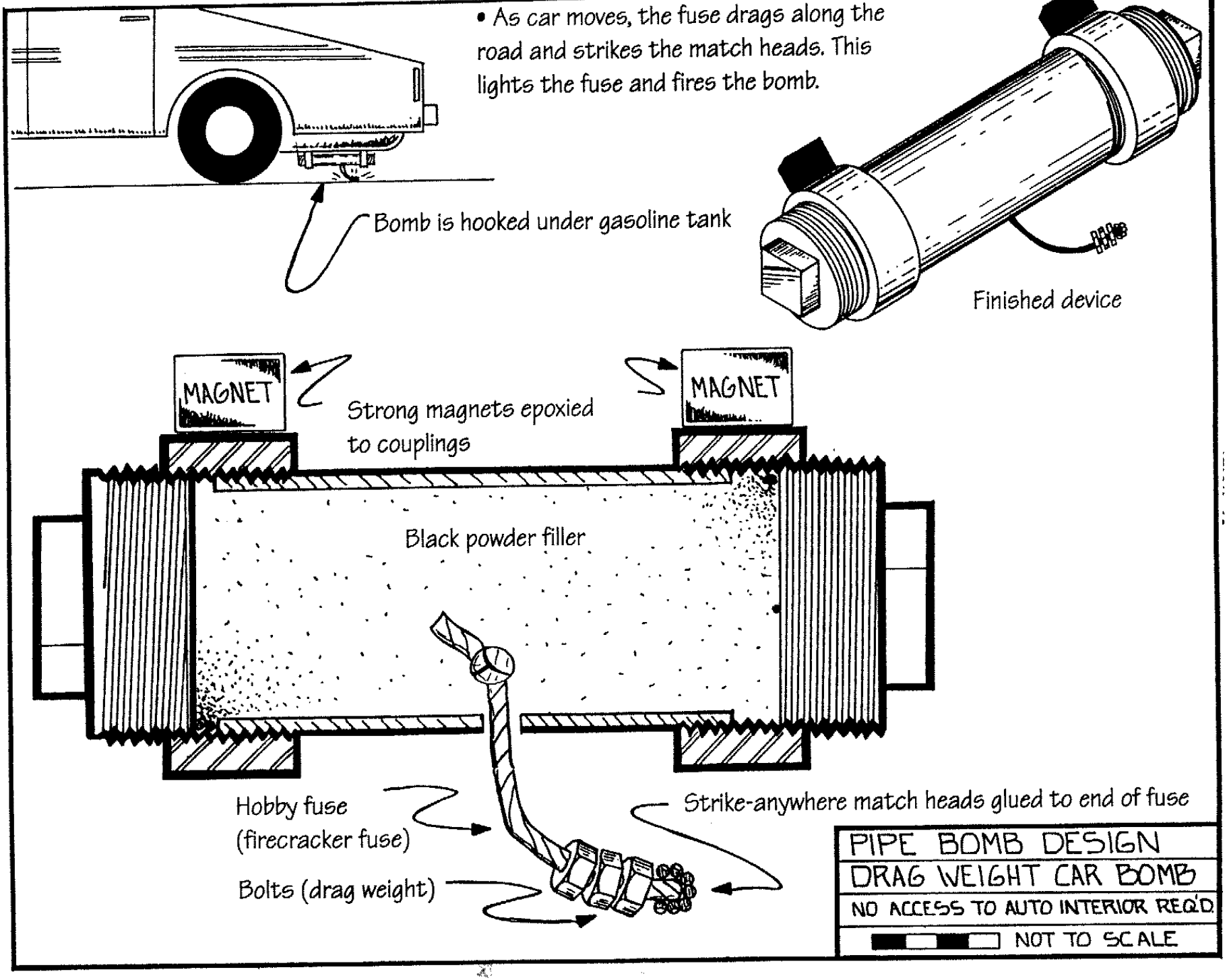


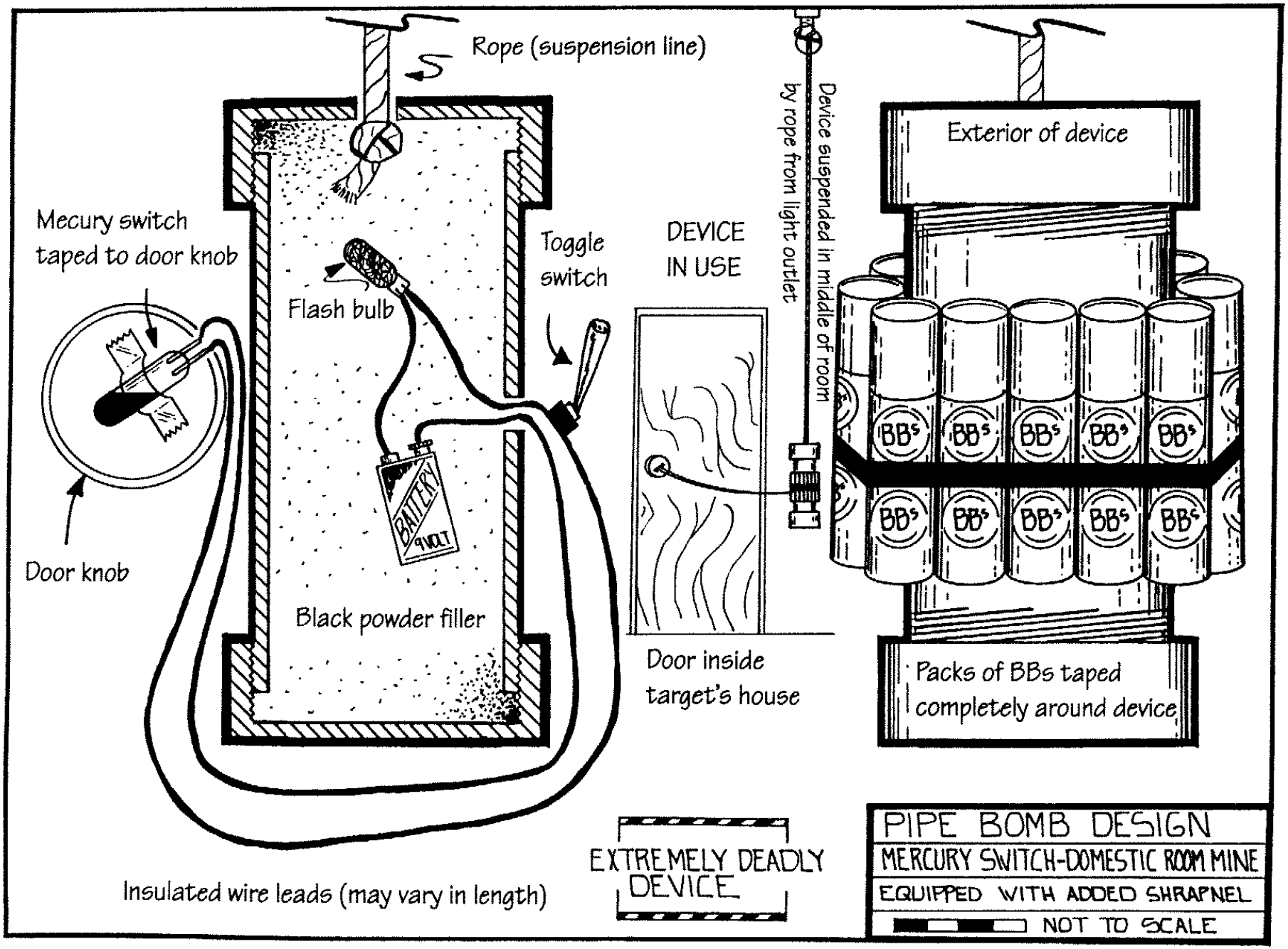
PIPE BOMB DESIGN
REMOTE CONTROL DEVICE
NOT HARD TO OBTAIN COMPONENTS
NOT TO SCALE



FOR ACADEMIC STUDY ONLY

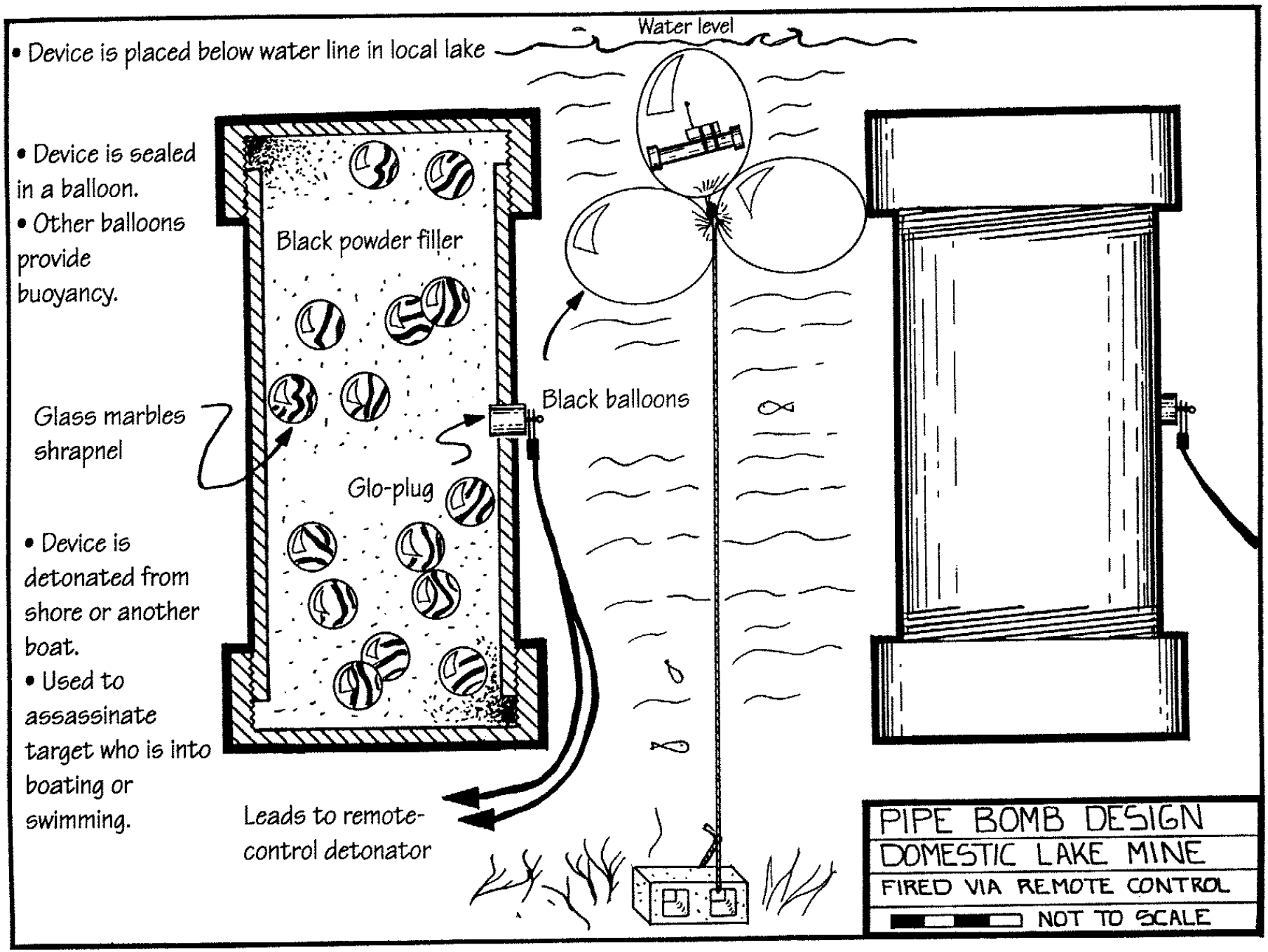
FOR ACADEMIC STUDY ONLY

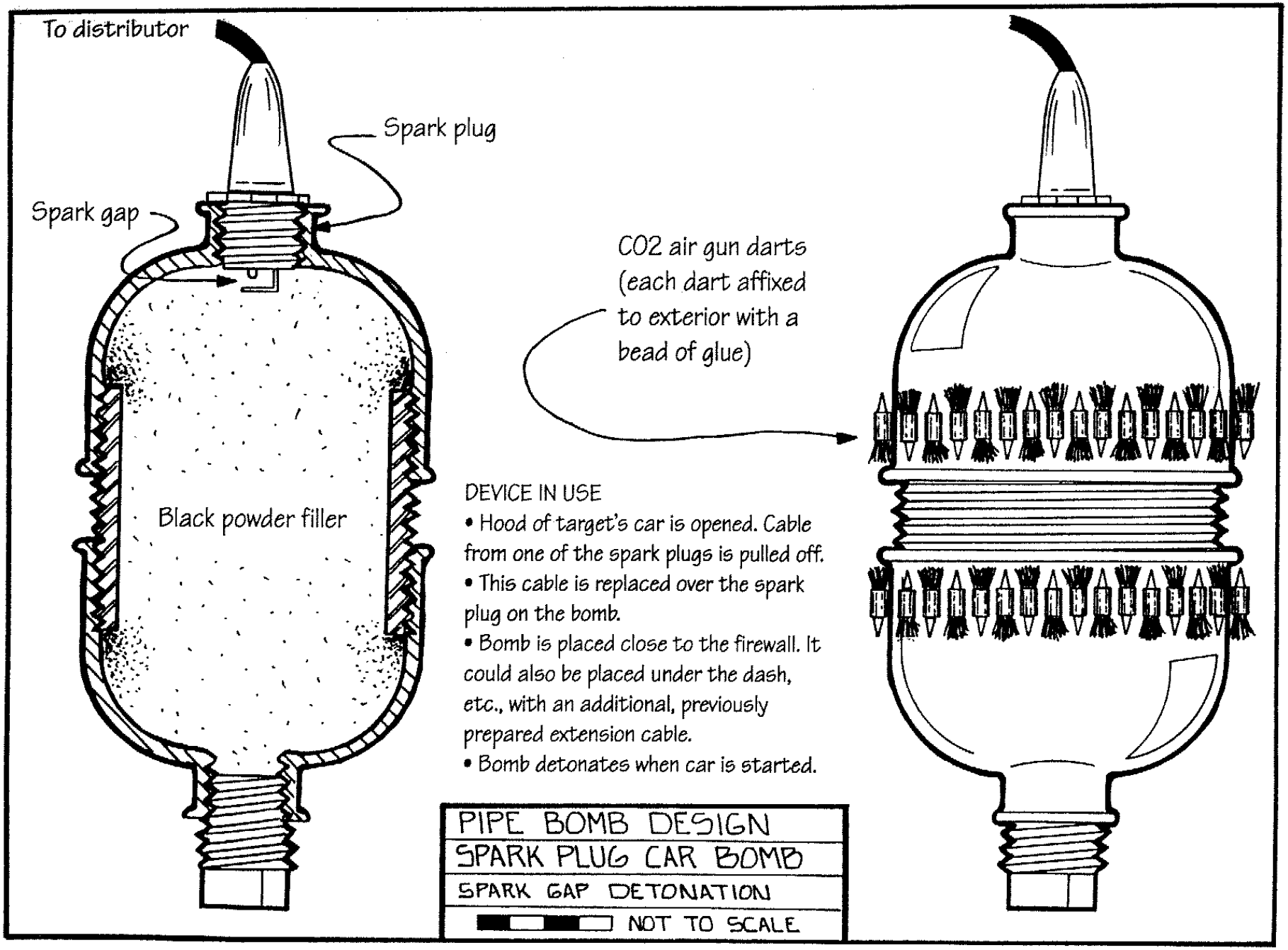




FOR ACADEMIC STUDY ONLY

FOR ACADEMIC STUDY ONLY





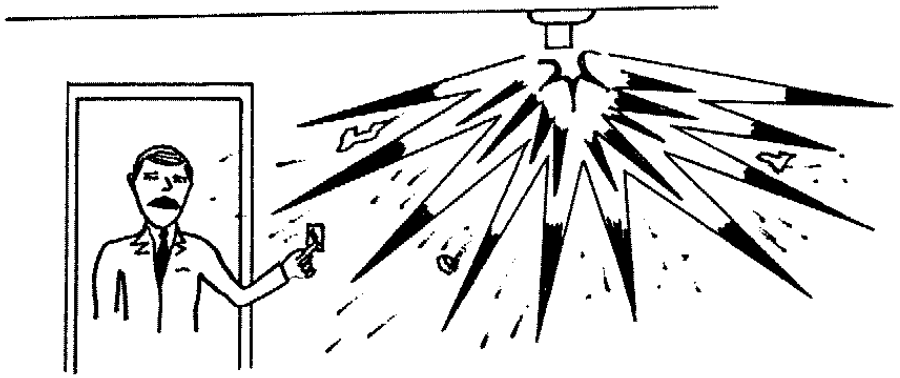
DEVICE IN USE

- Hood of target's car is opened. Cable from one of the spark plugs is pulled off.
- This cable is replaced over the spark plug on the bomb.
- Bomb is placed close to the firewall. It could also be placed under the dash, etc., with an additional, previously prepared extension cable.
- Bomb detonates when car is started.

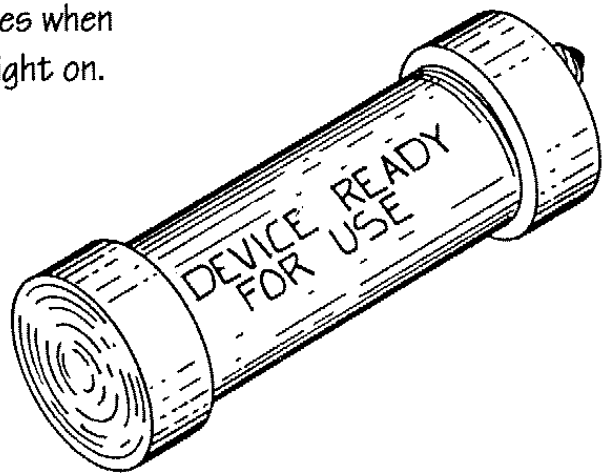
PIPE BOMB DESIGN
SPARK PLUG CAR BOMB
SPARK GAP DETONATION
NOT TO SCALE

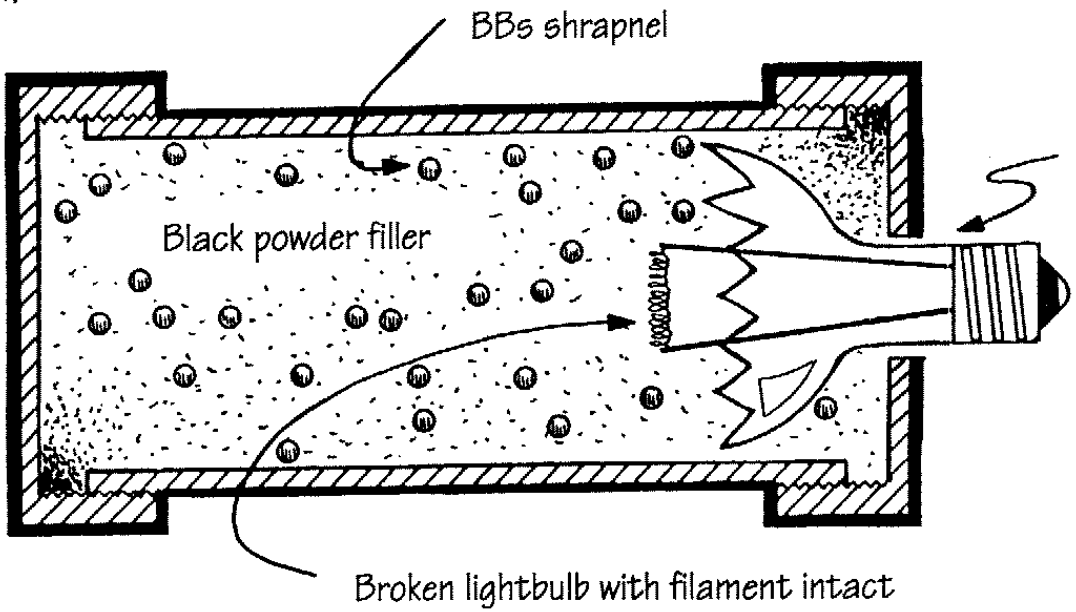
FOR ACADEMIC STUDY ONLY

FOR ACADEMIC STUDY ONLY



- Bomb explodes when target turns light on.



