

# The Certus rifle, a forgotten pioneer

Although Britain's superb magazine sporting rifle did not topple Germany's bolt-action designs, its true impact was perhaps greater. Dr John Newton tells why

IF you are a deer stalker, have you ever wondered about the origin and design of your stalking rifle? Did you ever consider whether there might have been any alternatives to the conventional bolt-action weapon?

The current mass-produced rifle market in the UK is dominated by several manufacturers including CZ BRNO, Heym, Remington, Ruger, Sako, Sauer, Mannlicher, Tikka and Winchester. With the exception of Remington, Ruger and Winchester, the companies are all European, and almost without exception the best bolt-action rifles are based on European actions. It is from two rifles, the Mauser and the Mannlicher-Schoenauer, that they all trace their origins.

Although neither weapon was designed with sport in mind—rather they were products of the drive for increased firepower by military powers during the often politically turbulent second half of the 19th century—together they form the basis for all modern bolt-action sporting rifles.

The Mauser action is the common ancestor of nearly all the conventional bolt-action rifles that we know today and originated with Paul Mauser's 1867 design for a single-shot rifle. Mauser was employed by the government firearms factory at Oberndorf in the Kingdom of Wurtemberg, and a version of his single-shot rifle was adopted by the Prussian armies in 1871, starting an evolutionary process which culminated more than a quarter-of-a-century later.

The key to the success of the original Mauser design was fourfold: the lock was self-cocking on lifting the bolt handle, where previous bolt actions had to be manually cocked before the bolt could be opened; on opening, the striker was retracted behind the bolt face, preventing the possibility of premature ignition when a fresh cartridge

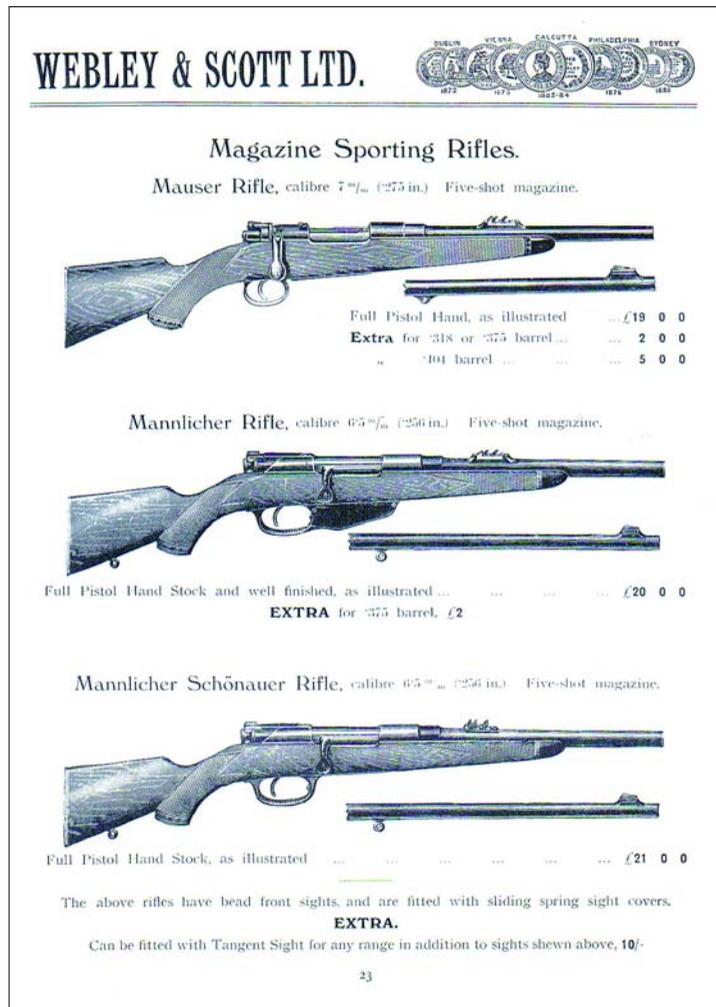
was chambered; the bolt incorporated both an extractor and an ejector; and a safety-catch was mounted on the cocking piece, which effectively locks the bolt, preventing the striker from reaching the cartridge.

A tubular magazine was added to the Model 1871, and in 1884 the German government adopted the new Infantry Repeating Rifle M 71-84. A further period of experimentation to find an even more robust rifle

led next to the Model 1889, which incorporated a forward-locking one-piece bolt and was the first Mauser rifle to use a box magazine. This process of improvement culminated in 1898 with the addition of a third safety lug to the rear of the bolt.

