

HANDGUNS

Series



REVOLVERS

VOL.

2

R-92 revolver (Russia)

Type	Double Action revolver
Caliber(s)	9x18 Mak, 9x17 Browning Short
Weight unloaded	520 g
Length	157 mm
Barrel length	63 mm
Magazine capacity	5 rounds



The R-92 revolver was designed circa 1992 by Instrument Design Bureau (KBP) in Tula, in an attempt to provide Russian police and private security personnel with compact, easily concealable weapon which is simple and reliable in use. It seems that, like other contemporary Russian revolvers, it never gained any significant acceptance in official use (despite being formally adopted for MVD use in 1994), and only 'private security' version, chambered for 9x17 Browning ammunition, was manufactured in any noticeable numbers. This revolver has somewhat unconventional appearance, with trigger and grip moved further forward than usual in an attempt to make the gun more compact.

Revolver FN Barracuda (Belgium)

Type	Double Action revolver
Caliber(s)	.357 Magnum / .38 Special and 9x19 Luger, interchangeable
Weight unloaded	1050 g
Length	211 mm
Barrel length	76 mm (3")
Capacity	6 rounds

The "Barracuda" revolver was the only known attempt of famous company FN Herstal to produce a revolver. It was developed during early 1970s and offered for police sales in 1974. This weapon was developed as a versatile police sidearm, suitable for both European and American markets. At the time, US police market was dominated by .38 Special and .357 magnum revolvers, and European police market was mostly dominated by pocket-type automatic pistols with trends moving toward 9x19 Luger caliber. Considering all that, as well as a very close similarity in bullet diameter of all those rounds, FN decided to produce a revolver that could interchangeably fire all those rounds.



FN Barracuda revolver with .357 magnum cylinder installed

To change between "American" .357 / .38 calibers and "European" 9mm Luger / Parabellum, one must simply install an appropriate cylinder to a basic gun frame. As the 9mm ammo is rimless, to achieve reliable extraction and fast loading, 9mm rounds are loaded using special star-shaped flat clips that hold 6 rounds together. Rimmed revolver rounds are extracted using their rims, and can be loaded one by one or 6 rounds at once using speedloaders developed for Smith&Wesson K-frame revolvers. 9mm rounds also can be loaded one by one without clip, but extraction would be problematic. FN revolvers were of good quality, but somewhat heavy and came to the market a bit too late to sell well. It is believed that FN manufactured several thousands of those guns during mid-seventies.



FN barracuda revolver with both cylinders removed (.357 / .38 top, 9x19 bottom). Also shown are cartridges of respective caliber and steel clip for 9x19 ammunition

The FN "Barracuda" revolver is more or less traditional double-action revolver with swing-out cylinder. Firing pin is installed in the frame of the gun for better safety. It is of all-steel construction, with solid frame and heavy, lugged barrel. Only one barrel length of 3 inches (76mm) was available. Sights were fixed, with the front sight blade pinned to the barrel.

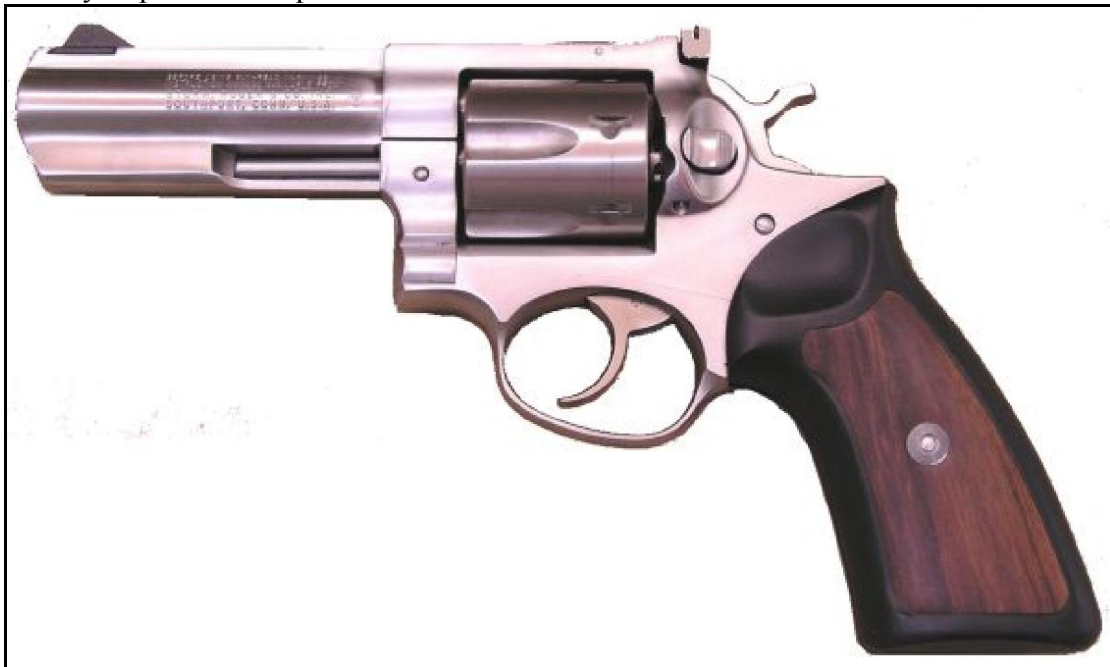
Barracuda revolvers were promoted as multi-caliber and thus ought to have two removable cylinders, one for .38 and .357 caliber rimmed revolver ammunition, and another for rimless 9x19 pistol ammunition. Each cylinder was marked with its respective caliber. It must be noted, however, that 9mm cylinders seem to be quite rare, and most available guns are in .38 / .357 caliber only.

It is NOT advisable to load 9x19 cartridges into cylinders NOT marked for this ammunition.

Ruger GP-100 revolver (USA)

Type: Double Action revolver
Caliber: .357 Magnum, .38 Special
Barrel length: 3" / 76 mm, 4" / 102 mm or 6" / 152 mm
Capacity: 6 rounds
Weight: ~ 41 oz / 1150 g with 4" barrel

The Ruger GP-100 revolver was first introduced in 1985 as a 2nd-generation of the Ruger Double Action revolvers, with intent to replace successful Ruger Security / Service / Speed Six line of revolvers. The GP-100 was a serious improvement over previous Ruger guns. It was made even stronger, with intent to fire an unlimited number of full-power .357 Magnum rounds, and was produced in many variations, with three basic barrel lengths (3" / 76 mm, 4" / 102 mm or 6" / 152 mm), various barrel profiles, with fixed or adjustable sights etc. GP-100 revolvers also are offered in two finish/material variations - blued carbon steel or polished stainless steel. Like most other Ruger guns, GP-100 revolvers are exceptionally strong, reliable and durable, and are great self-defense, security or practice weapons.



