

LET'S TALK GUNS

PART III (R to Z)

Now, with this final section of your Firearms Glossary, you have what it takes to really *talk guns* — from A to Z!

Some terms will be well-known to you by now. Others will become more familiar as your Course progresses. Nevertheless, you'll want to keep your glossary handy so you can use it often for reloading, collecting, blackpowder, or general firearms terminology.

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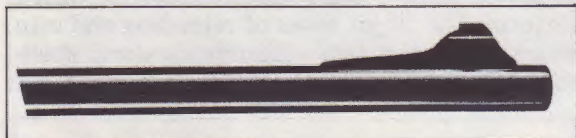
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R

ram — the heavy steel rod which runs through the center of a press holding the shellholder to drive the case into the die.

ramp sight — a front sight mounted on a base, usually about 2" to 2½" long, sloping upward from rear to front.



The RAMP SIGHT is a common standard front sight, especially on .22-caliber rifles. Above is a streamlined version by Williams.

ramrod (rammer) — the wooden or metal rod used to seat the ball over the powder charge in a muzzle-loading rifle. Ramrods are usually carried under the barrel and held by ramrod thimbles. The term is also used loosely to refer to a cleaning rod.

range — that distance between the firearm and the target. *Point-blank range* is the distance a projectile will travel before dropping to the extent that sight adjustment is required. *Effective range* refers to the longest distance a projectile will travel with accuracy.

rangefinder reticle — the aiming point in a telescopic sight which allows the shooter to estimate target range.

ream — to cut a cavity or remove material from a preformed cavity by use of a rotary cutting tool.

reamer — a rotary cutting tool used in reaming, or to remove crimps from military primer pockets.



There are many styles of varied-use REAMERS. This one, from Richmond Arms, is for shotgun chambers.

rebated rim — a type of cartridge case in which the rim is smaller in diameter than the body of the case.

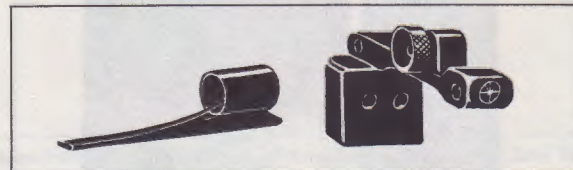
rebore — to ream out the rifling of any barrel so that it may be re-rifled to different specifications, or simply rejuvenated. Reboring is not as popular as it once was because of the low cost of rebarreling. However, it is often used to retain the gun's original external condition and appearance.

rebouncing hammer — refers to a gun in which the hammer or firing pin draws back automatically after striking the primer and is held in that position.

receiver — the metal frame containing the breech, locking, and reloading mechanisms of a rifle or shotgun.

receiver ring — the forward portion of a rifle receiver which is threaded so the barrel can be attached to it.

receiver sight — an aiming device attached to the receiver of a rifle, of the aperture or peep variety.



A typical RECEIVER SIGHT is the peep type, at right, combined with a hooded front sight, at left.

rechamber — to change the dimensions of a chamber by reaming for reboring, relining, or to change the cartridge used.

recoil — the backward movement of a firearm caused by expansion of powder gases which impel the bullet from the barrel. Recoil is measured in foot pounds along the line of the

barrel, which is generally above the point of resistance, causing the muzzle to swing upward with the force of the recoil.

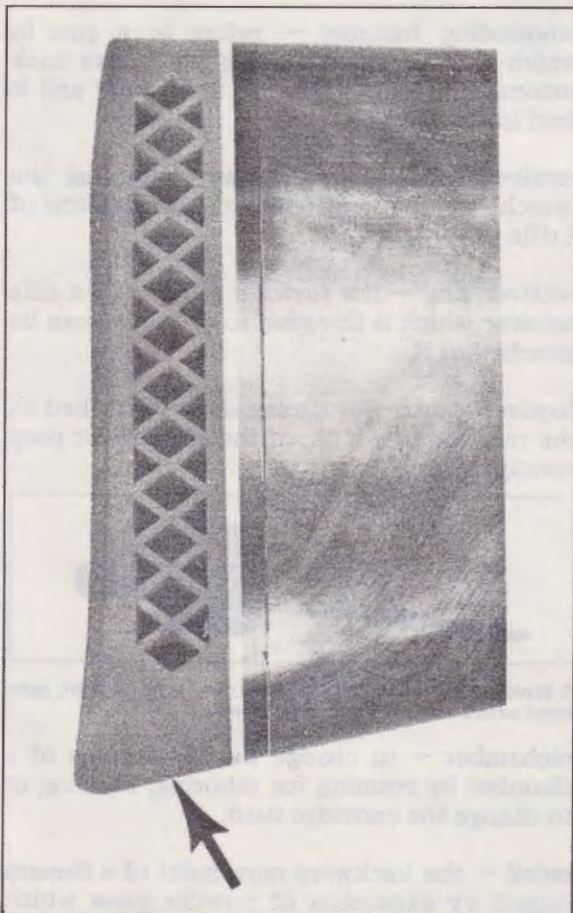
recoil-absorbing system — seldom-used mechanical attachment to the buttstock to absorb recoil energy by compression of springs or some other device.

recoil buffer — a device often found on military automatic firearms to reduce the impact of recoil on the components of the gun.

recoil lug — that surface on the receiver of a firearm which transfers most of the recoil forces to the stock so that it is possible to maintain tight assembly of the wood and metal components.

recoil operation — the mechanism which transfers recoil energy to the springs, which then utilize the energy to complete the cycle in a semi-automatic or full-automatic manner.

recoil pad — a cushion of rubber or other soft material attached to the buttstock of a shotgun or rifle to lessen the force of recoil.



When mounting a RECOIL PAD, the toe should parallel the stock's lower profile.

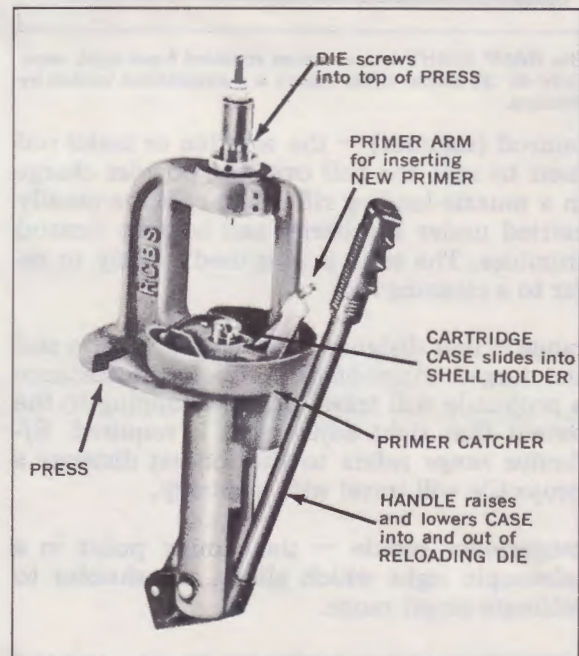
re-entry match — a shooting contest in which the competitor may fire more than one score for record.

regulating — the act of adjusting the barrels in a double rifle so that both shoot at the same point of impact. In a shotgun, refers to adjusting double barrels to place the pattern of both barrels at the same point.

release trigger — the specialized trigger mechanism sometimes found on trap shotguns which reverses the normal trigger function so that the gun is fired when the trigger is *released* rather than when it is *pulled*.

reload — to replace those parts of the cartridge used up when fired: the primer, powder, and bullet (or wad and shot). Because the case is the most expensive part of ammunition, the reloader saves by using the case over and over again.

reloading press — the mechanical device which performs the major tasks of reloading and into which are fitted the reloading dies and shell-holder.



The rifle RELOADING PRESS is the "factory" where every reloading function except powder charging is performed.

remaining energy — the velocity of a projectile when it hits a target at a given distance, expressed in foot pounds. Also referred to as "killing power" or impact energy.

remaining velocity — the speed which a projectile still has when it hits a target at a given range, expressed in feet per second.

Remington, Eliphalet (1793-1861) — founder of the Remington Arms Company, which was established in 1816 to manufacture gun barrels and flintlock sporting guns. Today Remington produces a major quantity of sporting and military arms and ammunition on a world-wide basis.

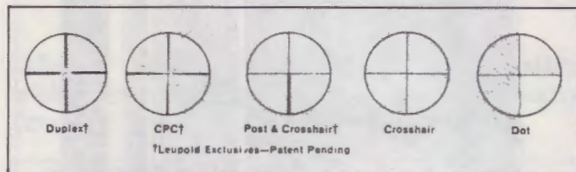
repeater — a manually-operated firearm containing a supply of cartridges which may be quickly and easily loaded into the chamber for fast repeat shots.

reprime (recap) — to seat a new primer in a cartridge or shell case. In a muzzleloader, to replace priming powder.

resize — to restore a fired cartridge case to approximately its original size.

