THE THOMPSON SUBMACHINE GUN

From Prohibition Chicago to World War II

MARTIN PEGLER

WEAPON

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Cover photograph by SSgt Walter F. Kleine, courtesy National Archives. Okinawa, 1945: A BAR-gunner ducks to one side as the Tommy-man lets rip with his M1A1.

Title page image: FBI agent on the range at the US Department of Justice building, with a Navy M1928 Thompson fitted with 'L' drum magazine.

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INTRODUCTION

'The deadliest weapon, pound for pound, ever devised by man.' *Time* magazine, December 1939

There are certain firearms that developed an iconic status during the last century. Partly this is due to the war and gangster films that became popular during the 1900s, many of which gave prominence to particular guns. The guns were not necessarily chosen because they were the best weapons in use at the time, but more often because of their form rather than their function; in short, some guns simply looked better than others, regardless of their mechanical properties or historical accuracy. As a result, collectors and shooters wanted the guns they saw on screen. A fairly modern example of this effect can be found in the use of the Smith & Wesson (S&W) .44 Magnum in the 'Dirty Harry' series of films in the 1970s and 1980s. The films sparked a colossal demand for the revolvers, a demand that S&W was initially unable to meet, and which arguably saved the company from looming financial disaster. Another example comes from the increased screening of live TV combat footage pioneered during the Vietnam War. Ordinary citizens could actually see soldiers holding and using various modern assault rifles and machine guns, and this sparked a renewed interest in weapons technology. Whereas older military firearms had always been in demand by collectors, there soon arose a parallel interest in the weapons currently in use, so commercial variants of the M-16, AK-47 and others became much in demand. The Thompson submachine gun is one of these iconic weapons. It had an unusual beginning, for it was developed after World War I as a trench weapon, but the war ended before it could see service. It was taken up with some enthusiasm, however, by the criminal fraternity working in Chicago and New York during the Prohibition years of the 1920s. The police and Bureau of Investigation, finding themselves out-gunned,

OPPOSITE
The two stars of the 1932 gangster film *Scarface*, Paul Muni and the Thompson M1921. It was Hollywood that gave the Thompson its fame, but it would be nearly another decade before World War II gave it its place in military history. (Photo by John Kobal Foundation/Getty Images)

A soldier from No. 1 Commando, armed with a Model 1928A1 Thompson, climbs up a steep rock face during training at Glencoe in Scotland. Although the receiver of the Thompson looks polished, it is merely catching the light, one reason for the later adoption of non-reflective Parkerising. (IWM H 15667)

were forced to purchase the Thompson for law-enforcement use. The huge publicity it gained in pitched battles between gangsters and police, and through its use in the notorious St Valentine's Day massacre (14 February 1929), quickly came to the attention of Hollywood producers, who began to feature it in a large number of films. In fact, the Thompson's film appearances were out of all proportion to its actual street use, and under normal circumstances it would probably have faded from view during the late 1930s, as increasingly efficient policing signalled the demise of the gangs.

Yet history has a way of coming full circle. In the wake of the Japanese attack on Pearl Harbor in December 1941, America had to arm itself quickly to fight a totally unexpected war. There was little in the US arsenal at that time that had not been in use during or immediately after World War I, but fortuitously the brilliant John Garand had been working on a new design of semi-automatic rifle, the M1 Garand, since the early 1930s, and it had been accepted for service in 1936. Despite the fact that the concept of submachine guns had never been particularly attractive to the US Army, and the Thompson had not been widely adopted for military service, it was at least commercially available. It thus became an obvious choice for the army and Marine Corps to help arm its troops alongside the M1 Garand, and eventually the Thompson, or 'Tommy gun' as it was universally known, became the most famous Allied submachine gun of the war. Indeed, Auto-Ordnance, the Thompson's manufacturer, was quick to see the importance of this nickname, and they patented it.

The Thompson was carried by American, British, French, Indian, Australian, Canadian, South African, New Zealand, Soviet and Chinese troops throughout World War II. It saw combat in every possible type of terrain – desert, mountain, jungle and forest, field and street – and it proved utterly competent in them all. The men who carried the Thompson swore by it and occasionally at it, as it was by no means perfect, but those who were issued with the gun seldom gave it up willingly. The firepower generated by its heavy .45-calibre bullets was second to none, and in close-combat situations a burst from a Thompson would usually resolve the situation immediately and very satisfactorily. Few on the receiving end of a burst from a Thompson ever lived to tell the tale. The story of how it achieved this status is both convoluted and fascinating, and begins in the trenches of France and Flanders in late 1917.

DEVELOPMENT

'A one-man, hand-held machine gun'

THE ORIGINS OF THE THOMPSON

The trench combat of the Great War spawned a number of weapons that were unique to the conflict and have since become commonplace on the battlefield: hand grenades, sniping rifles, flamethrowers, light mortars and submachine guns. But it was Germany who pioneered the first practical design of what was originally called the *Maschienpistolen*, or 'machine-pistol', but is now referred to as the submachine gun, and this was the 9mm Bergmann MP18/1. The Germans quickly realized during the grim fighting for Verdun in 1916, that bolt-action rifles suffered from severe limitations in trench warfare. They were too long, cumbersome to carry, slow to shoot and reload, and actually too powerful: in trench warfare, where combat ranges seldom exceeded 200 yards (183m) and were frequently almost point-blank, a rifle with a theoretical range in excess of 2,000 yards (1,828m) was quite unnecessary. A short-range, rapid-firing weapon with a large magazine capacity was what was needed, so the development of the Bergmann became a landmark in firearms design. Some 30,000 were issued between late 1916 and 1918, and it was subsequently copied by dozens of other countries. The MP18/1 suffered from a few shortcomings, the main problem being the use of the unreliable Luger 'snail-drum' magazine, soon replaced by a simple 'box' magazine, but in general it performed superbly. The term 'submachine gun' arose from the weapon's use of a sub-rifle calibre cartridge, generally a pistol calibre round, and the fact that it was capable of fully automatic fire.

The Allies were aware of the need to improve infantry weapons for trench combat, but British soldiers were not thought trustworthy enough to be issued with a personal automatic weapon. It was commonly assumed by the British military hierarchy that Tommies would fire off every

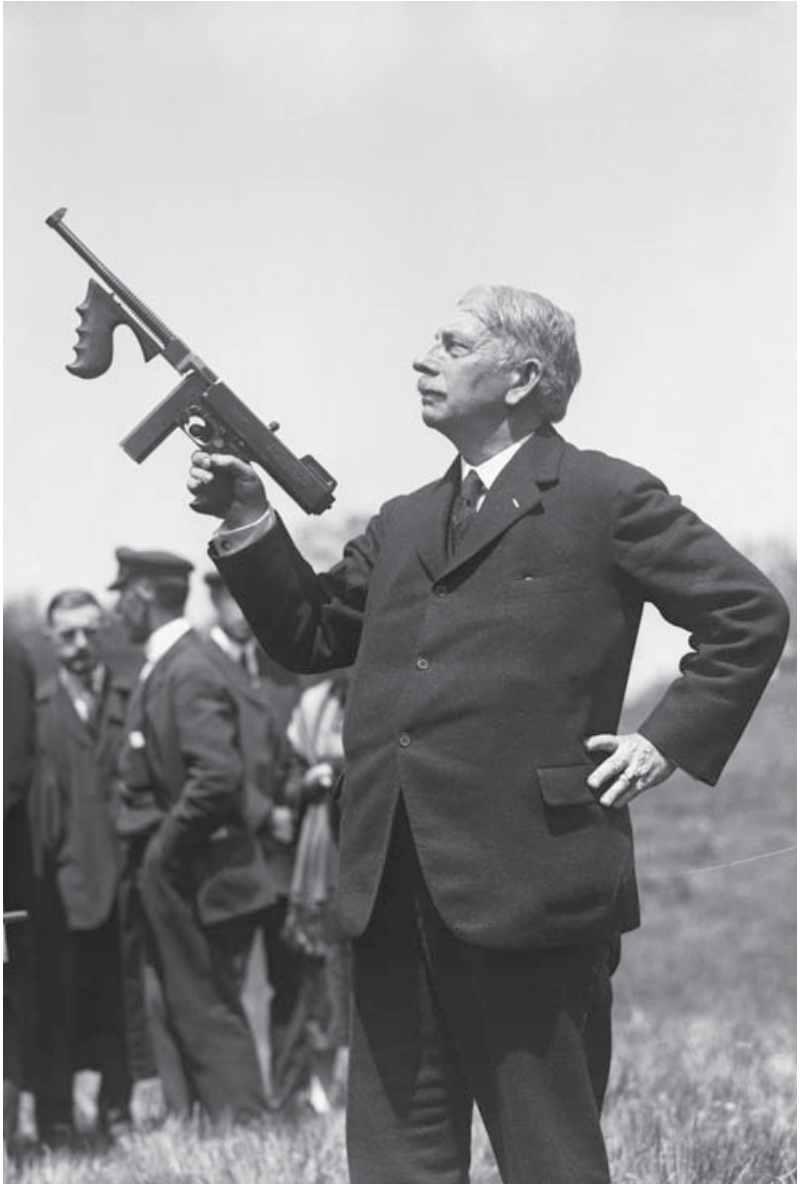
Auto-Ordnance's Chief Engineer, Theodore H. Eickhoff was hired by Thompson in 1916 to assist in the development of what would become the Thompson submachine gun.

cartridge within seconds, leaving themselves helpless. In addition, in wartime few governments were willing to introduce any large-scale form of new technology, as industrial production was invariably straining to supply sufficient weapons and equipment to keep the war machine going. Ironically, it was the French, who had a tradition of producing outdated, poorly performing small arms, who introduced the concept of increased personal firepower with the introduction during World War I of the truly awful Chauchat light machine gun, and the slightly more efficient Fusil Mitrailleur Modèle 1917, a gas-operated five-shot semi-automatic rifle. Neither were exactly compact or light, but the basic concept behind them, of providing troops with additional firepower, was a sound one.

America, which entered the European war in 1917, was also reluctant to adopt new technology. Its M1903 Springfield rifles were considered, with some justification, to be one of the finest military rifles then in use, and many soldiers were also equipped with the ubiquitous M1911 .45 Colt semi-automatic pistol, one of the best side-arms ever issued. Yet reports reaching US Army command began to indicate that while the Colt was proving excellent as a trench-fighting weapon, the Springfield was less so. This was bad news for Brigadier General John T. Thompson, who until 1914 had been the Chief of Small Arms for the Army Ordnance Department, and in this role he had strongly backed the development and adoption of the Springfield rifle. He had resigned from the army on the outbreak of war to become chief design engineer for the Remington Arms Company for whom he designed a huge new factory at Eddystone, Pennsylvania. Perhaps more significantly for the story of the Thompson, in 1916 he had also formed a firearms company with his son, Lieutenant Colonel Mercellus H. Thompson, which they named the Auto-Ordnance Corporation. He did so with financial backing from the very aptly named Thomas Fortune Ryan. Ryan was a financier of Irish origin, who had made a fortune from having the franchise to supply and run trams for the New York Metropolitan Traction Company, as well as from setting up the vast American Tobacco Company. Ryan had long been interested in firearms development and was intrigued by Thompson's early idea for an automatic rifle, and he invested heavily in the formation of the new company.