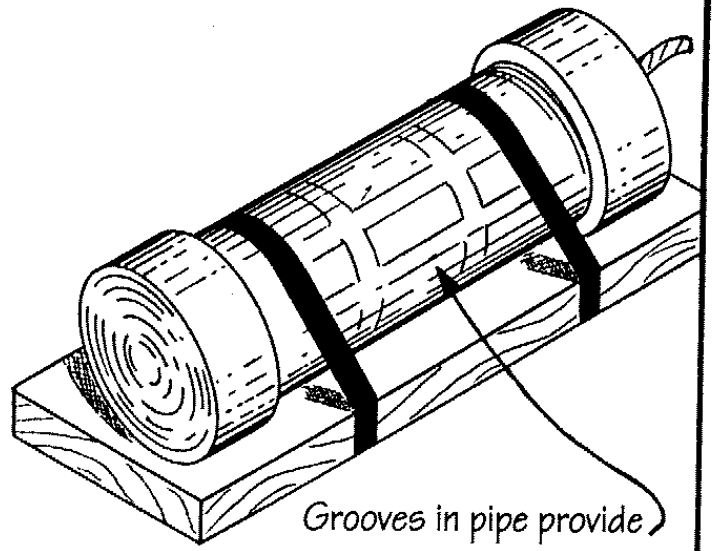


- Device is screwed into any light socket.
- With an extension cord, this device could be fired at a wide range of targets in almost any situation.

PIPE BOMB DESIGN
LIGHT SOCKET BOMB
USES STANDARD LIGHT BULB
NOT TO SCALE

• When the device is picked up, the depressed microswitch is released and the hidden electrical circuit fires the bomb.

• Once device is set with microswitch depressed and "off," these wires are tied together with a wire nut and stuffed back in the hole in the pipe.



Grooves in pipe provide additional shrapnel

Pipe packed full of match heads

Fuse (does nothing; makes device look innocent; designed to fool bomb technician)

Flashbulb

BATTERY

Small hole in pipe

1/8-inch hole bored in side of pipe cap

Flat surface

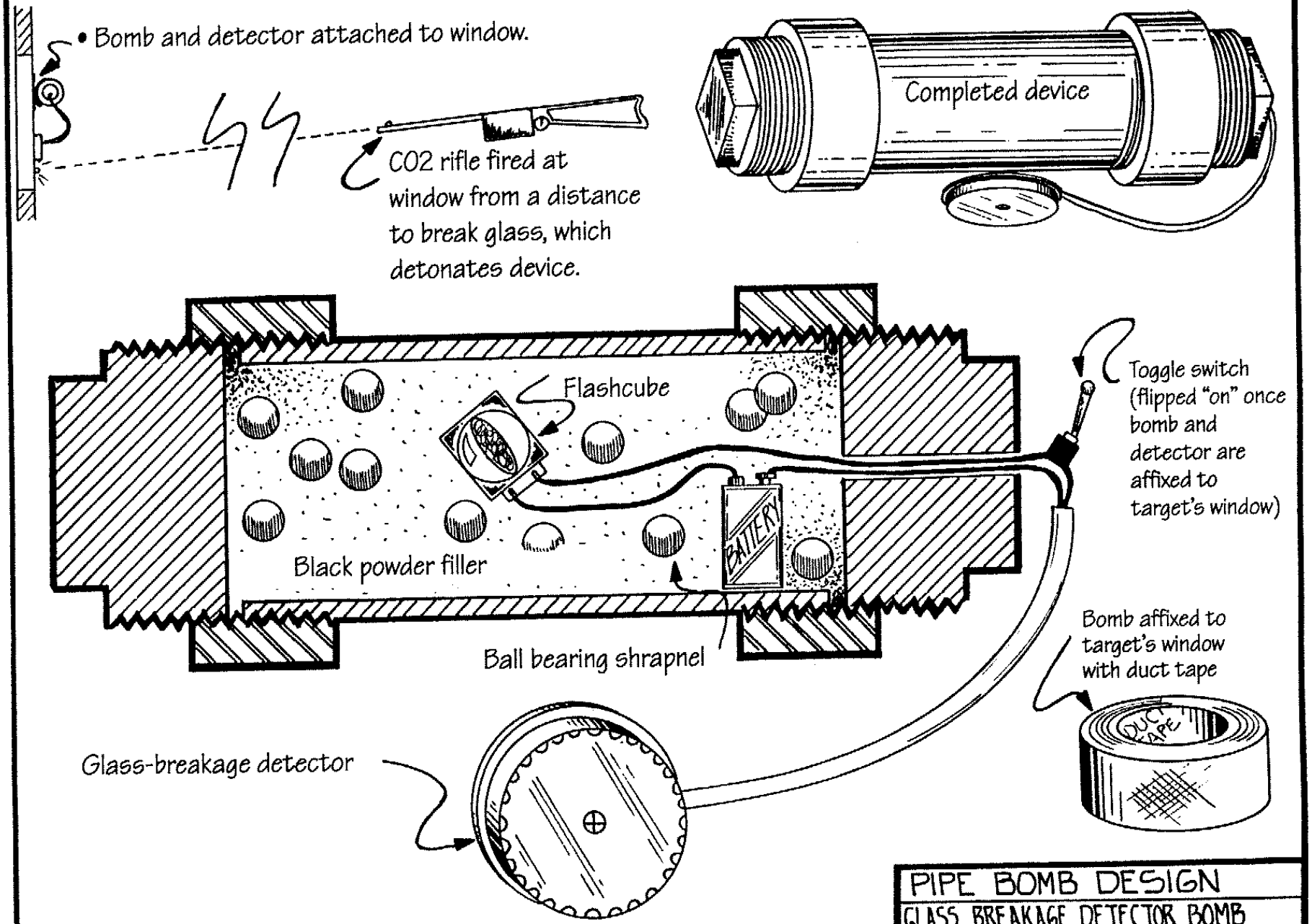
Hidden microswitch in depressed position

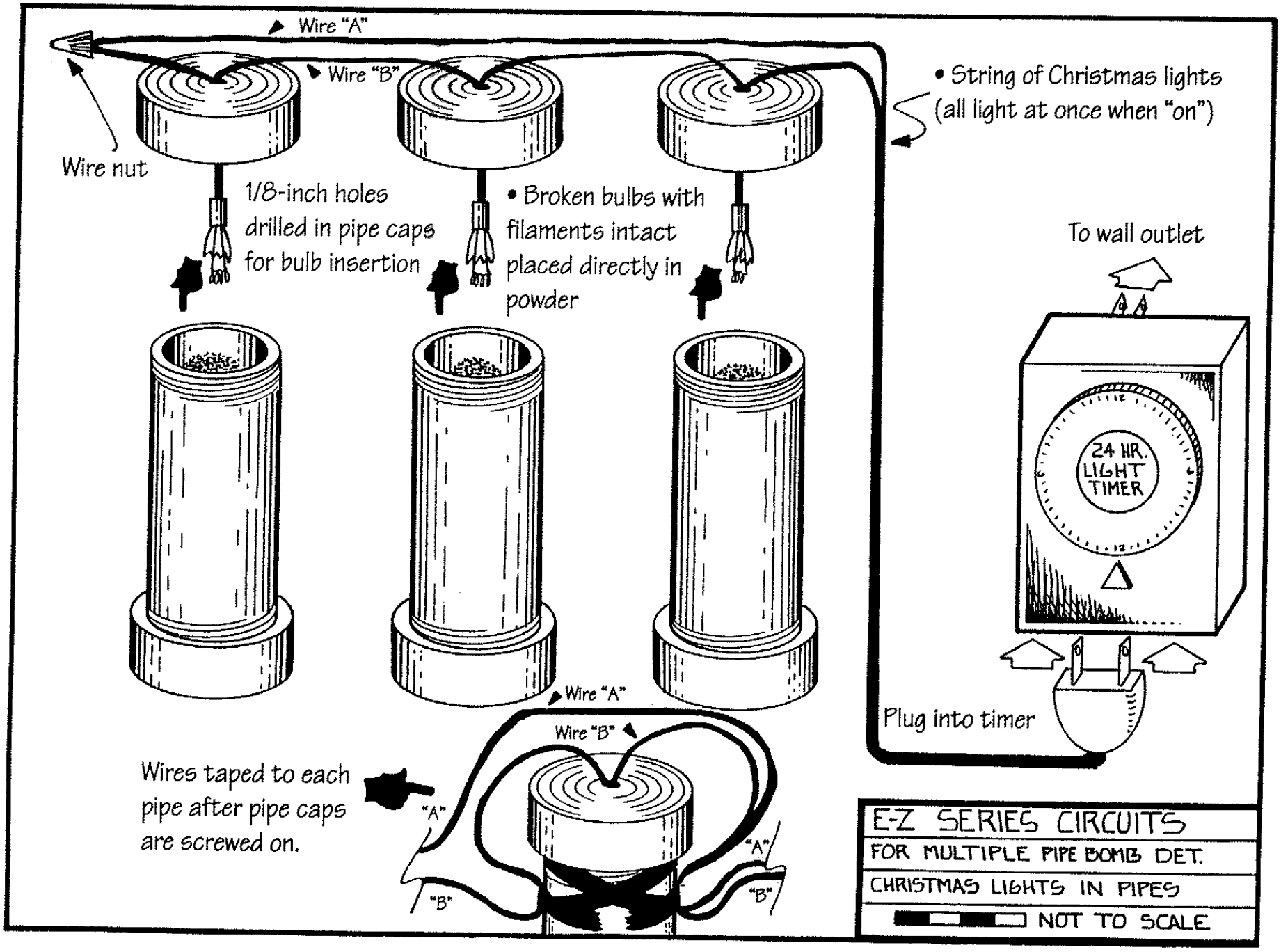
• Device is taped to a pine board.