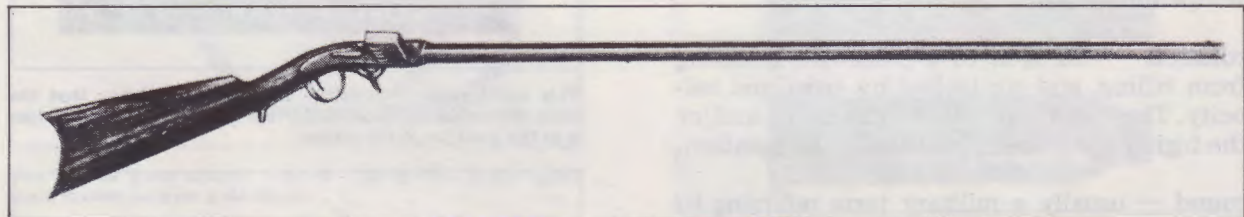
resizing dies — the key tools to reloading; they are screwed into the top of the press. Various ones will resize the fired case, eject the fired primer, and seat the bullet.

reticle — in sights, the system of crosshairs, fine lines, or dots in the focus of a telescope.

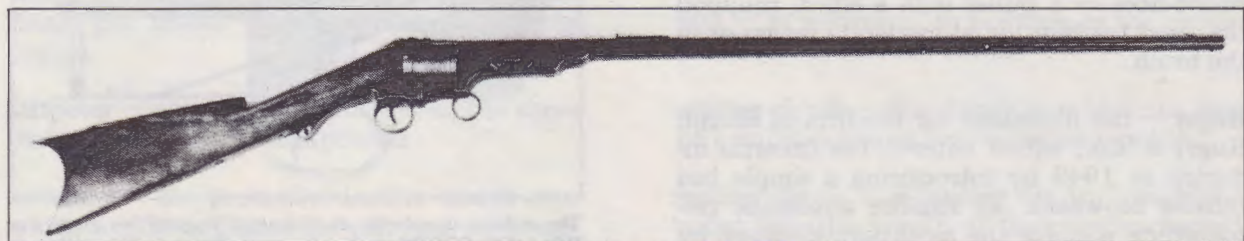


The RETICLE sight comes in various types. These are by Williams.

revolver — a multi-shot handgun using a turning cylinder as its magazine or cartridge container. Probably the best known revolver is the one developed by Samuel Colt and patented in the United States in 1836.



The Harmonica percussion REPEATER above was the product of Jonathan Browning, father of American arms wizard John M. Browning.



This Colt REVOLVING RIFLE is on display in the West Point collection of historical firearms.

revolving rifle — a rifle with a multi-chambered cylinder developed in the 19th century and made primarily by Colt.

rib — on a single-barreled firearm, the raised portion on top of the barrel which can serve as a sight base or simply be decorative. On a double gun, the strip of steel above the joint between the barrels.

rifle — a shoulder gun designed to fire one projectile at a time, having spiral grooves cut into the inner surface of the barrels to give the projectile twist or spin.

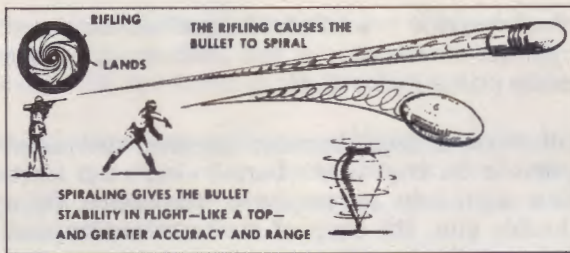
rifled slug — a pure, soft lead projectile which is rifled on the outside, but does not actually spin when in flight. Because it is weighted in front, it flies accurately and point-on. The rifled slug is usually used in shotguns for big game hunting.



Cutaway of a RIFLED SLUG shell shows, from left, powder, wads, and slug.

rifle saw — a short, file-like cutter which, when drawn through a barrel and mechanically guided in a spiral motion, cuts the rifling grooves.

rifling — the spiral grooves cut in a barrel which cause spin or rotation of a bullet to stabilize it in flight. The cut-away portions of the rifling are called "grooves," while the uncut or raised portions are called "lands."



Illustrated explanation of RIFLING, courtesy the National Rifle Association.

rim — the projecting edge of the base of a cartridge case upon which the extractor pulls, and which stops the progress of the case into the chamber. In England it is referred to as the “flange.”

rimbase — that part of a rifle stock on which the breech rests.

rim-fire — a cartridge which contains the priming mixture within the rim of the base. These cartridges are not reloadable.

rimmed case — any cartridge case having a rim.

rimless case — a cartridge case whose base flange (or rim) is the same diameter as the case head so that extraction is accomplished by using the groove ahead of the rim.

rolling block — a breech-loading action utilizing a short, circular breech block thumbed back to open the chamber and thumbed forward to close and seal the chamber for firing. The simplest full-strength single-shot action ever devised, the rolling block was manufactured in tremendous quantities by Remington Arms Company.

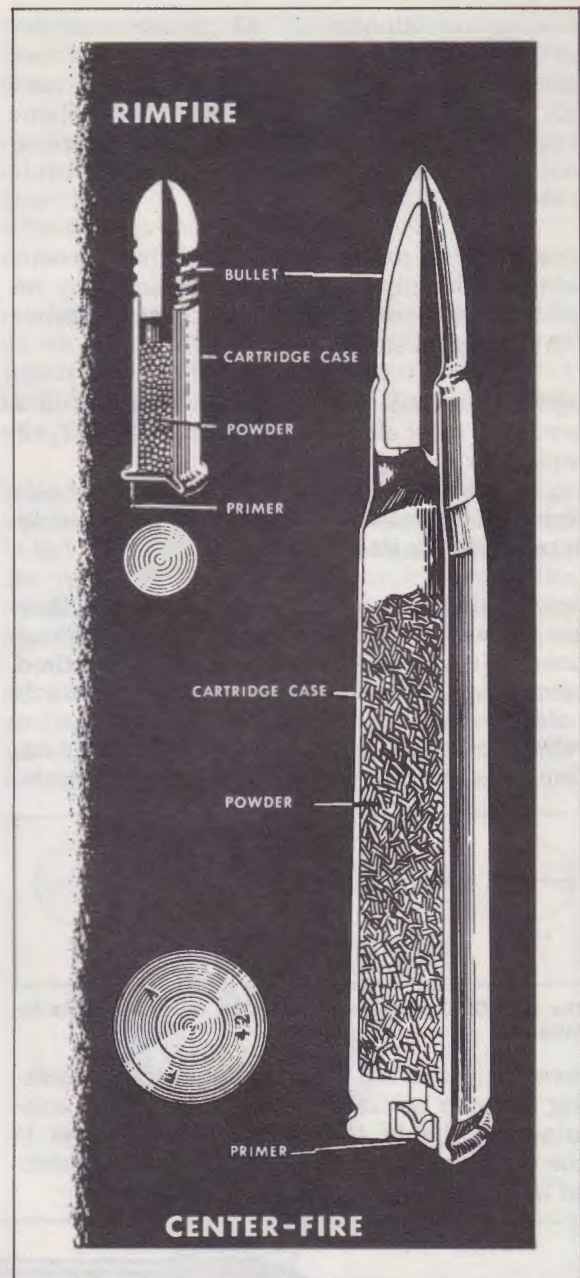
rook cartridge — a low-powered cartridge developed in England for small game.

rotation — the spin of a projectile resulting from rifling, and controlled by twist and velocity. The faster the twist of the rifling and/or the higher the velocity, the faster the rotation.

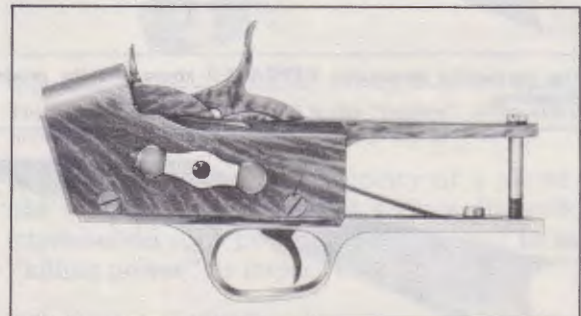
round — usually a military term referring to one complete unit of ammunition.

round-nose — a bullet with a blunt, rounded tip, used for hunting at moderate ranges or in the brush.

Ruger — the nickname for the firm of Sturm, Ruger & Co., which entered the firearms industry in 1949 by introducing a simple but reliable blowback .22 rim-fire automatic pistol which was, for the most part, designed by William Ruger.



This comparative illustration by the NRA shows that the basic difference between RIM-FIRE and center-fire cartridges is in the position of the primer.



The current popularity of historical firearms has made the ROLLING BLOCK action in great demand. This action is from Navy Arms.

ruptured case (separated case) — a case which has been blown into two parts just in front of the head. Normally caused by too much head-space or repeated inaccurate resizing.



Reloaders must check used brass carefully to avoid loading a **RUPTURED CASE** such as the one above.

S

safety — any device, manual or automatic, which prevents a gun from being accidentally fired.



One of the most simple types of **SAFETIES** is this giant head, shown here on a .44 Ruger.

safety lever — in modern revolvers, the bar which prevents the hammer from striking the firing pin unless the trigger is deliberately pulled.

