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# A First Time Look Into The OSS's SUPER SECRET SPY LABORATORY DIVISION 19

## Purloined From CIA Files

by
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The advancing technology of the past four decades has turned the craft of espionage into a peculiar sub-science all its own, and even the usually pragmatic field of ordnance development has seen some of the zaniness that occurs when an urgent problem is solved with generous funding.

A case in point is the arsenal of "spy" weapons developed for the use of the legendary O.S.S. operatives in World War II. American intelligence and espionage activity had been handled entirely by the legitimate services until the creation and blossoming of the O.S.S. as a separate agency under the Joint Chiefs. The O.S.S. organization was new, and so was their mission. With a novel relationship to the traditional services, the O.S.S. was charged with gathering intelligence, organizing, training and equipping native resistance groups to operate behind Axis lines. Their accomplishments are a tribute to the brave and resourceful men who comprised the O.S.S., while the efficiency with which they accomplished these dangerous missions against improbable odds is a tribute to the insight of the elite corps of scientists who envisioned, created and produced this arsenal of special weapons for these special missions. Any specialized craft requires specialized tools; ideology aside, the better the tools, the better the results with median operatives.

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The bulk of the O.S.S. special weapons were developed by Division 19 of the National Defense Research Committee, an organization under the auspices of the Office of Scientific Research and Development. The O.S.R.D. was a branch of the Office of Emergency Management, which was directly under the President, and had the monumental task of coordinating and directing the nation's resources for a total war effort. Division 19, code-named the "Sandeman Club," passed through two formative stages before it became a separate NDRC Division, and from that point on, operated almost exclusively as a research agency for the O.S.S. The O.S.S. also had their own R & D Branch, but this was primarily concerned with assimilating developments by other services into O.S.S. use, issuing material lists, aiding with training and similar functions. Division 19 also did research work at their laboratory in the Congressional Country Club for other services, but the main thrust was intended to be special weapons' design for the O.S.S. Near the end of the war, Division 19 turned their laboratory facilities over to the O.S.S. R & D Branch, just in time for the O.S.S. to be disbanded and become the C.I.A. Many of the devices, weapons and pieces of equipment designed by Division 19 are still in current use with the C.I.A. (whatever agency picks up the mission of the agency which came before, also inherits a lot of the same personnel and equipment). No doubt, a goodly portion of the original O.S.S. equipment which was still in use by the C.I.A., will be turned over to the Army Special Forces, as they take over responsibility for covert operations from the currently beleagured C.I.A.

The nature of the weapons developed spanned the whole spectrum of covert operations; there were black boxes and disguised bombs, weapons which could be fired long after the installing operative had gone (or those one could fire in person which made no sound); there were special sabotage weapons and weapons specifically designed for guerrilla war. Some were primarily designed to harrass the enemy and improve the morale of the occupied country.

A good example of weapons which never killed anybody but did play a role were "Who, Me?" and "Heddy." "Who, Me?" was a very straightforward weapon designed to help the morale of the occupied Dutch, and cause loss of face to the Japanese occupation troops in the Philippines. It was an opthalmic ointment tube filled with artificial feces (for European use against the trousers of SS officers), or with a skunky or cadaverous odor for use against the Japanese. Issue a handful of these to street urchins and you have the occupied people laughing, and feeling better, and better able to resist. "Heddy" was simply the first artillery simulator. Everybody who ever went through basic has enjoyed playing with these, but they were originally developed as a device which would enable an O.S.S. agent to cause panic and confusion in a civilian crowd, when such cover was necessary to effect his escape. A hand grenade would do the same thing, but would, of course, be against Geneva conventions for use on civilians.

One similar idea, spawned by the using services and pursued with little success, was code name, "Fantasia," and pursued under Problem 26. Shrinks within the O.S.S., whose job it was to know such things, claimed that Japanese troops would be terrified and demoralized at the sight of a large, glowing, barking and (if possible) fire-breathing fox which would appear over their heads in battle but would disappear when fired upon. The problem was submitted to Arthur D. Little, Inc., who coordinated with the National Fireworks Co., and with MIT. A number of possible research possibilities were outlined, but by that time, the leveler heads in the O.S.S. had prevailed and the problem was terminated with a report which commented "... I trust this will serve as a critique to us in the field of pure reason."