PIPE BOMB DESIGN
BOOBY-TRAPPED DEVICE
ANTILIFT TYPE SET UP.
NOT TO SCALE

FOR ACADEMIC STUDY ONLY

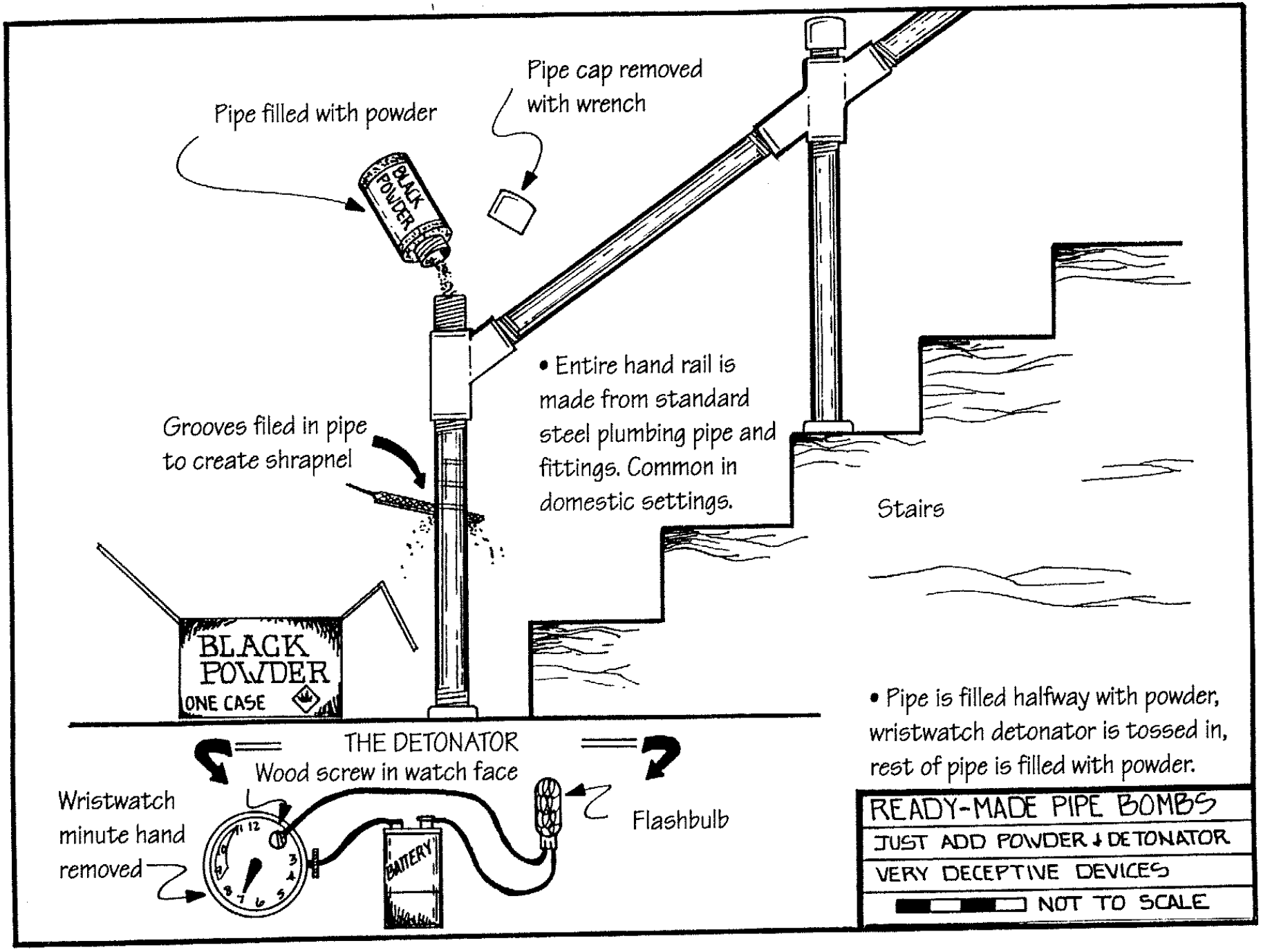
FOR ACADEMIC STUDY ONLY

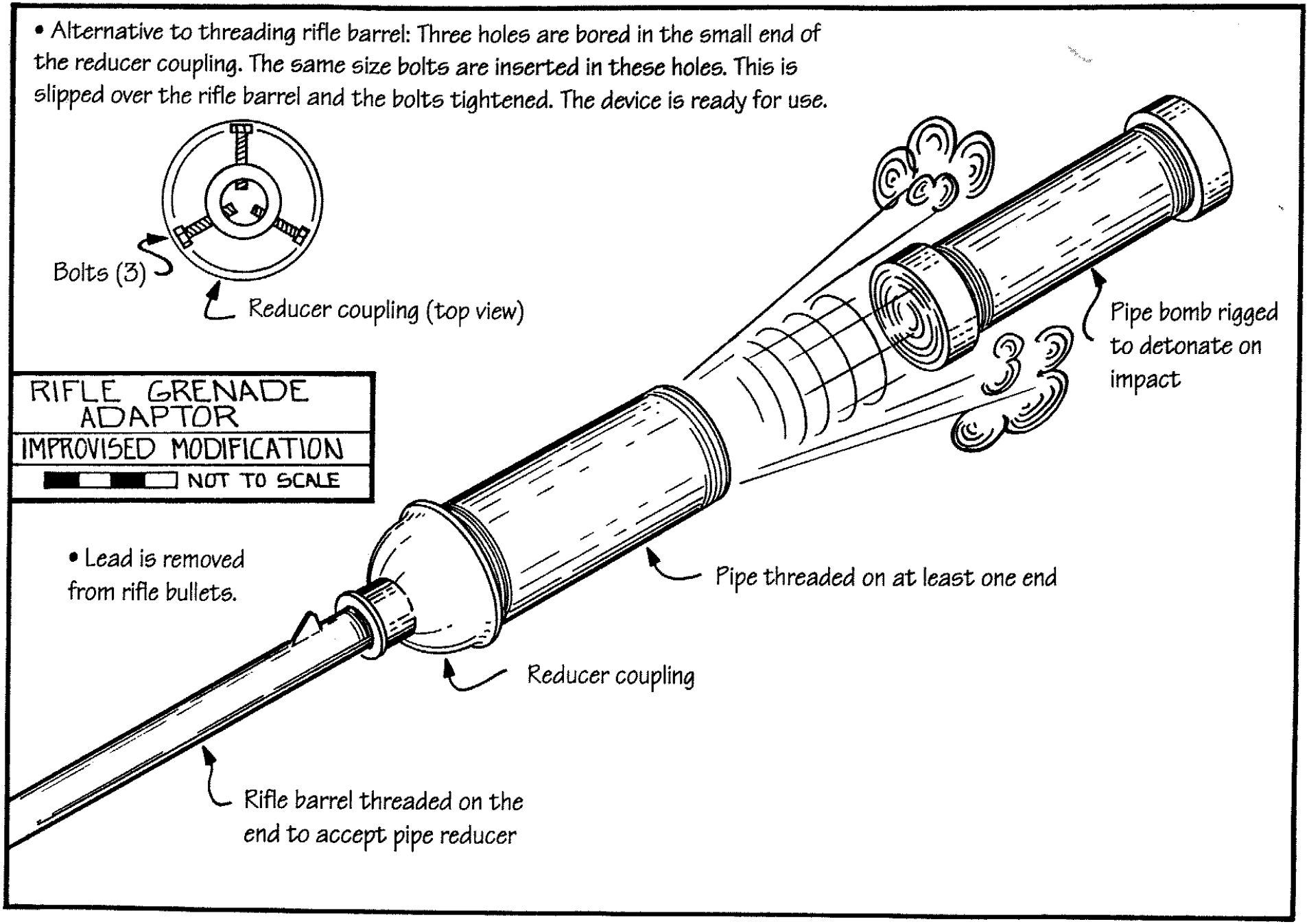




FOR ACADEMIC STUDY ONLY

FOR ACADEMIC STUDY ONLY





FOR ACADEMIC STUDY ONLY

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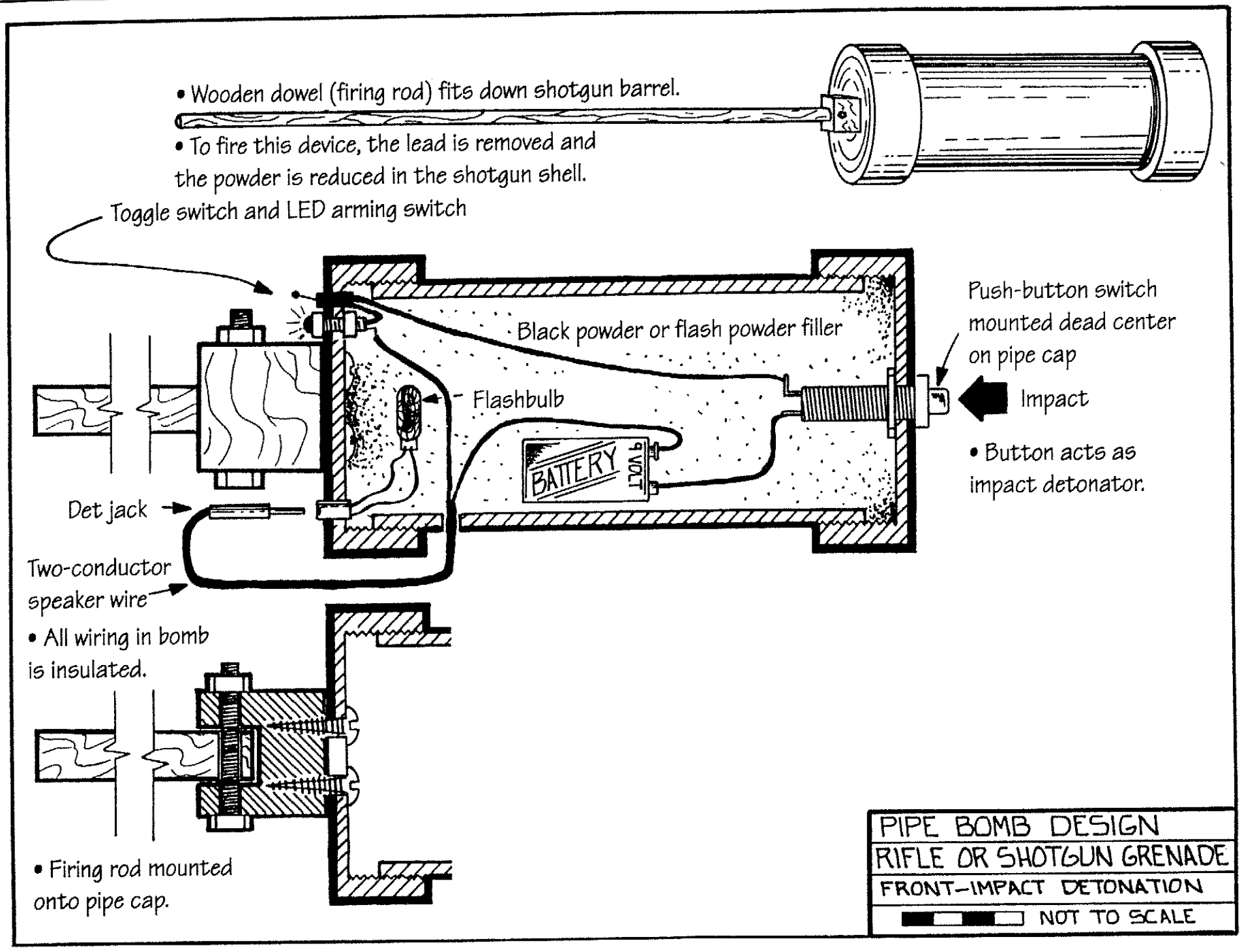
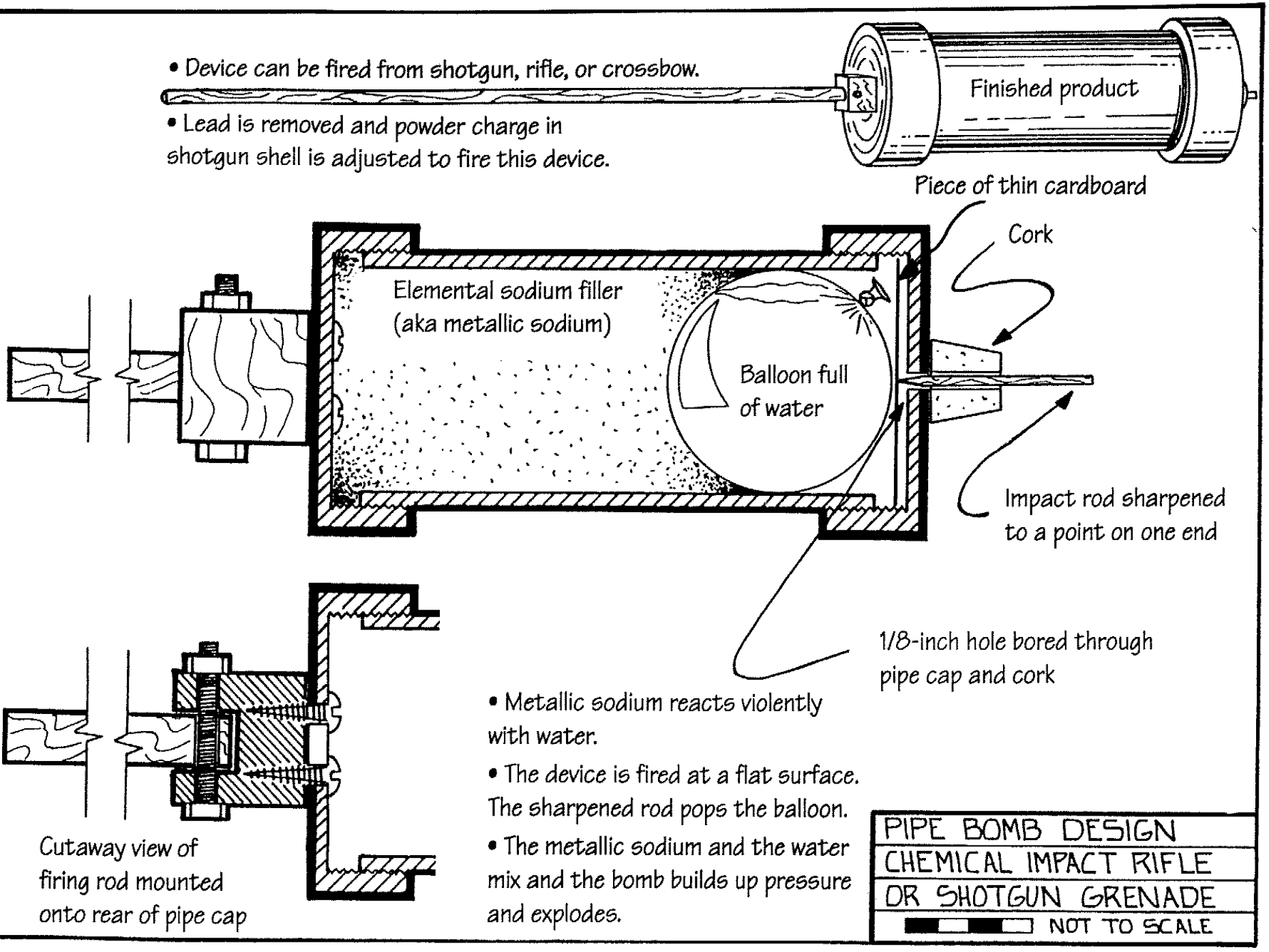
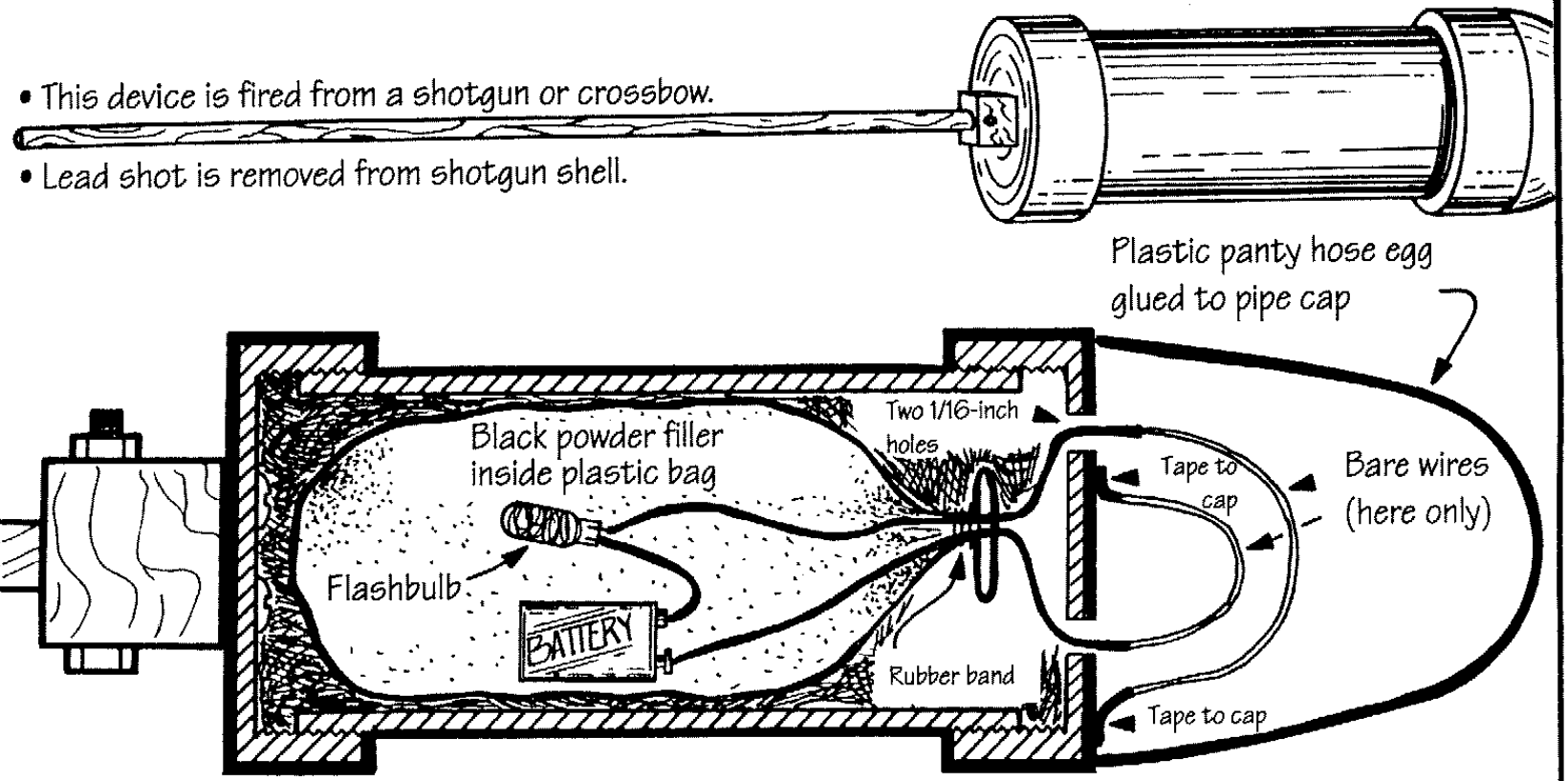


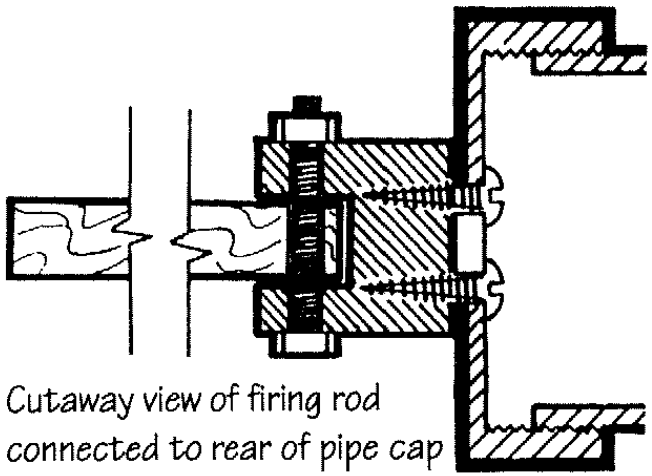


FOR ACADEMIC STUDY ONLY

FOR ACADEMIC STUDY ONLY

- This device is fired from a shotgun or crossbow.
- Lead shot is removed from shotgun shell.



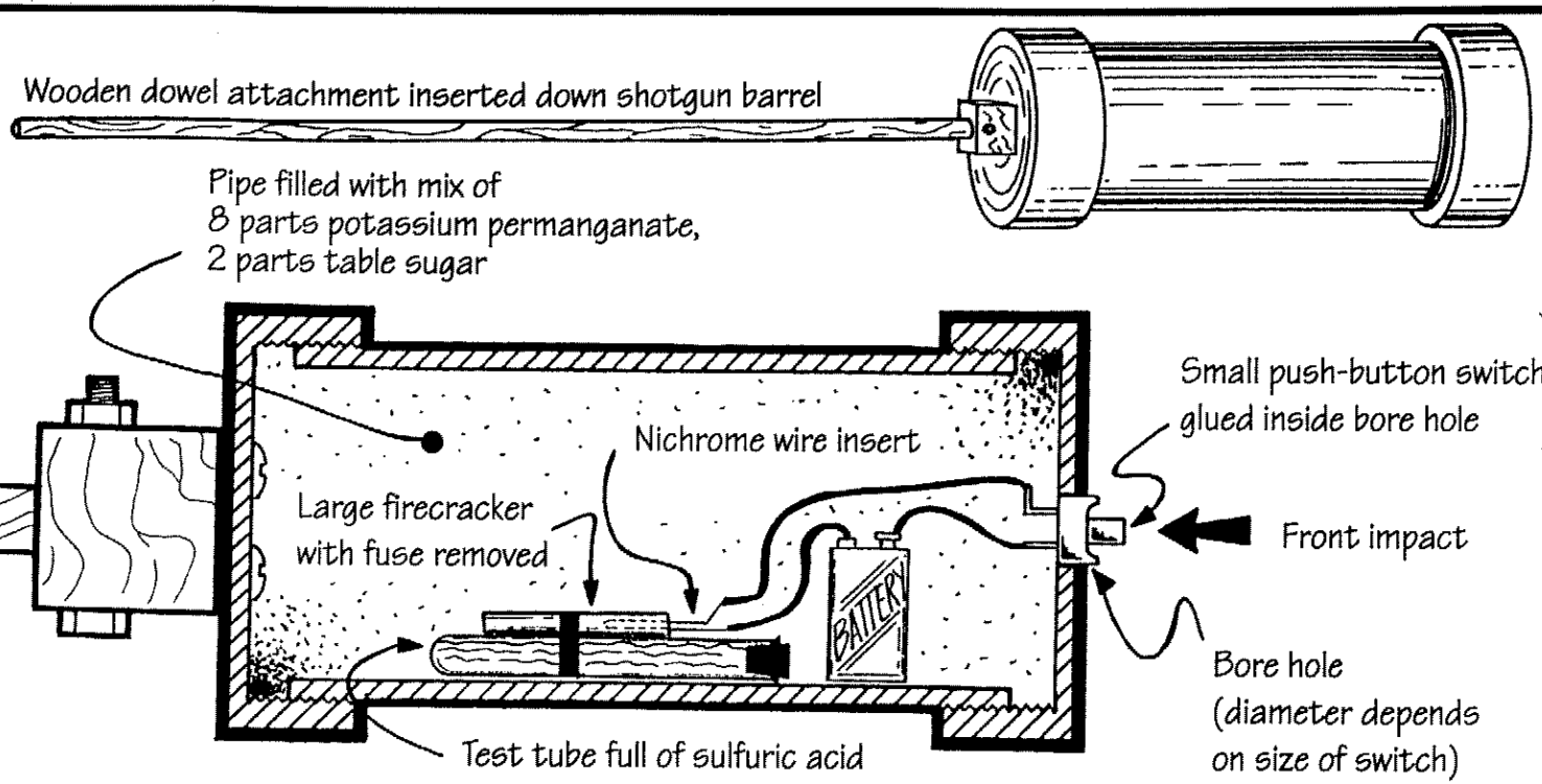


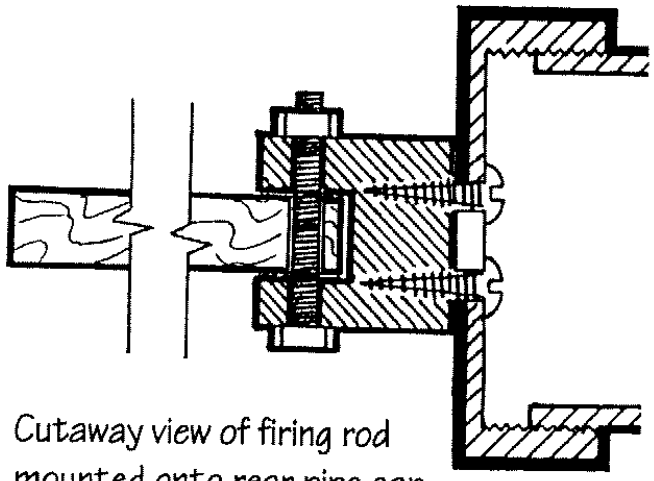
Cutaway view of firing rod connected to rear of pipe cap

HOW DEVICE IS USED

- Device is fired at hard surface.
- Upon impact, plastic egg is crushed and the bare wires mash together.
- This action closes the electrical circuit.
- The flashbulb fires and ignites the black powder.
- The device explodes.

PIPE BOMB DESIGN
RIFLE OR SHOTGUN GRENADE
FRONT IMPACT WEAPON
NOT TO SCALE





Cutaway view of firing rod
mounted onto rear pipe cap

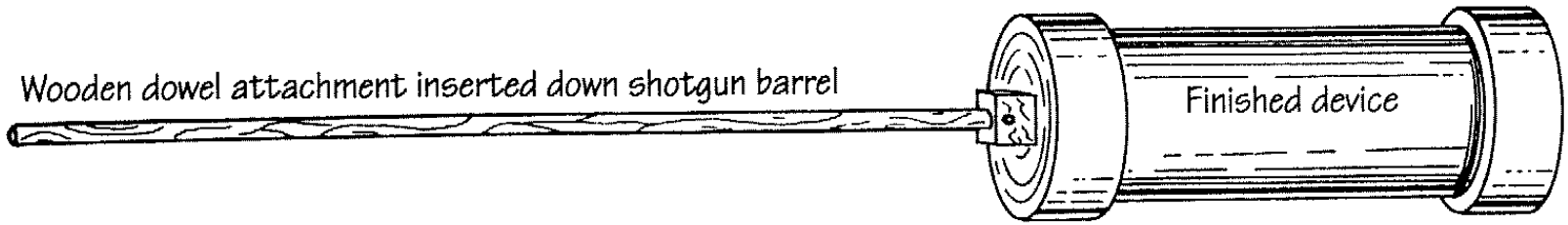
HOW DEVICE WORKS

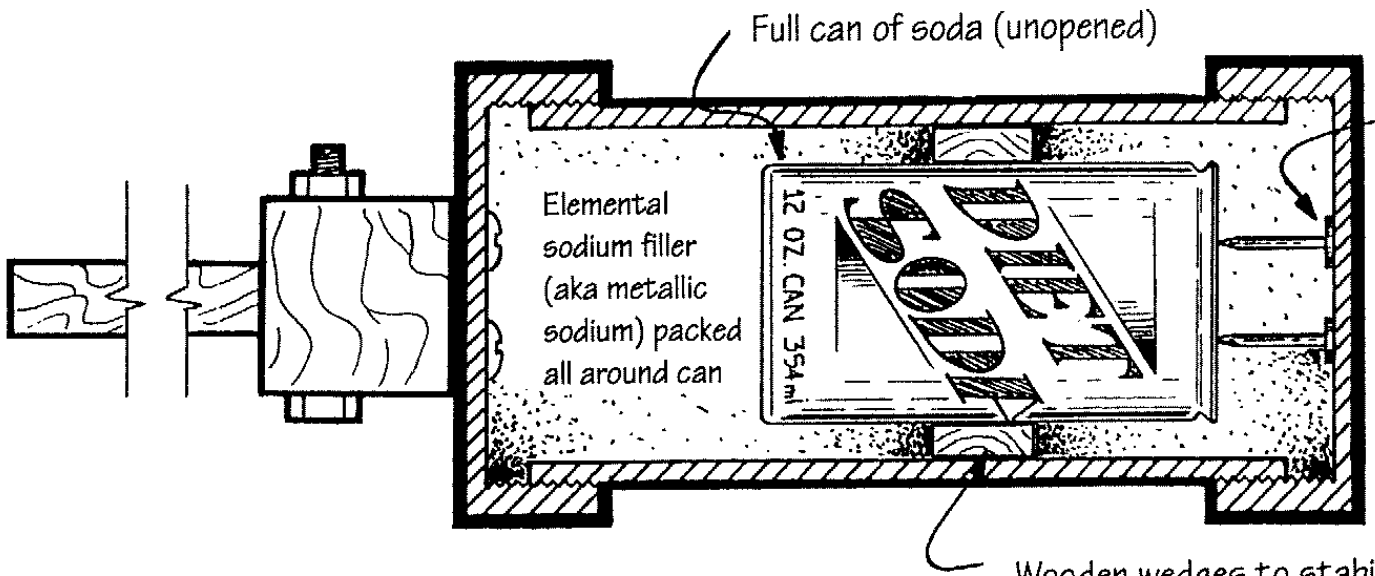
- Device shot through target's window.
- Impact of front switch hitting glass depresses button and completes the electrical circuit.
- Nichrome wire insert detonates firecracker and breaks test tube of sulfuric acid.
- When the sulfuric acid and the potassium permanganate and sugar mix, a violent chemical reaction takes place and the bomb explodes.