Ruger GP-100 revolver, stainless steel model, caliber .357 Magnum, with full-lug 4 inch barrel

The Ruger GP-100 revolvers are double-action guns with exposed hammers and swing-out cylinders. The trigger lockwork was assembled into the single unit along with detachable trigger guard, hammer was powered by durable coil spring. Revolvers have separate frame-mounted firing pin and automatic transfer-bar safety which permits the

hammer to strike the firing pin only if trigger is fully depressed. Cylinder lock is operated by a push-button, located on the left side of the frame, behind the cylinder. Unlike its predecessors, GP-100 revolvers feature additional cylinder lock, located at the front of cylinder crane, which is disengaged automatically once shooter has pressed the cylinder release button. Cylinder holds 6 rounds of ammunition, and opens to the left. Grip frame is of compact design, and standard grips are of single-piece wrap around type, made from synthetic rubber with wooden inserts. Revolvers are offered either with fixed sights or with adjustable sights.



Ruger GP-100 revolver, stainless steel model, caliber .38 Special, with half-lug 4 inch barrel and fixed sights



Ruger GP-100 revolver, carbon steel model, caliber .357 Magnum, with half-lug 6 inch barrel

Ruger Security Six, Police Service Six, Speed Six and GS32-N revolvers (USA)

Type	Double Action revolver
Caliber(s)	.357 Magnum, .38 Special, 9x19 Parabellum , .380 British service
Weight unloaded	~ 33.5oz / 970g for 4inch-barreled model
Length	depends on barrel length
Barrel length	2,75" / 70mm, 4" / 102mm and 6" / 152mm
Cylinder capacity	6 rounds

The Security Six line of revolvers was introduced by American company Sturm, Ruger & Co in 1971, as the new, most modern revolvers for police, military and civilian use. The line included three basic models - "Security Six" revolver with adjustable sights and square butt frame, "Police Service Six" revolvers (also known simply as "Service Six") with fixed sights and square butt frame, and "Speed Six" revolvers with with fixed sights and round butt frame. The first model was offered with three barrel lengths - 2,75" / 70mm, 4" / 102mm and 6" / 152mm, two latter models were offered only in two lengths - 2,75" / 70mm and 4" / 102mm. There also was fourth model in this line-up, the GS32-N, which was initially offered for government buyers; it was basically a slightly modified Speed Six revolver. Standard chamberings for the family were .357 Magnum or .38 Special, with 9x19 Luger / Parabellum added later (this featured a modified cylinder with patented extractor that had a spring ring which entered ejector grooves on rimless 9mm cartridge cases).



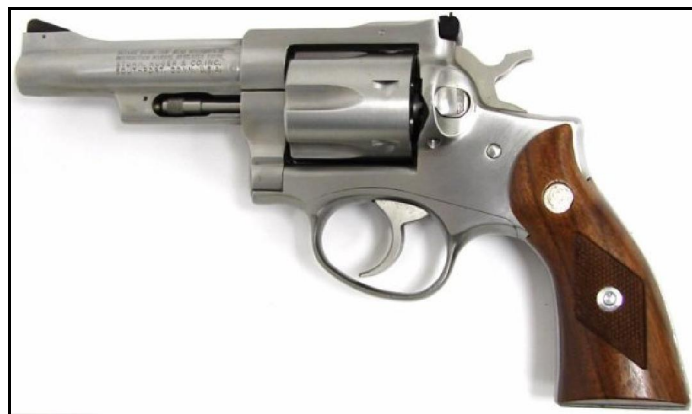
Ruger Police Service Six revolver, caliber .357 Magnum

For export to British commonwealth countries Ruger also made Speed Six revolvers in .380 British Service chambering. In 1975, Ruger introduced stainless-steel versions of all three basic models, which were produced concurrently with carbon steel models. Production of the whole line was ceased in 1988, with introduction of the second-generation Ruger GP-100 revolvers. Well over 1,5 million of Ruger's first-generation double action revolvers were produced. These revolvers were issued by US Border guard, National Immigration service, US armed forces, many police departments. Many revolvers were also exported to other countries.



Ruger Speed Six revolver, caliber 357 Magnum

In general, these first-generation Ruger revolvers were considered an excellent guns, strongly built, reliable and simple to maintain -all that with relatively affordable price. Many Service Six, Security Six and Speed Six revolvers are still sold in USA on commercial 2nd-hand market.



Ruger Security Six revolver, caliber .357 Magnum, stainless steel model

Ruger Security / Service / Speed Six revolvers are double-action guns with exposed hammers and swing-out cylinders. The trigger lockwork was assembled into the single unit along with detachable trigger guard, hammer was powered by durable coil spring. Revolvers have separate frame-mounted firing pin and automatic transfer-bar safety which permits the hammer to strike the firing pin only if trigger is fully depressed. Cylinder lock is operated by a push-button, located on the left side of the frame, behind the cylinder. Cylinder held 6 rounds of ammunition, and swung open to the left. Standard grips were checkered wood.



Ruger Security Six revolver, caliber .357 Magnum, carbon steel model



Ruger GS32-N military model revolver, a stainless-steel version of the "Speed Six" revolver

Ruger single action revolvers (USA)

Type: Single Action
Chambering(s): from .22LR to .44 magnum and .45LC
Weight unloaded: varies with model
Length: varies with model
Barrel length: usually 4 to 8 inches (102 to 205 mm)
Capacity: 6 rounds

When "Western Craze" hit the TV and movie screens in 1950s, William Ruger found a new business niche. By the 1950s almost everyone was thinking that Single-action revolvers are dead - even the Colt dropped their famous SAA "Peacemaker" from production. But Ruger thought differently, and in 1953 he introduced his first SA revolver - a Ruger Single-Six, chambered for .22LR. This gun followed the shape of the original Colt SAA, but used modern lockwork with coiled springs and frame made by precision casting instead of machining which resulted in lower production costs. In the 1955 Ruger announced his next SA gun that quickly become the flagship of all SA Rugers - the Blackhawk in .357 Magnum. next year Ruger announced the .44 Magnum Blackhawk. Both guns were a total success, and both currently known as Old Models, "flat tops" or "three screw" models. "Flat Top" comes from the flat topstrap ahead of the adjustable rearsights. "Flat tops" were made until 1962, and after that all adjustable sight SA Rugers have had top-straps with raised protective rear part, just ahead of the sights. In 1958, Ruger announced the Bearcat - a small-framed SA, chambered for .22LR. Bearcat had single-piece aluminium alloy frame and was, thus, much lighter and comfortable to carry than Single Six. In 1959, came the biggest of the SA Rugers - Super Blackhawk. Super Blackhawk had bigger and stronger frame made entirely of steel and it was chambered for powerful .44 Magnum and .45 Colt cartridges. It also had easily distinguishable square-backed triggerguard. Early Blackhawks were also available in .30 carbine, .41 Magnum and .45 Colt (all guns had same frame as .44 Magnum Blackhawks, which was slightly bigger than frame of .357 magnum ones).