John Thompson rejoined the army in his previous capacity in 1917, and was given the unenviable position of being in charge of all small-arms production. The apparent shortcomings of the standard military rifle were of particular concern to him, as he was dedicated to ensuring American soldiers had the best possible small arms to wage the war. His response to the problem was typically forthright:

Our boys in the infantry, now in the trenches need a small machine gun, a gun that will fire 50 to 100 rounds, so light that he can drag it with him as he crawls on his belly from trench to trench, and wipe out a whole company single-handed. A one-man hand held machine gun. A trench broom. The nearest to what I have in mind is the French Chauchat 8mm machine rifle [but] it is too heavy [18lb] not enough ammunition [20 rounds] it is a poor design and of wretched construction… I want a little machine gun you can hold in your hands, fire from the hip and reload in the dark. You must use an ammunition now available … and I want it right away. Now get to it. Expense is no object!

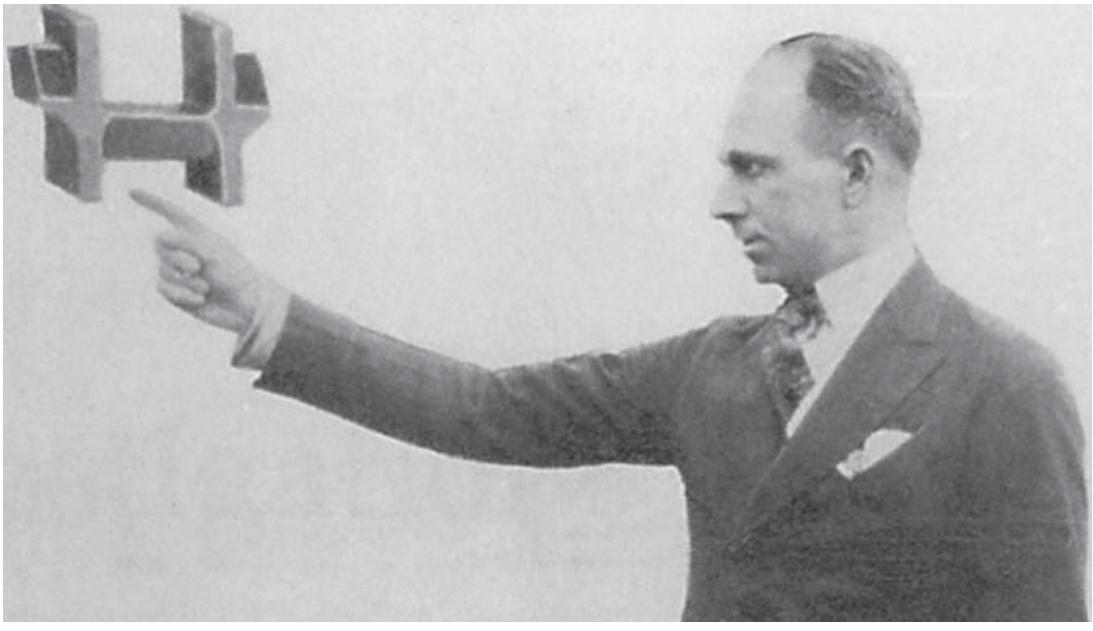


General John T. Thompson demonstrating to an interested crowd of officials his new invention, the M1921, in a photograph from May 1922. The butt has been removed and the compact nature of the gun is self-evident. (© Bettmann/Corbis)

BLISH, EICKHOFF AND THE .45

Thompson was capably aided in the development of the new weapon by the combined efforts of several talented individuals. Primary among them was Captain John N. Blish, a naval mathematician and physicist who had discovered important new properties of certain metals relating to adhesion; when machined at very specific angles, these metals became alternately adhesive or repellent dependant on the pressures exerted on them. When applied to the breech mechanisms of firearms, these principles translated into systems of mechanical operation that eliminated the need for lubrication, linkages and similar mechanical complexities. For the development of a lightweight automatic gun, these discoveries had very great potential indeed. Thompson was fortunate too, in hiring a very able designer, Theodore H. Eickhoff, who was to become senior engineer for the new Auto-Ordnance factory. Eickhoff had long experience of firearms design, having worked in the office of the Chief of Ordnance before the war, and he had at one time been assigned to examine the existing automatic rifles then being developed around the world. He was certain that the best calibres available for such designs were not the rifle-sized bullets then in common use (normally of around .30 calibre), but larger, heavier bullets that were of lower power. Such cartridges exerted less pressure on the mechanisms of firearms, were easier to handle when firing in full- or semi-automatic mode and their compact dimensions allowed the firearms to be smaller and lighter. The cartridges also possessed spectacularly efficient man-stopping effect at close range, causing wounds that were, if not fatal, then extremely debilitating.

Replacing the old .45in Long Colt revolver cartridge with the new .38 revolver cartridge had originally been the choice of the US Army, but experience during the Philippine Insurrection (1899–1902) fighting Moro



John N. Blish points to the lock that bears his name. The brochures for the M1919 featured tipped-in copies of this photo.

tribesmen, who were often physically assisted by recreational drugs, proved that the .38 cartridge did not have adequate stopping power. One Marine officer, an excellent pistol shot, emptied his revolver into the chest of a charging tribesman to little decisive effect, and was only saved from disembowelling by the Marine behind him, who brought the man down with a rifle bullet. Eickhoff was convinced the best cartridge for the purpose then in production was a development of the Long Colt cartridge, the .45in Automatic Colt Pistol (ACP) round. The '.45 Auto', as it was known, had been developed as a commercial cartridge by John Browning in 1905 and officially adopted by the US Ordnance Department six years later, when it was used in the M1911 Colt semi-automatic pistol. It used a 234-grain, jacketed round-nosed bullet that had a relatively low velocity of 820ft/sec (250m/sec). In practical terms, however, the weight and velocity meant that the bullet expended virtually all of its energy on the target, rather than going through it. Tests carried out on live animals destined for slaughter showed the tissue damage inflicted was at least as great as that of a rifle bullet at ranges of up to 55 yards (50m) and one soldier, accidentally hit by a .45 bullet, described it as 'feeling as though a dozen men had rammed him in the shoulder with a telegraph pole'. Clearly, utilizing an existing cartridge as potent as the .45 ACP made sense, but the big question was, what type of firearm could be designed that would use it to its best advantage?

The answer to that particular question lay in the minds of John Blish and a young man named Oscar V. Payne, although neither realized it at the time. In March 1915, Blish had patented a pistol using the 'Breech Closure for Firearms' system.[1] The pistol was loaded, and using his own unique locking wedge system (or sliding breech-block to be more accurate), the breech-block was pulled upwards on a rail to close the breech, and the pistol fired. The breech-block remained solidly locked in place until the chamber pressure dropped to a safe level, allowing it to slide down the rail. It was simple, clever and relatively easy to manufacture, but no-one was quite sure of its application.

Meanwhile Oscar Payne, a 23-year-old engineer and draughtsman, had arrived at the offices of Auto-Ordnance asking for a job. He had already forged something of a reputation by disassembling a very complex rifle in front of a board of army officers, even though he had never seen the weapon before, and so impressed were they that one had mentioned his name to General Thompson. When Payne arrived in front of Thompson's desk in spring 1917, he was immediately offered a position with the wonderfully vague title of 'inventor and designer'. It was to be a prophetic move. In an attempt to utilize the Blish lock in an automatic role, General Thompson had, through Auto-Ordnance and the designs of Theo Eickhoff, produced a prototype light rifle that was chambered for the .30.06in Springfield cartridge, the Thompson Auto Rifle. It was beset with problems, and Payne was immediately assigned to look at and modify the design.

[1] US Patent No. 1,131,319; 9 March 1915

THE 'AUTO-RIFLE'

In 1917, Auto-Ordnance produced its first prototype automatic rifle, using the Blish lock principle. It was a full-size weapon, looking not dissimilar to the Pattern 1917 rifle, and it chambered the .30-06 US cartridge. While the basic idea was sound, the mechanism was not, for the gun had a tendency to fire before the breech-block was actually in its locked position. As a result, it failed spectacularly, exploding while on the test bench, and Oscar Payne was asked to come up with suggestions for improvements. He and Theodore Eickhoff became convinced that the problem lay in the use of the .30-calibre cartridge, which was unsuitable for a weapon that used a friction lock, so they modified the breech-closing mechanism and Blish lock. All of the design team agreed with Eickhoff that to ensure reliable functioning, the .30 cartridge really needed to be replaced by something less powerful. All ammunition has what is known as a 'coefficient of ejection', which simply means that the bigger the body of the cartridge, the more likely it is to stick in the chamber after firing. This effect causes delayed ejection, as well as problems with high chamber pressures, and both Payne and Eickhoff realized that aside from its excellent ballistic performance, the short .45 ACP cartridge possessed the best coefficient of its type for use in an automatic weapon. At their suggestion, Thompson agreed to change the design of the rifle, and in September 1917 the 'Persuader' was built. This weapon bore a slight resemblance to the now familiar Thompson, but at the time it was an experimental one-off, and ultimately proved unsatisfactory, jamming after every two or three shots. There were several reasons for this problem, the main being that it used an unreliable belt-fed mechanism. Payne recounted that:

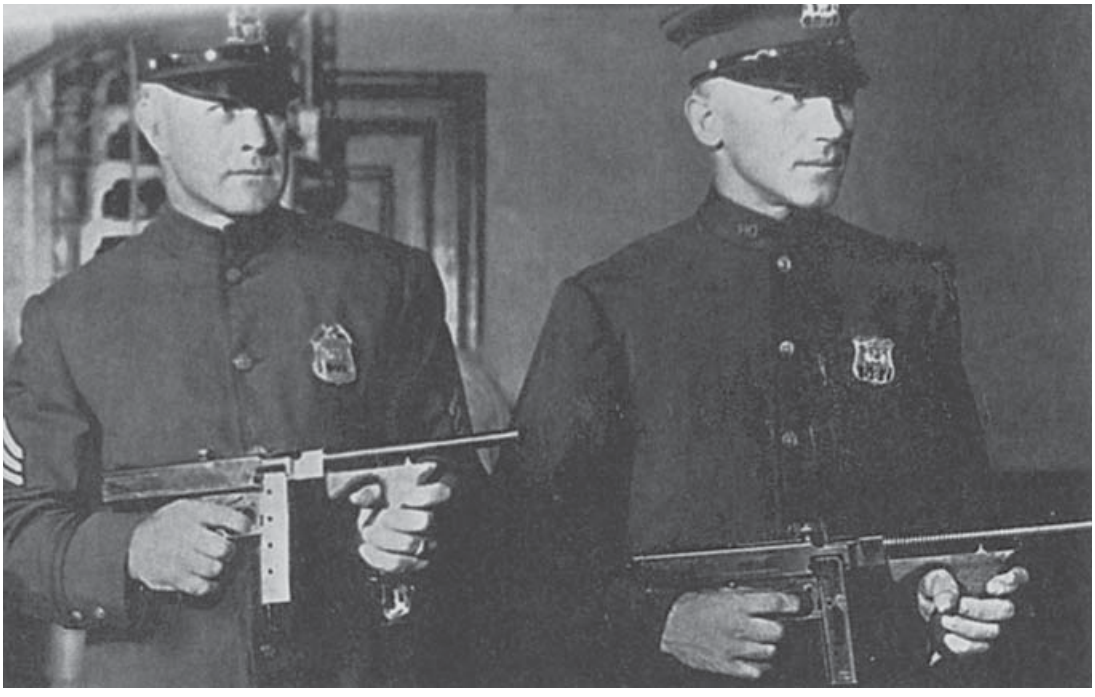
> We found the belt to be impracticable and abandoned it altogether ... we had become accustomed to keeping the weight of parts to an absolute safe minimum, so quite naturally we also designed the machine gun as light as possible. Finally we came to the conclusion that the gun parts were entirely too light and movement of parts entirely too fast to drag into position a belt of heavy cartridges. We decided to wipe the slate clean and start all over again.