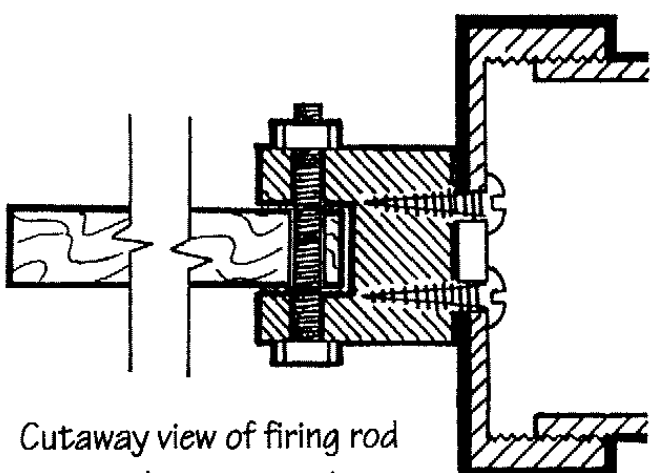
PIPE BOMB DESIGN
CHEMICAL REACTION RIFLE
OR SHOTGUN GRENADE
NOT TO SCALE

FOR ACADEMIC STUDY ONLY

FOR ACADEMIC STUDY ONLY







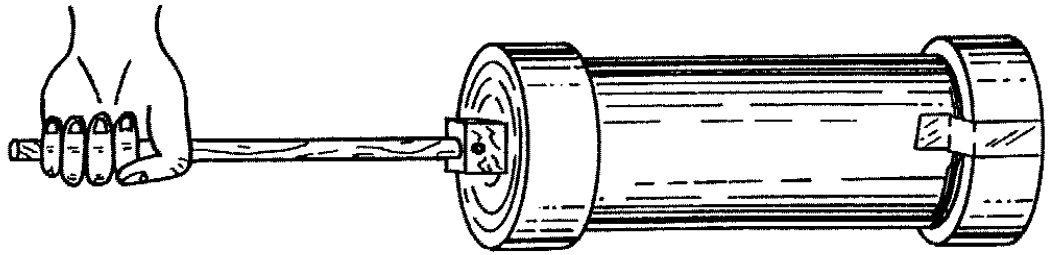
Cutaway view of firing rod mounted onto rear pipe cap

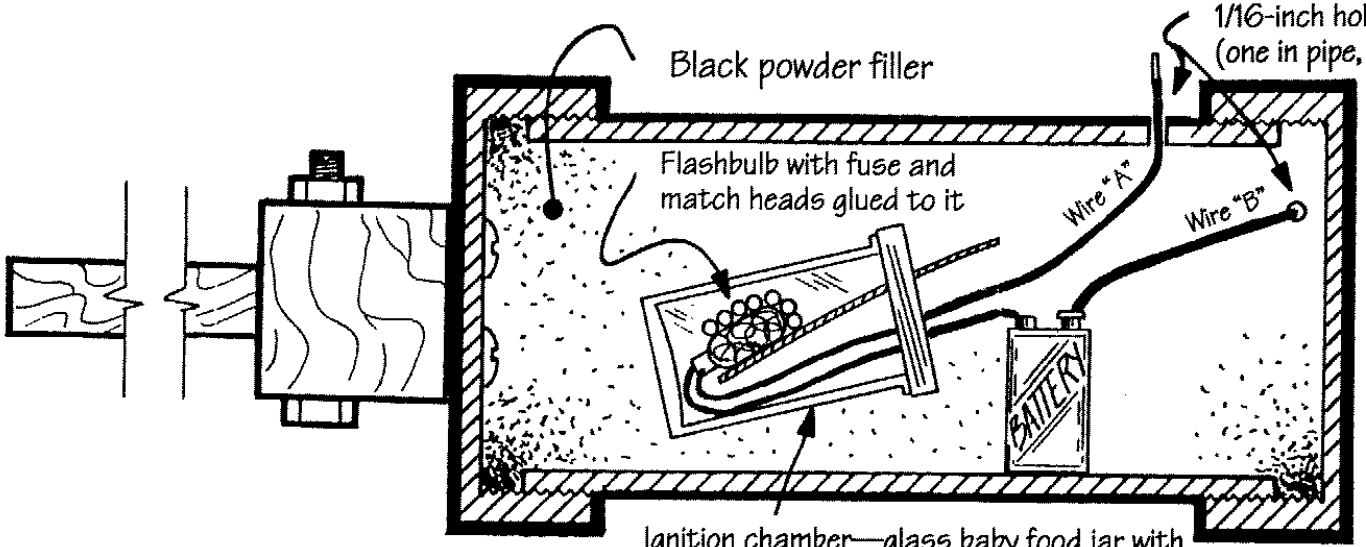
HOW THIS DEVICE IS USED

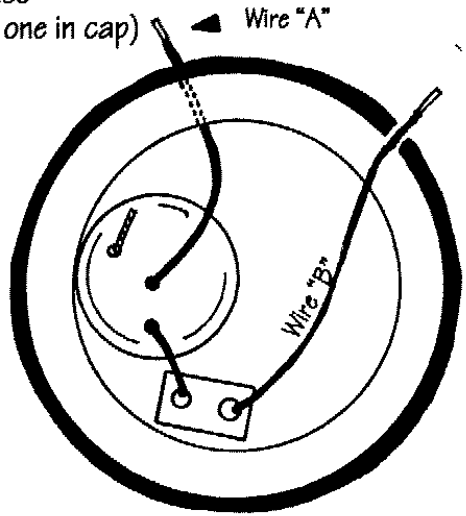
- Device is fired at solid flat object.
- Upon impact, can of soda is thrown forward and the nails strike and rupture the can.
- The liquid contents of the can leak out and come in contact with the elemental sodium.
- A violent chemical reaction takes place and the bomb explodes.

PIPE BOMB DESIGN
SODA CAN CHEMICAL IMPACT
RIFLE OR SHOTGUN GRENADE
NOT TO SCALE

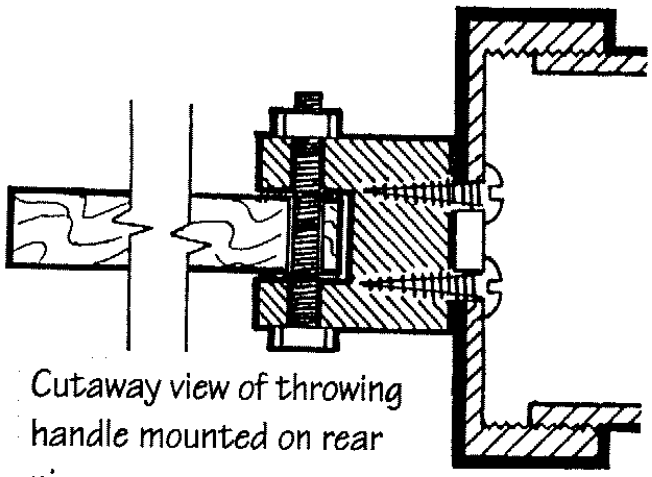
- A pipe bomb can be thrown a much greater distance with a handle attached to it.
- This is a slightly updated version of the old German World War II "potato masher" grenade.







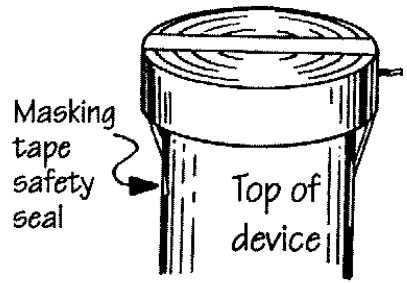
Top cutaway view



Cutaway view of throwing handle mounted on rear pipe cap

HOW DEVICE IS USED

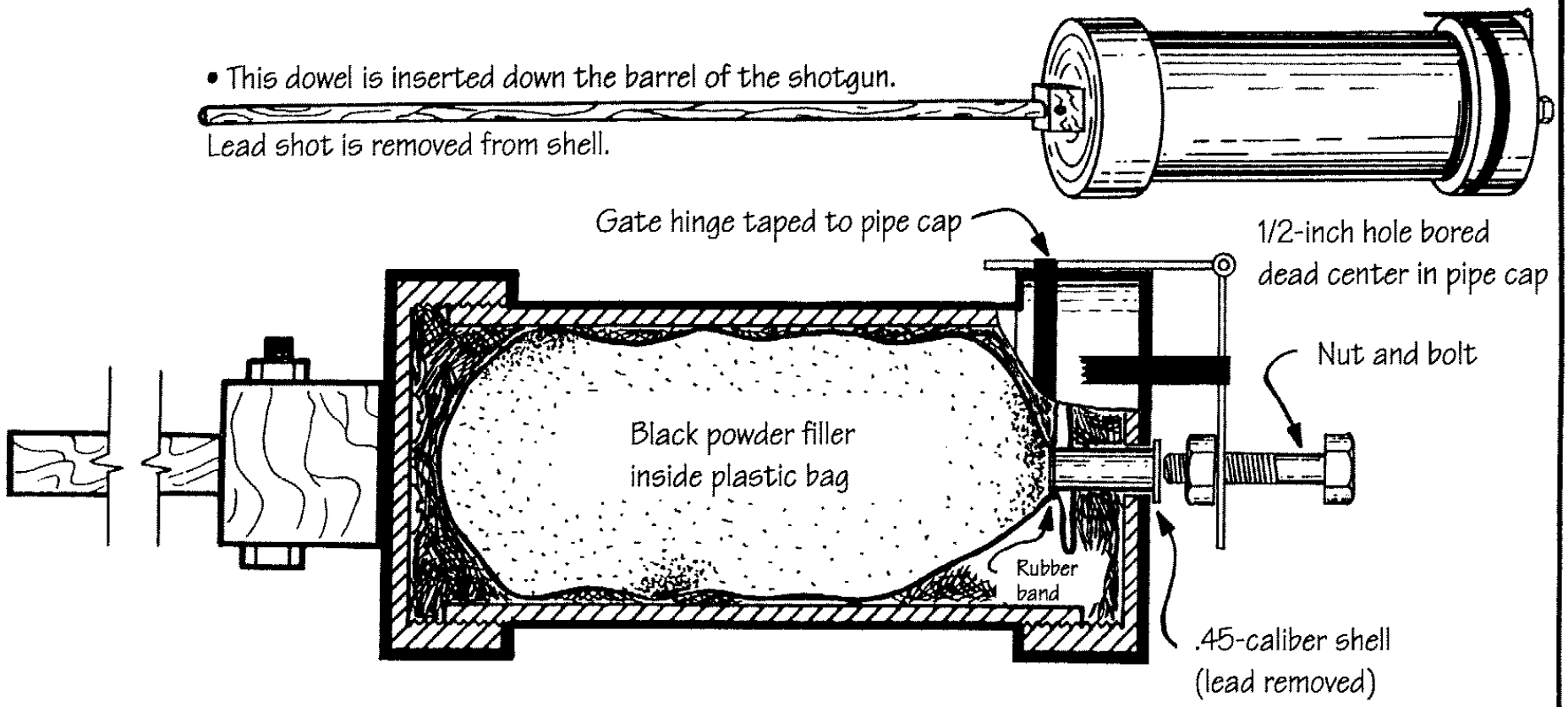
- Upper pipe cap is twisted to break masking tape seal.
- This action brings wires "A" and "B" together. They only need to touch for a second.
- As those wires touch, the flashbulb will fire and ignite the match heads and the fuse.
- The device is thrown by the handle at a distant target.
- Once the fuse burns out of the jar and past the lid, it will ignite the black powder and the bomb will explode.
- Approx. 3-5 second delay after cap twist.

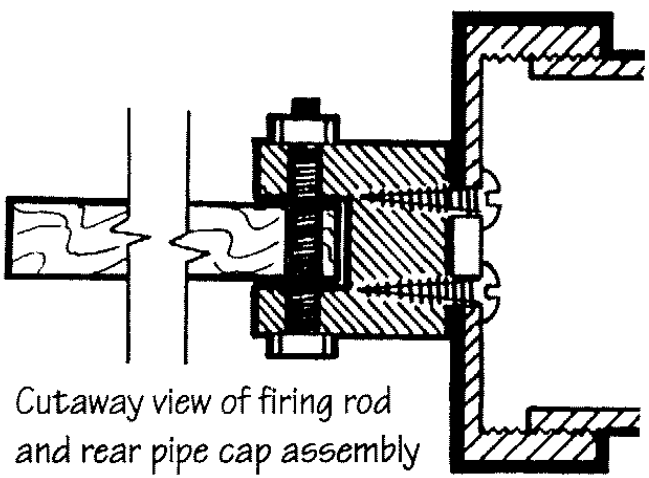


PIPE BOMB DESIGN
IMPROVISED WWII GERMAN GRENADE
INGENIOUS CONSTRUCTION METHOD
NOT TO SCALE

FOR ACADEMIC STUDY ONLY

FOR ACADEMIC STUDY ONLY





Cutaway view of firing rod and rear pipe cap assembly

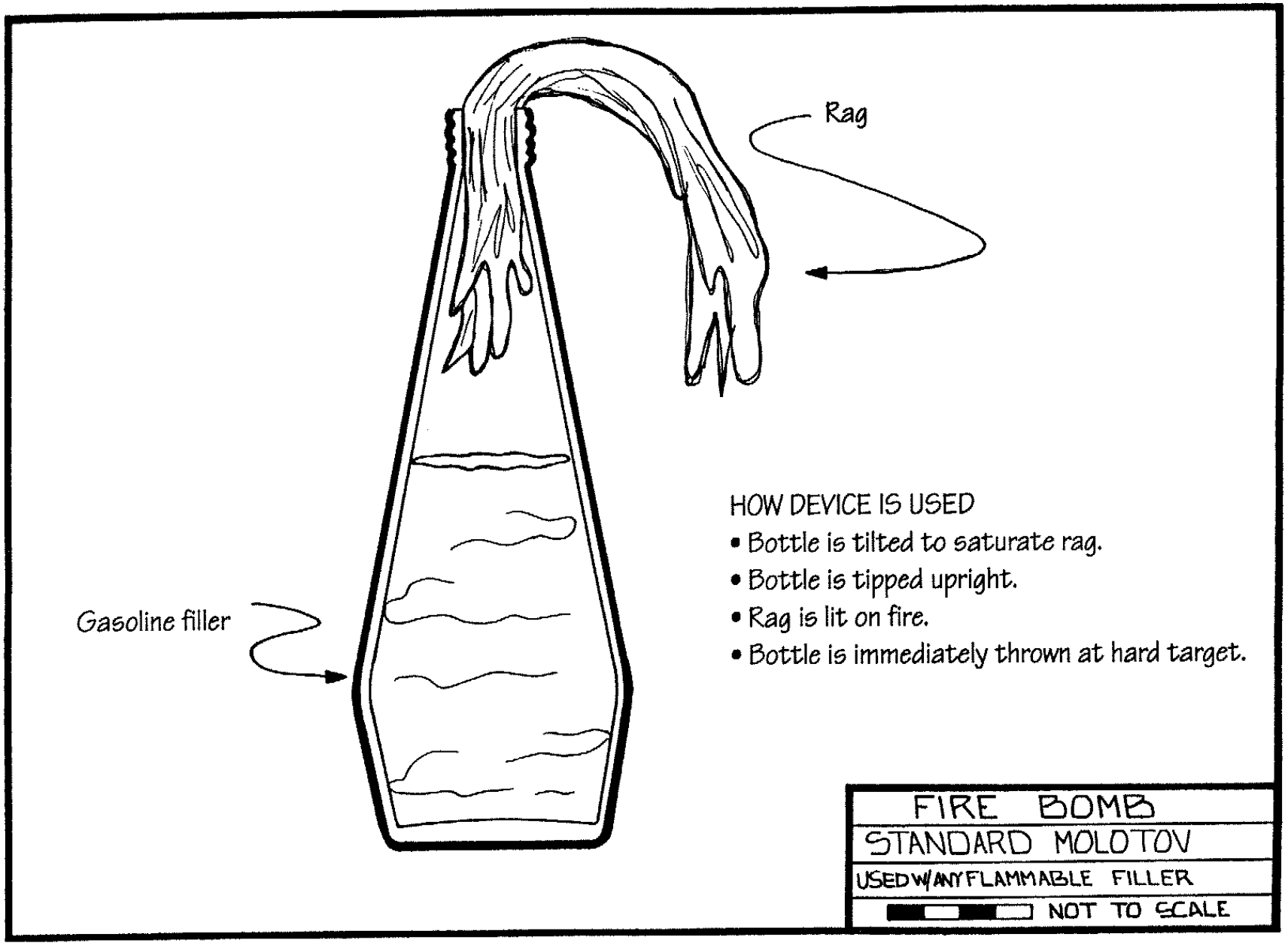
HOW THIS DEVICE WORKS

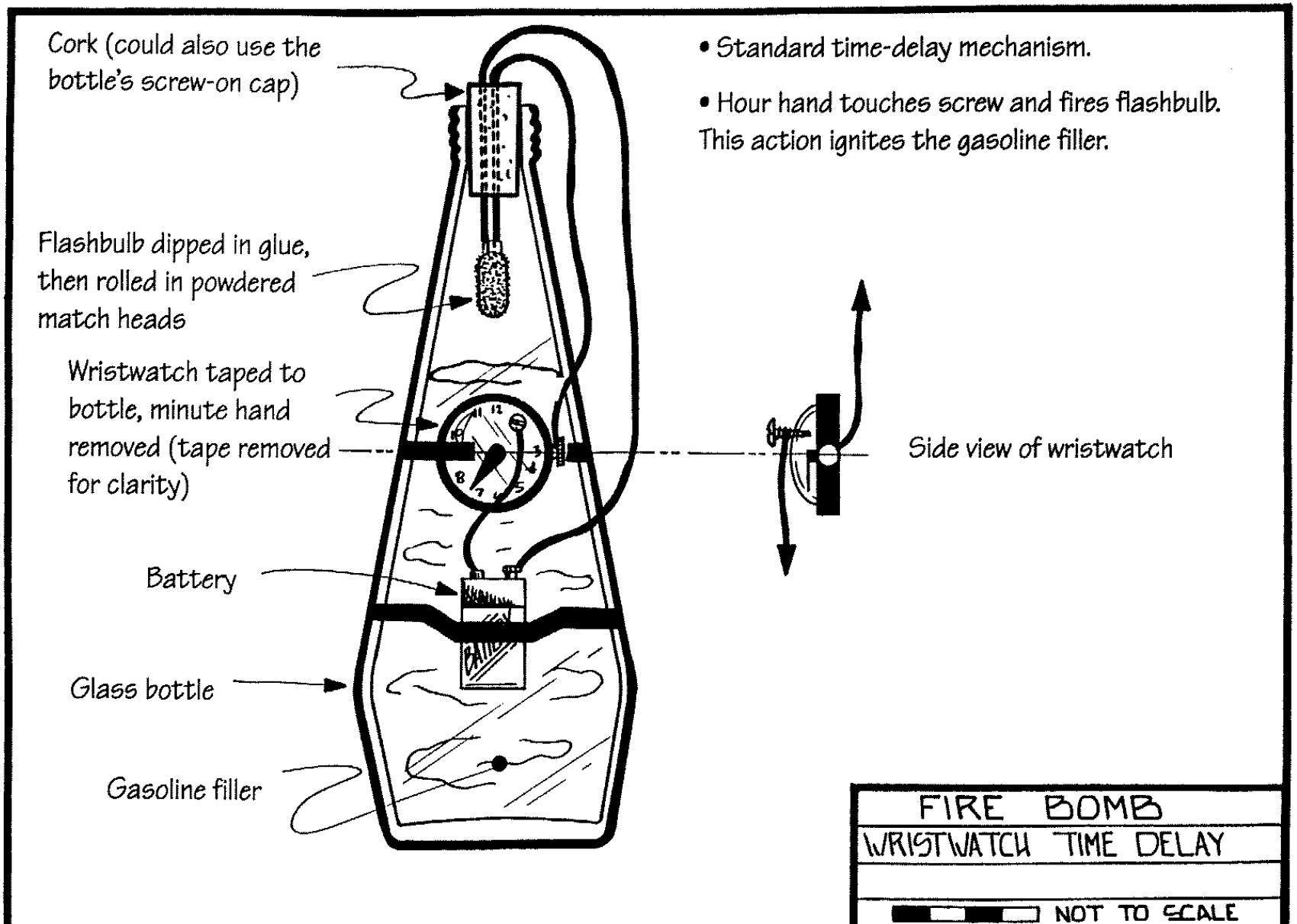
- Device is shot at hard target.
- Bolt strikes primer on .45 shell and fires it into the bag of black powder.
- Powder ignites and detonates device.