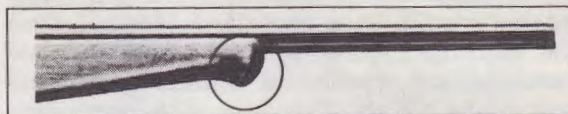
salt peter — potassium nitrate, one of the three basic ingredients of blackpowder.

scabbard — the protective leather sheath into which a rifle is placed for carrying on horseback.

scatter gun — a shotgun whose barrel has been shortened in order to achieve a wide shot pattern.

scatter load — a shotshell load which produces a wider, less dense pattern than average. Used for hunting small or upland game in thick cover or at close range.

schnabel — a purely decorative design on a rifle or shotgun where the forend tip is flared to form a sculptured knob.



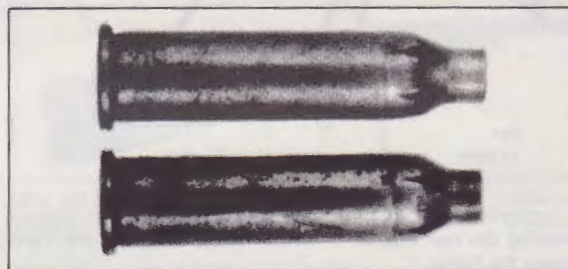
The Teutonic **SCHNABEL** on this Savage 99-A is a manufacturer's design addition.

scope mount — the mechanical device used to attach a telescopic sight to a firearm. Consists of a base attached permanently to the gun's receiver which will accept rings or clamps to attach the tubular body to the telescope.

sear — the mechanism linking the trigger and firing pin so that the pin is held at half or full-cock until released by trigger pressure.

sear spring — the small spring which activates the sear.

season crack — the longitudinal split in a cartridge case, usually caused by the case neck receiving too much tension from the bullet inside. Excessively hard cases, made brittle by repeated reloading, are more likely to crack. This condition can be prevented by the reloader by periodic annealing of case necks.



SEASON CRACKS in these cases were probably caused by excessive reloading without annealing.

seat — in reloading, to position in the proper place, as "to seat the bullet."

seating depth — the depth to which the base of a bullet is seated below the case mouth.

seating die — a reloading die that seats the bullet into the mouth of the powder-charged case, crimping the case when necessary.

sectional density — a mathematical factor expressing the relationship between the weight of a bullet and the cross-sectional area, termed by the formula: (weight/density squared) times .7854. The bullet's weight as expressed in pounds is divided by the area of the bullet base as expressed in square inches. The result is then multiplied by the constant factor .7854. To get the weight in pounds, divide by 7,000.

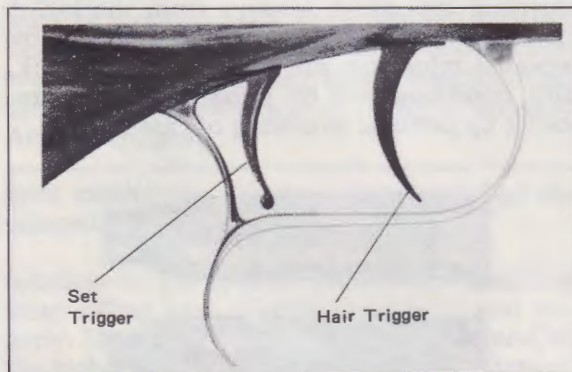
semi-automatic — this term is often erroneously confused with "automatic." The semi-automatic firearm, when cocked and loaded, fires the cartridge, ejects the case, inserts a new cartridge, and recocks the action, all with one pull of the trigger. The gases of the exploding propellant provide the energy for this action.

serpentine — a combination trigger, hammer, and pan mechanism resembling the letter "S" which revolutionized the matchlock.

serpentine powder — the first blackpowder developed before corning was introduced. A coarse, non-uniform meal.

setscrew — the screw which regulates pressure in the trigger mechanism.

set trigger — a double-trigger firing mechanism in which a rear trigger is cocked so that slight pressure on the front trigger will fire the arm. This eliminates "creep" or "drag."



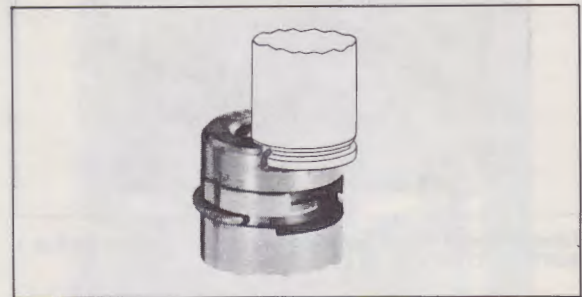
Pressing the rear trigger, or SET TRIGGER, readies the front trigger for firing.



The SHARPS rifle was used by most of the Sioux in the battle with Custer at the Little Big Horn.

Sharps, Christian (1811-1875) — designer of several popular firearms, including the big side-hammer percussion, breech-loading carbine used in the Civil War which used a linen cartridge and was later designed to accommodate rim-fire and center-fire cartridges. The heavy Sharps rifles became known as buffalo guns in the 1870's. Because Sharps rifles are now quite scarce, they have become valuable collector's items.

shellholder — the cartridge case holder on a reloading press.



The cartridge case slides into the SHELLHOLDER in this Lyman reloading press.

shooting bench — the solid, steady foundation used for benchrest shooting.

shooting preserve — a large parcel of land set aside for the raising of special species of game which are usually periodically released for sport shooting. A list of shooting preserves can be obtained by writing to the National Shooting Sports Foundation, 1075 Post Road, Riverside, Connecticut 06878.

shooting stake — in the field, a steadying device upon which the forend of the rifle is rested.

short action — in a revolver, a mechanical modification which reduces locking and cocking time. In a rifle, refers to a bolt and receiver designed for shorter-than-standard cartridges.

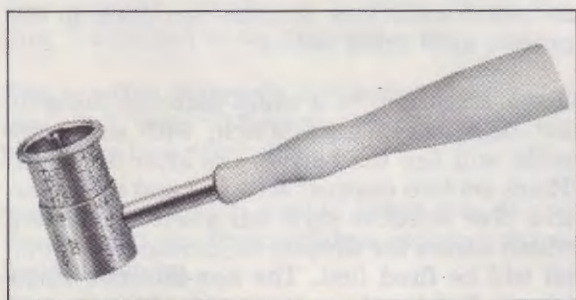
short-and-long starter — a five or six-inch rod fitted with a round or palm-fitting handle,

used to start patched balls down the muzzle of blackpowder shoulder arms and some pistols.

short-jacket — a type of bullet swaged from a lead core and using a short gilding metal cup.

shot — in sporting terms, spherical lead pellets loaded into shotgun shells. In early days, shot referred to *any* projectile and was later replaced by the word "bullet." Shot is manufactured by pouring molten lead through perforated plates and allowing the droplets to fall, forming spheres due to surface tension. The balls then fall into water to cool and harden.

shot dipper — a device for measuring one charge of birdshot.



This **SHOT DIPPER** by Lyman can be adjusted to measure precisely the right amount of shot for varied load requirements.

shotgun — a shoulder firearm with a smooth bore, designed to fire small pellets, shot, or rifled slugs.

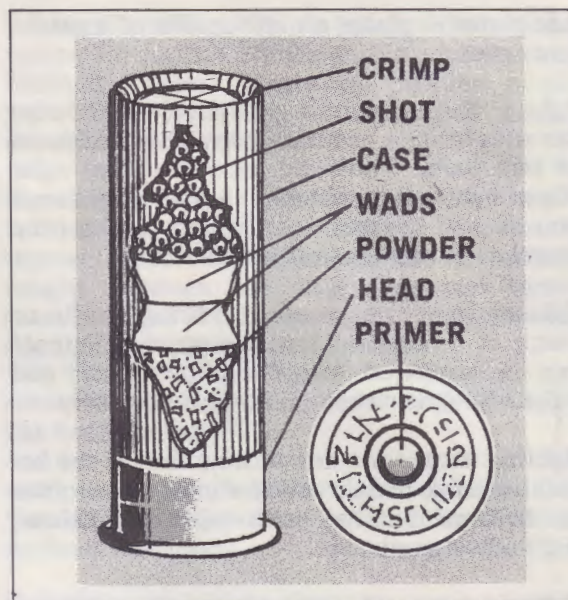
shot pattern — the distribution of the pellets of a shotshell when fired into a target or piece of paper to determine the center of aim and the density of the pattern.

shot placement — placing the fired bullet in the most desirable portion of a given target. Shot placement is undoubtedly the most important hunting ability.

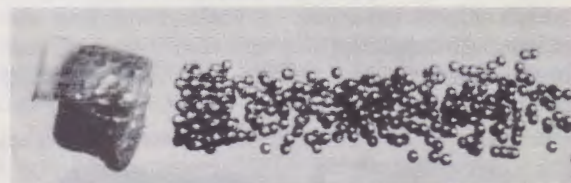
shot pouch — a container, usually leather, for carrying birdshot.

shotshell — ammunition for a shotgun, consisting of a paper or plastic case, shot charge (pellets), powder charge, one or more wads, and primer. Modern shotshells have combined wads with a shot cup.

shot string — the line of flight of a shot charge in motion. Rather than disbursing in a round, disc-like manner, as is evident in a shot pattern, shot pellets travel in elongated fashion, sometimes as long as 15 or 16 feet.