Work began anew in late 1917 on an improved design, but it was not until 1919 that a working variant was manufactured. This weapon bore many of the hallmarks of the later guns – a slab-sided receiver, rear and forward pistol grips, modified Colt M1911 box magazine and top-mounted cocking handle – and was known as the 'Annihilator'. There were many alterations made to the original design. It had a square bolt and the actuator, or cocking handle, was offset and machined in one piece with the firing pin, but it could only be fired in full-automatic mode. This new design posed a problem with regard to ammunition supply, as its rate of fire was a heady 1,500rpm and the Colt magazine held only seven rounds. Furthermore the barrel had no cooling fins fitted, vital on a weapon capable of such a rate of fire. In an attempt to solve the ammunition supply problem, a drum magazine holding 50 rounds was produced, and two more guns were manufactured. These second-generation guns also sported finned barrels, a removable front grip and the receiver was machined with slots for insertion of the drum magazine. Curiously, no butt was fitted, the gun quite literally being a 'machine-pistol'. There was not even provision for a fore-sight, but the weapon was gradually taking on its own momentum, as parts of the guns were slowly modified and adapted to improve function and reliability. One area in which significant improvements were made was in the magazines, as a 20-round box pattern was produced as well as two drums, holding 50 or 100 rounds and named 'L' or 'C' pattern respectively (these being the Roman numerals for 50 and 100). Further additions to the original design included a selector switch for full- or semi-automatic fire, a rounded cocking handle set centrally into the top of the receiver and a simple blade fore-sight. Altering the angle of the

OPPOSITE TOP
The prototype 'Persuader' showing the basic shape that would evolve into the familiar Thompson.

OPPOSITE MIDDLE
The 'Annihilator 1' was the first prototype incorporating a more ergonomic front and rear pistol grip layout with top mounted actuator, or cocking handle.

OPPOSITE BOTTOM
Cooling of the barrel was a problem, and the finning first appeared on the Model 1919 'Annihilator II'. Note the slots in the magazine well to accommodate a drum magazine.



Two New York City policemen pose for a publicity photo with M1919 'Annihilator III' Thompsons.

Blish lock helped slow things down somewhat but the rate of 800 rpm was still high. By the end of 1918, some 24 guns had been constructed. (A number of guns with no serial numbers have surfaced over recent years, so the actual total weapons made may be as high as 40.) These early weapons were known as the M1919 and the series was used as a rolling test-bed to smooth out the rough mechanical edges and ensure the basic concept was sound. Both Payne and Eickhoff were satisfied that the gun was practical, but it still needed to be simplified to ensure the least number of working parts for both reliable functioning and ease of manufacture. There was little that could be done to reduce the high machining costs, despite the fact that the final variant of the M1919 comprised only 11 major component parts, and Auto-Ordnance desperately needed orders. The time had come to put the gun into production.

Making the gun was all very well, of course, but it still lacked a name and any model designation. It was still, strictly speaking, a machine-pistol, but this was not to Thompson's taste and it was suggested that it be called a 'sub-calibre gun' to show that it used a smaller cartridge than a rifle. This term was already in use, however, for military rifles that were fitted with small-bore training barrels for target use, usually of .22 calibre. It was believed that prospective purchasers would be confused by this term, so during one of Auto-Ordnance's meetings someone (exactly who was never recorded) suggested the term 'submachine gun'. Further suggestions about its possible name were bandied about, and it very nearly became the Ryan submachine gun, after Thomas Ryan. Ryan himself disapproved of this name, stating he knew nothing about guns, and suggested it simply be called the Thompson gun – and so it was.

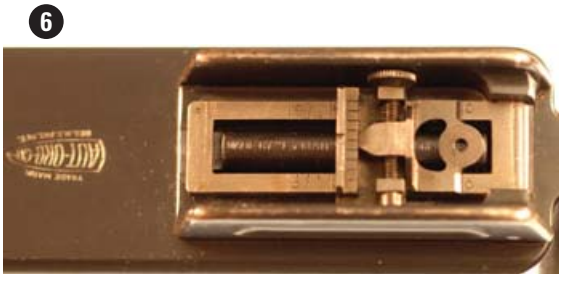
COLT AND THE NEW MODEL 1921

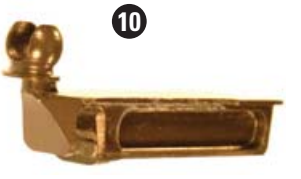
Auto-Ordnance was not capable of volume production of the new weapon, having only a small machine shop with nine staff, so if the new gun were to be manufactured in quantity and at reasonable cost, it needed facilities for mass production. The simple answer was to use the huge engineering potential of the Colt Patent Firearms Company at Hartford, Connecticut, which had already been assisting with the development of the M1919. General Thompson had previously worked closely with Colt on the M1911 pistol, so it was not unsurprising that in August 1920 Auto-Ordnance signed a contract with Colt to make 15,000 guns at the rate of 100 guns per day, at an initial price of $38.25 per gun. Colt was also contracted to produce the magazines.Work began straight away on tooling up, Colt taking one M1919 gun to use as a pattern, and by February 1921 they had the machinery in place to begin manufacture. The first guns were produced by 30 March 1921 and all were checked by Auto-Ordnance's own inspector, Major John Barrett, a very experienced man who recorded every detail of their manufacture, inspection and shipping. These Colt-Thompsons were made to very high standards of workmanship and began their lives with the nomenclature 'Model of 1921A' (see page 30 for

specifications of all major variants). Some 15,000 would be manufactured. The guns bore all of the hallmarks of the original Thompson design, with a 10½in (26.6cm) finned barrel and a blade fore-sight; they were also fitted with an adjustable Lyman ladder-type rear sight, which required the centrally mounted cocking handle on the top of the receiver to be slotted to enable aim to be taken through it. There were distinctive walnut fore and rear pistol grips but the most noticeable addition was that of a walnut stock, which fitted on sliding rails under the rear of the receiver and could be removed in seconds by pressing a release button. The stock provided much improved grip for shooting, made for steadier aim and helped control the recoil. There was a fire mode selector switch on the left side, providing either full-auto or single-shot modes, and a safety lever that worked by blocking the sear. The gun could use a 20-round box magazine, but the receivers were all machined to accept the 50- or 100-round drum magazine. As the gun was capable of a theoretical rate of fire of 800rpm, a 100-round drum capacity was not regarded as excessive, although it added 3lb 2oz (1.4kg) to a gun that was already tipping the scales at 10lb 4oz (4.6kg) empty. All guns were serial numbered on the left receiver, under the butt stock on the frame and under the fore-grip. In 1926, Colonel Richard W. Cutts and his son had begun work designing a 'compensator' that could be fitted to the barrel of a rifle or machine gun. It would allow the muzzle blast generated by the propellant gases to vent upwards, helping counteract the tendency of automatic weapons to muzzle-climb when being fired. Initially, Cutts tried attaching weights to the muzzle, a system that worked but was hardly practical. The idea for using the muzzle gas to counteract climb actually came from some old-established technology. 'Falling back on the principles of steam engineering as applied to turbines, we discovered that we could harness the power of propellant gases and thereby reduce the recoil, by attaching an expansion chamber and tube at the end of the barrel.' Determining the effectiveness of the designs posed something of a problem, however, so Cutts approached Philip Quayle, a physicist working at the Peters Cartridge Company of Ohio, and put the problem to him. Quayle was a gun enthusiast who had developed a high-speed camera that could film bullets in flight. 'This allowed us to see the results of the changes we were making in the design of a compensating device.'

Muzzle-climb certainly posed a problem for anyone using an M1921 in full-automatic mode, for unless fired in short controlled bursts the Thompson would invariably end up pointing high and right of the point of aim. Solving this challenge became Cutts' personal obsession, as he explained:

> As the gun recoiled after the first shot and before the shooter could recover from the kick, the gun would fire its second shot and the muzzle would bounce still higher. Successive shots would punch the muzzle up and up, with the shooter himself actually hindering it, because his muscular effort and delayed muscular reaction prevented the gun from dropping to its original level so that its jump started from a higher point after each shot.





The net result was a simple screw-on compensator with four vertical vent slots that allowed the gas to blow upwards on firing; this system created a powerful down-thrust that helped counteract the muzzle-climb. The Lyman Corporation liked the idea and offered to manufacture the Cutts compensator on the basis of a $1 commission to Colonel Cutts per unit sold. They began to appear on Thompsons from early 1927 onwards and guns supplied with them were advertised as M1921ACs. Further development of the Thompson did not stop with the introduction of the M1921, for a number were converted at the factory to semi-automatic fire only. The rationale behind this conversion is not easy to determine, but it is probable that there was some demand for a cheaper version that was more controllable than the full-auto version. How many were made is not known, possibly fewer than a hundred and original examples today are rare.

THE BRITISH THOMPSONS

In May 1921, General Thompson went on a sales tour of Europe, visiting Belgium, Britain, France and Spain. He was invited to demonstrate the M1921 at the Royal Small Arms Factory at Enfield on 30 June 1921, which he did with some success. The resultant report made by the Chief Inspector of Small Arms makes interesting reading. Although it is too long to reproduce in full, some sections concerning the accuracy and reliability of the gun are worth reproducing. There was some puzzlement expressed about the requirement for the Blish locking system, albeit couched in faintly impenetrable army technical language.