PIPE BOMB DESIGN
RIFLE OR SHOTGUN GRENADE
FRONT IMPACT DETONATION
NOT TO SCALE

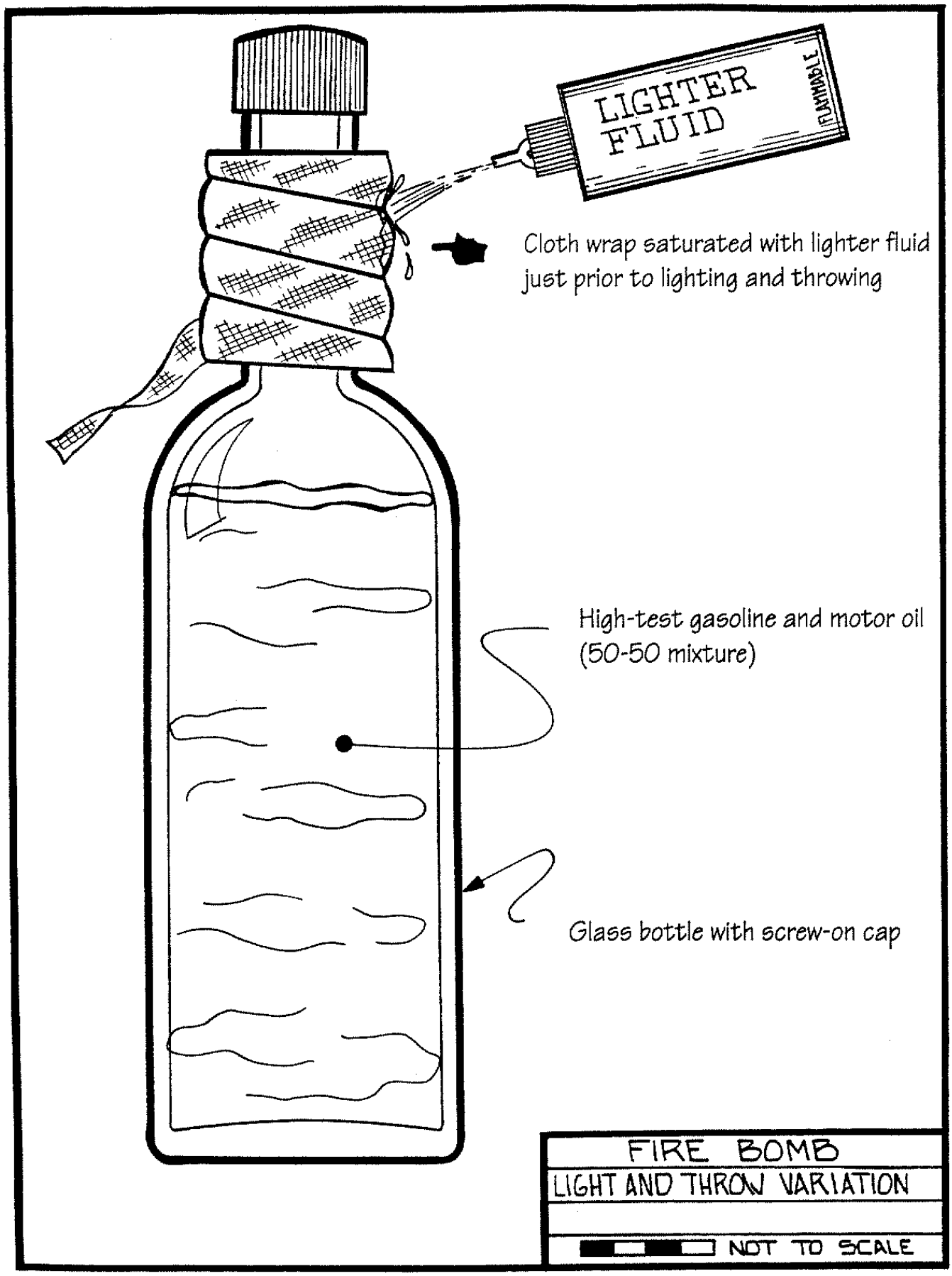
FIRE BOMB DESIGNS

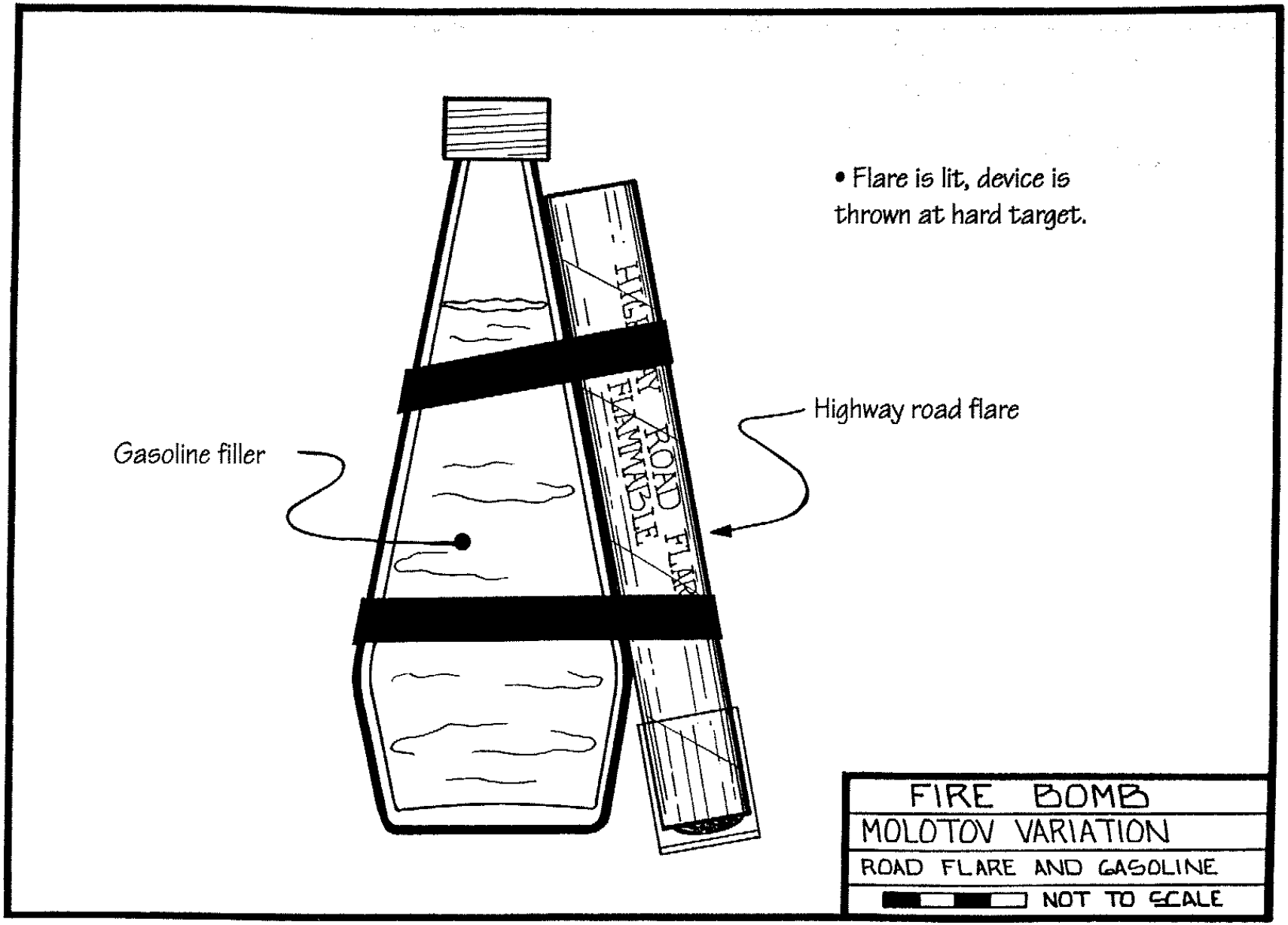
FOR ACADEMIC STUDY ONLY





FOR ACADEMIC STUDY ONLY


LIGHTER FLUID
FLAMMABLE
Cloth wrap saturated with lighter fluid just prior to lighting and throwing
High-test gasoline and motor oil (50-50 mixture)
Glass bottle with screw-on cap
FIRE BOMB
LIGHT AND THROW VARIATION
NOT TO SCALE



FOR ACADEMIC STUDY ONLY

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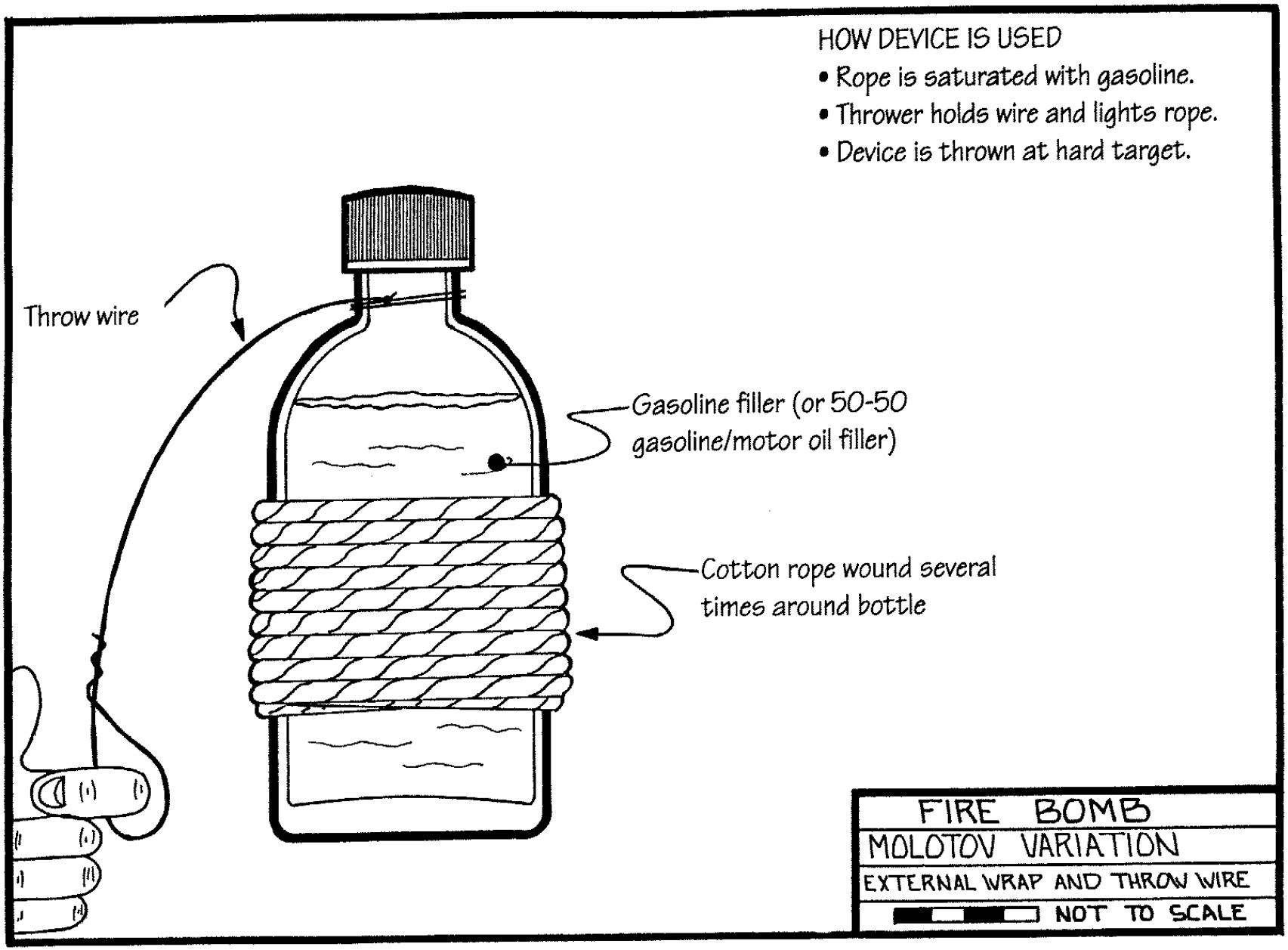