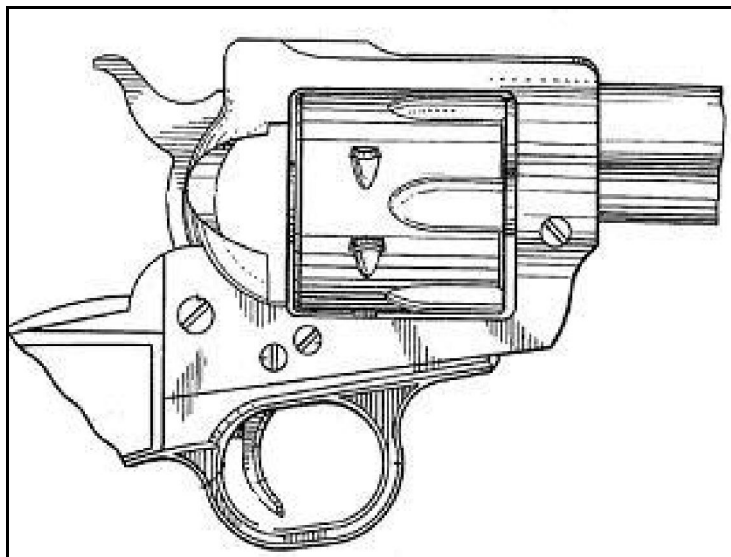
Ruger Blackhawk New Model - the flagship of all SA Rugers

In 1973 Ruger announced New Model Single Action revolvers. All previous guns had no special safeties against accidental ignition of the cartridges in the chamber under the hammer, so the only safe mode of carry was with the 5 rounds in the 6-chamber gun, with empty chamber under the hammer. New Model SA Rugers have patented transfer bar safety, which allows to carry all 6 chambers loaded. This invention applied not only to the new production models - Ruger designed his new action so it could be installed also in Old Model frames, and Ruger factory still offers installation of the new model action in old guns for free (see www.ruger-firearms.com for details).



Ruger Blackhawk (Flat-top, Old or "three screw" model)

In 1985 Ruger offered new variation of the SA theme - Ruger Bisley. This gun had Colt "Bisley" model - like grip frame and was initially available in chamberings from .22LR to .45LC.



Ruger three screws (Old Model) frame

In 1993 Ruger announced a fixed-sighted SA revolver, named Vaquero. Vaquero in Spanish means "cowboy", and this gun obviously intended for growing sport of the Cowboy-action shooting. Vaquero revolvers available in .357 Magnum, .44-40, .44 Magnum, and .45LC. A combination of the Bisley frame and Vaquero fixed sights was a logical step, and this has been done in 1998 with Ruger Bisley-Vaquero models, available in .44 Magnum and .45LC.



Ruger Bearcat New Model - smallest of the breed

In general, all Ruger Single Action revolver are quite similar. All SA Rugers (except the Bearcat) had two-piece frame with separate grip frame; Bearcat (both Old and New models) revolver had single piece frame. Frames could be made from steel or aluminium alloy (grip frames on some models). All SA Rugers have coiled main springs and frame-mounted firing pins, and all New Model guns also featured patented transfer bar safety which allows the hammer to strike the firing pin only when trigger is pulled completely. All revolvers have cylinders with 6 chambers. Loading and unloading is commenced via the loading gate at the right side of the frame. Fixed spring-loaded ejector rod is mounded below the barrel and to the right. Cylinder is freed for loading simply by opening the loading gate, unlike the traditional SAAs where cylinder is freed by placing the hammer to the half-cock position.



Ruger Bisley Vaquero - Bisley-framed gun with fixed sights

Most of the SA guns have micrometer adjustable rear sights, except for Bearcat, Single Six and Vaquero and Bisley-Vaquero models. Early Single Six revolvers had blade-type rear sights, all other fixed-sighted models have the rear sights in the form of the groove on the topstrap. Adjustable-sighted versions of the Single Six and Bearcat are named Super Single Six (first appeared circa 1964) and Super Bearcat, respectively.



Ruger Bisley New Model

In general, Ruger SA revolvers offer the best value for single action shooter, giving the versatility and extreme reliability for any use - cowboy-action shooting, hunting, plinking, target shooting. From what i know, even some police departments in the USA issue Blackhawks as a duty guns, which is really funny indeed.



Ruger Single-Six New Model - a small-caliber single action



Ruger Super Blackhawk - the BIG brother



Ruger Vaquero - fixed sights version for Cowboy-action shooters

SPO-JGAS 2010

Smith & Wesson N-frame revolvers (USA)

Type: Double Action

Chamber: .38/44, .357 magnum, .41 magnum, 10mm auto, .44 SW Special, .44 Rem
Magnum, .45ACP, .45Auto Rim, .45LC

Weight unloaded: vary with model, usually 1 kg plus

Length: vary with model

Barrel length: 2 1/2 to 8 3/4 inches (64 to 222 millimeters)

Capacity: 6 rounds (also some versions of M627 - 7 and 8 rounds in .357magnum)

The N-frame revolvers are the biggest double action ones, that are manufactured by Smith & Wesson company. The history of the N-frames began in 1908, with the introduction of the New Century Hand Ejector revolver, chambered for then-new .44 S&W Special cartridge. The gun, also known as a "Triple Lock" model, featured additional cylinder lock at the cylinder crane, plus two standart locks at the front and rear ends of the cylinder axis/ejector rod. Another feature was the enclosed ejector rod (underbarrel lug). The frame was bigger and heavier than the K-frame Hand Ejector, allowing to use larger caliber ammunition. The trigger action was similar to .38 caliber Hand Ejectors, as well as the sights.