> There is an element of doubt as to whether the use of the lock is a positive one. The inclination of the sides of the 'H' and the corresponding angle of the grooves in the breech block tend to closure, whereas … the inclination of the outside 'ears' and the corresponding angle of the grooves in the receiver tend to release. It is well known that with pistol ammunition the inertia weight of the breech block and the resistance of its return spring afford sufficient resistance to hold up the cartridge [case] while the bullet leaves the barrel, provided such weight and spring resistance are correctly worked out. [2]

In simple terms, the Chief Inspector was questioning the necessity of the Blish lock, as the counterbalancing weight of the breech-block and its recoil spring, matched to the cartridge performance, should in theory provide sufficient delay on opening when operating on a straightforward blowback principle. Indeed, the Small Arms staff at Enfield pre-empted the alteration of the design of later Thompsons by removing the Blish lock completely and then firing the gun remotely under safe conditions. The results were instructive: 'The rounds were fired, both

1. A view of the Model 1921AC, showing its very distinctive silhouette. Many collectors and firearms historians believe this to be the most classic of all the Thompson models.

2. The beautifully sculpted fore-grip, with front mounted sling swivel.

3. The quick-release stock showing the machined slot into which the guide rails on the receiver slotted.

4. The patent markings on the left side of the receiver.

5. Colt's markings on the right.

6. The Lyman rear sight, graduated to 600 yards. Note also the Auto-Ordnance 'bullet' logo on the receiver.

7. The effective Cutts compensator. It is attached by means of a pin visible below the fore sight to the right of the picture.

8. The breech-block and firing-pin aperture. The body was slotted to enable the Blish lock to fit inside it.

9. The Blish lock, showing its very complex shape. Machining this was both time consuming and costly and omitting it from the later guns made for considerable savings without impairing performance.

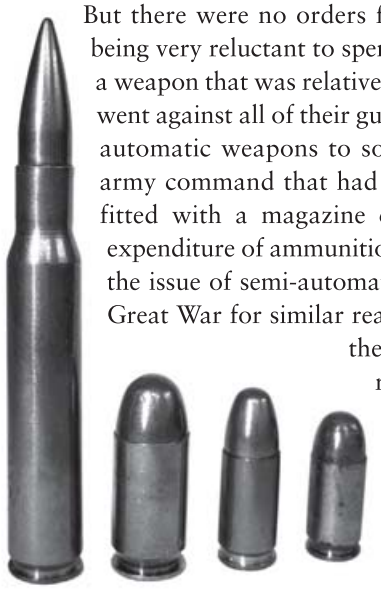
10. The actuator, or cocking handle. Later models had a heavier actuator fixed to the right side of the breech-block.

[2] Report by the Chief Inspector of Small Arms, RSAF Enfield (9 July 1921). Courtesy of the Pattern Room Library, National Firearms Collection, Leeds.

George Goll firing an M1921 Thompson in front of an invited audience of British officers at Bisley Camp in summer 1921. The climbing muzzle caused by the recoil on the gun can clearly be seen and Lyman sights would have been of questionable practical use.

ejection and extraction being satisfactory. The gun functioned well and the condition of the spent cases was found to be identical with that of the spent cases … fired with the wedge assembled to the gun.' There was also doubt about the efficacy of the drum magazines: 'The 20 round box magazines are much simpler than the drum magazines and appreciably lighter for the same number of rounds, 5 empty box magazines holding 100 rounds in all weighing 2lb as against 3lbs 2ozs for the 100 round drum and 2lbs 8ozs for the 50 round drum. The box magazines are simpler for packing and transport.' There were a few reliability problems when the Thompson was tested, mostly with ammunition failing to fire (not necessarily the Thompson's fault), and some ejection problems. But overall the British report praised the Thompson: 'The weapon is handy, compact and is designed in a manner convenient for manufacture.'

But there were no orders forthcoming, the British government being very reluctant to spend money re-equipping the army with a weapon that was relatively expensive, unproven in combat and went against all of their guiding principles with regard to issuing automatic weapons to soldiers. This was, after all, the same army command that had insisted that the Lee-Enfield rifle be fitted with a magazine cut-off 'to prevent the unnecessary expenditure of ammunition', and which refused to countenance the issue of semi-automatic pistols to their soldiers during the Great War for similar reasons. The prospect of actually giving the soldiery a gun capable of such high rates of fire horrified many at the Board of Ordnance, and in the wake of the public's distaste for anything involving military expenditure after 1918, there was little chance of the Thompson being adopted by Britain.



BELOW
Left is a .30in Springfield round which proved too powerful for the initial Thompson design. Next are the .45in Colt ACP and 9mm Luger Parabellum cartridges, both of which were used in Thompsons, and lastly a .32in Colt automatic cartridge for comparison.

A military Model 1923 Thompson with fitted bipod and 16in barrel. The Thompson could not cope well in a sustained fire role due to overheating.

Undeterred, the designers continued to try to find a way to get their gun purchased in Europe. Demonstrations to the French Army in 1921 and 1923 were moderately successful, but the testing was marred by component failure: 'It was observed that the bolt had broken in two parts. This must have occurred before the shooting [test] was over because the break had very pronounced caulking.' Unmentioned at the time was the fact that despite this damage, the Thompson had continued to function, whereas most other submachine guns would have ground to a halt. The Belgian Army were quite impressed with the Thompson, when it was demonstrated to them in 1923, but they wanted it chambered for the 9mm Parabellum cartridge, then an extremely popular calibre in Europe.The dilemma faced by Auto-Ordnance was that they could not easily set up manufacturing facilities to make variants of the gun, so they approached the Birmingham Small Arms (BSA) factory in 1925 with an offer that BSA make, under licence, 'European' models of the Thompson. Little of the history of these guns has survived, and they are not generally well known outside of collectors' circles, but the first of the pre-production models was named 'Model of 1926' and was chambered for 9mm. It had been designed by BSA's brilliant engineer George Norman and bore only a passing resemblance to the original Thompson guns. It had a wooden stock and fore-end that enclosed the front of the receiver, an unprotected 300m (328-yard) graduated ladder-type rear sight, a deeper, milled receiver with separate selector and safety levers, and a magazine release catch that was considerably simplified compared to the M1921.

In January 1927, the first 9mm example was demonstrated to the French military weapons testing facility at Versailles (the VTC). The gun was also supplied with a bipod to permit sustained fire, as crucially its rate of discharge had increased from 800rpm to a blistering 1,200rpm. Yet inexplicably, no drum magazines were available, and it was only tested with the 20-round box magazine. Extracts from the subsequent French report are instructive:

> The Thompson submachine gun discharges in single fire or as a machine gun. In the first case, precision [accuracy] is excellent up to 600 metres; in the second the overly rapid rate does not allow the weapon to be shot unsupported without excessive scattering [of the bullets]. The weapon underwent a test fire of 3,500 rounds with 2,500 in automatic fire, which led to only a few minor problems, but inspection … revealed a broken bolt and galling on the Blish lock, on the cocking notch and on the tip of the sear.

Clearly, the French were not overly impressed with the performance of the weapon, as in single-shot mode it was not as accurate as a rifle, and in full-auto mode it was difficult to control. They concluded: 'Following an earlier weapon study of this type, the VTC were not interested in guns shooting ordinary pistol cartridges. The latter [test] shows, compared to the same type of weapons studied in France, no marked improvement.'

Despite the production of the 9mm gun, neither the French nor Belgian Army placed any orders. This lack of response, however, did not stop BSA from working on an improved model, the M1929, which bore a stronger resemblance to the original M1921 design, with a plain wood fore-end and a bird's head pistol grip on the stock to provide a surer grip. This stock mutated into a more elegant sporting type, with a swell for the trigger hand to aid grip. The magazine was curved and a number of different calibres were offered, including 9mm Bergmann and 7.63mm Mauser, but despite the improvements no major orders were forthcoming, and BSA ceased production of the Thompson in 1930.

POSTAL SERVICE AND MARINE THOMPSONS

Meanwhile, the undeterred Auto-Ordnance sales team had continued to demonstrate the gun across America. Their first major order came from an unexpected source, the US Postal Service, who following a series of brutal robberies ordered 200 M1921A Thompsons to provide security for mail trains. These guns were actually supplied to the US Marine Corps, which was tasked with guarding these trains, and the Marines instantly took the Thompsons to their hearts. It was due to this early ownership that they conducted further tests in 1927. Although impressed, the Marine Corps asked Auto-Ordnance to try to reduce the rate of fire, so Oscar Payne (who had by then left the company) was tasked with finding a solution. This he did in a typically simple manner, by weighting the actuator with a riveted steel block and reducing the strength of the recoil and buffer springs. These measures dropped the cyclical rate to a far more manageable 600rpm and the US Marines' postal service Thompsons were retro-converted to the new design, as were all stocks of earlier guns, which were re-stamped '1928' over the original '1921'. The M1928 was officially introduced on 1 January that year and the left side of the receivers were marked 'U.S Navy'. Tests were carried out on 12 M1928s by the Chief of Ordnance at Aberdeen Proving Ground in Maryland through mid February 1928, and the new

FBI agent on the range at the US Department of Justice building, with a Navy M1928 Thompson fitted with 'L' drum magazine.

weapon proved very acceptable: '2010 rounds were fired with only three malfunctions, these being a failure to extract on gun number 7510. These were perhaps due to both corroded ammunition and a slight burring of the bronze lock.'[3] The result was a very favourable test report, with only some faint criticism:

1. The guns which were submitted for test are in excellent firing condition.
2. That for tracer firing the mechanism opens a little too quickly this results in the gases getting into the eyes of the gunner.
3. That the twelve guns as received from the Auto-Ordnance Corporation are satisfactory for test by the Infantry, Tank Corps and Cavalry.

The M1928 is probably the most iconic and instantly recognizable of all of the Thompsons, with its finned barrel, bulbous Cutts compensator on the muzzle, drum magazine and wooden double pistol grips. As a result of this testing, 1,500 guns were accepted into US Navy service on 14 March 1932 as the 'Gun, Submachine, Caliber .45, US Navy Model of 1928'. The Tommy gun was finally beginning its military career.

[3] US Ordnance Department report of 7 March 1928.

THE NEW MODELS

The years 1928–29 were crucial for Auto-Ordnance, as General Thompson retired from his position as head of the company in 1928, and the following year Fortune Ryan died. Sales of the Thompson had not been good, the Colt-made weapons having more or less kept the company afloat. Some 10,300 models had been sold in the United States and abroad, but they were insufficient to keep the company viable. The Thompson's increasing use by the lawless elements of society had done nothing to add to its reputation either, and the Ryan heirs were keen to liquidate the company, which was valued at a mere $412,000 but with colossal debts of $2,200,000. Yet John and Marcellus Thompson (the son of General Thompson), still majority shareholders, blocked any and every attempt to shut down the company.