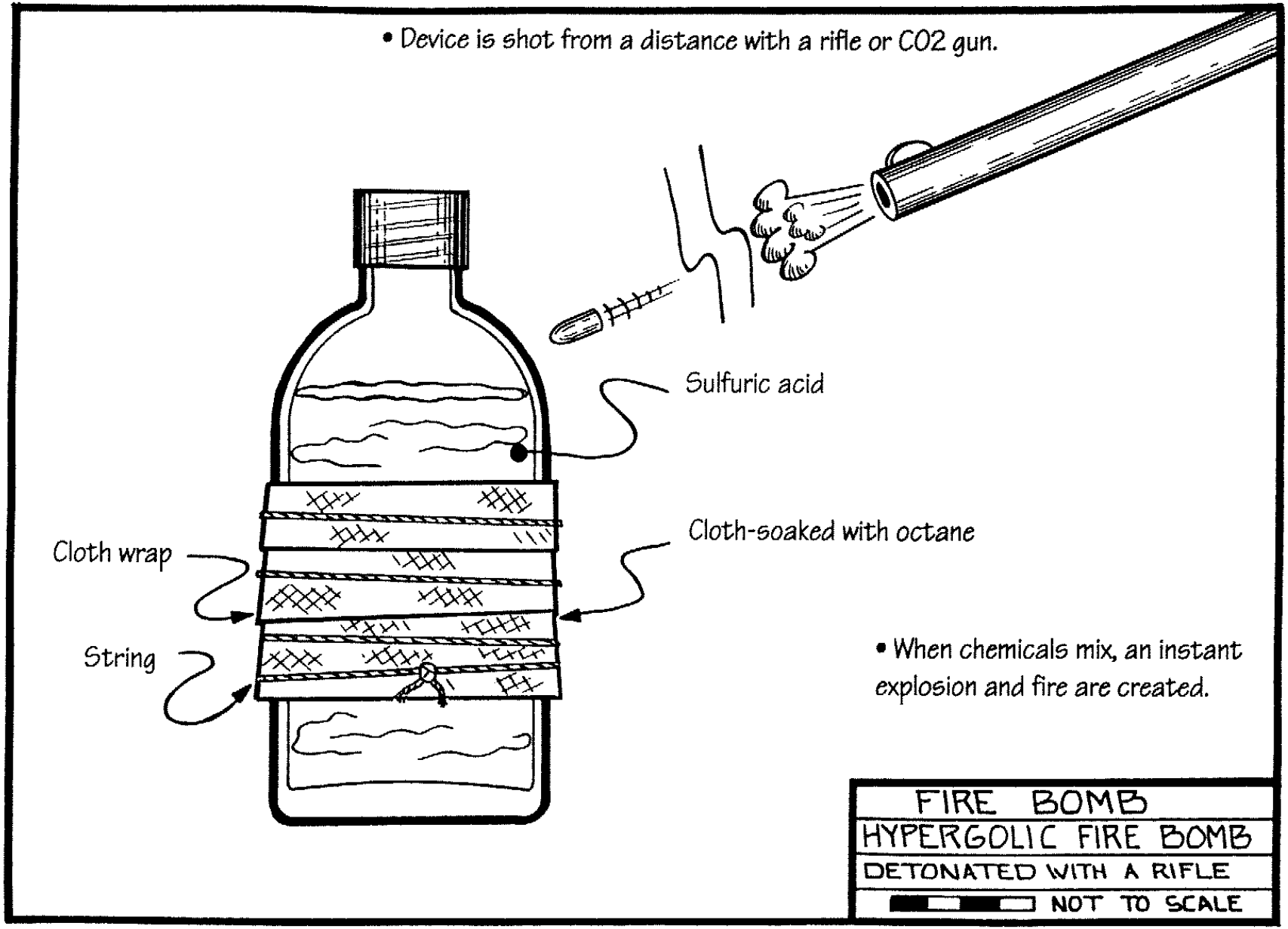

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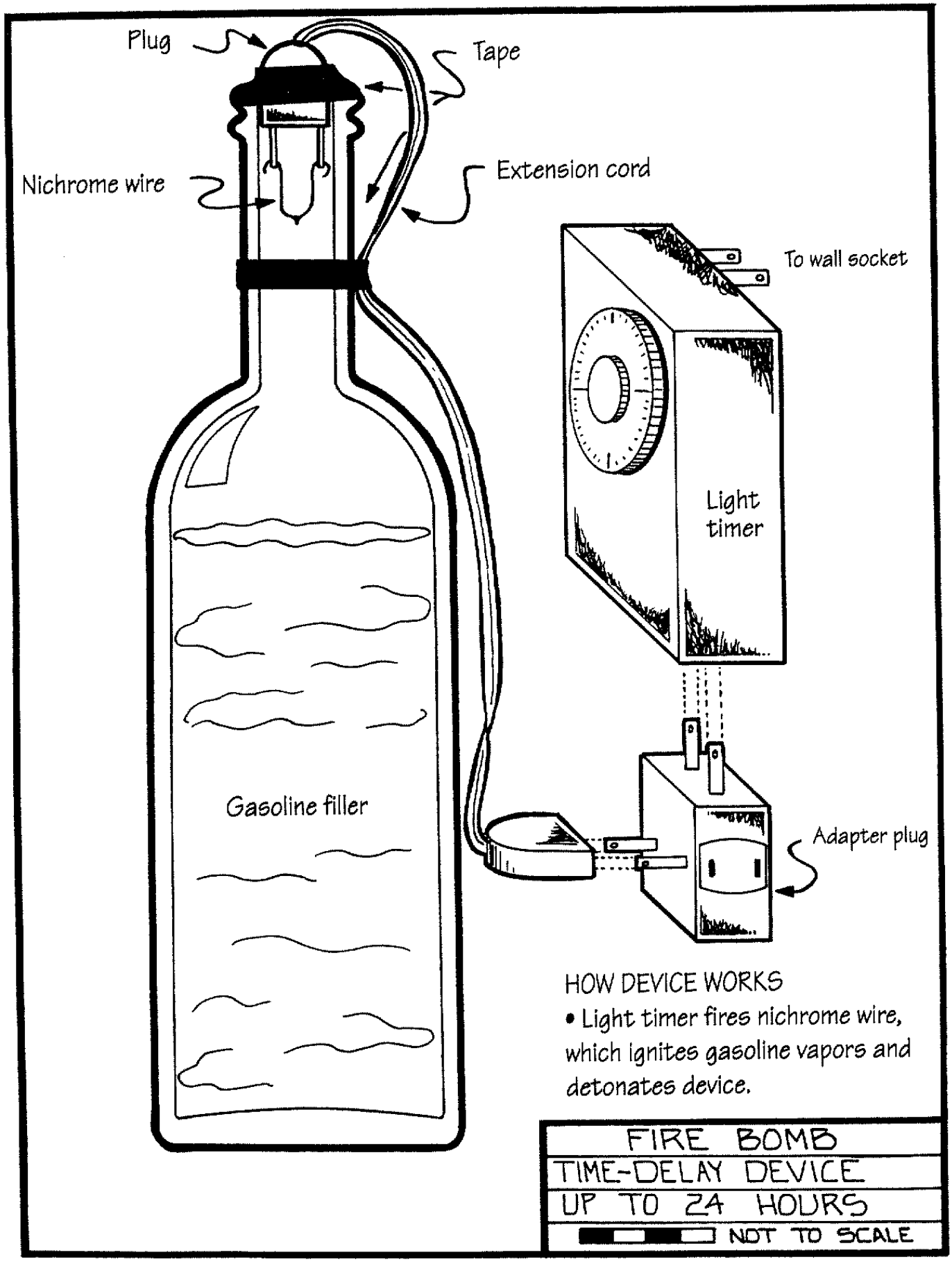
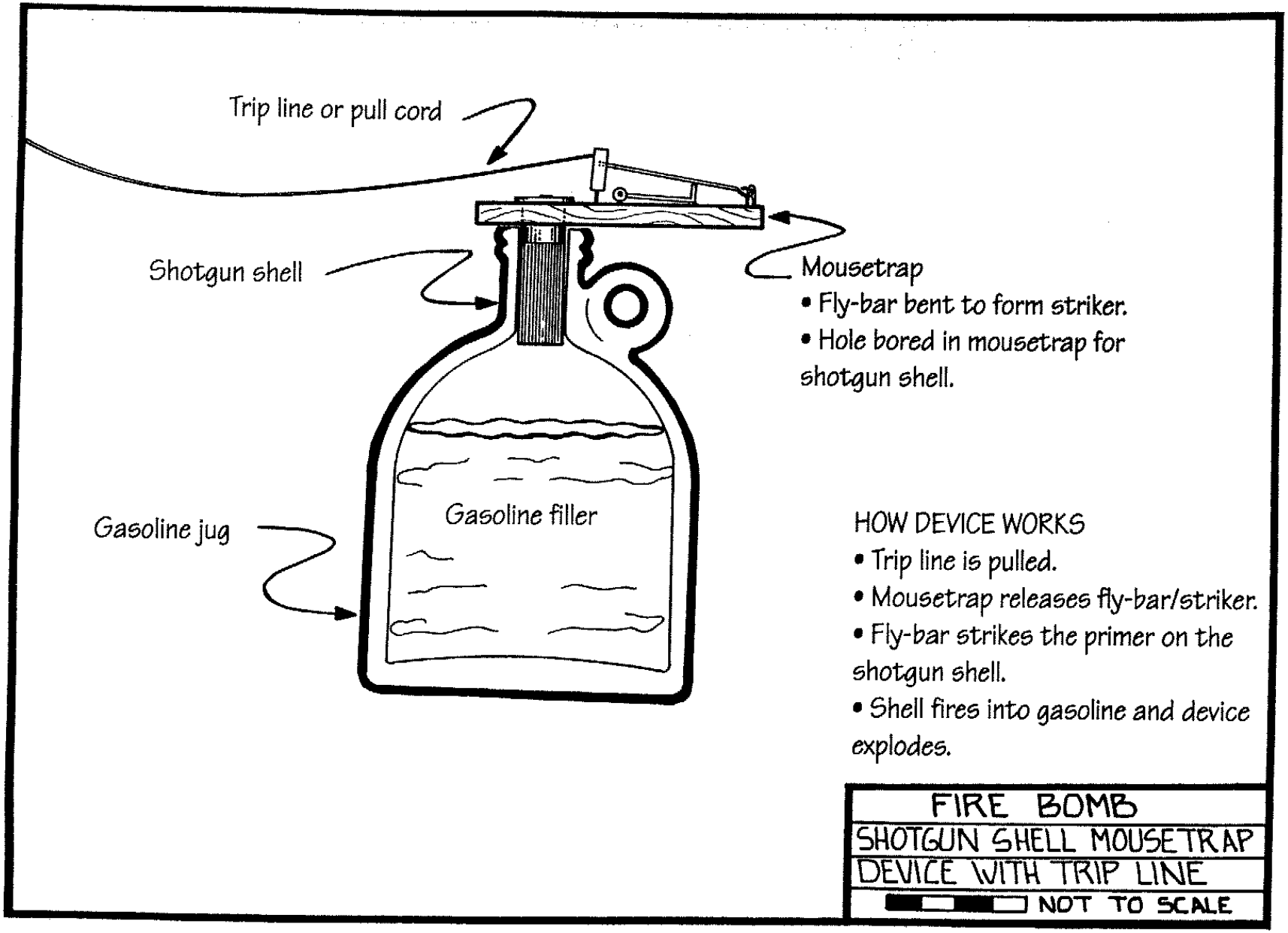


FOR ACADEMIC STUDY ONLY



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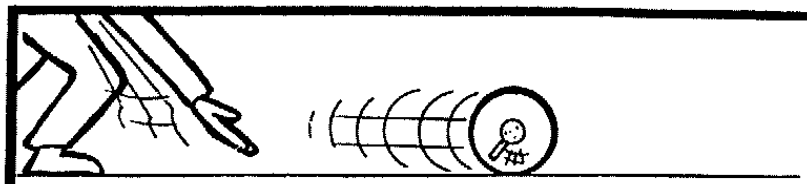
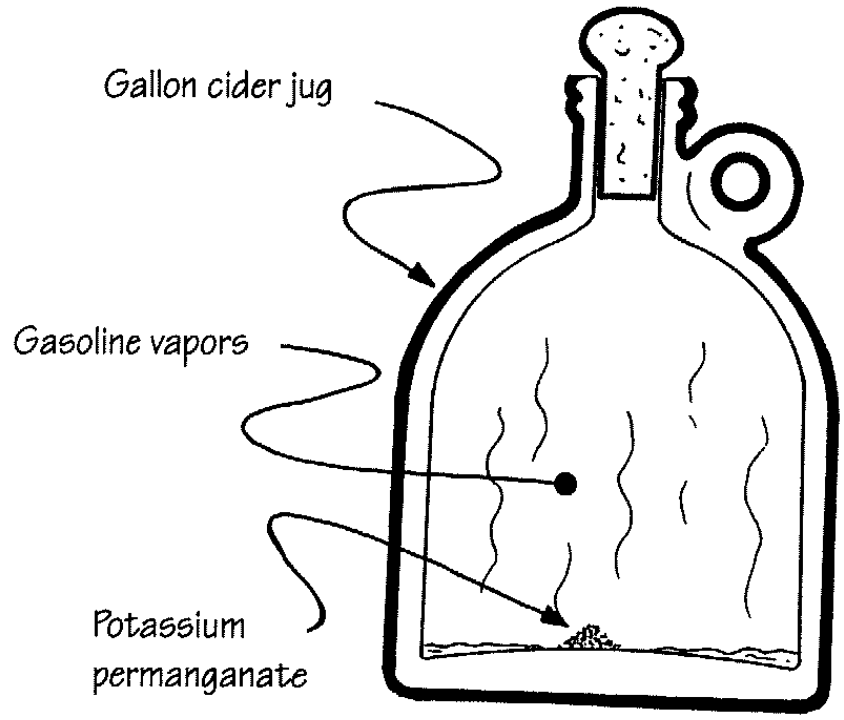


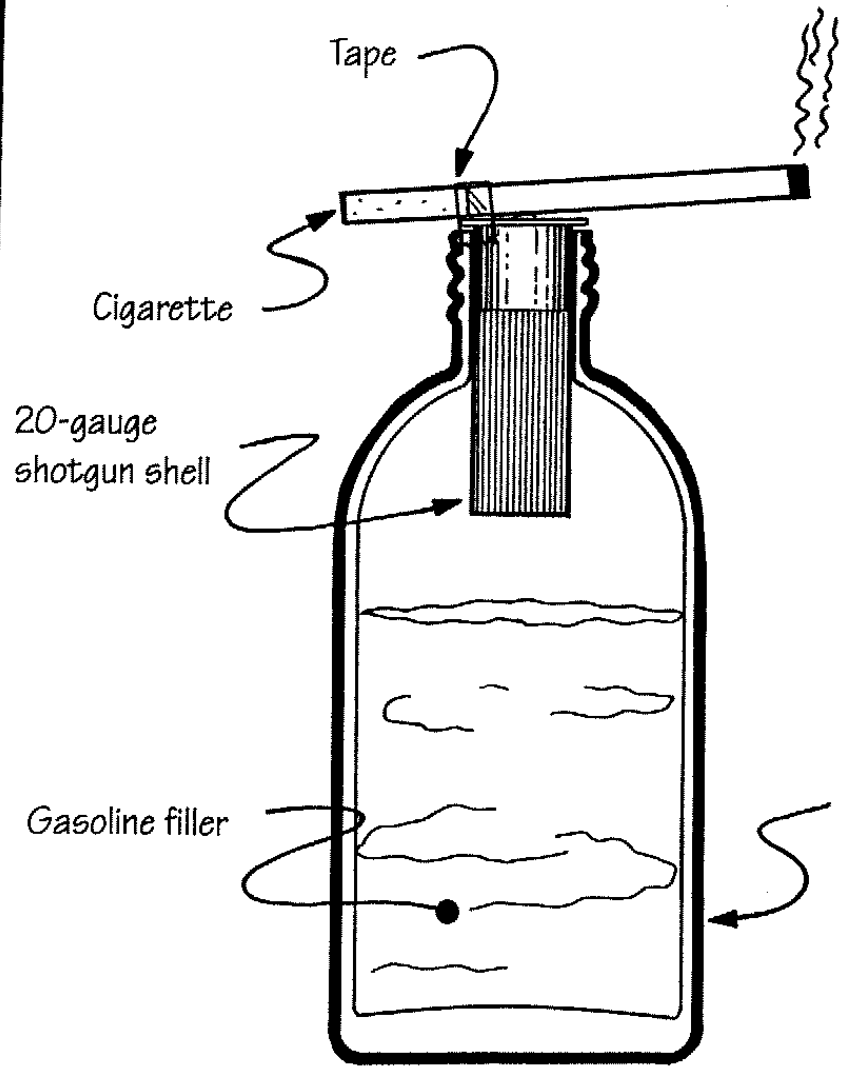


HOW DEVICE IS USED

- Jug is filled with gasoline, gasoline is sloshed around to coat walls, then poured out.
- A pinch of potassium permanganate is tossed in immediately and the jug is closed with a cork.
- Jug explodes when it breaks against wall.

FIRE BOMB/
GENERAL EXPLOSIVE DEVICE

NOT TO SCALE



HOW DEVICE IS USED

- Cigarette is taped to the top of the shotgun shell.
- Lit cigarette burns down.
- Heat from cigarette fires primer on shotgun shell.
- Shell fires into gasoline and device explodes.

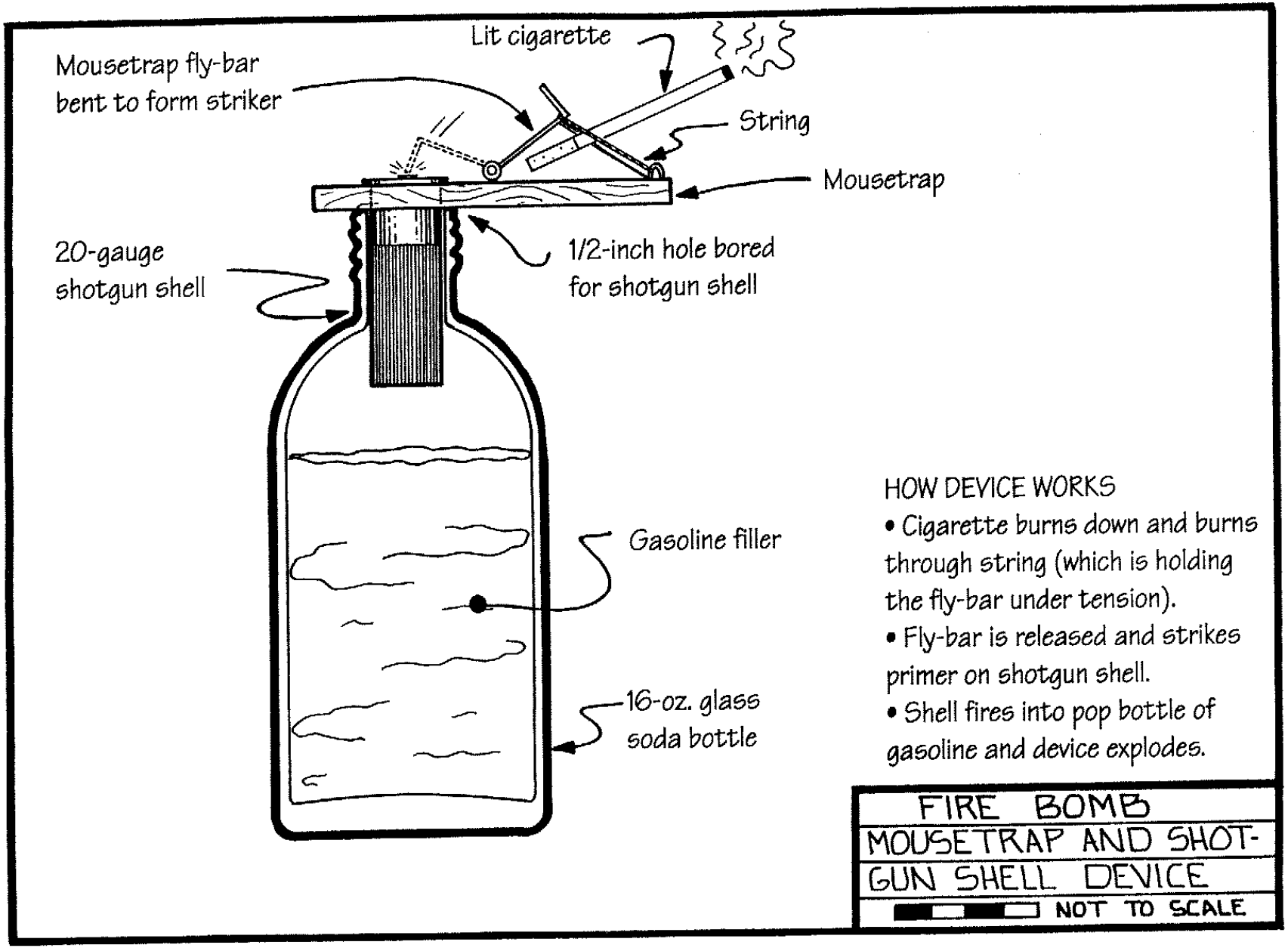
CIGARETTE DELAYS (from tip to butt)

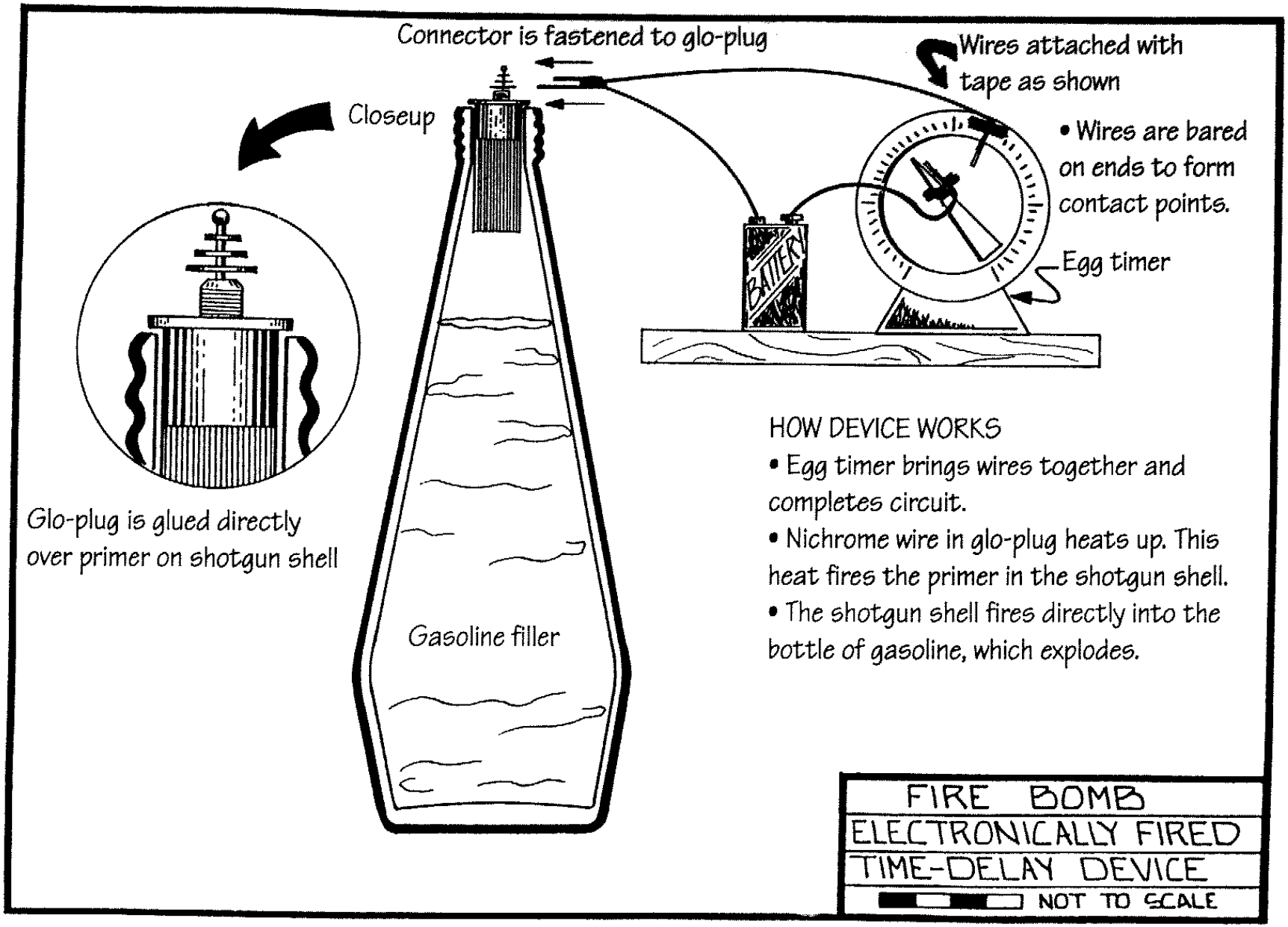
- Standard: 3 1/2 to 5 minutes.
- 100mm: 6 to 8 minutes.
- 120mm: 5 to 7 minutes.