S&W "New Century" or "Triple Lock" model of 1908, caliber .44 S&W Special

In the 1915 the S&W got rid off the Triple Lock feature, as a time-consuming and cost-adding. The underbarrel lug also was removed. After the beginning of the World War One, following the demand of the US Army in the sidearms, the S&W rechambered its N-framed second model for US GI .45ACP cartridge. As the .45ACP was rimless round,

the gun should be loaded with ammunition in half-moon clips for proper case extraction. each clip can hold 3 rounds and also speed up loading. These guns were issued to US troops as S&W Model of 1917 revolvers, along with the Colts (issued under the same designation of M1917).



S&W M1917 - second model N-frame revolver, chambered for .45ACP

In the mid-1920s came the third model of the N-frame, that brought back the underbarrel lug. In the 1929 S&W developed new round, .38 High Velocity (.38HV) - a heated-up version of the .38 S&W Special. Since this round was unsafe to fire in the K-framed M&P revolvers, S&W team rebarreled the N-framed revolver for .38-caliber (actually, .355in), and installed a heat-treated cylinder that could hold 6 rounds of either .38HV or .38Spl rounds. The gun was named 38/44 Heavy Duty (Model 20, since 1956). Similar model with adjustable sights was called the .38/44 Outdoorsman (model 22).



S&W model 27, classic N-frame revolver in .357 magnum

The development of the .38HV cartridge (also known as .38/44) and the Heavy Duty revolver led to the invention of the .357 magnum round - a lengthened version of the .38HV. The only reason for case lengthening was to avoid chambering hot ammunition into guns that were not designed for such ammo. The first revolvers in the .357magnum by S&W were similar to .38/44's, except for the longer cylinder. Since the 1956, this model received the designation Model 27. During 1980's, the Model 27 was replaced by its stainless steel version, model 627. Currently, model 627 is offered in limited numbers from S&W Performance Shop, with standard 6 round cylinders or with "high capacity" 8 rounds unfluted cylinders. A "budget" version of the Model 27, model 28, originally known as "Highway Patrolman", was very popular police sidearm in the USA during the 1950's-60's. The Model 28 differed from the Model 27 mostly by having less "luxury" finish, while maintaining almost the same strength, reliability and accuracy.



S&W 38-44 "Heavy Duty" - a third model N-frame, caliber .38 High Velocity, father of the .357 magnums

During 1920's-50's S&W also developed some target models in .44spl, that differed from standard ones by having adjustable sights (post-1956 guns also known as Model 24's), and in 1950s S&W introduced target revolvers chambered in .45ACP, using same half-moon clips as M1917's. These models are known as Model 25's, and currently are in limited production by S&W Performance Shop.

In the mid-1950s, following the demand from the hunters and shooters in the more powerful cartridge/gun, S&W and Remington developed the pair that for couple of decades became the most powerful handgun/cartridge combo in the world. namely, these were .44 Remington Magnum cartridge and S&W .44 Magnum revolver, later renamed in the model 29. Back in the 1980's the model 29 was replaced by its stainless steel version, the Model 629, that is still in production. Most common versions are model 629 standard with old-style, short underbarrel lugs, or 629 "Classic" models with full-length, heavier underbarrel lugs. All variants of the model 629 featured adjustable sights.

In the 1967, the S&W and Remington decided to introduce a gun/ammo combination that will fill the gap between .357mag and .44mag guns. The result was the .41 Remington magnum cartridge and the S&W Models 57 and 58 revolvers. Model 58 featured standard N-frame with fixed sights, and was intended for police and state troopers use. Model 57 featured fixed sights. However, these guns did not catch the market well, mostly because these were still too powerful (with too big recoil and muzzle blast) for many law officers. The stainless steel of the model 57, the Model 657, is still being manufactured by S&W.



S&W model 28 "Highway Patrolman". A budget version of the model 27, great police gun in .357 magnum



S&W original .44 magnum revolver, later renamed into model 29

With the introduction of the new, powerful pistol cartridge, 10 mm auto, S&W began to manufacture the Model 610 - 6-round revolver, that should be loaded with ammunition in full- or half-moon clips. As with other 6xx series revolvers, Model 610 featured stainless steel construction and adjustable sights.



S&W model 610 "Classic", stainless steel revolver in 10mm auto



S&W 629 - stainless steel version of the Model 29



S&W Performance Center model 627 ("factory custom" model) with 8-shots cylinder



S&W Performance Center Model 25, a remake of the old revolver in the .45 Long Colt

SPO-JGAS 2010

Smith & Wesson "Military and Police" M10 and other K-frame revolvers (USA)

Data for current manufacture M10 revolver with 4 in (102mm) barrel

Type: Double Action

Chamber: .38 Special; some other models also .357 magnum

Weight unloaded: ca. 1000 g

Length: 236 mm

Barrel length: 102 mm

Capacity: 6 rounds

The history of one of the most successful revolver designs of all times, the Smith & Wesson's "Military And Police", began in 1899, when S&W began to manufacture its "Hand Ejector" model in .38 Long Colt caliber. In 1902, S&W introduced the .38 hand Ejector revolver in its new chambering, the .38 Special, and during the following years continued to slightly improve the design. The 38 Hand Ejector took its shape in 1915. In 1920s, Smith & Wesson renamed the 38 Hand Ejector into Military and Police model, and in 1958, after introduction of the model numbering system, S&W assigned to the Military & Police revolver a model number 10. During the century, the total numbers of the M&Ps manufactured by S&W could be estimated at rough six millions plus, give or take. This included some 1 million or so revolvers, delivered to the US Government during the WW 2, and a large numbers of revolvers, manufactured for export into British Commonwealth countries.



S&W Hand Ejector .38spl - model of 1905

In general, the M&P was one of the most popular police revolvers in the USA. Some sources said, that at some time period, some 80% of ALL US Police departments were armed with M&P revolvers! These guns were also used by US Military, especially in US Air Force and US Navy. The M&P's were widely copied by numerous manufacturers in Spain, France and other countries.



S&W Military and Police revolver with 5 inch barrel - circa 1941

Technically, all M&P revolvers are double action, swing-out cylinder revolvers. All M&P family revolvers featured similar medium sized frame (S&W nomenclature code: K-frame); All M&Ps featured dual-locked 6 chamber cylinders (one lock is manually operated by the latch, located at the left side of the frame behind the cylinder and locks the rear part of the cylinder axis; another lock is a spring-loaded one that locks the front part of the cylinder axis/ejector rod under the barrel). Standart M&Ps featured fixed front sight and fixed rear sight, in the form of the groove, cut in the top of the frame. Some target versions (see below) featured ramp front sight with adjustable rear sights. Original material of the frame was the carbon steel, blued or parkerised; later, lightweight aluminium alloy frames and stainless steel frames were introduced. Original barrels were from 2 to 8 1/2 inches long, of thin profile, with exposed ejector rod. Later, "heavy barrel" models were introduced. Some later models also featured barrels with upper rib and / or enclosed ejector rod.