This unhappy situation continued for the next decade, with Auto-Ordnance teetering on the brink of extinction but managing to continue on the basis of limited government orders. How long this situation could have continued is debatable, but coincidentally Marcellus died in 1939 and John Thompson the following year, enabling a suave and smooth-talking entrepreneur named Russell Maguire to purchase the ailing company for $529,000, on the understanding that the outstanding debt was written off. He cleverly managed to acquire a majority 50.8 per cent holding in the company, and thus the new Thompson Automatic Arms Corporation was formed. His acquisition did not endear him to either the arms industry or government, for he had something of a reputation for being, in today's terminology, an asset stripper. However, like it or not, the future of the Thompson was in his hands and there was little that could be done about it.

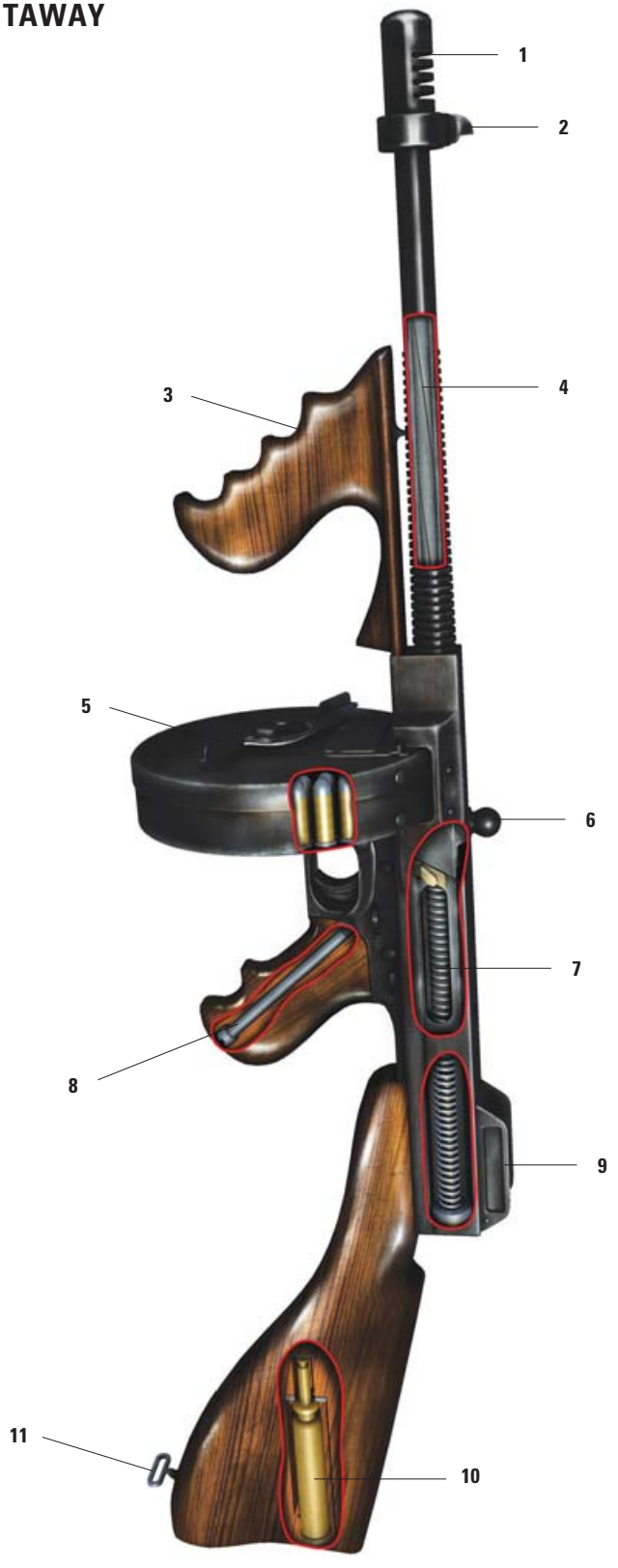
A 50-round 'L' drum designed by Oscar Payne, illustrating the positioning of the cartridges with the front plate and winder removed.

THOMPSON SUBMACHINE GUN CUTAWAY

M1928A1 Thompson

Thompson models varied considerably in external appearance as the demands of a war economy forced a change from the traditional rich glossy blue-black exterior to a far more functional matt grey Parkerised finish. While the internal mechanisms were also simplified and cheapened, the basis function differed very little from the early Model 1921s to the last Model M1A1s. Specifications given are for the Model 1928A1.

1. The Cutts compensator, showing the slotted vents that helped keep the barrel down when firing on fully-automatic.
2. The sharp blade foresight. In combat this snagged on clothing and accoutrements and in its final incarnation, the M1A1, the foresight was a rounded pattern with no angular edges.
3. The unique walnut fore-grip. It aided aiming and steadied the weapon but was expensive to manufacture and like the foresight it was not entirely practical in combat.
4. The 10.5 inch (266mm) barrel, with six-groove, right-hand twist rifling. It made the overall length of the M1928A1 33.75 ins (857mm).
5. The 50-round drum magazine. With a cyclic rate of 800rpm this could be emptied in 3.7 seconds, firing its .45 calibre bullets at a velocity of 910 fps (277m/s).
6. The centrally mounted actuator, or cocking handle. Practical for either right or left-handed shooters it blocked the view of the foresight, so had to have a slot machined through it.
7. The recoil or buffer spring. This soaked up recoil but more importantly provided the motive force to return the breech block to the firing position, stripping a fresh cartridge from the magazine as it did so.
8. The walnut pistol grip. A comfortable design that did not change, it was retained by a single large internal screw.
9. The protective wings for the delicate Lyman sight. Omitted from the M1, they were reinstated on the M1A1 models.
10. The walnut stock. A quick-release design, it also held an oil bottle accessed via a small flap in the steel buttplate.
11. The sling swivel. Many combat Thompsons had the rear swivel moved to the side or top of the butt and the fore-grip swivel screwed to the left or right side of the grip providing a more comfortable position for the sling.



Meanwhile, events outside of America were set to change not only the fortunes of the new company, but also the course of world history. While the outbreak of war between Britain and Germany in 1939 did not initially involve the United States, it led to a sudden upsurge in demand for small arms of all types from Britain, whose small professional army was woefully under-resourced. (See section 'Britain adopts the Thompson' below.) The evacuation from Dunkirk in May and June 1940 resulted in huge losses of materiel and weapons that British industrial production, still on a peacetime footing, was unable to replace at sufficient speed. The constant rises in demand put pressure on Thompson Arms, and the Japanese attack on Pearl Harbor in December 1941 raised the stakes even higher. Two major problems faced Thompson at the start of 1939: the slow production of the M1928 guns, and their high cost. Larger-scale production was the answer, as large numbers reduced costs, but this step required a manufacturer with the capacity and experience to produce a product as complex as the Thompson. Colt had by this time ceased production of the Thompson, as it was no longer commercially viable, so Maguire approached the Savage Arms Corporation with an offer of manufacturing the M1928 under licence. Despite their misgivings (they had turned down a similar suggestion back in 1920), they agreed on the basis that all the existing tooling was supplied to them by Colt, and that 50 per cent of the contract price was paid in advance. Clearly Maguire's reputation for being fly-by-night had preceded him. The initial contract of 13 December 1939 was for the supply of 10,000 M1928A guns at a cost price of $32 each ($496 or approximately £800 in current value), less the Cutts compensator or Lyman rear sight, as both were purchased directly from Lyman. Barrels would be threaded to accept a compensator and the fore-grip was attached at an extra cost of 67 cents per gun.

The initial hope was that production would be started within ten weeks of the contract signing, but there was a complex chain of supply problems that seemingly no-one had understood. In fact, many of the parts for the original Thompsons had not been made by Colt at all, but had been sub-contracted to a number of different suppliers. Although Colt had mainly been responsible for machining of the receivers and breech-blocks of the M1921 guns, the unmachined forgings were provided to them by Billings & Spencer of Hartford, Connecticut. The butt assembly, including butt-plate, quick-release mechanism and barrel blanks, had been supplied by Remington Arms of Ilion, New York, who bought in the wood blanks from several suppliers. Originally both Colt and Savage had undertaken machining work on the barrels. The compensators were made by the Lyman Gunsight Company, who also supplied the sights, and some of the original tooling was still in use by both Colt and Remington, who were supplying spare parts for existing guns. Savage decided to begin production at its Utica factory in New York, but the proposed start date of January 1940 was very optimistic, and it is to their credit that production actually began fairly soon afterwards, in May 1940. The guns were sold to Thompson initially at $67 each, but this figure dropped to $59 by 1942, as production was simplified. Sale price to the US

government was $130 per gun and a whopping $200 to the UK or other foreign buyers, which equated to about £45 at the time (about $3,320 or £2,070 in today's currency). Almost all Savage-made guns have components stamped 'S' and serial numbers prefixed with an 'S', with the exception of one contract for 50,000 guns, unmarked for reasons that have baffled firearms historians ever since.[4] Otherwise, all of the Savage-made guns are identical to the Colt 'Navy' Models of 1928, albeit some later guns were parkerized rather than blued.

Up until this time, the US Army had shown little interest in the gun, but gradually realized that there were no other viable options. Back in March 1932 they had placed the Thompson on a 'limited procurement list' for weapons they regarded as useful but non-essential. Initial cavalry interest in replacing their rifles with Thompsons had waned, and while a few guns had been purchased the cavalry formations preferred to wait for the issue of the new Garand M1 semi-automatic rifle. Later comparative tests actually showed that for cavalry use, which by now was predominantly service in armoured vehicles, the M1 was actually ill suited, being too long and overly powerful. They belatedly turned to the Thompson, which in September 1938 was re-designated as the 'Submachine Gun, Caliber .45, Model of 1928A1', and was at last placed on the official weapons supply list. Even then, the army did not look seriously at purchasing the guns for infantry issue, and it was not until June 1939 that they issued their first order to Thompson Arms, for 950 guns. Events moved quickly after that, for by late 1940, this number had been increased significantly to 20,405 M1928A1s, although a large number of these were destined for Britain. Post-Pearl Harbor, however, attitudes changed markedly, and the Ordnance Board began to realize that the supply of firearms was inadequate for the army's needs. By February 1942, half a million Thompsons had been manufactured. Eventually, US troops in every theatre of war were carrying these submachine guns.

IMPROVEMENTS, AND THE M1A1

Despite Savage's initial lack of enthusiasm for producing the Thompson, it was gradually proving profitable, for by the end of 1940 some 20,450 guns had been ordered. But there still remained the practical difficulties in manufacturing a gun with the close internal tolerances required by the Blish system and the amount of machining required for items such as the expensive walnut stocks and pistol grips, finned barrel, compensator, adjustable sights etc. To make a gun soldier-proof is very difficult indeed, as any weapons designer will confirm. It must be robust, have minimal working parts, be simple to strip and re-assemble, have nothing that requires adjustment (if a soldier can fiddle with something to 'improve' it, he will do), be relatively unaffected by dirt, sand and lack of oil, and be tolerant of a poor cleaning regime. The M1928s fell short in a number of

[4] Contract G-4, dated 6 November 1940.