FIRE BOMB
CIGARETTE DELAY-HEAT
IGNITION DEVICE
NOT TO SCALE

FOR ACADEMIC STUDY ONLY

FOR ACADEMIC STUDY ONLY





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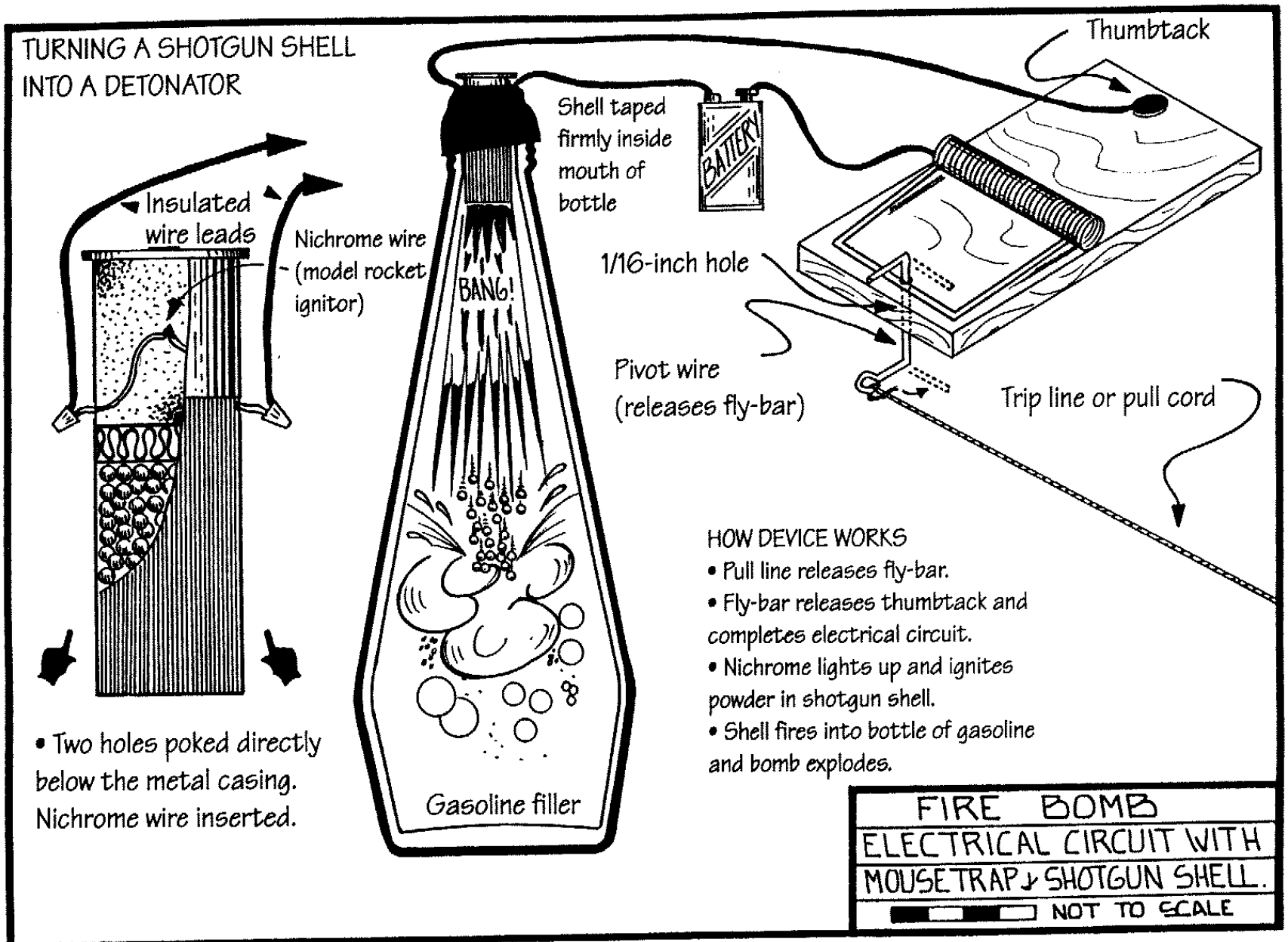

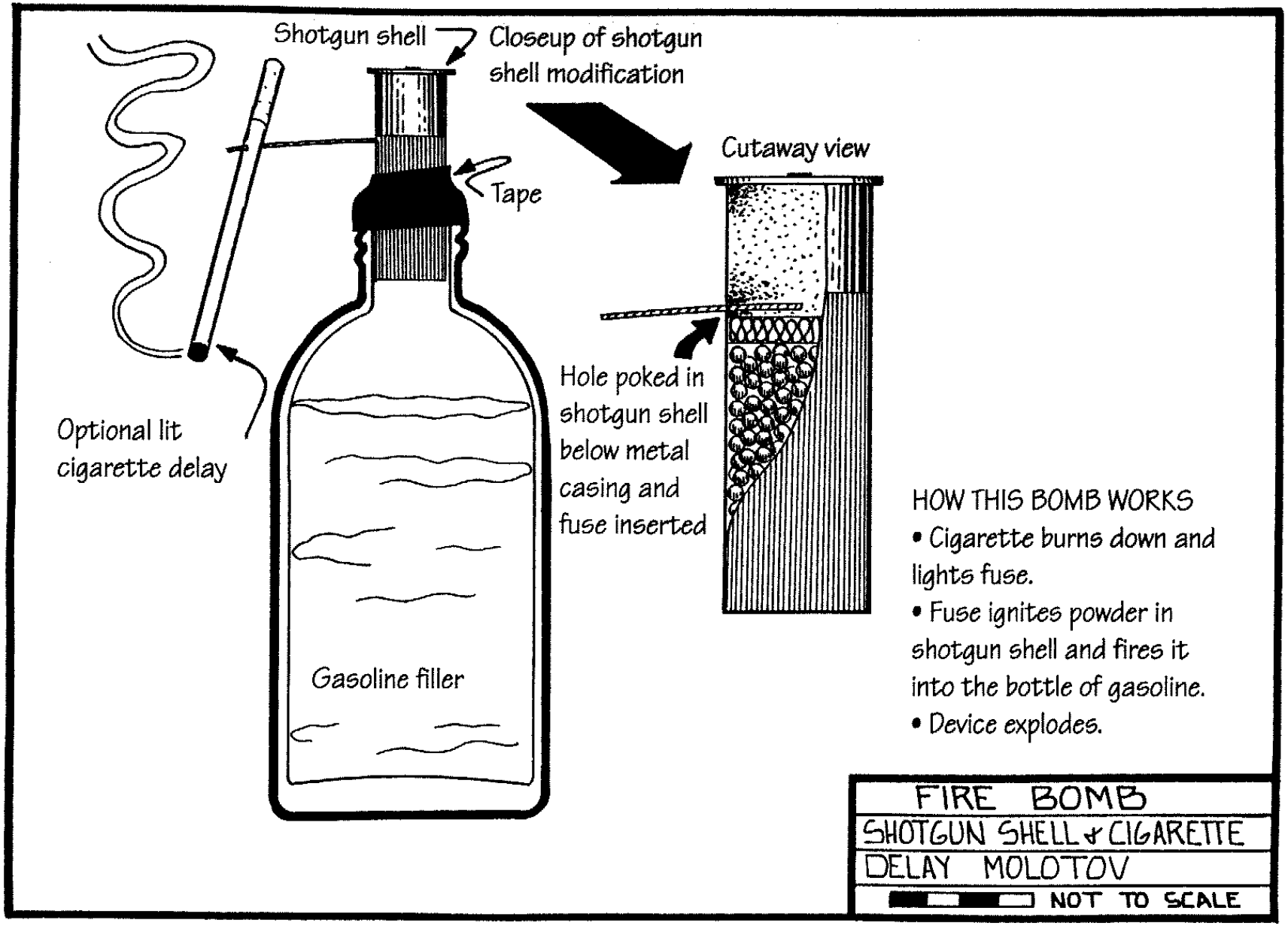

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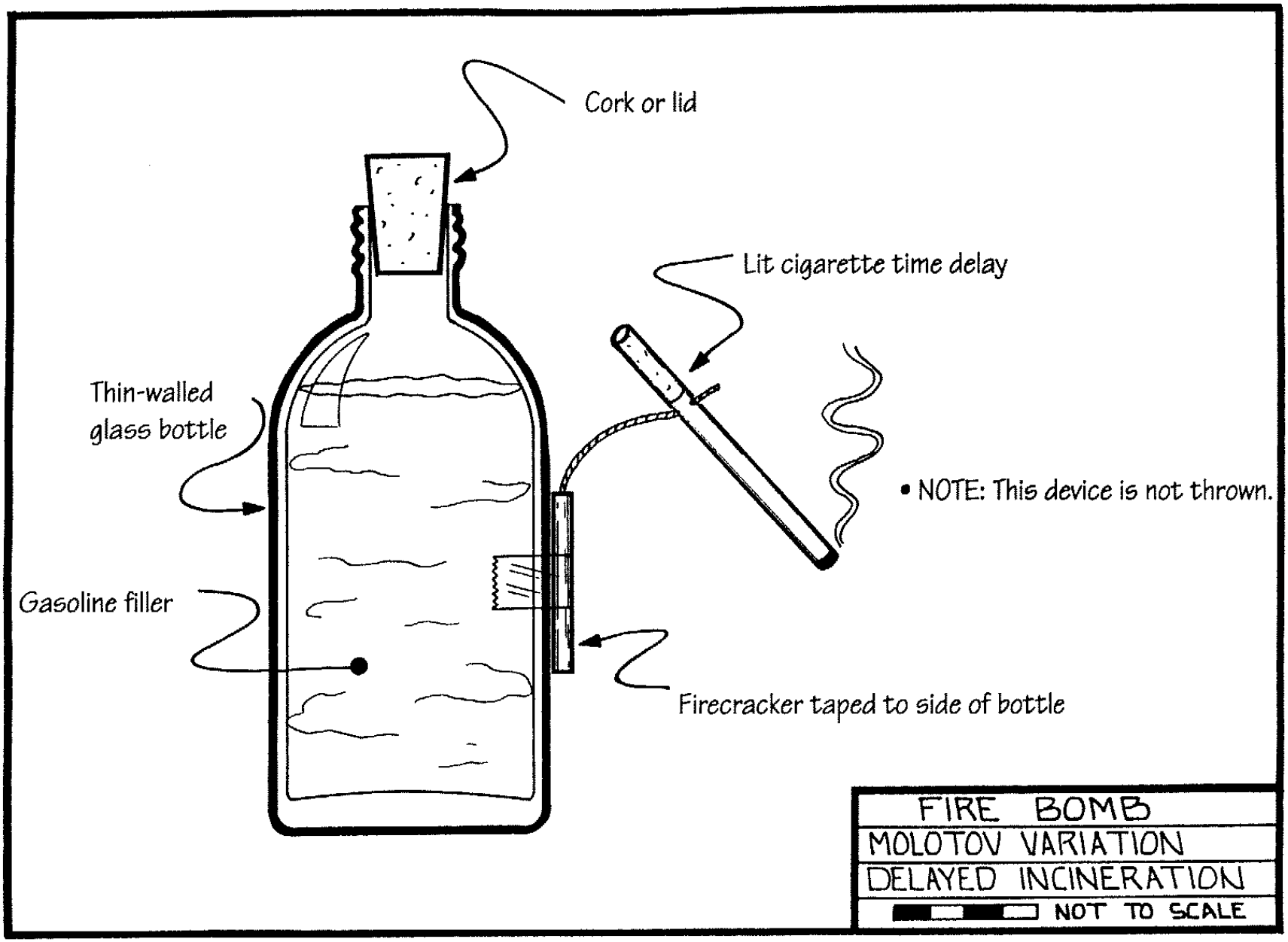

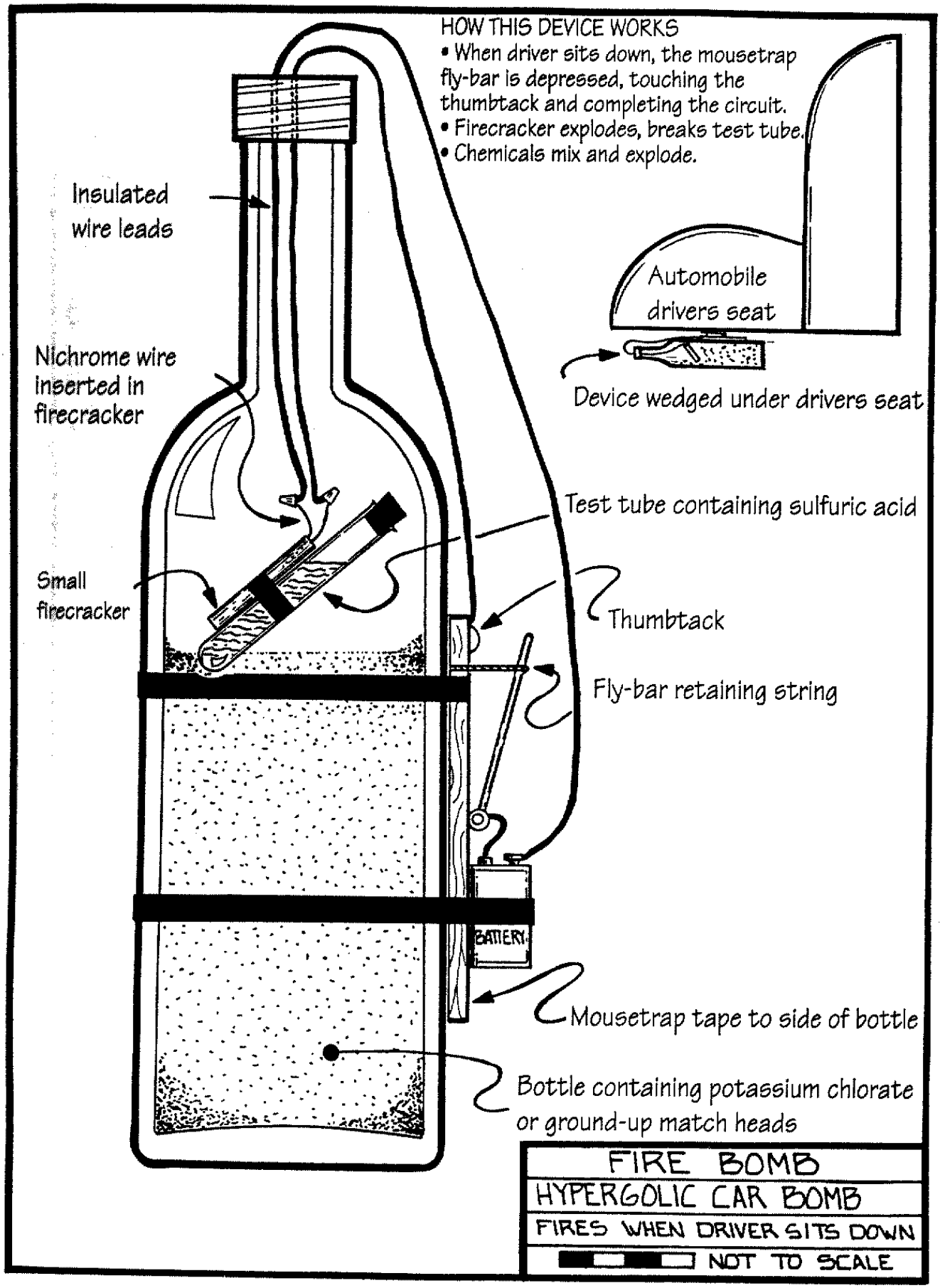

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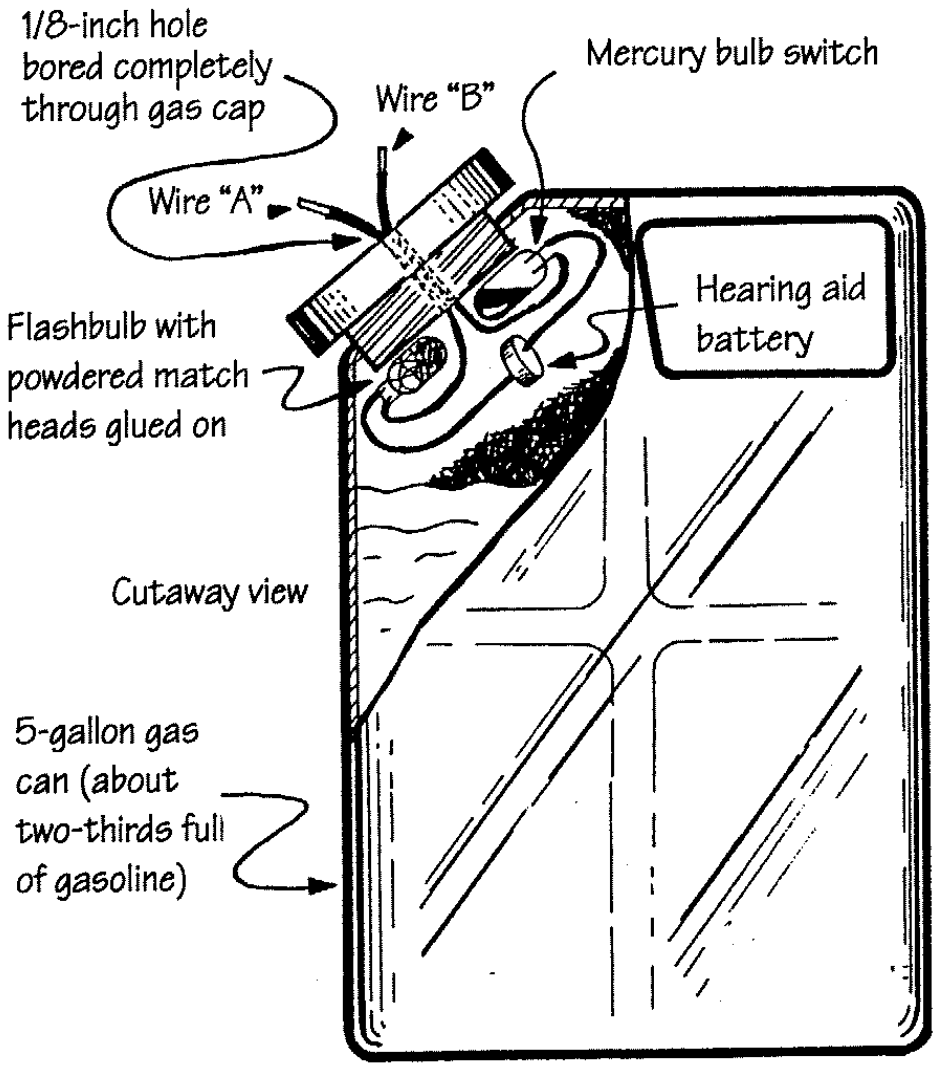
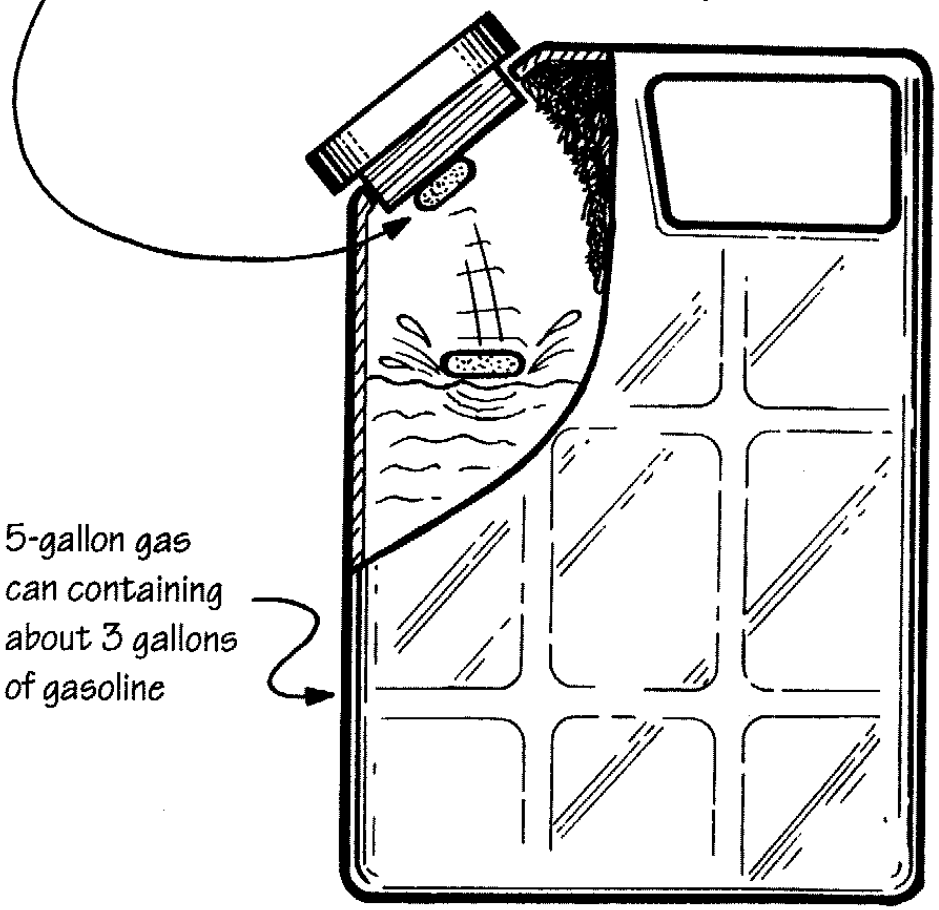
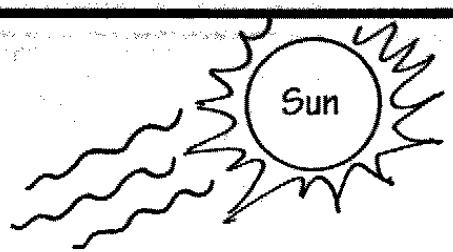


HOW DEVICE IS USED

- Duplicate prepared gas cap is switched with target's gas cap at the sight.
- Prepared gas cap is marked on its exterior so mecury bulb is tilted upright.
- Wires A and B are twisted together and stuffed out of sight down the 1/8-inch hole.
- When the target unscrews the gas cap, the mercury bulb switch is inverted and closes the electrical circuit. This fires the flashbulb, which ignites the gasoline vapors and detonates the gas can.