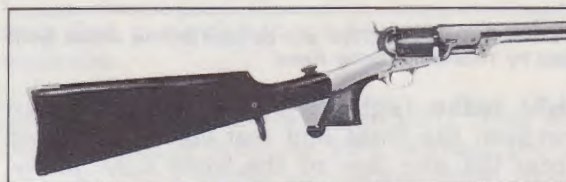
The components of a typical **SHOTSHELL**.



The wad is following the **SHOT STRING** in this photo taken just as the load has been fired. The string will elongate even more before reaching its target.

shoulder — the sloped or rounded portion of a bottle-necked cartridge case between the neck and the body. The area by which the headspace is usually determined in a rimless cartridge.

shoulder stock — long arm-type stock added to certain handguns for steadying and aiming.



The **SHOULDER STOCK** is now in demand by replica enthusiasts. This one by Navy Arms is fitted to a Colt Dragon.

side lock — a type of action most commonly found in side-by-side or double-barreled shotguns in which the working mechanism of the gun, except for the trigger, is attached to metal plates fitted into the side of the action body. This is generally the most expensive action design and is usually heavily engraved on the side plate. A disadvantage to the side lock is that it requires the cutting away of a great deal of wood at the most fragile part of the stock, weakening it and making it more susceptible to breakage.

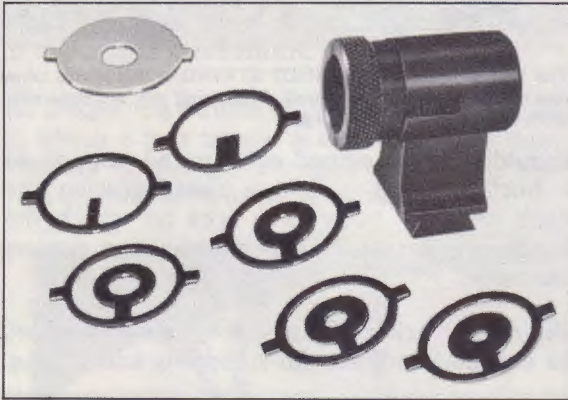
side plates — plates on either side of a patch-box cover.

sight — the device on a gun barrel which helps the shooter aim accurately; usually composed of two parts, front and rear. The front sight (fore sight) is positioned above the barrel muzzle, and the rear sight is at the back of the barrel or on the receiver (receiver sight).

sighting in — the process of firing a rifle or pistol at a target so that the point of impact can be compared with the point of aim and sight adjustments can be made if necessary.

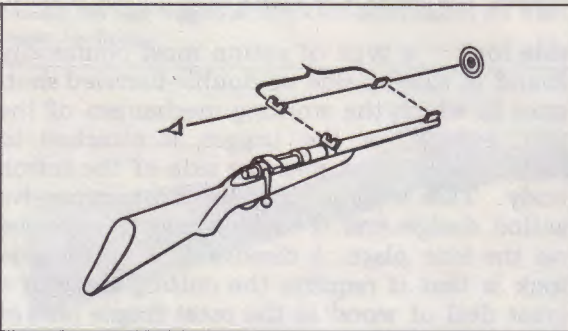
sighting shot — the non-scoring shot at the beginning of a match which allows the shooter to become familiar with wind conditions, sight adjustments, etc.

sight insert — the interchangeable element used in target-type, hooded-front rifle sights which allows insertion of various sighting elements, allowing the shooter to choose the one best suited to the particular range, lighting conditions, target, etc.



Various SIGHT INSERTS can be used in this Globe front sight by Thompson-Center Arms.

sight radius (sighting plane) — the distance between the front and rear sights, measured from the rear face of the front sight to the rear face of the rear sight.



The SIGHTING PLANE or SIGHT RADIUS is the distance between the sights.

single-action — a revolver design in which the revolver must be manually cocked for each shot. Also, an autoloading pistol design requiring manual cocking for the first shot with subsequent shots accomplished by slide motion.

single-base powder — a smokeless small arm powder made of nitrocellulose rather than nitroglycerine.

single-set trigger — a trigger system wherein the gun may be fired by a single heavy rearward pressure, or the trigger may be set forward to cock after which a light rearward pressure will release the hammer to fire the gun. The object of such a trigger is to safely permit an uncommonly light trigger pull.

single-stage trigger — a trigger in which movement and resistance increase smoothly in one process until firing results.

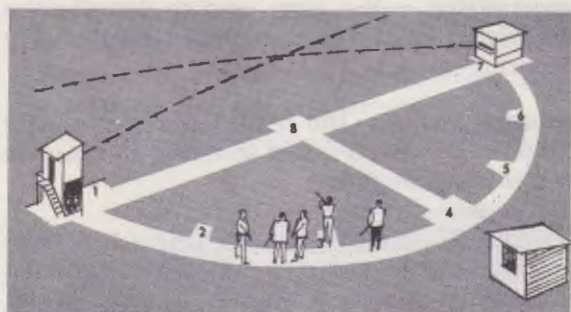
single trigger — in a multi-barreled shotgun, the firing mechanism which, with successive pulls, will fire the barrels one after the other. There are two designs: selective and non-selective. The *selective* style has a selector button which allows the shooter to choose which barrel will be fired first. The *non-selective* single trigger dictates the sequence in which the barrels will be fired, usually with the right (or the lower) barrel firing first. Single triggers, whether selective or non-selective, are of two basic designs: inertia block or mechanical linkage.

sizing — the additive in certain cloth materials which gives them "body" that must be washed out before the material can be used in patching.

skeet shooting — originated in the U.S. in 1926, an adaptation of trapshooting. A round of skeet consists of 25 clay discs, representing birds, which are mechanically hurled in the same path. The shooter fires from eight stations at "birds" flying from first the high house, then the low house. The skeet gun normally has a barrel length of 26 inches with a choke balanced between wide shot dispersion and evenness of pattern. It must be capable of two quick shots.

skeet stock — the buttstock on shotguns designed for skeet shooting which has considerable drop and short pull.

slack — the amount of movement in a trigger mechanism before it engages the releasing mechanism.



The shooter will fire at clay "birds" fired from both the high and low houses as he progresses from the various stations on a SKEET range.

sling — a strap, usually leather, attached to a gun to aid in carrying it or steadying it for better accuracy.

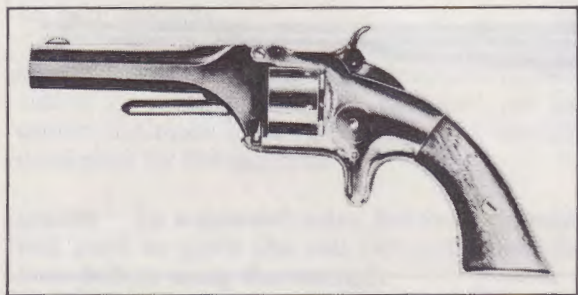
sling swivel — the metal loop which may or may not be permanent through which the sling is attached to the firearm.

slug — often refers to any metal piece being propelled from a firearm, but correctly applies only to a rifled slug.

small-bore — a term used in target shooting to describe .22 rim-fire cartridges and guns chambered for them.

small of the stock — the narrow portion of the stock between the comb and the receiver.

Smith & Wesson — one of the world's largest handgun manufacturers, formed in 1854 as the Volcanic Repeating Arms Company to produce lever-action repeating pistols. The founders were Daniel Baird Wesson, a gunsmith, and Horace Smith, who held the patent on a new breech-loading mechanism.



One of the first SMITH & WESSON cartridge revolvers is this .22-caliber model.

smokeless powder — the high-energy fuel which burns efficiently without external oxygen and is used as the propellant for all modern small arms ammunition. The burning rate is controlled by the size of the kernels, the relationship of perforation size to kernel size, and by use of various kinds and amounts of

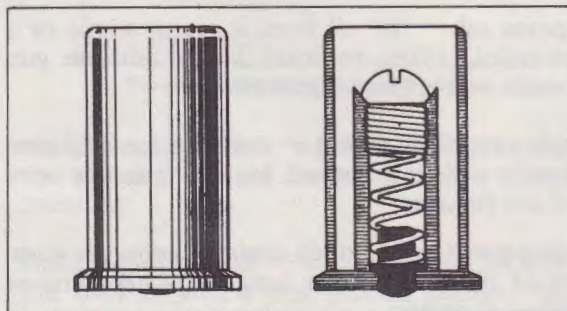
deterrent coatings. Smokeless powder was invented in the late 1800's and is composed of nitrated cellulose (single-base powder) or nitrated cellulose with nitroglycerine added (double-base powder).

smokestack — the malfunction in an auto-loading pistol wherein the fired case is not thrown clear of the action, but is instead caught between the slide face and barrel breech as the action closes with its open end up, thus resembling a smokestack.

smoothbore — any firearm in which the bore has not been rifled.

snail — on high-grade percussion firearms, the "water drain" type base for the nipple which replaces the drum.

snap caps — shotgun shell-like devices which are inserted into the chambers of double-barreled shotguns to protect firing pins from breaking and the face of the standing breech from becoming distorted by firing pins protruding into the breech.



A pair of SNAP CAPS permits testing of firing pins and ejectors without fear of breakage.

snap shot — a quick shot taken without deliberate aim.

snaphaunce (snaphance) — an early form of flintlock dating from the 16th century, probably of Dutch origin, and distinguished from the more popular flintlock by the steel (or frizzen) and the pan cover being separate parts rather than a single unit.