Most devices developed by Division 19, however, were deadly serious. Many projects did not reach production and issue, but formed the basis for postwar weapons which are now "new" special weapons, or current ordnance issue. Such items as time delay pencils, concussion detonators, water purifiers, boobytrap and detonation devices, are current engineer issue.

The M33 "Mini" grenade, equipped with the M217 Impact Detonator had its beginning as Division 19, Problem No. 28. The O.S.S. had field requests from operatives in France for a grenade which would detonate when it hit. They were tired of having grenades roll off a Nazi staff car to explode harmlessly by the side of the road, or worse yet, being thrown back. The traditional services particularly the airborne forces, also expressed interest, in this, and pre-production runs were sent to Europe for testing. The troops loved them, but there were problems with pre-detonation, and there were injured personnel and worried brass. In addition, tests at Aberdeen resulted in the death of a young officer who threw the grenade up in the air (which armed it) and then caught it (which detonated it). As a result the powers-that-be decided that the grenade as designed was not safe, and it finished the war without significant issue. It was also developed in WP version, which also did not see combat use. But the research done by Division 19 led to the "new" grenades which can be thrown with accurate ease, and detonate upon striking their target.

The detonation of an explosive or incendiary charge is a very basic requirement for any such munition, and many methods were explored by Division 19. From this basic research came a wide selection of appropriate initiating devices. These initiating devices were used in turn, on a wide array of explosive and sabotage devices. Threads of prior British research were picked up and an American version of the A-C (acetate-cellulose) delay and the chemical time pencil were refined and put into large scale production. The "Firefly" gas tank grenade was developed, and issued with telling effect on German transport during the battle of the bulge.

Virtually all of the O.S.S. explosive and sabotage devices were designed to accept such delays as mentioned above. The famous "PI" pocket incendiary, the "Limpet" mines, dust initiators, thermite well, the Bushmaster relayed-remote weapons firing devices — these and many more items of issue could be fitted with one or more of these delay mechanisms.

Some initiating devices were designed to be spontaneous, such as the "City Slicker" oil slick igniter, which was ignited by the action of the water into which it was dropped. It was also issued in a "Paul Revere" (by land or sea) model which was equipped with a time pencil for parallel use as a land incendiary. Others were designed to be set off by action on the part of the target, such as the various bobbytrap devices. Some were fired by the action of radio signal, and others by the action of precision clockwork. Some, such as the concussion detonator, were initiated by the action of other nearby charges.

In certain instances, available initiating devices were further refined for special application, as the time pencil was for use on the "Bat" incendiary. This program, also called the "Adams Plan" and "X-Ray," attempted to develop an effective bat-borne incendiary. Such an incendiary device appeared feasible and was developed, but the program was dropped due to the erratic behavior of the bats.

Certain demolition devices were developed specifically for use against the enemy transport which were adapted to the particular mode of transport. Two excellent examples of such devices were the "Aerometer" which blew Nazi planes out of the air with a force greater than a direct artillery hit, yet could be easily concealed in the fuselage of the plane and detonated at a predetermined

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altitude, and the "Mole," designed under the "Casey Jones" project which would derail Axis trains . . . only in a crowded alpine tunnel. The "Moles" were first installed on old wrecking and repair trains, so they too would be stacked up in alpine tunnels when they went to the rescue of the other demolished rolling stock.

Weapons which would not have the appearance of weapons or could be used in combination with locally available or improvised materials were also in demand. Under the "Camel" project, many disguised or camouflaged items were developed, such as "matchbox" cameras, explosive coal, explosive candles and the like. Some items were developed from the onset as totally disguised articles. Cases in point were "Aunt Jemima" explosive flour (eat it, bake biscuits with it, or blow up a bridge with it), and explosive fiber (knit it, weave it, wear it or put a detonator on your BVD's and blow up a plane with it). Both these latter items are still issued by appropriate agencies.