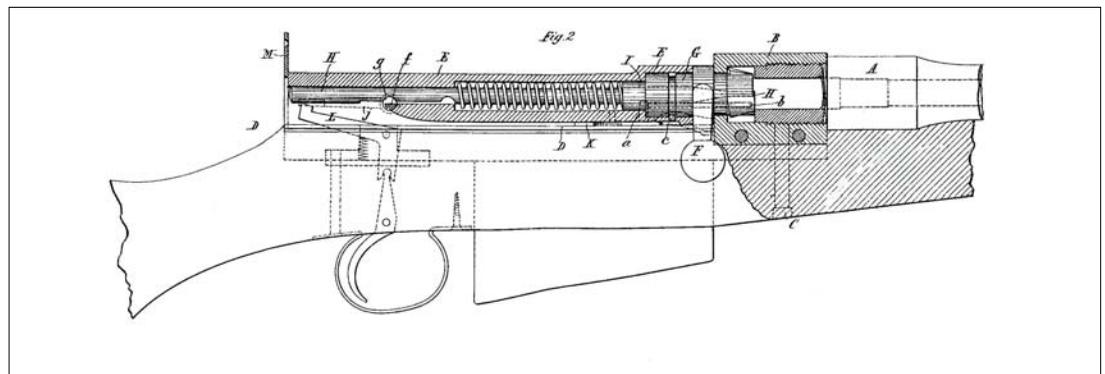
The Model 98 became the most highly regarded of all the Mauser designs. It was adopted by the Imperial German Army and has formed the basis for nearly all sporting rifles made since. The design's simplicity of construction and sheer strength undoubtedly form the basis of why the Mauser 98 action was accepted as the dominant design for magazine sporting rifles, of which the principles of operation remain unaltered. Indeed, if you are lucky enough to be in the market for a custom-built stalking rifle from an English gunmaker such as Holland & Holland, or from a specialist rifle maker such as Trevor Proctor, your weapon will be built on a traditional Mauser 98 action.

Contemporary to the Mauser, the Austrian Ferdinand Ritter von Mannlicher's rival Mannlicher-Schoenauer rifle was perhaps more responsible for the overall style of the European bolt-action rifle. The original Mannlicher-Schoenauer action was similar to the Mauser but the bolt handle was placed further forward and in front of the rear bridge of the receiver which, as a consequence, had a cut-out to allow the handle to be drawn back to withdraw the bolt. But,



PICTURES BY DR. JOHN NEWTON

Left: A 1914 Webley & Scott catalogue showing Mauser and Mannlicher rifles. Below: Britain's Certus, by Cogswell & Harrison. Patented in 1900, emphasis was put on high quality at a lower cost.



as with the Mauser, the Mannlicher action was cocked by lifting the bolt handle. The Mannlicher-Schoenauer was the first rifle to incorporate a rotary magazine that could be loaded through the top of the action.

Designed at the Steyr Armoury in Austria and later improved by Otto Schoenauer, the technical director of the Austrian Arms Co, the rotary magazine allowed the overall depth of the magazine to be reduced. This allowed the rifle to be shallower in depth than a design based on a box magazine. Another practical advantage of the rotary magazine was that, since it was enclosed within the fore-end of the rifle, it was protected from the ingress of dirt and water.

Development of the Mannlicher-Schoenauer culminated with the supremely successful M1903 sporter chambered in 6.5x54 mm, which was followed by the M1905 in 9x56 mm, the M1908 in 8x56mm and the M1910 in 9.5x57mm. Although these predated the almost universal use of telescopic sights, the need to withdraw the bolt through the rear of the receiver meant that telescopic sights had to be side-mounted at the rear to avoid obstructing the bolt. Modern Mannlicher rifles produced by Steyr use a bolt of the Mauser pattern.

Once the Mauser and the Mannlicher designs had become firmly established on the continent, London gunmakers soon became adept at supplying the aspiring sportsman with either a rifle of European origin or a European action, re-barrelled and finished to his or her specification in their own workshops.

However, despite the dominance of the European bolt actions and pre-eminent British falling-block rifles, there was soon competition from the heart of the London gun trade in the form of a novel new design that sought to compete as an inexpensive alternative to the tried and tested European rifles.

Like many London gunmakers, Cogswell & Harrison offered a range of rifles in a bewildering variety of calibres and finishes. But in addition to offering conventional double rifles and bolt actions based on



**Top: Cogswell & Harrison's innovative Certus rifle, one of the very few to survive, chambered for the .450/400 3/4in flanged Nitro Express cartridge. With its new and uncommon design and production principles, it was a forerunner of all modern machine-made firearms. Lower: Bolt-action rifles built on Mauser's Model 1898.**

the established European designs, the proprietor, Edgar Harrison, was constantly seeking to produce inexpensive shotguns and rifles. To realise his aim, he introduced a kind of close-to-form technology where the individual components were machine-made oversized, and then fitted together by the hand of a skilled craftsman. In Harrison's words, it was in the 'last cut of the file' that the quality came.

Using these new and—for the London gunmaking community at the time—relatively uncommon principles, together with an unconventional new design, Cogswell & Harrison launched the Certus magazine rifle in 1900. It was an affordable alternative to the Mauser and Mannlicher.

The Certus rifle was based on Edgar Harrison's 1900 design, protected by British patent No 4,097 of March 1, 1900, entitled

'Improvements in Rifles'. Harrison dispensed with the receiver that normally encloses the body of the bolt. Instead the bolt was attached to a breech-block, sliding on rails that were attached to the breech. The bolt handle was mounted at the forward end of the bolt, as with the original Mannlicher, where the bolt head engaged in the housing at the breech by means of an interrupted screw. The result is that the bolt is neither enclosed nor supported along its length; instead the only support comes from the bolt head when the breech is closed.