Original drawing of an early SNAPHAUNCE showing the ignition principle.

snubnose — the common term referring to guns of small to medium frames and having barrels of two inches or less in length. Such handguns are easily concealed weapons.

soft-point bullet — a form of jacketed bullet with an exposed lead core tip which expands upon impact with the target.

spanner — a wrench used for cocking a wheel-lock firearm.

Spencer rifle — an exposed-hammer, tubular-magazine, lever-action rifle invented by Christopher Spencer in 1860 and used by the Union forces in the Civil War after 1862. Until well into the 1870's, the Spencer carbine saw action with the U.S. Cavalry and was a principal weapon used in the Indian wars.

spent bullet — a projectile whose energy and velocity have been used up, or "spent," and which lacks the force needed to penetrate its target.

spent primer — refers to a primer that has been fired.

sperm oil — the oil from a sperm whale or a cachalot, often referred to in antique gun books as a preferred gun oil.

spin (rotation, twist) — the rotation of a projectile which is caused by rifling in the bore of the firearm.

spire-point — a bullet design having an elongated point; used for long-range big game or target shooting.

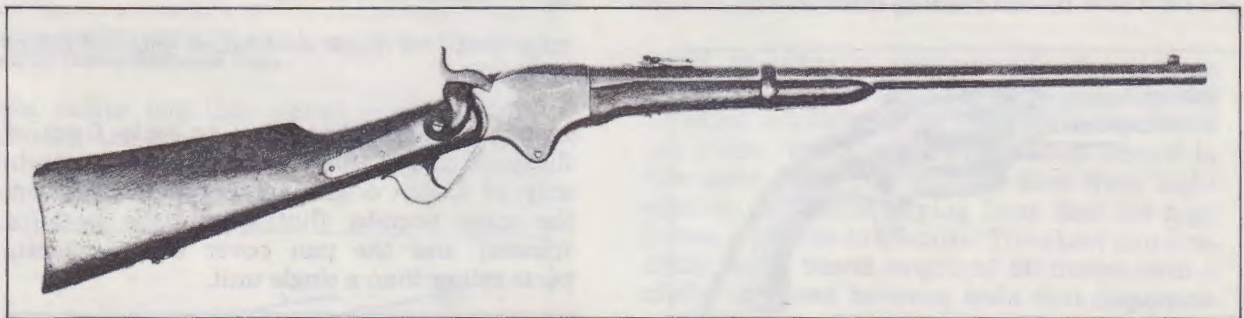
sporterizing — the term used to describe the modifying of a surplus military rifle or any firearm for a specific purpose.

spotting scope — the small telescope, usually 20-power, used in target shooting to examine target hits after firing.

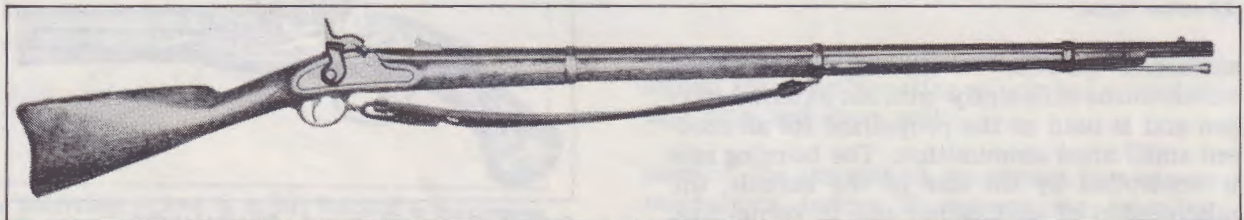
Springfield Armory — the principal U.S. Government-owned and operated small arms manufacturing facility, located in Springfield, Massachusetts. Established by an act of Congress in 1778 as an ammunition laboratory, it began the manufacture of smooth-bore flintlock muskets for the U.S. military in 1795. The Armory has become the principal manufacturer of military small arms except in wartime, when civilian industrial manufacturing companies exceed its capabilities. Until the late 1960's, the Armory was the principal seat of U.S. military small arms research and development. The famous "Springfield rifle," the U.S. M1903, got its name because of its receiver ring markings from the Springfield Armory.

sprue — the small amount of excess lead remaining on a cast bullet or ball at a point where the metal was poured into the mold; or the hole through which the lead is poured into a bullet mold; or the small flat on one side of a cast bullet where excess lead was removed by the cut-off plate.

sprue cutter — the pivotal plate on a bullet mold which can be rotated to cut off the sprue from a cast bullet prior to dropping it from the mold.



The .52-caliber SPENCER carbine helped turn the tide of battle for the Union and was feared and envied by the Confederates.



An original U.S. SPRINGFIELD musket, Model 1863, used in the Civil War.

spur trigger guard — on early firearms, a trigger guard on which a hook extends from the lower side to support the second finger, giving better control of the hair trigger.



The **SPUR TRIGGER GUARD** will steady the second finger of the shooter, thus aiding accuracy.

squeeze bore — a barrel design, still basically in the experimental stages, in which the barrel is of large caliber immediately ahead of the chamber, but tapers to a smaller caliber at the muzzle. The projectile fired in such a barrel has a body size equal to the muzzle diameter, but is flanged to equal the breech diameter. When fired, the flanges are compressed and greater resistance is exerted against the bore to effectively seal and maintain high chamber pressures for a much longer period than normal, producing ultra-high velocity. At this time, squeeze bores are not in general production.

stabilize — to give sufficient rotation or twist to a projectile so that it will travel point-on.

star crimp — the most frequently used shot-shell mouth closure, deriving its name from its appearance. The six or eight triangular segments are folded flat. The star crimp cannot be used with rifled slugs or with large-size buckshot loads because projectiles of this size do not have enough give to allow the forms to fold properly.

starlight scope — a highly sophisticated observation or aiming telescope designed for use under minimum lighting conditions. Normally used only by the military.

starter — on a muzzleloader, the short wooden rod used to place the ball partway down the bore before using the ramrod.



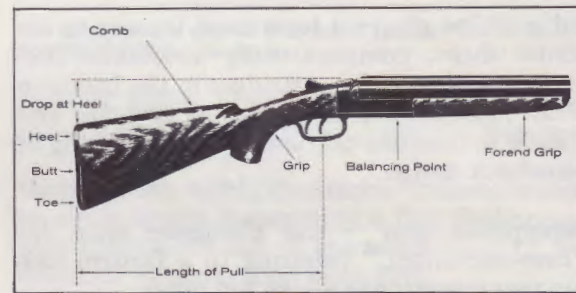
A properly patched round ball requires the use of a **STARTER** to fit the ball into the muzzle and drive it far enough down the barrel so it can be handled by the ramrod.

steady pin — the small knob on the edge of a flat mainspring which fits into a slot of the lock plate of an early firearm.

steel-jacketed — usually used erroneously to describe any full-jacketed bullet. A limited number of steel-jacketed bullets have been manufactured only in wartime when there were shortages of alloys.

stirrup — the pivoting piece connecting the mainspring to the tumbler in some forms of flint and percussion locks.

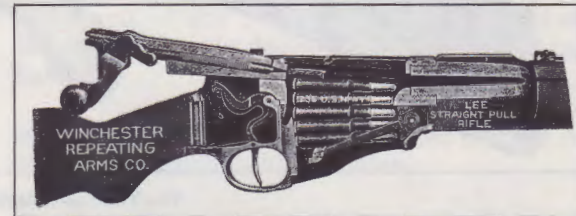
stock — that portion of a rifle or shotgun which supports the barrel or breech assembly; usually of wood or, on some modern stocks, plastic.



The components of a shotgun **STOCK**.

straight-cut rifling — a rare early bore which was grooved straight down the barrel, without spiraling.

straight-pull action — a bolt-action in which the bolt is pulled and pushed straight back and forward rather than in the manner of the Mauser turnbolt system. Rifles utilizing the straight-pull action are the Winchester, Lee, and Ross.



The Navy Lee **STRAIGHT-PULL** action, 1895 model, 6mm, manufactured by the Winchester Repeating Arms Company.

striker — the front portion of a firing pin which hits the cartridge primer.

striking a barrel — finishing the exterior of a barrel by lengthwise draw-filing with a special double-handed striking file. Often found on older, high-quality octagonal barrels.

string measure — in a shooting match, the

measurement from the center of a target to various impact points to accurately determine the score. Originally referred to a pioneer method of scoring in which wooden plugs were inserted into each bullet hole and a string was drawn around all and measured. The shortest string won, meaning that the shooter kept his bullet pattern closest and was the most consistent in his shooting.

stripping — failure of the bullet to follow the proper path through the rifling. Stripping can be evidenced by scrape or skid marks at the front of the ogive where the bullet has hit against the lands when it entered the rifling.