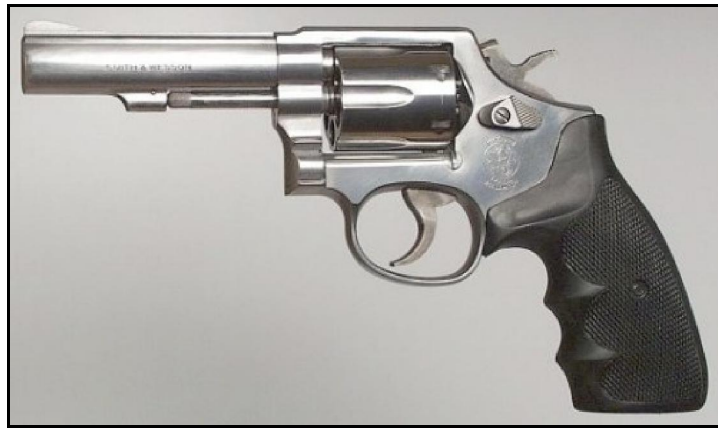


S&W model Victory - military WW2 production with 5 inch barrel

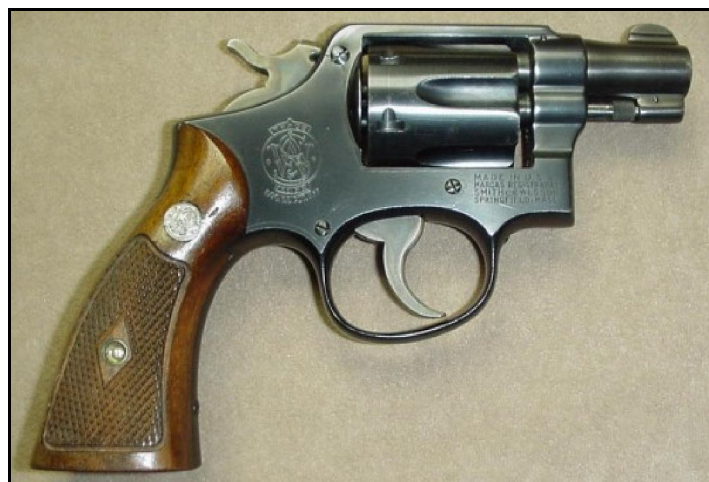
Here is the list of the most common M&P models, manufactured during the last 100 or so years.

- **38 Hand Ejector** - original model. In 1899, introduced in 38 Long; in 1902 in .38 Special.
- **Military & Police** - Hand Ejector .38 Spl, renamed somewhere in 1920s.
- **Victory model** - WW2, military issue M&P's with rough finish, plain wood grip panels and lanyard ring. manufactured for US Military in .38Spl and for British Commonwealth in .38/200, with 4 or 5 inch barrels.
- **Military and Police, Model 10** - M&P, numbered in 1958. Currently in production.
- **Military and Police, Model 11** - M&P, chambered for British service .38/200 cartridge. In production since 1936, discontinued in 1965
- **Military and Police Airweight, Model 12** - similar to Model 10, but with alluminium alloy frame. In production since 1953, discontinued in 1986
- **Military and Police Magnum, Model 13** - M&P with thick, heavy barrel, chambered in .357 magnum cartridge. In production since 1973, discontinued.
- **K-38 Masterpiece, Model 14** - Target version of the M&P, with 6 or 8 inch barrel and adjustable sights. In production since 1947, discontinued in 1982
- **K-38 Combat Masterpiece, Model 15** - Version of the Model 14, with ribbed barrels of 2, 4 or 6 inches long and adjustable sights. In production since 1949, discontinued.
- **K-32 Masterpiece, Model 16** - Target version of the M&P, chambered for .32 S&W Long, otherwise similar to K-38 model 14. In production since 1947, discontinued in 1973
- **K-22 Masterpiece, Model 17** - Target version of the M&P, chambered for .22LR. In production since 1946, discontinued
- **K-22 Combat Masterpiece, Model 18** - Version of the Model 15, chambered for .22LR. In production since 1949, discontinued in 1986

- **Combat Magnum, Model 19** - M&P with heavy barrel, chambered for .357 Magnum, with adjustable sights. In production since 1955, discontinued
- **Military and Police Stainless, Models 64, 65, 66, 67** - M&Ps with heavy barrels (2, 4 or 6 inches long) and stainless steel frames; Models 64 and 67 are chambered in .38 Special, models 65 and 66 - in .357 Magnum. Models 64 and 65 featured original, model 10-like fixed sights, models 66 and 67 - adjustable sights. Currently in production.
These stainless steel models replaced previous, similar carbon steel models in the following order:
Model 13 - replaced by Model 65.
Model 19 - replaced by Model 66.
Model 15 - replaced by Model 67.
Model 10 - complemented by Model 64.



S&W Model 64 .38Spl - stainless steel version of the Model 10HB (Model 65 in .357Magnum looks almost the same)



S&W Military and Police revolver with 2 inch barrel - circa 1949



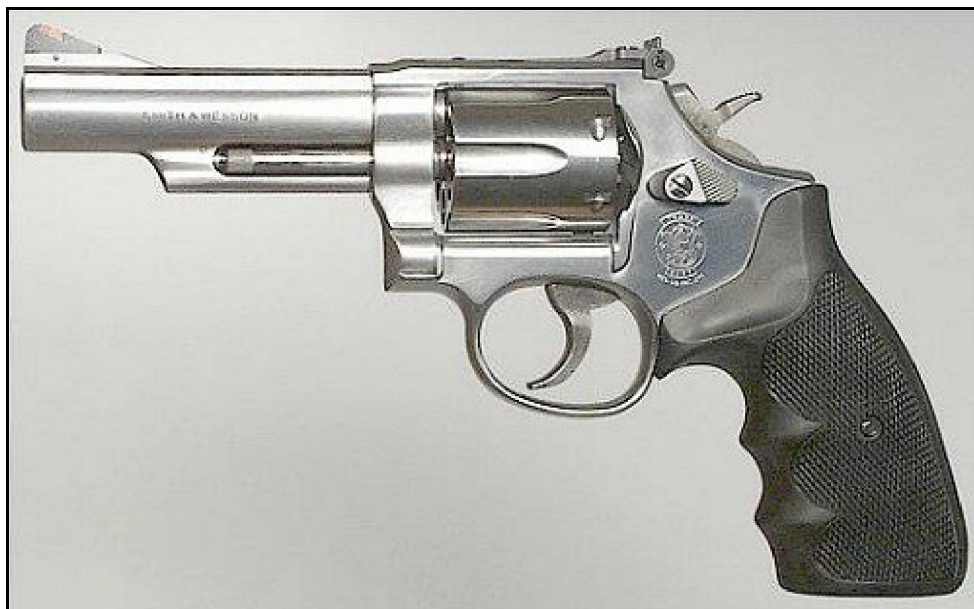
S&W Model 10 Heavy Barrel with 4 inch barrel