The full spectrum of clandestine-use, anti-personnel projectile weapons was also explored. Spring-launched "pistols" and silent "pentrometer" adaptations for the .45 auto were developed, as well as a full range of silenced small arms. Silencers were developed for the .30 Carbine, M3 and Thompson submachine guns, and .22 pistols. With the excellent results obtained with the .22 HDM pistol, work on other noiseless hand weapons was dropped. The silencer developed by Bell Labs for the Thompson was adapted to the M3 and put into full production. Both the .22 HDM and M3 submachine gun, with Bell Labs silencers are still in use today, along with more recent developments. Indeed, the ill-fated flight of Capt. Gary Powers brought attention to the silenced HDM, as one was in the "spy" kit with which he was captured by the Russians after they downed his U-2.

After the O.S.S. stood down and was replaced by the C.I.A., the Cold War put greater demands on the ability of the U.S. government to implement national policy by covert means. With the confusing tangle of treaties which came into being, as the great powers tried to consolidate power and align smaller nations on their side after WWII, it became more and more important to be able to do the expedient thing without drawing any fire, i.e., without "officially" mounting an operation against a party who had a treaty with a superpower, who would be obliged to risk a major confrontation with the other superpower who was engaging his ally.

Thus, the postwar period has seen myriad covert operations, economic and psychological war and only a few large scale conflagrations. Brushfire wars and shadow-wars fought by phantom personnel have been the rule, and the technology of clandestine hardware has kept apace. In a future article we shall discuss the avant-guarde developments of the past decade, as American and Communist block scientists endeavor to adapt the most recent scientific breakthrough to the field of clandestine. R.D.

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# Deadly Designs From The Super Spy Black Bag Of Dirty Tricks

*1. Testing the W. Rite phosphorous Beano*

*2.* **Beano.** *A baseball-shaped grenade, detonated by an impact fuse. Premature detonations caused numerous injuries and deaths during testing early models.*

*3.* **Bat Bomb.** *A small incendiary device to be attached to bats, which when released from planes, would fly into the attics of Japanese houses. A time delay device would activate the incendiary material.*

*4.* **Aunt Jemima.** *A high explosive mixture camouflaged as flour. Still a current clandestine store used by various agencies.*

*5.* **Impact Testing Machine.** *This spring-activated weapon fired a .07416 projectile at 154 ft. per second.*

*6.* **William Tell.** *This rubber-powered cross bow fires a steel-tipped dart at 180 feet per second.*

*7.* **Little Joe.** *Throws a 24 gram dart which will penetrate 12 inches of solid horsemeat at six feet.*

*8.* **Caccolube Turtle Egg.** *Consisted of an aluminum-magnesium 50-50 alloy, finely ground cork and dry resin packaged in thin, rubber sheaths. Used to sabotage engines and gasoline stores.*