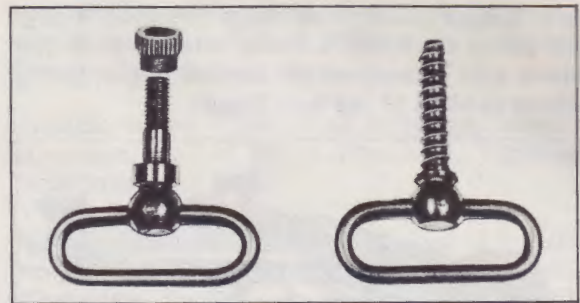
stuck case remover — a special tool used to remove cases stuck in reloading dies.

submachine gun — a term used loosely to describe short, compact, fully automatic firearms chambered for cartridges in the handgun class. Most submachine guns are low-cost and simple in construction and operation, being of blowback design.

superposed gun — the European term for "over-and-under," referring to a firearm having two barrels, one above the other.

swage — to form under extreme pressure. The process by which most lead and jacketed bullets are produced.

swivel — the metal ring used to attach a sling to a firearm.



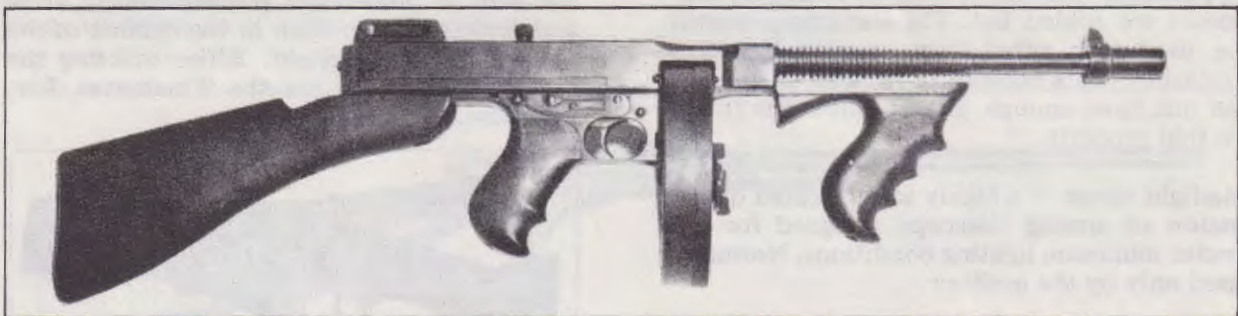
Two types of SWIVELS — the standard forearm (left) and the standard stock screw (right).



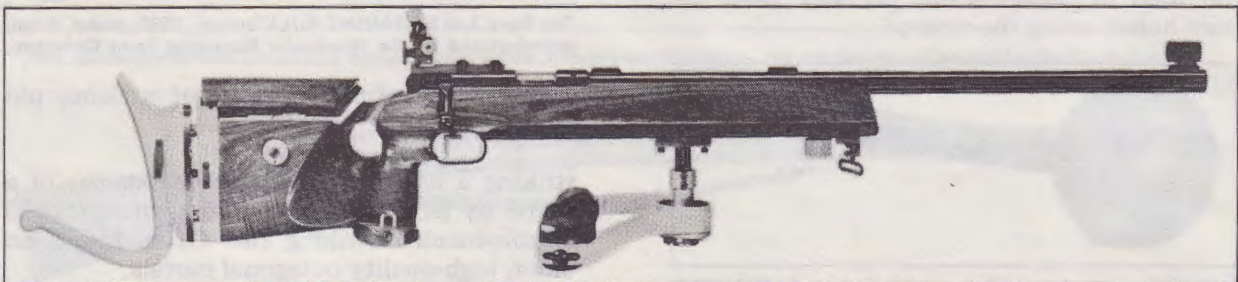
takedown rifle — a rifle with a barrel easily removed from the action to make it convenient to ship or carry.

tang — a metal strip extending rearward from a firearm receiver through which screws are driven to reinforce the weak section of the stock by attaching it to the barrel. On a shotgun, the extension of either the top or bottom of the action body.

tape primer — a roll of paper tape containing fulminate pellets at regular intervals, similar to the tape used in modern cap pistols. Tape primers furnished the ignition for specially modified rifles and percussion rifles during the Civil War era. The best known form of tape primer was that perfected by Maynard.



The Thompson M1921 SUBMACHINE GUN.



The Anschutz Model 1413 TARGET RIFLE. Notice the hand stop, hook butt plate, and adjustable cheekpiece which are commonly found on such rifles.

target pistol — a highly accurized competition pistol, usually identifiable as having a very short action, fast lock time, and longer-than-usual barrel.

target rifle (match rifle) — a competition rifle characterized by a heavy, straight stock, usually with an adjustable cheekpiece and with a hand stop, thumb rest, palm swell, and other design features to control balance, accuracy, and recoil.

telescopic sight — an aiming instrument mounted on a firearm, fitted with a telescope to make the target appear closer and larger.

temperature effect — refers to the change in a bullet's velocity produced by a change in the surrounding temperature. Performance standards are established at and corrected to 70°F. When a cartridge is fired at a lower temperature, the velocity will be slower; at a higher temperature, the velocity will be faster.

tennon — a slip of metal dovetailed into the bottom of a muzzleloader barrel through which a key or pin passes to hold the barrel in the stock.

thimble — in blackpowder terminology, the tubular container which holds the ramrod.

throat (leade) — the unrifled forward portion of the chamber, tapered to meet the bore.

throat diameter — the diameter of the chamber throat at the front of a revolver cylinder.

through bolt — the long bolt extending through the center of a long gun buttstock which threads into the receiver, drawing the stock up tightly. This is the strongest method of attaching a separate buttstock.

thumbhole stock — a rifle stock with a comb extending the full length from the receiver, having a hole to fit the shooter's thumb.

thumb rest — the raised surface on the thumb side of the grip of a target rifle, shaped to

give the shooter's thumb support. On a handgun, the ridge on the thumb side of the grip, formed to fit the curve of the thumb.



The ridge on the grip of this target revolver will serve as a **THUMB REST** for the shooter.

time of flight — measurement of the time it takes a projectile to travel a specific distance.

tinder — any highly flammable substance used to catch sparks for starting a fire. Early pioneers made good use of the mechanism of the flintlock to ignite their campfires.

toe — the corner of the bottom part of the buttstock.

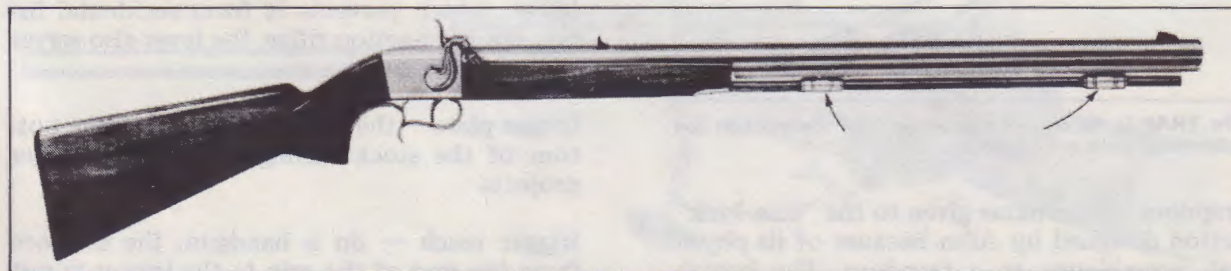
toe plate — on a Kentucky rifle, the metal strip at the bottom of the butt, next to the plate.

tompion — in early times, a plug inserted in the muzzle of a firearm to protect it from dirt or moisture while in storage.

top extension — on a side-by-side shotgun, an extension of the rib from the breech end of the barrel, usually designed to assist in locking the gun.

top jaw — on a flintlock, the upper portion of the clamp which holds the flint.

top jaw screw — the heavy screw which clamps the flint in position on a flintlock.



Arrow indicates the **THIMBLES** on this Model 1882 Morse Navy .58-caliber replica by Navy Arms.

top lever — on break-open guns, the pivotal lever at the upper rear of the receiver which engages the locking system and allows the gun to be opened.

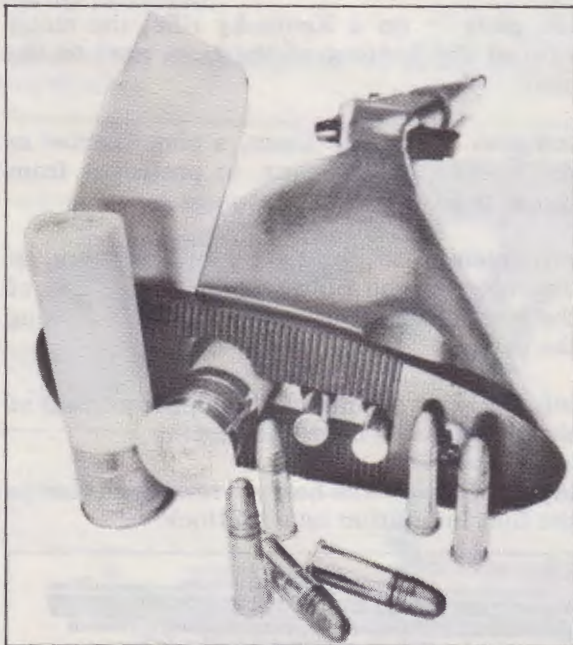
touch hole — the small opening in the top rear of a flintlock or hand cannon barrel through which the match was thrust to ignite the propelling powder. In later flintlocks, the vent through which the pan transmits its flash to the charge.

touch pan — refers to the flash pan on an early firearm.

tow — unspun flax, very rough and porous, used by pioneers as a cleaning patch.

trajectory — the path of a projectile from the muzzle to the target. Trajectory can be measured by two means: (1) mid-range trajectory height, and (2) bullet drop.

trap — the covered recess in the stock of a firearm for storing cartridges, spare parts, or cleaning equipment. Usually fitted with a metal-hinged or sliding cover, it is most commonly located in the face of the butt. On a pistol, the trap is often found in the grip or in the belly of the stock between the butt and the grip.