S&W K-38 Masterpiece Model 14 target revolver with 6 inch barrel



S&W Combat Masterpiece Model 15 revolver with 4 inch barrel



S&W Model 66 .38Spl - stainless steel version of the Model 15 (Model 67 in .357Magnum looks almost the same)

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Smith & Wesson / AAI Quiet Special Purpose Revolver / QSPR / tunnel revolver (USA)

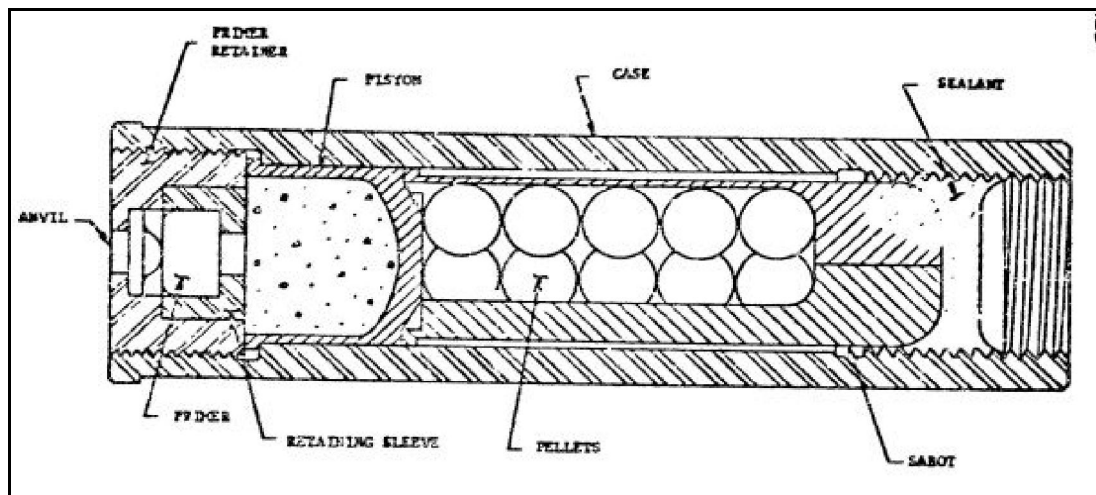
Type	Double Action revolver
Caliber(s)	.40 smoothbore (.40 QSPR silenced ammunition)
Weight unloaded	n/a
Length	~ 170 mm / 6.7"
Barrel length	35 mm / 1.375"
Cylinder capacity	6 rounds

Quiet Special Purpose Revolver (QSPR; also known as 'tunnel revolver' or 'tunnel gun') evolved from 1967 US Army requirements for a silenced, multi-projectile hand weapon for use by 'tunnel exploration personnel' (so called 'tunnel rats'), which operated against Vietnamese communist forces in the numerous tunnels dug by NVA and VC personnel. The weapon concept was developed at US Army Land Warfare Laboratory at Aberdeen Proving Ground, in collaboration with AAI corporation, which was responsible for creation of the internally silenced ammunition, based on the "gas seal piston" concept (similar concept at the time was employed in a number of Soviet Spetsnaz weapons, firing PZ type internally silenced ammunition). The whole concept of the internally silenced ammunition is rather old and starts in the pre-WW1 era, but practical results were achieved only during 1950s and 1960s, when chemical and metallurgical technologies finally permitted manufacture of actual ammunition.



Smith & Wesson Model 29 revolver modified by AAI corporation into Quiet Special Purpose Revolver (QSPR)

Quiet Special Purpose Revolvers (QSPR) were based on commercially available Smith & Wesson Model 29 .44 Magnum revolvers, rebuilt by AAI to handle their special integrally silenced ammunition. Earliest prototypes featured new, very short smoothbore barrels with .40" / 10mm bore, and with cylinder chambers reamed to accept QSPR ammunition which externally represented metal cased .410 gauge shotgun shells. Internally, however, the QSPR ammunition was quite different; it had a machined steel case with screw-in base. Primers were secured deeply in the cartridge base by screw-in bushing and additional anvil, which transferred the blow of the hammer to the primer (cartridges produced for tests in 1971 had no intermediate anvils). The small charge of gun powder was enclosed at the front and sides by the cup-shaped steel piston, which, upon discharge, was securely jammed at the mouth of the case by the internal thread. The QSPR ammunition fired fifteen tungsten balls (loaded into plastic sabot), each weighting about 7.5 grain / 0.5 gram, at muzzle velocity of about 730 fps / 222 m/s, which resulted in total muzzle energy of about 135 ft-lbs / 185 Joules. Due to the nature of the round (tungsten shot), the practical lethal range was estimated at about 30 feet / 10 meters, which was sufficient for extremely cramped tunnels of Vietnam war. The sound signature of QSPR round fired from QSPR revolver was about 110 dB, or similar to that of traditionally silenced .22LR pistol. It must be noted that QSPR revolvers had no sights, as these were intended for use at point-blank ranges and in very low visibility conditions of tunnels. The basic mechanism (double action trigger and swung-out cylinder) were retained from standard S&W revolvers, although there were some modifications done to the hammer, and new short smoothbore barrel was installed.



Cross-sectional drawing of the early version of AAI Corp Quiet Special Purpose Round, from 1971 US Army document

First ten specimen of QSPR revolvers were delivered for field testing in Vietnam in mid-1969. Testing continued until late 1969, with several live fire encounters with NVA / VC personnel. It is interesting that most of these encounters were actually not in the tunnels but during the ambushes made by US special operation forces on NVA or VC trails. The field testing proved extreme usefulness of the QSPR revolver but also identified a number of issues which required further improvement of both the gun and the ammunition. QSPR improvement and testing program was initiated in 1970, and lasted

through 1971. However, withdrawal of US forces in Vietnam caused the decline of interest in this and some other developments, and the QSPR program was quietly terminated in around 1972. Total number of QSPR revolvers built is not known, and various sources estimate that number between 25 and 250 guns in total. Compared to the contemporary Soviet equipment of the similar nature, such as S4M silent pistol, the QSPR most probably provided somewhat more firepower at point-blank ranges (because of the higher muzzle velocity and bigger ammunition capacity), but it was also significantly heavier and bulkier. This is not surprising, as these guns filled different niches, the S4M being primarily a concealed-carry "spy gun", while QSPR was a holster-carry "short range ambush" weapon.