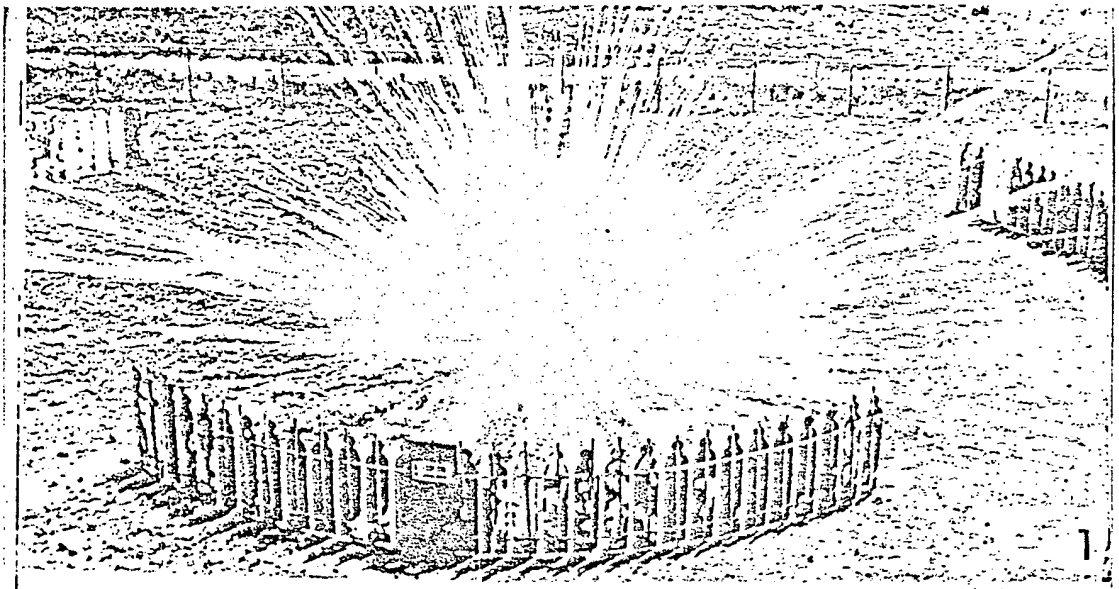
*9.* **Anerometer.** *Designed to detonate in enemy aircraft by an electrically operated barometric switch.*

*10. Testing the Firefly.*

*11.* **Firefly.** *A small grenade designed to be inserted in a fuel tank of a vehicle. The fuel caused a rubber washer to expand, detonating the grenade, rupturing the fuel tank, spreading the fuel and igniting it.*

*12.* **City Slicker.** *An oil slick igniter. White lumps in center are carbide, which react immediately with water to form and ignite self-ignite acetylene gas.*

*13.* **Mole.** *The mole would explode after a pre-determined time delay on sudden change from daylight to darkness. Used to destroy trains shortly after entering tunnels.*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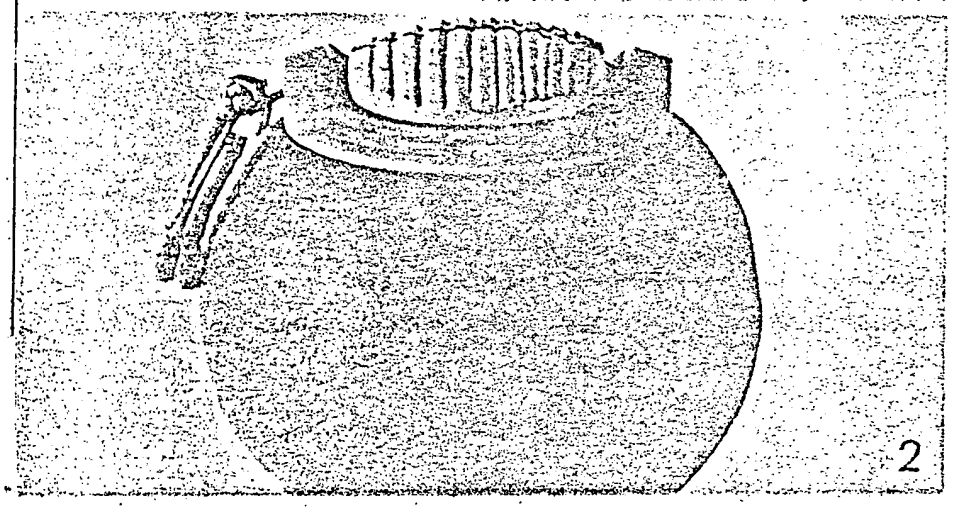
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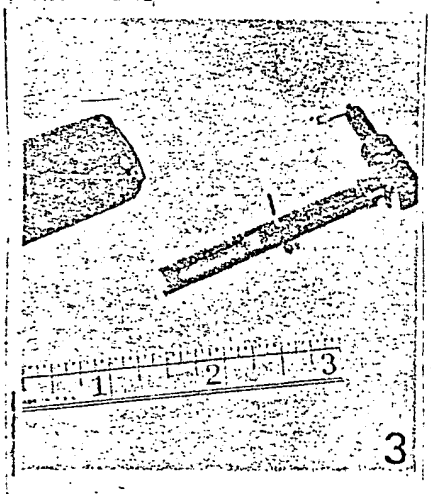