TOP AND MIDDLE
Left and right side views of an M1A1 clearly showing the cleaner lines of this variant. The actuator has been moved to the right, the plain fore-end and short muzzle make for smoother profile. The under-mounted sling swivels were not ideal though, as the gun tended to hang upside-down when carried across the chest. This weapon was used during the battle of Guadalcanal.

BOTTOM
The original M1 peep-rearsight (director) on the right, compared to the improved M1A1 with its protective wings on the left.

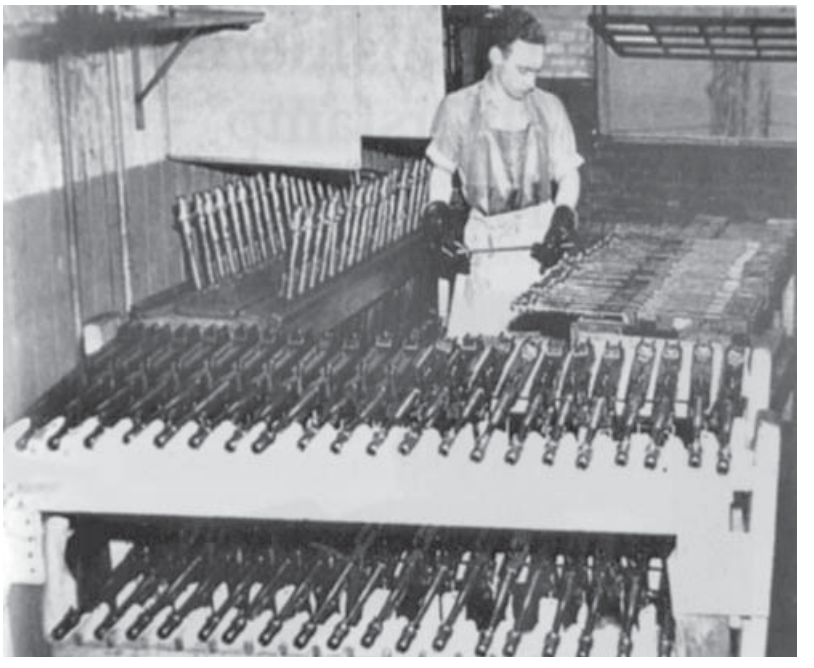
respects, for beautifully finished as they were, they required a reasonable level of care, the fore-end grip protruded awkwardly and the adjustable rear sight was unnecessary on a close-range weapon. The drum magazines were also awkward to fit and heavy to carry, as well as being prone to rattling, as one soldier reportedly remarked, 'like a can of ball-bearings'.

From 1940 there began a slow process of evolution that was to lead to the Thompson becoming a much leaner and more workman-like side-arm, but initially there was not a coherent policy. As with any production item, variations occurred depending on when changes were introduced, the availability of certain components and sometimes simply what was in the parts bins at the time. Therefore Thompsons could, and did, appear with any number of parts variations, due mainly to the vagaries of production in the years between 1940 and the eventual production of the wartime M1 models in 1942. This evolutionary period was interesting from the point of view of understanding the shortcomings of the original design when put into military use. Generally, guns commercially supplied to law-enforcement departments or private citizens are seldom given the sort of harsh use that a combat firearm will receive in its lifetime, and weaknesses show up very quickly.

Internally, the time-consuming machined ejector was replaced with one made of spring steel, with the ejector being riveted over to retain it. The distinctive rounded barrel fins, thought vital for cooling when the gun

Although by this stage in the war the M1A1 was the commonly issued Thompson, this 1943 War Bonds poster still chose to feature the classic shape of the M1928.

was used at maximum rate of fire, were first altered to a simpler, squared section, then eliminated altogether. In practice, the Thompson was seldom used with an ammunition supply greater than 50 rounds, and mostly with 20-round box magazines. Changing the smaller-capacity magazines gave sufficient time for the barrel to cool and short bursts of fire were normal in combat, hence the capacity of the larger drums was more hindrance than help. An unfinned barrel was found to be sufficiently robust not to require additional cooling. The Lyman rear sight was discontinued, being replaced with a very simple riveted 'L' shaped peepsight that was later given additional protection by the fitting of angular 'wings' similar to those used on the Lyman. Lighter, cheaper hardwoods were substituted



Production guns being inspected at the Savage factory.

for the lovely but costly American walnut stocks and the fore-end grip, which often snagged in clothing or on equipment, was eliminated. Instead, a horizontal fore-end with finger grooves was introduced in March 1941. Sling swivels were inserted into both fore-end and butt stock. All of these improvements were based on practical experience in the field, but they did not greatly speed up production, and demand for the Thompson was growing by the day.

A request by the British government for assistance with the supply of war materiel subsequently led to the creation of the Lend-Lease programme in March 1941, whereby ships, tanks, vehicles and small arms were to be sent to Britain in exchange for use of vital military bases in Canada, Bermuda and the West Indies. Initially some 4,700 Colt-manufactured M1921A Thompsons were set aside for shipment to Britain. Clearly production at Savage was going to be insufficient to meet the demand, and the site for a new Auto-Ordnance plant was purchased in August 1940 at Bridgeport, Connecticut. Production did not begin until January 1941 and was limited to the manufacture of receivers and trigger units, with Remington still being the major contractor for the supply of barrels, most internal parts, butts and fittings.

In the face of complaints from the US government about the high cost of Thompsons, Auto-Ordnance needed to lower the unit price of their guns. Although they had managed to lower it to $108 by the end of 1941, it was still expensive in comparison to other guns – an M1 Garand rifle, for example, was half the price. At this point, Savage engaged the fertile brain of an ex-patriot British engineer named John Pearce, who had become their chief engineer. He and co-designer Nicholas Brewer took a long hard look at the Thompson, in particular its complex Blish lock. They

TOP AND MIDDLE
One of the experimental aluminium-bodied Thompsons with plastic stock and fore-end.

BOTTOM
A silenced Thompson. Some were supplied for Special Operations Executive (SOE) use and from experience the author can confirm that they are very quiet indeed.

were well aware of the test reports from two decades earlier, in which Thompsons had been successfully fired without the lock in place, and they were sure that workable guns could be produced if it was eliminated. They set to work, and by the winter of 1941 had produced a test piece that they demonstrated to F. Hickey, president of Savage Arms. It was test fired for 10,000 rounds and performed excellently; indeed, so confident were Savage and Pearce that they submitted the 'New Model' to the US Army Ordnance Board for testing in March 1942. The most fundamental change internally was the total omission of the Blish locking system, for with the breech-block and recoil spring properly matched to the power of the .45-calibre cartridge, the Thompson functioned perfectly as a simple blowback weapon. As military use of the drum magazine was almost negligible, the locating slots for it on the receiver body were also removed, allowing only the use of box magazines. The centrally mounted cocking handle, always contentious on the M1928, was moved to the right-hand side of the receiver, although this was possibly a retrograde step, as it made the gun more difficult for left-handers to cock and carry across the body. (An experimental ambidextrous M1A1 was manufactured later in the war, but never put into production.) The lovely chequered fire selector and safety levers of the original guns were altered to simple rotating studs with steel pins through them. Internal parts such as firing pins, recoil springs, extractors and trigger units remained basically the same as on the M1928.

These new guns were designated 'Gun, Submachine, Caliber .45, Thompson M1'. An even simpler variant, the M1A1 model, was devised in late 1942 but differed only in so far as it did away with the floating firing pin and hammer on the breech-block common to the earlier models. It was replaced by a simpler one-piece breech-block and firing pin, further cutting back on production time and cost. The cyclic rate without the Blish lock remained relatively similar, at 700rpm. Most significantly, though, the price of a Thompson had dropped from $225 per gun to $44. As it was, the new gun was only slightly more compact at 32in (81.3cm) and fractionally lighter at 10lb 6oz (4.74kg), a saving of a mere 6oz (170g) over the M1928. A larger-capacity 30-round magazine was also available as well. In a further attempt to cut production time and lighten the guns, early in 1943 Savage

Technical Specifications of major Thompson variants:

Model 1921

Cartridge: .45 ACP
Muzzle Velocity: 920 fps (280 mps)
Weight empty: 10lb 4 ozs (4.6kg)
Overall length: 25 inches (635mm) without butt, with butt 31.8 inches (807mm)
Barrel length: Finned type, 10.5 inches (268mm)
Barrel with Cutts compensator: 12.5 inches (317mm)
Sights: Lyman ladder rear, blade front.
Cyclic rate: 800 rpm
Magazines: 20 round box, 50 and 100 round drums.

Model 1928A1

Cartridge: .45 ACP
Muzzle Velocity: 920 fps (280 mps)
Weight empty: 10lb 12 oz (4.8kg)
Overall length: 33.75 inches (857mm)
Barrel length: Finned type, 10.5 inches (268mm)
Barrel with Cutts compensator: 12.5 inches (305mm)
Sights: Lyman ladder rear, blade front.
Cyclic rate: 6-725 rpm
Magazines: 20,30 round box, 50 and 100 round drums.

Model M1/A1

Cartridge: .45 ACP
Muzzle Velocity: 920 fps (280 mps)
Weight empty: 10lb 7 oz (4.7kg)
Overall length: 32 inches (813mm)
Barrel length: Plain type, 10.5 inches (267mm)
Sights: Peepsight rear, blade front.
Cyclic rate: 5-600 rpm
Magazines:20,30 round box only.

produced an aluminium-bodied gun based on the M1928 design. There was considerable logic to this, for aluminium alloy is cheaper than steel, faster and easier to machine, lighter and, if sufficiently thick walled, almost as strong. The use of wood was also believed to be outmoded, for plastic was rapidly becoming the material of the future, for it could be moulded to any shape and was waterproof. Unfortunately, testing showed up a number or potential shortcomings in the aluminium design. The battering given to the rear of the receiver by the recoil spring and buffer deformed the alloy, eventually breaking a large piece of it off. Furthermore, the guns were even heavier than the originals, mainly due to the thickness of the aluminium required to prevent its deformation and the increased weight of the 'Franzite' plastic used for the stock. Savage manufactured 40 of these guns, in a mixture of types, most being a direct copy of the M1928, although some were slight hybrids with horizontal fore-ends. Few were serial numbered and at the end of the testing all of the guns were supposedly destroyed. The concept of using alloys and plastics in firearms put Savage light years ahead of other weapons manufacturers, but they were defeated by the poor materials then available.