SPO-JGAS 2010

U-94 "Udar" revolver (Russia)

Type	Double Action revolver
Caliber(s)	12.3x50R, 12.3x22R
Weight unloaded	920 g
Length	173 mm
Barrel length	mm
Magazine capacity	5 rounds

The U-94 "Udar" (Strike or Blow in Russian) revolver was developed during early 1990s at the famous KBP design bureau in Tula, Russia. It was intended primary for police use as a concealed carry weapon with enhanced effectiveness against a variety of targets, by developing a variety of 12.3mm rounds with various bullets (lead bullets for maximum stopping power, hardened steel AP bullets for maximum penetration against barriers such as doors or car bodies etc). The rimmed ammunition was based on shortened 32 gauge brass shotgun shells, cut to necessary length. For various reasons the police version didn't caught on with Russian law enforcement, and a reduced power version, known as U-94S "Udar-S" was developed for private security companies. It used shorter cartridges with lead bullets only (no AP).



U-94 "Udar" revolver is a conventional double-action revolver with semi-exposed hammer (hammer head is accessible through the opening at the top rear of the frame for manual cocking or decocking) and side-opening cylinder that holds 5 rounds. Cylinder opens to the left, spent cartridges are ejected all at once when ejector rod is pressed, fresh rounds are loaded one after another manually. Revolver has unusual appearance as it was optimized for concealed carry and short-range use only. It had a steel frame and cylinder, and polymer grips.

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Webley-Fosbery automatic revolver (Great Britain)

Data for Model 1902 Webley-Fosbery revolver with 6 inch barrel

Type	Double Action semiautomatic revolver
Caliber(s)	.455 British Service or .38ACP
Weight unloaded	1065 g
Length	267 mm (10.5")
Barrel length	152 mm (6")
Magazine capacity	6 rounds (.455) or 8 rounds (.38)

This unusual weapon, which combined features (either good and bad) of both revolver and a self-loading pistol was a brainchild of British Colonel G. V. Fosbery. The basic design was conceived during last years of 19th century, and first production guns appeared from noted British gun-making company Webley & Scott in 1901. The Webley-Fosbery revolvers were widely tested by various armed forces, but never adopted because of over-complicated design and insufficient advantages over either a double-action revolver (like contemporary Webley & Scott revolvers) or early self-loading pistols. Webley-Fosbery revolvers were produced in several modifications up until start of World War One, and it saw limited action in Boer wars, as well as in WW1 in the hands of few British officers who purchased it privately. Webley-Fosbery revolver, in fact, had few advantages over contemporary revolvers of same caliber - mostly those were reduced recoil (because of recoiling action and heavier weight) and somewhat improved accuracy in rapid fire (because of self-cocking action and reduced recoil). Its mechanism was quite sensitive for dirt and fouling, and gun must be held tight during the fire, or otherwise the recoil movement of the upper frame will be insufficient for cycling the action. Its reloading was not much faster than of contemporary revolvers, despite the fact that special flat clips were developed for this weapon, holding either 6 .445 or 8 .38 caliber rounds at once.

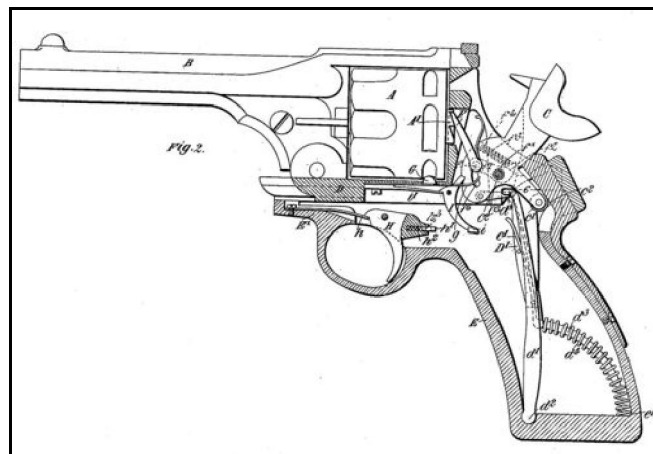


Diagram from the same patent, showing upper frame in recoiling position. Note that the gun in the picture uses different cylinder rotation mechanism when compared to production Webley-Fosbery guns

Webley-Fosbery revolver used recoil energy generated by each discharge, to rotate the cylinder and cock the hammer for next shot. To be able to do so, it had a two-part frame. Bottom part consisted of a grip with trigger unit, and has rails on its upper surface. The upper frame, which held the cylinder and tip-down barrel, as well as hammer unit, as able to recoil on the lower frame rails against a spring. Upon recoil, a special stud, fixed on the lower frame, followed the zig-zag tracks in the cylinder to rotate it and index next loaded chamber with the barrel. At the same moment, hammer was cocked. Once all ammunition in the cylinder was expended, revolver was reloaded by pushing on the barrel lock release and swinging the barrel down on its hinge, thus tipping the rear of the cylinder up. This movement activated the automatic extractor which pulled empty cases out of cylinder chambers simultaneously. Once cylinder was emptied, fresh cartridges were loaded (either one by one or all at once, by using a flat steel clip), then barrel was swung up and locked. After reloading, revolver could be fired either by double action pull on the trigger, or by manual cocking of the hammer with subsequent single-action trigger pull. Webley-Fosbery revolvers were also fitted with manual safety levers, located on the left side of the grip frame.