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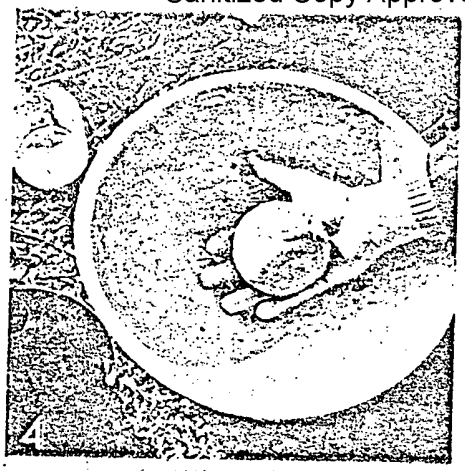

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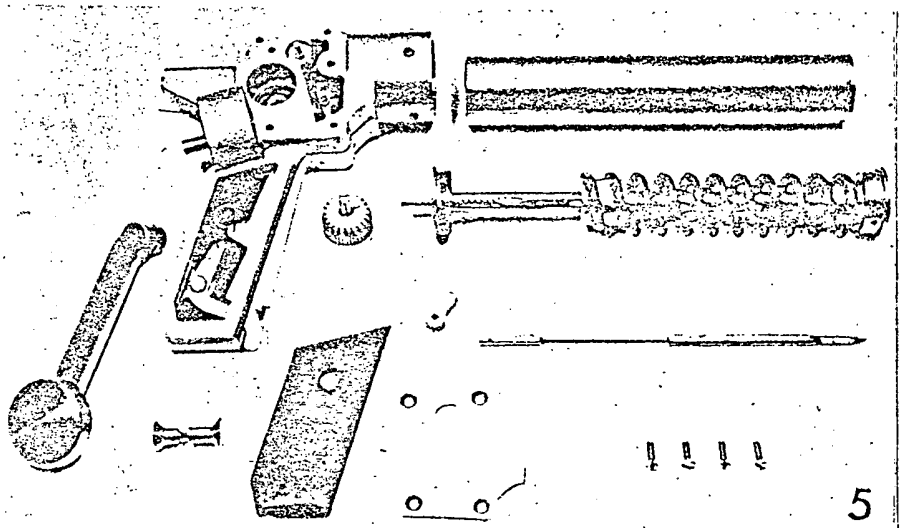

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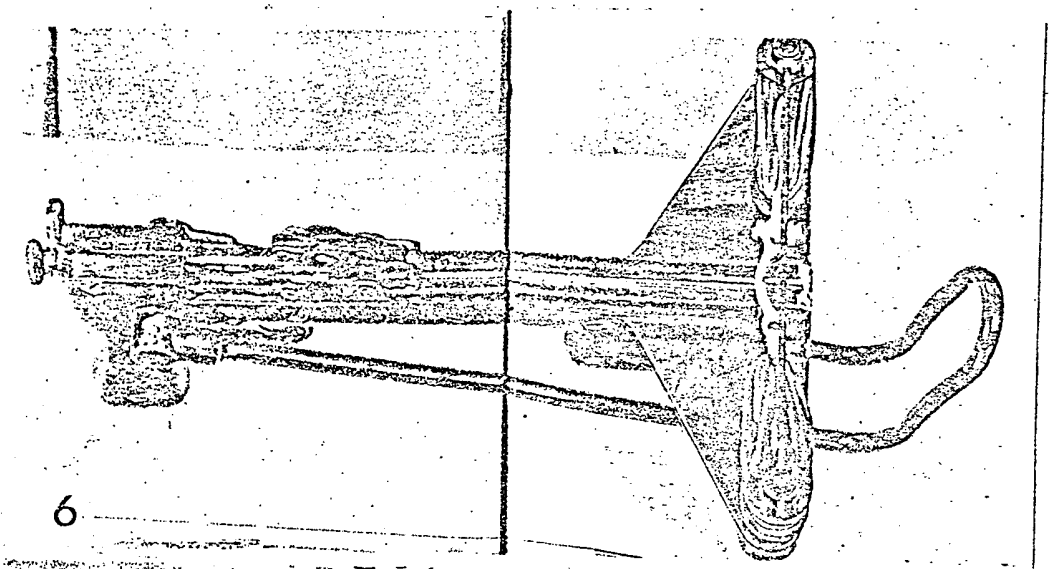