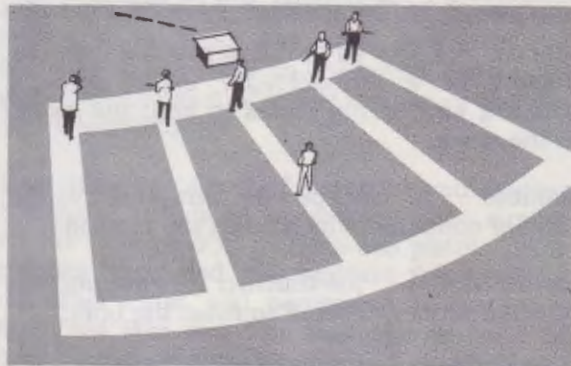


The TRAP in the butt of this Savage M24 combination gun holds extra shells and cartridges.

trapdoor — the name given to the “cam-lock” action designed by Allin because of its physical resemblance to a trapdoor. The breech block pivots at one end and opens by lifting

the other end. It was this device that converted muzzle-loading rifles to breechloaders and led to the development of the Springfield M1873 single-shot rifle.

trapshooting — a popular shotgun game designed to allow the shooter to practice his skill during off-season or to give those not wishing to hunt the opportunity to use their shooting skills. The target is a clay disc or “pigeon” which is mechanically thrown from a trap at various angles anywhere within the 34° trap field. In one round of trapshooting, 25 “birds” are thrown or, in doubles, 25 pairs. The trap shotgun has a longer barrel than ordinary, usually 30 inches, and is full-choke or improved modified choke. The stock is longer and straighter than that of the average shotgun. The first National Trapshooting Championship was held in New Orleans in 1887.



In TRAPSHOOTING, the clay bird is thrown at a constant height, but at varying angles from the sunken house at the top of the picture. As each shooter has his turn, he will shoulder his gun and call “Pull” to indicate he is ready to shoot.

trap stock — a shotgun buttstock specially designed for trapshooting; it has a straighter stock and longer length of pull.

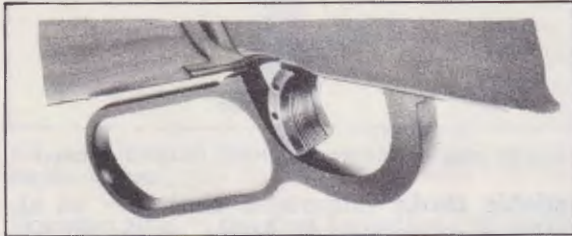
trigger — that part of a firearm which, when pulled, releases the firing pin to ignite the cartridge. Originally called “tricker,” so called because when pulled it “did the trick.”

trigger guard — the piece of metal around the trigger which prevents it from accidental firing. On lever-action rifles, the lever also serves as the trigger guard.

trigger plate — the metal strip set into the bottom of the stock through which the trigger projects.

trigger reach — on a handgun, the distance from the rear of the grip to the trigger in rest position.

trigger shoe — the curved piece of metal attached to fit over the front face of a trigger, secured by small setscrews, to perform one of two functions: (1) to increase the area engaged by the trigger finger, or (2) to move the effective surface of the trigger forward.



A TRIGGER SHOE installed on a Winchester rifle.

trigger spring — the small spring which returns the trigger to its rest position.

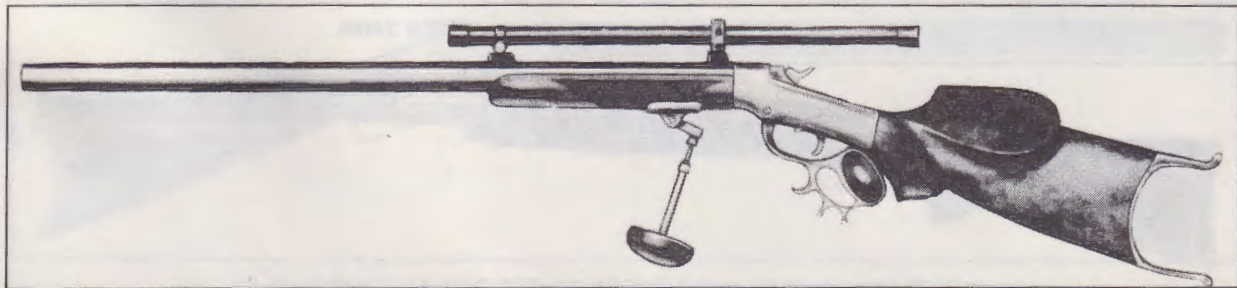
trigger squeeze — the act of pulling the trigger by gradually applying ever-increasing pressure until the sear is disengaged and the gun fires. Effective trigger squeeze requires proper follow-through by avoiding the natural inclination to jerk or flinch at the moment of sear release so that disturbance of the gun (aim) by abnormal finger movement is avoided.

trigger stop — a mechanical device that curtails rearward trigger movement at exactly the instant of sear disengagement.

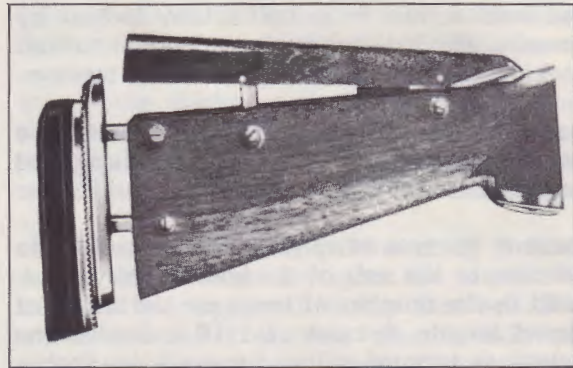
trombone action — the nickname for a pump or slide action.

try gun (try stock) — a gun with a specially developed stock made in numerous parts fitted with clamps, screws, and sliding members so that any conceivable dimension can be arranged whereby the gun will fit the physique, shooting habits, and preference of any shooter. After the shooter has determined the stock dimensions that best fit his needs, his own gun will be custom-made.

tube lock — a very early percussion system in which a fulminate-filled tube, inserted directly into the vent, was crushed by the hammer.



A TUBE SIGHT was used on this Ballard target rifle to define the sight picture.



The TRY STOCK is useful in diagnosing special shooting problems.

tube sight — an early predecessor of the telescopic sight. A long, thin metal tube with a rear aperture and front pin-head, it was affixed to the entire barrel length. Although having no optical lenses, this sight allowed surprisingly good definition of the sight picture.

tubular magazine — in a repeating rifle, the opening under the barrel into which cartridges fit nose to tail.

tubular powder — a kind of smokeless powder having cylindrical grains, each of which has one or more longitudinal holes through it.

tumble — to rotate a bullet or case in an abrasive compound for the purpose of cleaning or polishing.

tungsten carbide — the hardest manmade metal, composed of powdered carbide of tungsten fused with cobalt under extreme heat. Often used in resizing or swaging dies.

turn barrel — a kind of muzzleloader having two barrels joined one above the other which pivot to a common breech for firing. The turn barrel differs from the double barrel in that it has only one firing mechanism and both barrels are fitted with percussion nipples and sights. Although not popular during the muzzle-loading era, modern replicas are much in demand.

turnbolt action — a bolt-action locked by pressing the bolt handle in and down so that locking lugs are turned into receiver recesses.

turret press — a kind of reloading press with a rotating turret used to position resizing and seating dies and powder measures.

twist — the rate of spiral of rifling grooves in relation to the axis of the bore, usually measured in the number of turns per ten inches of barrel length. A twist of 1:10 indicates one complete turn of rifling for every ten inches of barrel length. There are also progressive or gain twist riflings, usually starting at a slower rate at the breech, but with the twist becoming closer together toward the muzzle.

U

under rib — a metal rib underneath a half-stock barrel which supports the ramrod thimble.

under-striker lock — a percussion lock having the hammer underneath and often with a mainspring as the trigger guard.

upper tang (top tang) — the extension of the breech plug held in the small of the stock by a screw.

upset, bullet — the rapid expanding of a soft lead and copper alloy bullet upon firing, caused by the heat from its expanding gases softening the metal. A certain amount of bul-

let upset is advantageous because the bore is sealed and escaping powder gases are contained. If upset is excessive, however, the barrel will bulge and, although it will usually return to normal, it can be strained to a point of cracking or damage.