FIRE BOMB
BOOBY-TRAPPED GAS CAN
WITH FLASHBULB DETONATOR.
NOT TO SCALE





- This device is extremely dangerous to construct.

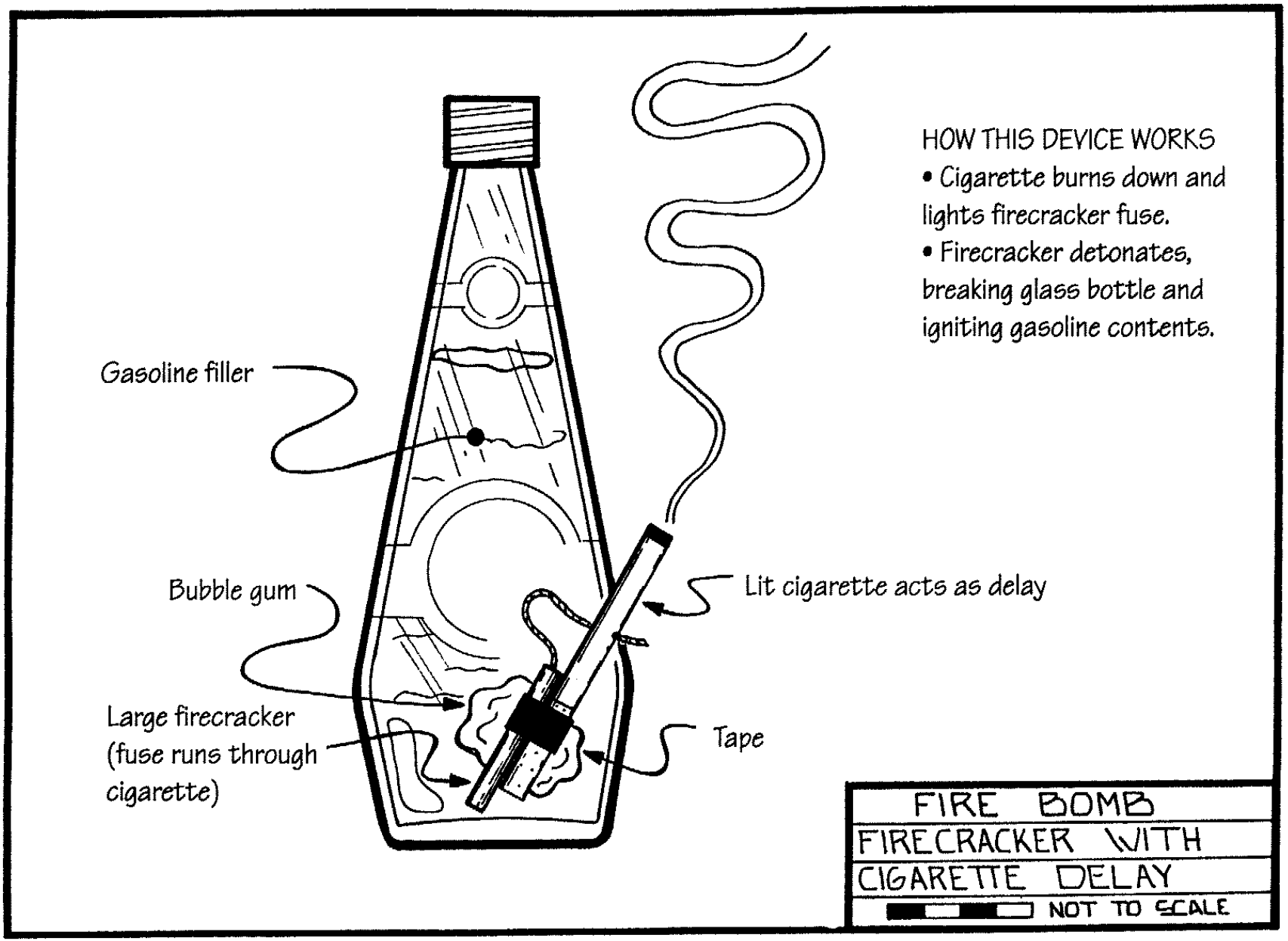
HOW DEVICE IS USED

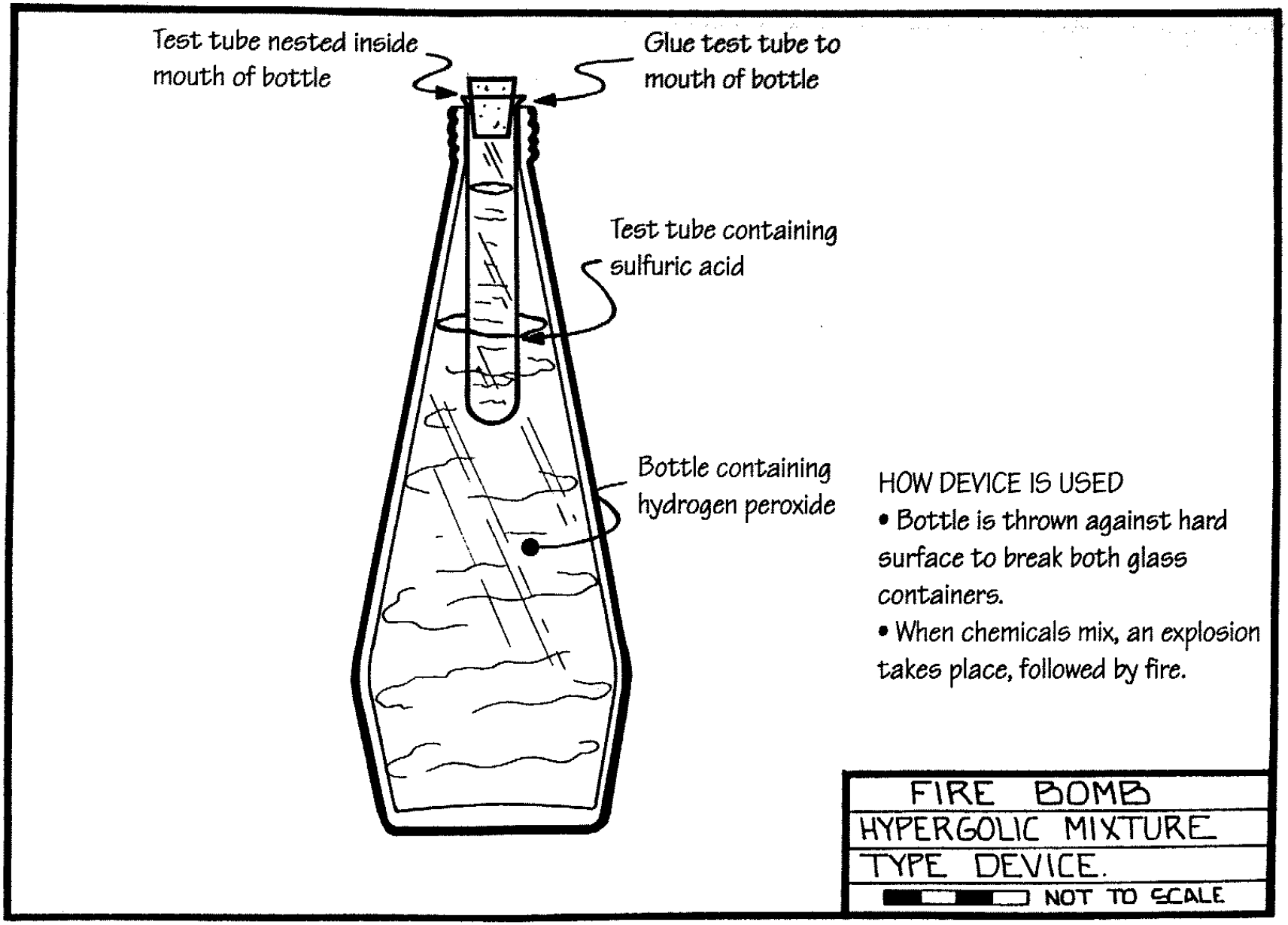
- Device is set in sun. Heat melts the wax pellet and the capsule falls into the gasoline.
- When the elemental sodium comes into contact with the gasoline, a hypergolic reaction detonates the device.

FIRE BOMB
HYPERGOLIC GAS CAN BOMB
HEAT DELAY IGNITION
NOT TO SCALE

FOR ACADEMIC STUDY ONLY

FOR ACADEMIC STUDY ONLY





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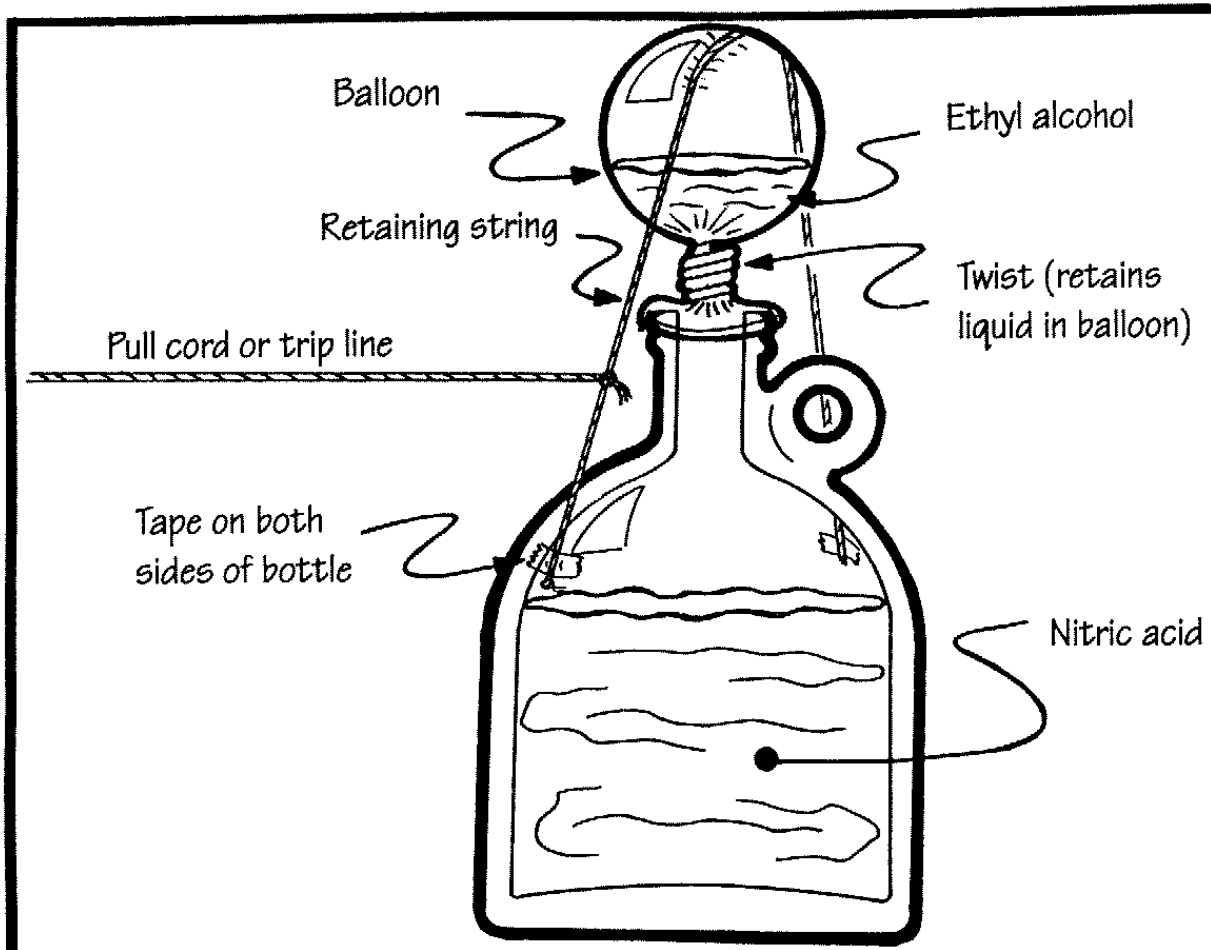
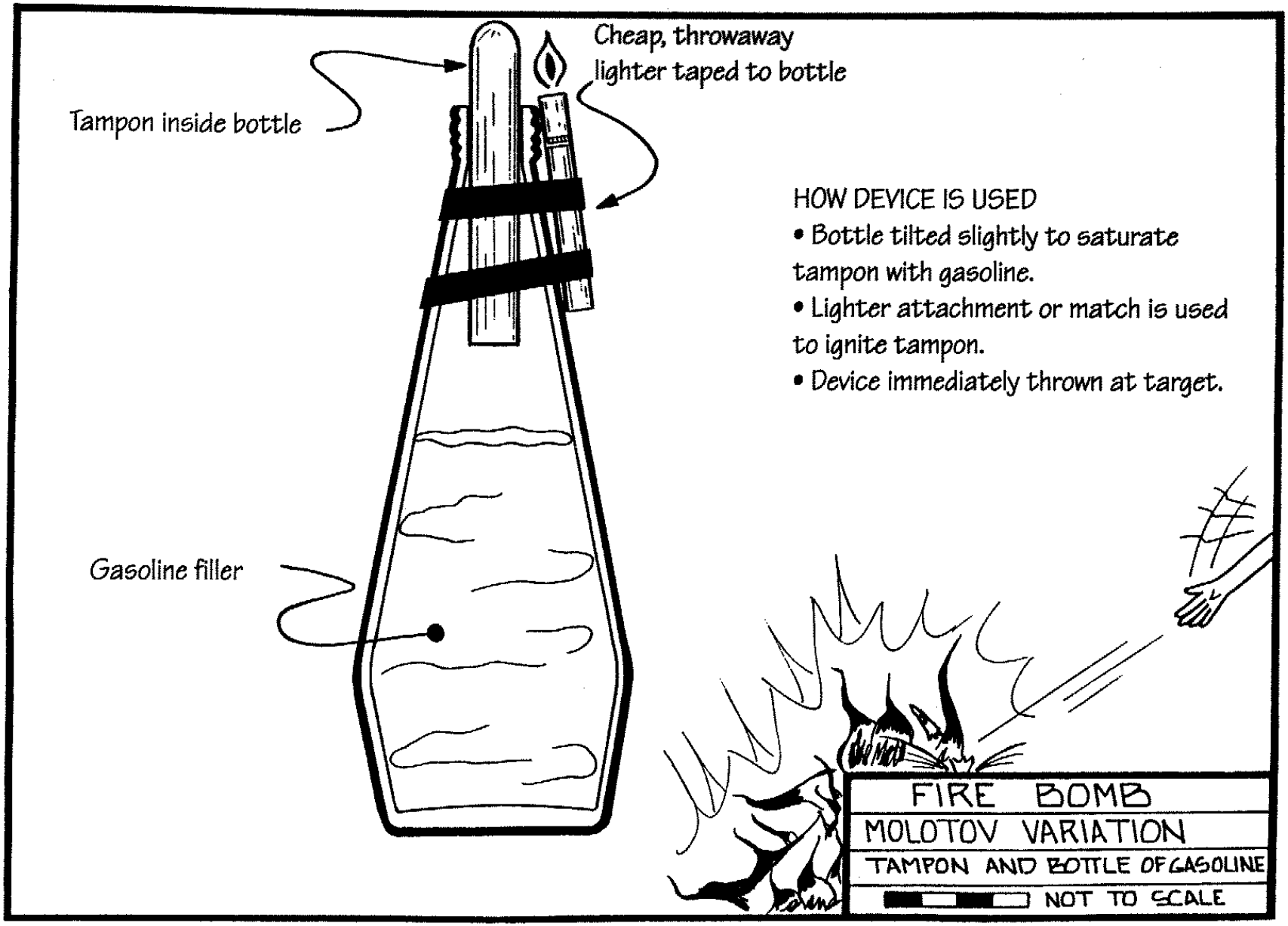


DEVICE IN USE

- Pull cord releases retaining string.
- Twist in balloon unwinds and releases alcohol into nitric acid.
- The two chemicals mix and detonate the device.

FIRE BOMB
CHEMICAL REACTION BOMB
FIRED VIA PULL CORD.
NOT TO SCALE



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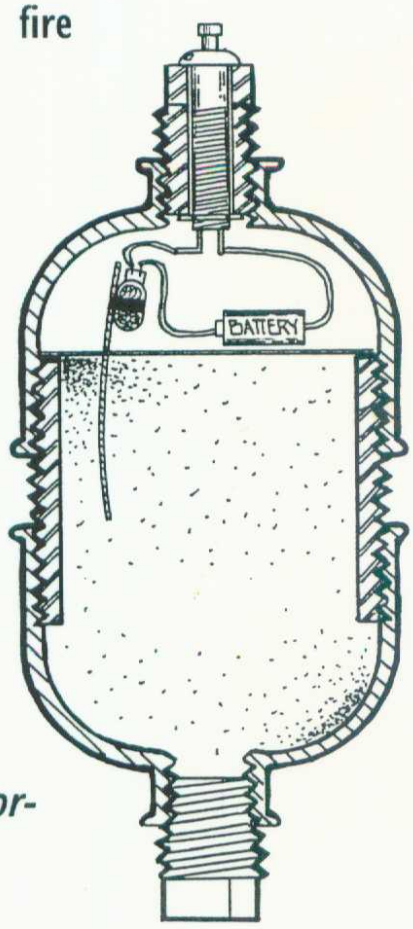
Pipe and fire bomb designs have long been used by criminals and terrorists intent on furthering their goals through intimidation and murder. Police and military explosive ordnance disposal (EOD) personnel need to know how these insidious devices are constructed in order to effectively handle and ultimately disarm them. This manual features clear illustrations detailing the construction principles and deployment possibilities of dozens of dangerously clever pipe and fire bomb designs. They provide valuable insight into the mind of the bomber and the many ways he can combine commonly available materials into incredibly lethal packages.



This book is *not* presented as an instruction manual, nor is it an adequate substitute for extensive certified instruction in EOD procedures and techniques. *It is offered for academic study and informational purposes only.*

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