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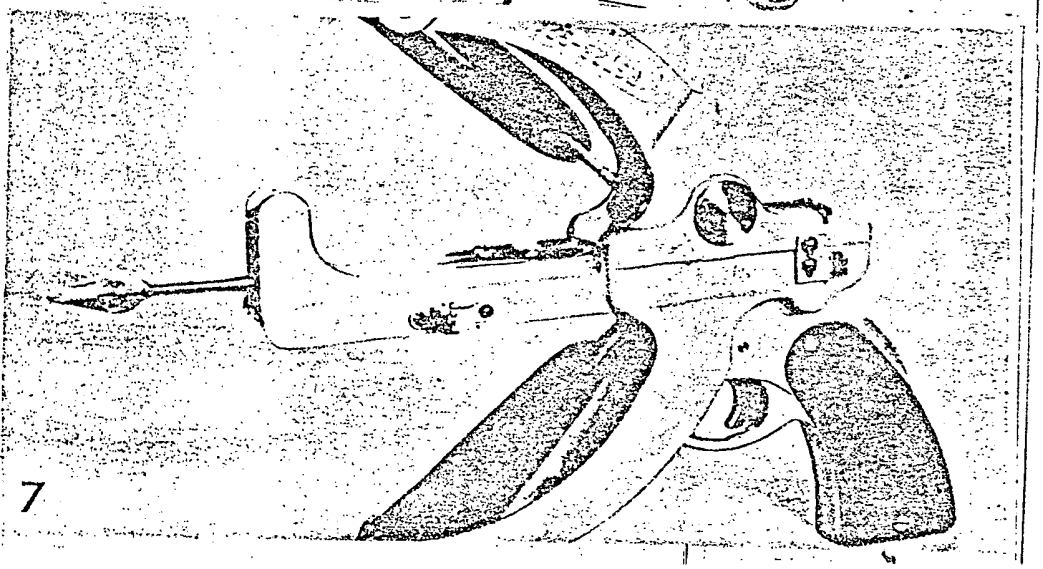

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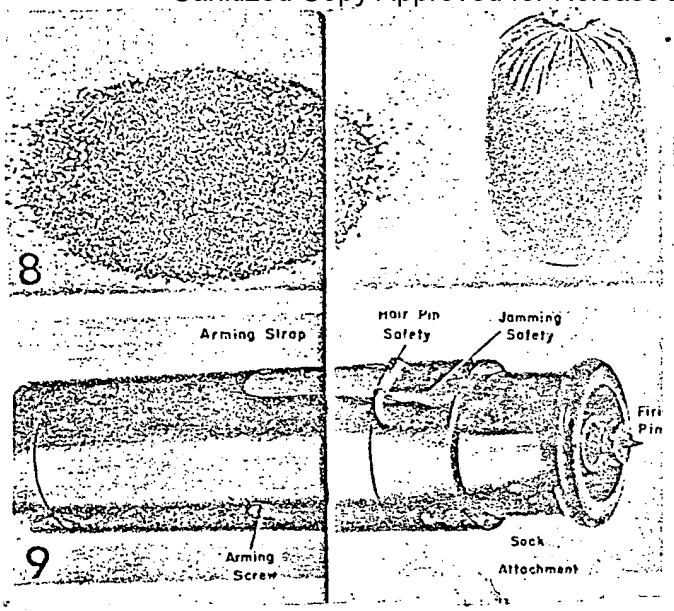