BRITAIN ADOPTS THE THOMPSON

When war broke out in September 1939, no-one, least of all Neville Chamberlain's government, had even the remotest idea of the enormity of events that would soon unfold. The 'phoney war' period was one of gathering forces, stockpiling existing weapons and frantically placing contracts for more. The Bren gun was in service along with the indomitable Lee-Enfield rifle, but the British Army, consistently under-funded in the 1930s, was bereft of light automatic weapons. Conveniently forgetting its earlier summing up of the Thompson as 'that tatty American gangster gun' after earlier testing, the Board of Ordnance requested that the government sanction the purchase of 'as many Thompson machine carbines as possible'. With the election of Winston Churchill as prime minister in 1940, things began to move quickly. Churchill, an ex-soldier and weapons enthusiast, was also significantly a believer in the Thompson, publicly paraphrasing the *Time* magazine comment that 'General Thompson's gun may be, pound for pound, the most devastating weapon devised for war.' He immediately sanctioned the acquisition of M1928 guns, and the British Purchasing Commission, based in New York, placed the order in February 1940.

At first, only 450 were to be supplied, and the subsequent contract did not actually specify a number – Britain needed all the guns it could get. Ordnance inspectors were sent from Britain to check and stamp all export guns destined for Europe, and many guns that remained in the United States but never reached England bear their inspection stamps. They were to be shipped by Savage as fast as possible at $225 apiece, and these guns, finished in commercial blue, were supplied in a transit chest with walnut stocks and two 'L' type drum magazines, four box magazines, a webbing

Winston Churchill believed the Thompson to be vital in aiding British forces win the war. Here, he inspects an M1928 during a tour of invasion defences near Hartlepool, 31 July 1940. (IWM H 2646)

sling, 1,000 rounds of ammunition and a cleaning kit. Curiously, the first units to receive the Thompsons were not regular army units, but the men of the highly secret Home Guard Special Units, a small army comprised of professional soldiers and Home Guard men with previous military experience, who together were to become the core of a country-wide resistance in the event of invasion. They had access to a series of specially constructed underground bunkers, cleverly camouflaged in remote areas, in which weapons, food and radio equipment were stockpiled. These units had been formed at the very start of the war, and they received the first deliveries of Thompsons in early spring 1940.

Exactly how many Thompsons were supplied is unknown, but doubtless some still lie, safely packed and greased, in sealed bunkers secreted in woods dotted around the country. It was not until early 1941 that the first M1928s began to find their way into the army, and to begin with only Commando units were issued with them, as one ex-Commando recounted: 'We were given a new carbine, the Tommy gun, in, I think April or May 1941. We had all seen them at the pictures, of course, Al Capone and the rest, so we went around talking like Jimmy Cagney for a while. In

OPPOSITE
The boxed Thompson kit issued to British units in the early months of the war. (IWM FIR 6362E)

Seated at the dining table with his wife, a sergeant of the Dorking Home Guard in Surrey, England, gives his Tommy gun a final polish before leaving home to go on parade. (IWM H 5850)

fact they were very well made, beautiful really. But blimey, they were heavy things.'[5] Commando units were selected for early supply because of their need for a compact, fast-firing side-arm that was reliable and hard hitting, and the Thompson fit the bill exactly.

As the Lend-Lease programme got underway, more and more Thompsons found their way to Britain. By this time, the US government was wholly responsible for the supply of weapons under Lend-Lease, and total British orders for the Thompson stood at 514,000. Despite the depredations of the U-boats on the Atlantic convoys, some supplies of Thompsons continued to reach Britain, but of the guns ordered only 100,000 had arrived by April 1942. However, panic measures to introduce some alternative to the costly Thompson had resulted, by the summer of 1941, in the production of the Sten submachine gun. Unlike the finely machined M1928, with its beautiful finish, the Sten was assembled by unskilled workers from black-painted parts supplied by subcontractors, and cost £2.50 (about £112 or $180 in current values). It was unlovely, crude and dangerous if mishandled, but also serviceable and easy to manufacture and repair. Sten guns became a priority for issue to all European Theatre of Operations (ETO) Commonwealth troops with the exception of the Commando brigades who were mostly supplied with Thompsons – and wanted to keep them. Curiously, despite the availability of the Sten, Thompsons continued to be issued to Home Guard units. For some of these scratch-formed defence groups, the old jokes about taping a butcher's knife to a broom handle were not so far from the truth, but in reality many units were issued with new Thompsons, albeit initially with no ammunition:

[5] Sergeant Thomas 'Tommy' Dales, ex-No. 2 Commando; interview with author.

During training, a Free-French commando balances precariously on a wire bridge while aiming his Thompson. One hopes he didn't actually have to try shooting it.

> We had two Thompson guns and several dozen Enfield Pattern 1917 rifles, which were chambered for the [American] .30-calibre ammunition, but we were issued with .303 cartridges which were no use. We had no ammunition at all for the Thompsons though, and were told that in the event of invasion we were to apply to the nearest regular army headquarters for a supply of cartridges. This was daft, because they were 20 miles away, which meant we'd have to fight our way to get there with useless guns in order to get our ammunition! Things got much better later on, though, and we eventually became very well armed indeed; we had something like 20 Thompsons, as well as Browning machine guns, mortars and Enfield rifles. When we were photographed we looked like a regular army unit.[6]

The available stocks of M1928s were nowhere near enough, of course, and for propaganda reasons guns were often taken from one unit and passed to another so that suitably aggressive pictures could be taken. Indeed, many home service units were supplied with wooden 'props' for propaganda purposes, as the Ministry of Defence knew that all pictures released to the public would be carefully examined by German intelligence staff. Even today, occasionally some wooden Thompsons appear in sale rooms, and are normally described as 'film prop guns', but their history is often far more interesting.

[6] Peter Evans, ex-East Yorkshire Home Guard; interview with author.

Chinese Communist militiamen, photographed in 1945. One carries a matchlock wall gun of 18th century design, the other a Chinese-made Thompson M1928A1. (Cody Images)

As supplies of the M1928 began to dry up, they were replaced with the more basic M1/M1A1s, and these too began to be issued to line regiments. As a result, a great mix of different models were carried into the war, with old M1928s being used alongside the later M1 guns. In regions where supply was problematic, such as Burma and Madagascar, the early guns often saw service with Commonwealth soldiers right throughout the war. Such was the esteem in which the Thompson was held that the Commando badge, worn on the upper shoulder, featured an M1928.

It was not only Commonwealth troops, however, who were supplied with the Thompson. During the war the French government-in-exile ordered 6,000 guns for supply to the Free French forces training in Britain. Chinese forces fighting the Japanese were also supplied with thousands of guns (the actual number is unknown), and so popular was it that China began to manufacture their own copies, using the simple M1/M1A1 blowback action. Hundreds of these were to see further service against American soldiers when they were supplied to the Viet Cong during the Vietnam War (1964–73). Huge numbers of M1928A1 and M1A1 models were supplied to the Soviet Army following the German invasion of Russia in 1941, most of which were never issued, the gun proving to be troublesome in the sub-zero conditions of Russian winters. In these regions, the fine tolerances to which the Thompson was made worked against them, for the extreme cold prevented the breech being cocked and caused extractors to shear, problems from which the rough but serviceable Russian PPSh-41 submachine gun did not suffer. Many hundreds of these Thompsons are now appearing on the collectors' market as Russia slowly sells off some of its vast hoarded stocks of wartime guns. Military production of the Thompson finally ceased in 1944, after 1,387,134 guns had been manufactured.

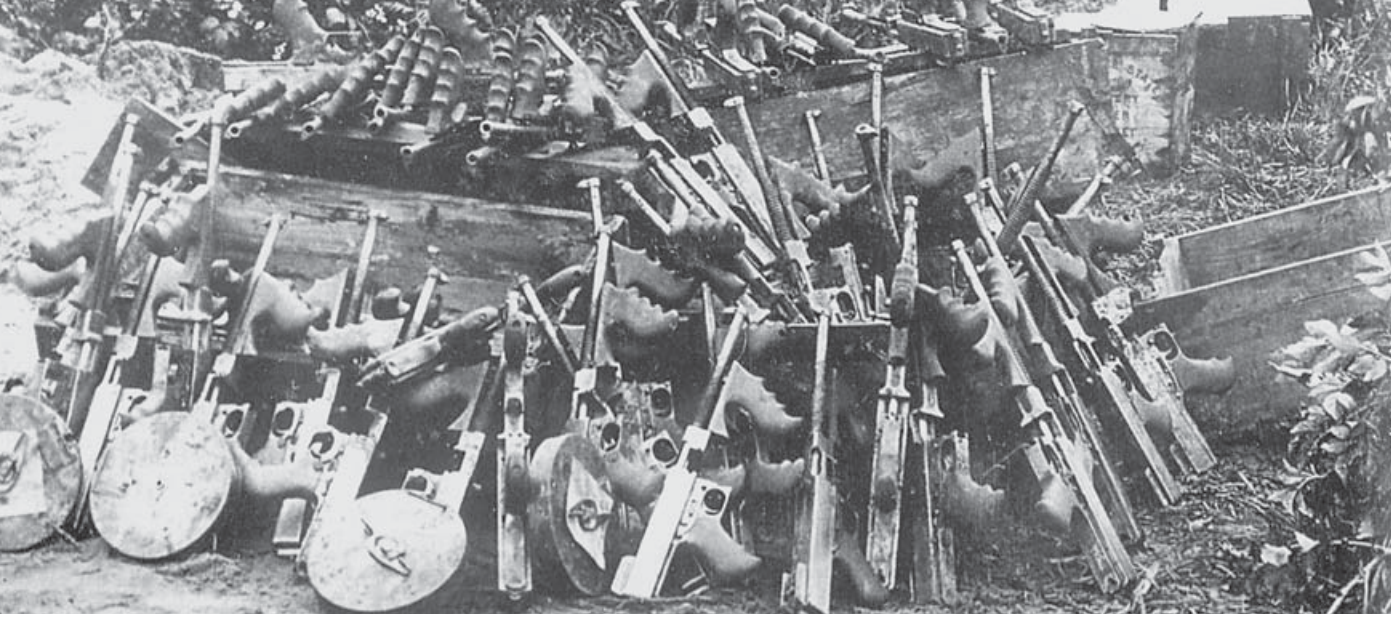
USE

The weapon of choice for criminals and Commandos

TERRORISTS AND THOMPSONS

In many respects, the Thompson was introduced at the most inopportune moment, for with the ending of World War I the countries involved were understandably disinclined to pay for the further development or purchase of new weapons of war. The basic concept of a small, fast-firing light machine gun was good, for nothing like it existed. Most governments, however, believed that the likelihood of another war, specifically fought on the lines of the previous one, was remote. As a result, commercial funding was required to develop and manufacture the Thompson, and so it was to private agencies that the company turned for sales. Unfortunately, the Thompson's first highly publicized use was to prove near disastrous for the future of the company.