V

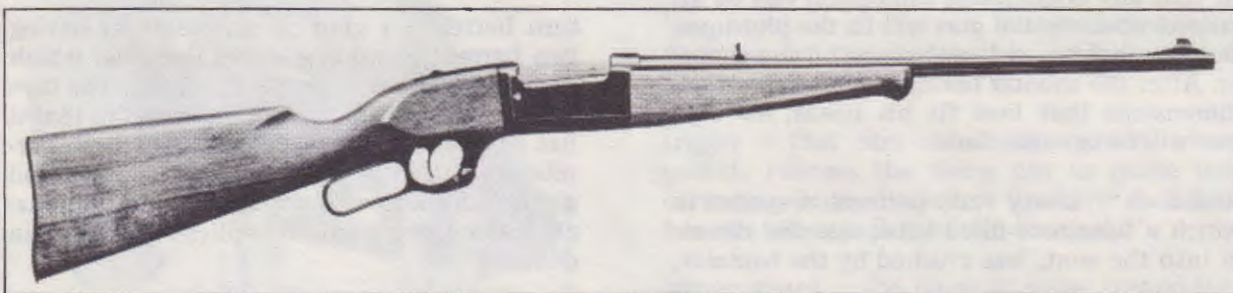
variable choke (adjustable choke) — an attachable or permanent device on the muzzle of a shotgun barrel which allows the choke to be changed quickly.

vent — in a breechloader, a gas escape route; in a muzzleloader, the small aperture through which the flame of ignition reaches the main charge; in a flintlock, the hole through the barrel wall between the flash pan and the main propelling charge.

ventilated rib — a metal attachment running the length of the barrel which forms a raised plane to dissipate barrel heat during rapid firing. Barrel heat causes heat waves or "mirages" which are disturbing to sight.

vernier caliper — a graduated instrument for measuring distances precisely; of invaluable use to the reloader for measuring case and cartridge dimensions.

vernier sight — a precise adjustable rear aperture sight based on the calipers produced by Vernier, developed in the mid-1800's.



The safety on this Savage 99-A is located on the UPPER TANG.



The VENTILATED RIB on this Browning Trap 99 will prevent "mirage" during rapid firing.

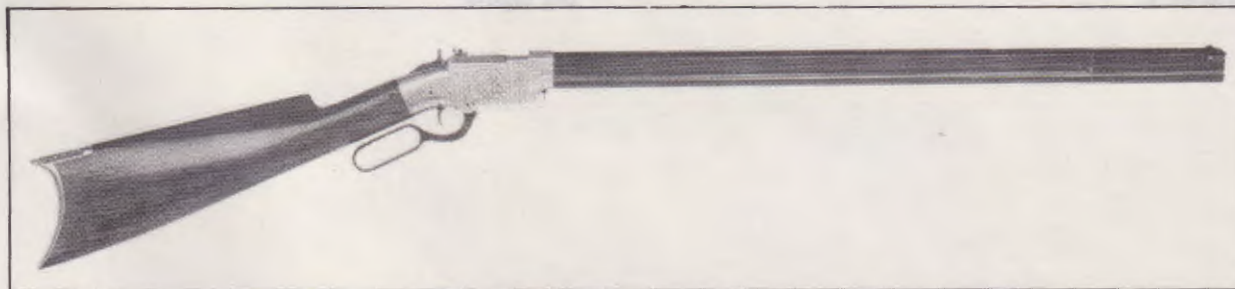


A typical VERNIER SIGHT, tang-mounted, used on many current replicas.

Volcanic rifle — the first repeating rifle heavily used in the U.S. utilizing self-contained ammunition. Originally called a “volitional repeater,” the Volcanic depended on the “rocket ball,” a lead hollow-base bullet filled with a fulminate propelling charge covered by a disc of cork. Upon firing, the fulminate was ignited by the pin and the disc was consumed or blown from the bore behind the bullet.

W

wad — a disc of paper, felt, plastic, or other material used in shotshells and sometimes in metallic cases. The purpose of the wad is to fill the space between the powder and the shot charge, sealing the gases behind the shot and providing a cushioning action for initial acceleration. The kinds of wads are: (1) *filler wad* — placed between the powder and card or nitro wad to cushion the shot from the thrust of the hot gases and to bring the shot to the proper height for correct crimping; (2) *over-powder wad* — placed between the powder and filler wad, sometimes called nitro wads; (3) *top wad* — a thin card placed on top of the shot in folded crimp shells. Star crimp shells do not require top wads; (4) *base wad* — permanently built into the shell at the base to hold the paper tube to the base and give added support to the thin brass wall.

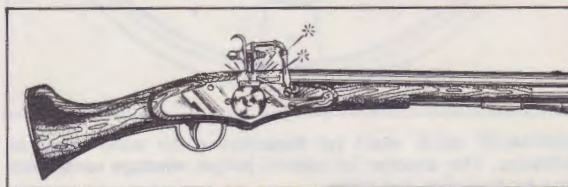


An original VOLCANIC REPEATING RIFLE from the Winchester collection.

Weatherby, Inc. — a contemporary manufacturer of quality firearms and ammunition. Located in South Gate, California 90280.

web — the thickness of the solid portion of the brass cartridge case between the primer pocket and case interior; also, the wall thickness of tubular powder.

wheel-lock — an early 16th-century firearm design which improved upon the matchlock and was later replaced by the flintlock. The wheel-lock had a serrated wheel which was wound tightly and held in ready position by a rudimentary sear connected to the trigger. Pyrites, held in place by a “dog,” were then lowered against the wheel rim and in contact with the priming powder. When the sear was released, the spring spun the wheel and its serrated rim struck the pyrites, producing a shower of sparks which ignited the priming powder. The same basic principle is in use today in Ronson lighters. Wheel-locks were very complicated to make and could be afforded only by the wealthy, making them prized collector’s items.

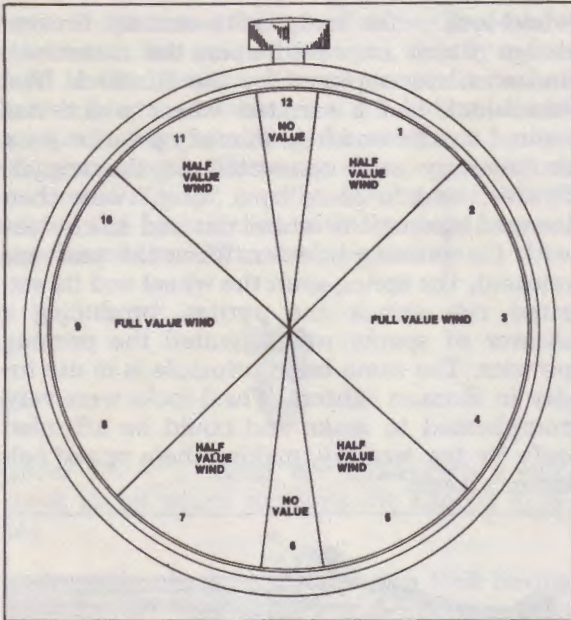


Original drawing of an early WHEEL-LOCK showing ignition principle.

wildcat — a cartridge or gun not standardized by the Sporting Arms and Ammunition Manufacturers Institute (SAAMI) and usually created when a gunsmith or reloader changes an existing cartridge case to suit his own specific requirements.

Winchester Repeating Arms Co. — founded in 1866 by Oliver F. Winchester, a New England shirt manufacturer, to produce the Model 1866 rifle, the first really successful lever-action repeater. The Winchester Company, located in New Haven, Connecticut, is now a division of Olin Industries.

windage (wind deflection) — the lateral drift of a bullet in flight caused by wind currents. In a sighting system, the lateral adjustment of the rear sight to compensate for wind conditions. In a muzzleloader using round balls, the clearance between the bore and the ball, or the escape of propellant gases through this clearance.



WINDAGE clock chart for determining the wind effect of ballistics. The shooter (at center) judges windage compensation by direction and value.

wind rule — a formula used to determine the allowance necessary to offset the effect of wind currents at a known velocity and from a known direction. The result is expressed in minutes of angle (MOA) required to compensate for wind blowing at 90° to the bullet path.

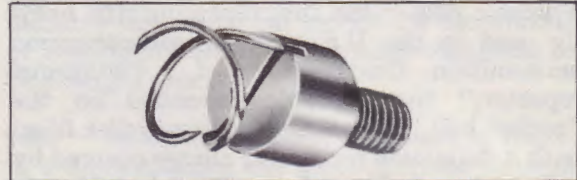
wiping rod — the rod used on a muzzleloader to clean the bore between shots.

work harden — to change the grain structure of metal by drawing or working. Case necks are often made brittle and work-hardened by reloading and must be annealed to prevent cracking.

worm — in muzzleloaders, a corkscrew-tipped rod which holds a cleaning patch, or is used to remove a patch stuck in the bore.

wrist — the small portion of the stock of a muzzleloader grasped by the firing hand.

Wundhammer swell — a rifle stock feature designed by Louis Wundhammer having a bulge on the right side of a pistol grip to fill the palm of the trigger hand, making constant hand placement easy and comfortable. Many modern Wundhammer swells are overdesigned and too large to serve their original function.



The **WORM** will be attached to a rod for holding a cleaning patch.

XYZ

X ring — the tie-breaking ring inside the maximum-value scoring ring on targets used for domestic pistol and small-bore rifle shooting competitions.

zero — the sight setting at which points of aim and impact will coincide at a given range with adjustments made for prevailing conditions such as light and wind.



Sight adjustments must be made to **ZERO** the shots in the center of a target at various distances.

zeroing in (sighting in) — the process of zeroing sights.