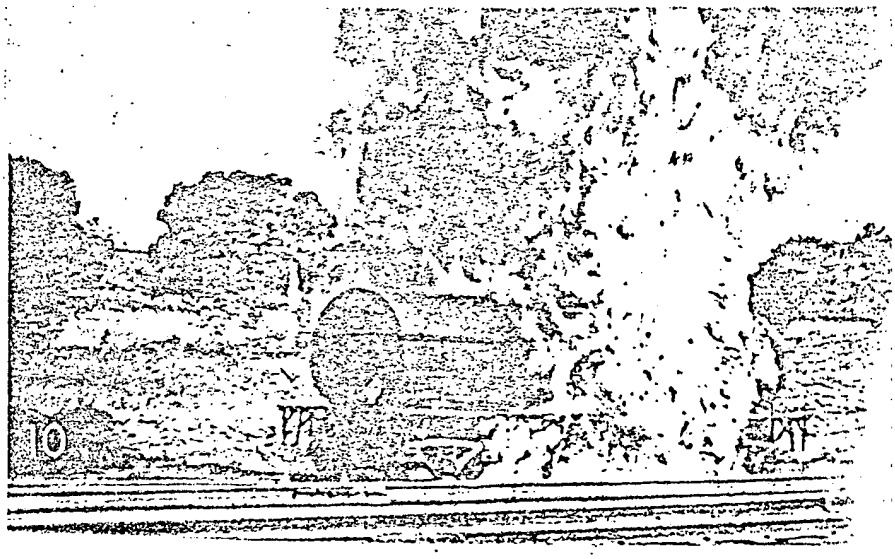


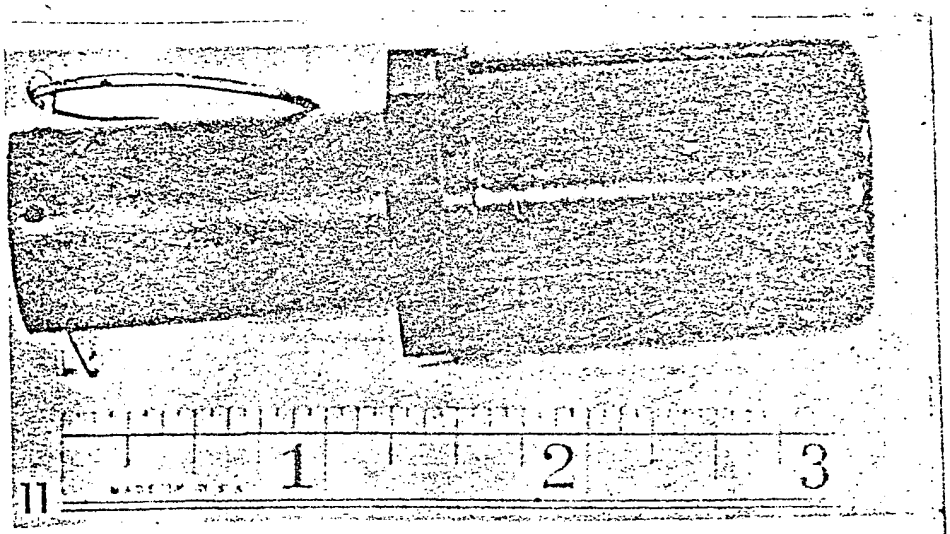


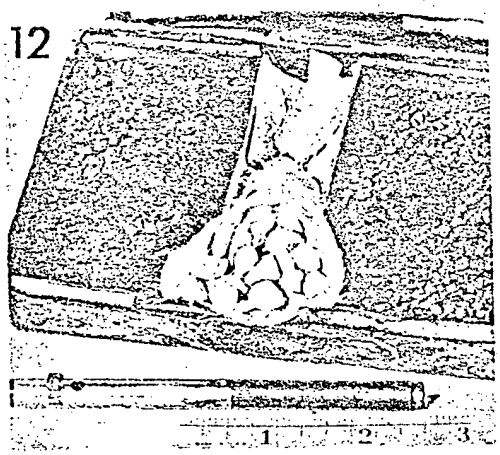



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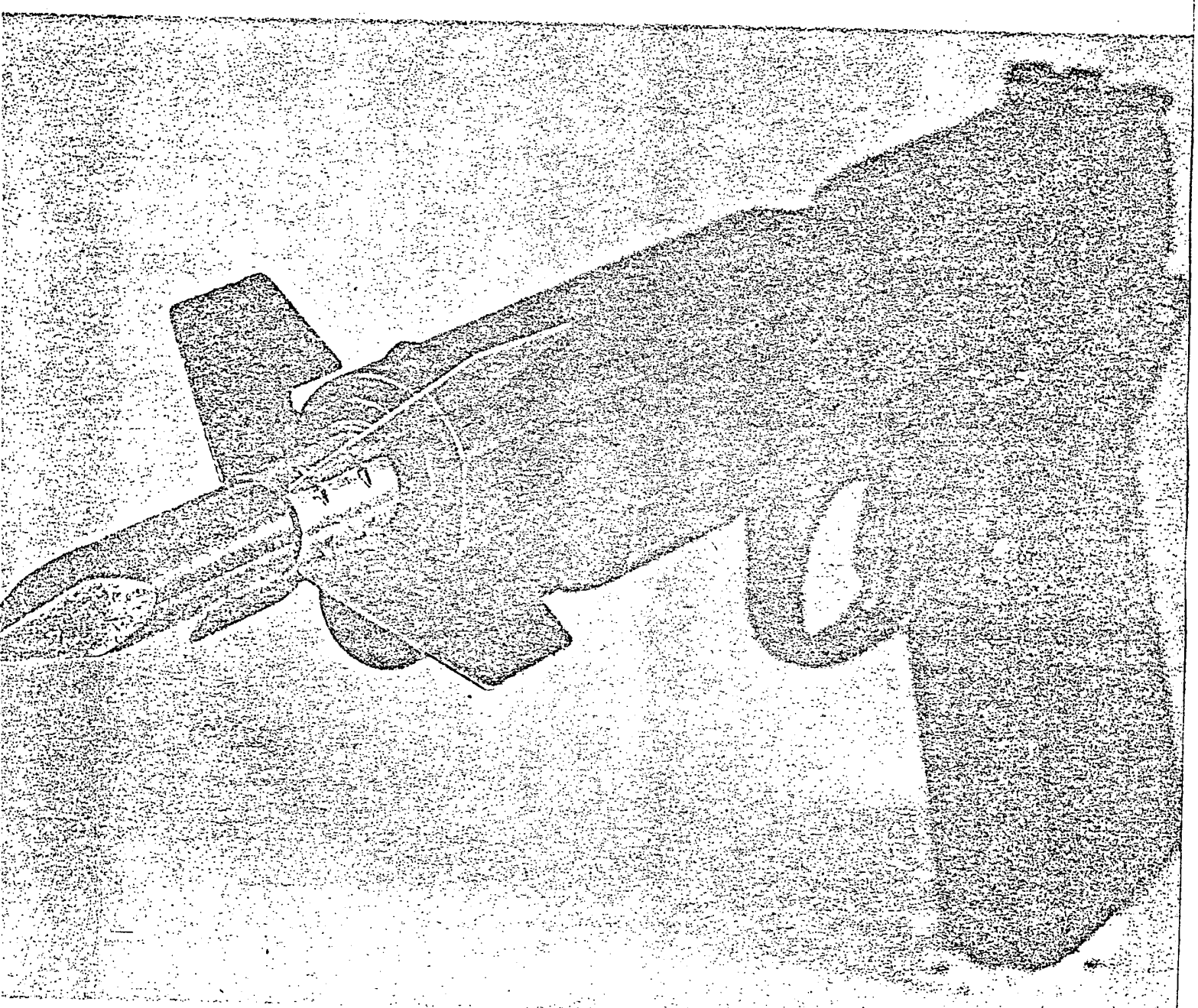

*A M1911A1 .45 cal. automatic was modified to accept a spigot, over which fit a dart-like projectile. Propellent was contained in the projectile's shaft.*

**The Bigot**