The bolt was opened by a quarter-turn of the handle, and to withdraw the spent cartridge it slides back on the rails, withdrawing the firing pin and ejecting the empty case. Harrison utilised a similar design principle a year later in a patent for recoil operated self-loading firearms. Clearly he was aiming to reduce costs by removing the requirement to machine a receiver, while the absence of anything enclosing the bolt facilitated the easy clearing of any obstruction at the breech or the loading of a fresh cartridge when the magazine was empty.

Never shy of self-congratulation, the company's 1900 catalogue quotes the Editor of one sporting magazine as stating, 'The mechanism is very strong, the parts few in number and simple in construction ... as the breech block slides on a pair of flat guides, easiness of loading of the magazine is ensured', and another as declaring, 'The rifle action is not one that can be likened to that of any existing weapon, military or otherwise, upon the market. While possessed of a bolt it is not the ordinary turn-bolt action', concluding, 'The diagram (of shooting) is first-rate.' The advertisement goes on to inform the reader that the Certus was designed for the 'sportsman requiring the advantages of a magazine rifle, combined with the high velocity smokeless powder cartridges, and heavy bullets.'

An article entitled 'How to buy a gun', published in 1903, was very complimentary: 'Costing from 10 to 17 guineas, [it] is a high-class magazine sporting rifle, made in various bores ex-

pressly for use with smokeless powder. The weight is two or three pounds less than that of a double rifle, and a sportsman armed with either a .400 or .450 weapon of this kind could render a good account of any kind of game. The mechanism is strong, and the parts are few in number—a great consideration. Loading is easily and quickly managed, and the shooting of this handy rifle is extremely accurate.’

Few examples of Certus rifles seem to have survived, though Cogswell & Harrison acquired the example illustrated here in 2003. Chambered for the .450/400 3<sup>1</sup>/<sub>4</sub>in flanged Nitro Express, company records show that it was completed in November 1904 and was ordered with three leaf sights to 100, 200 and 500 yards. Today long-range shooting with open sights at game animals is not the norm. Several generations ago attitudes were different—although at 500 yards the accuracy of such large-calibre ammunition must be doubted. These, with their heavy bullets and modest velocities, were not known for their flat trajectories.

Interestingly, the few surviving examples of Certus rifles of which I am aware are all chambered for the .450/400 3<sup>1</sup>/<sub>4</sub>in. This cartridge was one of the first nitro, or smokeless, rounds and represents a transition from the older black powder loads. The round consisted of a 400-grain projectile propelled by 60 grains of cordite that reached around 2,150ft per second at the muzzle, where it produced more than 4,000 foot-pounds of energy. It was regarded as one of the earliest, and greatest, all-round cartridges, and at the time filled the same all-purpose role in both double and magazine rifles that later the .375 Holland & Holland magnum was to achieve.

With the growth of the British Empire, Cogswell & Harrison clearly saw an expanding market for their products. Many Certus rifles were sold for use abroad and it is interesting to read the claims made for their use in India in the 1900 catalogue: ‘The recent orders made in India under the Arms Act practically bar sportsmen from using rifles of service calibres, and conse-



**Above: The Cogswell & Harrison Certus rifle with the action open, showing the bolt on its sliding carrier. Lower: German Steyr Daimler Puch rifle built on a Mannlicher-Schoenauer action, the telescopic sight mount set on the side of the receiver.**

quently it is an extra advantage that such a rifle as this will not subject its owner to many of the petty worries incidental to the possession of a weapon firing Service types of ammunition.’

The start of the 20th century saw growing unrest in many parts of the British Empire, and in particular India and the Sudan, where many old British military .577/.450 Martini Henry rifles chambered for the .450 cartridge were in circulation. The colonial powers tried to keep .450 ammunition out of the wrong hands, so its private ownership and possession were outlawed. As a result an abundance of replacements for the .450 appeared in around 1906. Cogswell & Harrison responded to the situation by promoting

the .400, .470 and .475 as suitable replacements and offered their range of double and magazine rifles in these calibres.

The Certus was also available in several smaller calibres, including a sporting pattern rifle .22, and as a rook rifle in either .295 Certus or .250. Cogswell & Harrison extensively marketed guns chambered for the .295 Certus cartridge, a variant of the .300 Rook, although it is unlikely that they introduced the round.

The British proprietary system allowed a gunmaker to have exclusive rights to a cartridge they designed, the name and the calibre often becoming synonymous. More likely is that the .295 Certus was developed by Eley or Kynoch and then taken over by Cogswell & Harrison.

After the 1900 catalogue, no further references are made to the Certus rifle in the few examples of the company’s catalogues that have survived, except the French catalogue of 1907 that shows a Certus falling-block rifle. The name Certus finally reappears in about 1929, when it is used for a range of single-barrelled folding guns and an air pistol, the design for which was protected by Edgar Harrison’s last British patent in May 1929.

The Certus never achieved the success of the conventional bolt actions—always a difficult task given the quality of the European designs. Yet perhaps its major role was to lead the way towards the widespread use of machine-made parts in the production of affordable firearms. □