.455 caliber Webley-Fosbery revolver, left side



.455 caliber Webley-Fosbery revolver, right side

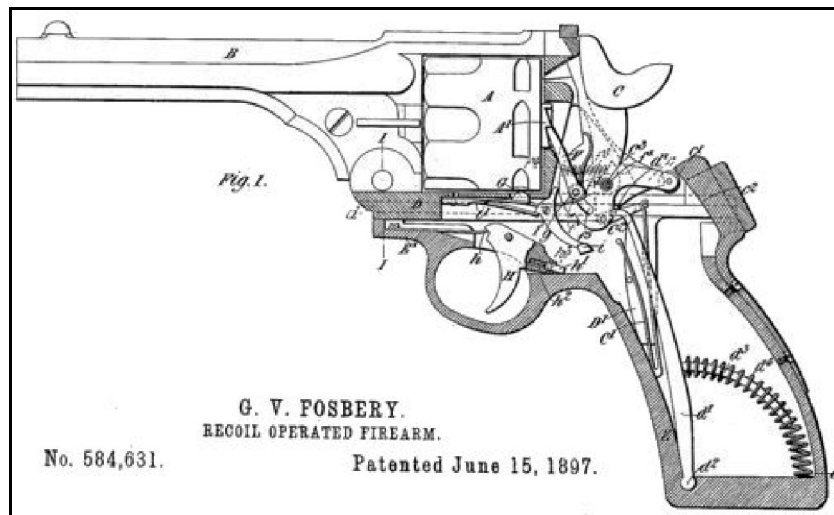


diagram from original US patent granted to Col. Fosbery for design of his automatic revolver; Upper frame is in forwardmost position.

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Webley top-break revolvers (Great Britain)

Type: Revolver, Double Action

Chamber: .455 British service; .38/200 (.38S&W)

Weight unloaded: 995 g (Mark 1 - Mark 5 with 4 inch barrel); 1100 g (Mark 6)

Length: 260 mm (Mark 1 - Mark 5 with 4 inch barrel); 286 mm (Mark 6 with 6 inch barrel)

Barrel length: 4 inch (101 mm) Mark 1 - Mark 5; 125 mm (some Mark 3 and Mark 4); 152 mm (Mark 6)

Capacity: 6 rounds

The first top-break revolvers were developed by the Webley & Son company (Webley & Scott Co. since 1897) of Great Britain in the 1870s. First Webley revolver had been officially adopted for Royal Army & navy service in 1887, as a Webley Revolver, .455, Mark I. It was a break-top, six shoot, double action revolver, chambered for blackpowder .455 British Service cartridge, officially known as Cartridge .455 revolver, Mark I. This cartridge launched heavy, 18 grammes (265 grains) lead bullet at relatively slow muzzle velocity of 180 meters/second (ca. 600 fps). Later, smokeless version of this cartridge had been adopted, but since it also could be fired in early revolvers, the gain in the velocity or muzzle energy was very minor.



Webley .455 caliber MK. I (Mark 1, 1887)

All Webley top-beak revolvers featured two piece frame, which hinges ("breaks") down at the forward low end for ejection and loading. The ejector is actuated automatically when the frame is broken open, simultaneously removing all six cases from the cylinder. The cartridges then can be inserted by hand. In the case of revolver being rechambered for .45ACP round, half-moon clips are used to load the gun (two clips, each for 3 rounds). All Webley revolvers were Double Action or Double Action Only, with very distinguishable shape of the barrel and frame lock with lock lever on the left side of the frame and V-shaped lock spring at the right side. Below is the list of all Webley revolvers, officially adopted in Great Britain. Many other variations were also manufactured for civilian and police use.



Webley .455 caliber MK. II (Mark 2, 1894)

Webley revolver, .455, Mark 1. Adopted in 1887, chambered for blackpowder cartridge. 4 inch (101 mm) barrel, "bird head" shaped grip.

Webley revolver, .455, Mark 2. Adopted in 1894, almost the same as Mark 1, but hardened removable steel plate was added at the back of the frame breech, hammer was strengthened, grip was slightly rounded.

Webley revolver, .455, Mark 3. Adopted in 1897, this was Mark 2 with improved cylinder to frame lock. Cylinder can be removed for cleaning. Since 1905, some Mark 3 revolvers were also made with 5 inch (125 mm) barrels.

Webley revolver, .455, Mark 4. Adopted in 1899, this was an improved Mark 3, made from different steel, with smaller and lighter hammer and wider cylinder slots. Since 1905, some Mark 4 revolvers were also made with 5 inch (125 mm) barrels.



Webley .455 caliber MK. IV (Mark 4, 1899), frame broken open and extractor exposed from the cylinder

Webley revolver, .455, Mark 5. Adopted in 1913. Mark 5 was designed to accept smokeless (cordite) ammunition, and thus, had larger and stronger cylinder, and accordingly redesigned frame.



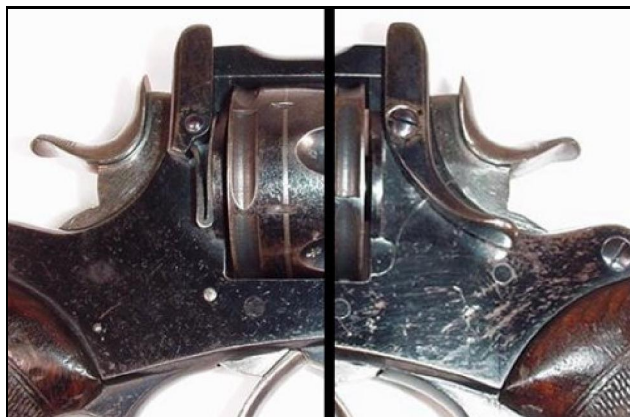
Webley .38 caliber MK. IV (Mark 4, 1942)

Webley revolver, .455, Mark 6. Adopted in 1915, it was the "ultimate" Webley .455 six-shooter. Mark 6 featured redesigned, more squared grip, 6 inch (152 mm) barrels, removable front sights. Mark 6 revolvers were manufactured by Webley & Scott until 1921, later these were manufactured by Royal Small Arms Factory at Enfield Lock. Officially rendered obsolete in 1932 with the adoption of the Enfield No.2 .38 caliber revolvers, but widely used by British troops during the World War Two.



Webley .455 caliber MK. VI (Mark 6, 1915)

Webley revolver, .38, Mark 4. Officially adopted for military service in 1942, this was initially a scaled-down version of the .455 Mark 6 revolver, chambered for .38 S&W cartridge, and developed by Webley & Scott in 1923 for police use. These guns were officially regarded obsolete as late as in 1963. It should be noted, that official british .38/200 ammunition was based on early, blackpowder .38 Smith & Wesson cartridge, and was used with heavy 200 grains (13.4 gramms) bullet, leaving the muzzle at relatively slow velocities of about 198 meters/sec (650 fps).



right and left side views on Webley frame lock

R-92 revolver is a more or less conventional double-action revolver with semi-exposed hammer (which protrudes from frame at the top, allowing it to be manually cocked or de-cocked) and side-opening cylinder that holds 5 rounds. Since ammunition, for which this revolver is intended, is rimless, cartridges are loaded into flat steel clips prior to loading into the cylinder. Loading and extraction is performed using this clip, with all 5 rounds at once.

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