Ironically, it was because of the financial involvement of Thomas Fortune Ryan that the company suffered a severe setback. Its guns were found in Ireland in the hands of the Irish Republican Army (IRA), the first organization to make large-scale use of the Tommy gun. The IRA of the 1920s was not the organization that it grew to become in the mid 20th century. It was formed from volunteers to fight what they regarded as an oppressive British military force, its cause helped by the controversial and frequently brutal employment of the 'Black and Tans' (a violence-prone support force for the Royal Irish Constabulary) throughout the Anglo-Irish War c.1916–21. Irish sympathizers in the USA had been keen to purchase guns for the Republican cause, the first two Thompson guns reaching Ireland by late May 1921 prior to the outbreak of the Irish Civil War 1922–23. These were smuggled in by two former US Army officers,



An impressive cache of Thompsons found in Co. Mayo, Ireland, after a police raid in 1943. Sadly, most of these guns were later destroyed.

who demonstrated them to the IRA commanders and were then employed to teach other volunteers how to use them. The first combat use of the Thompson in history was on the afternoon of 16 June 1921, when a train loaded with soldiers of the West Kent Regiment passed an IRA ambush site at Drumcondra near Dublin. A dozen men lay in wait, two armed with the precious M1921s. Bombs were thrown and one Tommy gun opened up on the train, firing about 60 rounds into the carriages, wounding three soldiers. The other gun jammed due, according to a police statement, to the drum being improperly loaded into the weapon. As with most guerrilla groups, the IRA found weapons in short supply but it had not escaped the notice of two leading IRA activists living in America, Joe McGaritty and Lawrence de Lacey, that Thomas Ryan was a supporting member of *Clan-na-Gael*, a highly influential pro-Irish Republican organization that worked towards independence for Ireland. While the clan did not overtly support illegal activities, it is fairly certain that senior figures provided covert financial assistance for gun-running. It is highly likely that Ryan fell into this category, for he was also a great friend of Éamon de Valera, one of the most senior Republican figures. It would have been virtually impossible for Auto-Ordnance to have permitted export of their guns to a purchaser without prior knowledge of their eventual destination, and Ryan, his long-term secretary Frank Merkling and Marcellus Thompson must certainly have been aware of the destination of the orders placed in January 1921, for an initial 500 guns with a further option for 1,000 more. This first order was placed by a friend of Merkling, Frank Ochsenreiter, who despite his Germanic surname was an American pro-Republican sympathizer. Ochsenreiter had a link to an export company in New York run by another pro-IRA man, Daniel Fitzgerald, whose alias was Frank Williams. Ochsenreiter was allowed a large discount on the order because he was working at the time for a subsidiary company owned by Thomas Ryan. Working with Ochsenreiter was George Rorke, another American with pro-Irish sentiments who had been buying guns on their behalf.

The timing of the order, placed a month before production of the M1921 was due to start, was perfect, for it provided a vital cash injection into the new company. Exactly where the money came from has been disputed over the years, and while undoubtedly a small proportion came from Ireland, the bulk was provided by pro-Irish groups in the United States. De Valera had made a widely publicized tour of the country in 1920, and it is estimated he raised in excess of $5 million (about $60 million in modern terms), so payment for the guns was not a problem. What was a problem for the gun-runners was how to ship their cargo into Dublin, but once again luck and Irish-American sympathizers were able to smooth a path for them. The vessel selected was an old freighter named *East Side* that sailed out of New Jersey, where a cargo warehouse had been established to store firearms bound for Ireland. Customs procedures were circumvented by ensuring an Irish customs officer 'inspected' the first shipment, which was labelled on the manifest as 'engineer's stores'. Evading customs was never a problem for the IRA, for a large percentage of the dock workers and customs officials were Irish, and finding supporters for the cause was easy. A stroke of luck for the gun-runners was a providential strike by marine engineers in June 1921, and the vessels affected were desperate to hire any men they could with suitable experience. Seven Irish 'engineers' signed on to the *East Side*, and they loaded the cargo that had already evaded proper customs inspection. It appeared that the IRA were about to become the first organization to be supplied with a large quantity of Thompsons. Unfortunately for the gun-runners, the curiosity of two other crew members was aroused by the number of Irishmen on board and the rapidity with which the customs officer had facilitated the loading. They secretly opened one of the bundles, and found something that was a little deadlier than spare parts. The captain was informed, and when he attempted to question the 'engineers' they had vanished. The guns, of which there turned out to be 495, were surrendered to the New York Police Department (NYPD). As can be imagined, this event stirred up a political hornets' nest in America, Britain and Ireland. Agents from the US Bureau of Investigation, headed by a young man named J. Edgar Hoover, descended en masse on the vessel, its shipping agency and the Auto-Ordnance premises. There was little difficulty in tracing exactly who had ordered the guns, for the serial numbers had not been erased on all of them – Fitzgerald/Williams and George Rorke were quickly indicted, as were a number of dock workers and customs officials. Most serious for Auto-Ordnance, Frank Merkling and Marcellus Thompson were also heavily implicated. This situation was particularly embarrassing for the Thompson family, because Marcellus' father-in-law was none other than the US ambassador to Great Britain. There was no real evidence against Thomas Ryan, but the situation was still serious. However, after a number of highly publicized legal hiccups – a prosecuting lawyer was sacked for incompetence, a new jury had to be sworn in, then several other lawyers resigned – the case was finally prepared for trial in 1922. Only then was it realized that the laws passed during World War I forbidding the export of arms to any belligerent countries had actually been repealed in 1921.

Thus the export of these guns to Ireland was not, technically, illegal. By now, there was little will on the part of the British government to pursue the matter, as post-war Ireland had, temporarily at least, reverted to its peaceful political ways. The case was abandoned in 1923, but then took on a new twist when the legal representative of the shippers presented a court order to the Bureau of Investigation for the return of the confiscated guns. They were then shipped in several batches to Ireland over a period of time between 1920 and 1930, where they were stored in scattered IRA dumps until such time as they would be required.

A more successful smuggling operation than that of the abortive *East Side* operation had taken place in April 1921, when 30 guns had landed in Cork packed inside furniture loaded on a ship named SS *Honolulu*. For many years this event has puzzled historians, for the guns apparently arrived in Ireland before production of the M1921 had begun at the Colt factory. They were in fact the first pre-production guns to be made, and the 40 or so produced were mostly hand finished. No records of these completed M1919 guns were apparently kept, making them today the most prized of all of the Thompson models among collectors. It was suggested that these guns were sold to IRA gun-runners with the full knowledge of the Colt board of management, and it is difficult to believe that they could have 'walked' out of the back door, particularly in the face of the obsessively meticulous record-keeping of the inspector, Major Barrett. The only answer was that they were sent with the full knowledge of Ryan, Merkling and Thompson. Another 51 guns reached Ireland sometime in June 1921, but the following month a truce was agreed between the IRA and British forces and peace, of a sort, had broken out.

GUNS AND GANGSTERS

The early use of the Thompson in minor conflicts abroad was little reported in the American press, indeed these wars made little impression on the media. At the time, the press was fully occupied in reporting the dismal effects of the financial depression that had swept across America and Europe like an economic locust storm. Several million US men were unemployed, and in the wake of increasing poverty many took to crime as a desperate last resort. The situation had been unintentionally exacerbated by the ill-conceived attempt to ban the sale of alcohol, which started at midnight on the 16 January 1920. Prohibition, as it was called, remained in force throughout the most turbulent years of the depression. It was not repealed until 1933, by which time crime syndicates had been formed that were earning millions of dollars a week through 'bootlegging' (the illegal supply of alcohol), extortion, prostitution, tax fraud and all of the other activities that were commonly associated with organized crime. Of the men involved, only an initial few were professional career criminals, but their exploits involving the Tommy gun were soon both to captivate and appal millions of ordinary people as the press and later Hollywood began to report on, and glamorize, their lives.

The effect of .45-calibre bullets fired by police and Federal agents can be seen on the doors of the car that carried Bonnie and Clyde. (Topfoto)

The first sales of Thompsons for law enforcement purposes were few and far between, but in August 1920 an M1919 was taken to Camp Perry in northern Ohio for a series of demonstrations. Its unique looks and impressive performance puzzled and astonished all those watching:

> There appeared a strange looking weapon. It was neither rifle nor shotgun: pistol nor revolver. It had two odd-looking pistol grips … it had no butt-stock. The user held the weapon on his hip by firmly grasping the two grips – and squeezed the trigger. Then things began to happen. From the muzzle burst a sheet of flame … from the breech erupted a shower of shiny brass cases. Crowds gathered. Here was a deadly arm, capable of spraying the landscape with sudden death in the form of 230 grain Colt .45 Automatic pistol bullets. 'What is it?' was the topmost question. 'A machine gun? What's it for?'

Clearly the demonstration had some effect, for the NYPD purchased ten of the guns, but sales were generally slow to law enforcement agencies. However, it was the chance attendance at a subsequent sales meeting at Maumee County, Ohio, by one Edward E. Richardson, the hard-working and utterly honest deputy marshal of Maumee, that would have a long-lasting effect on future sales of the Thompson. Richardson was so captivated by the Thompson that he wrote to the company offering his services as an agent for the sale of guns to law enforcement agencies. 'My idea would be to put on a campaign in small towns and villages, particularly county seats, and to demonstrate the gun before the proper authorities.' He was well placed to begin such an enterprise, for he knew many of the police forces and agencies in Ohio and surrounding states.

'Sold only to those on the side of law and order', Auto-Ordnance's 1927 price list for the 'Thompson Anti-Bandit Gun'.

Richardson's letter struck a chord at Auto-Ordnance, and he received several replies from John E. Sturm, the domestic sales manager. Sturm had quickly recognized that commercial sales to law enforcement could be very rapidly expanded with the right marketing, and he also understood the fragile nature of funding for most local police forces:

> There is an excellent market for the Thompson guns among police officers, sheriffs and banks. We concur in your belief that your office and influence in the community will serve to aid in your sales work. Many times where a town or a community cannot afford to buy a gun for their police department, local merchants will band together and pool their money and present a gun to the police department. As you can see a Thompson gun readily protects any town and it is the best form of insurance against banditry. You are perfectly correct in stating that more work can be accomplished by personal demonstration than any amount of literature.

A rare police-style carrying case for the Model 1921, incorporating four 20-round magazines, a 50-round drum and cleaning kit.

Thus the company began to market the Thompson in a new way, advertising it as an 'Anti-Bandit Gun'. So worried by the threat of robbery were many towns, that the prospect of protecting their lives and property by equipping their police with the latest firearms proved an extremely popular concept, and it was a brilliant marketing ploy on the part of both Auto-Ordnance and Richardson. Marcellus Thompson wrote to him in late 1928, expanding this theory.

> For police purposes, it is not intended that the Thompson displace the revolver or pistol, they are for pocket use and hand-to-hand fighting. The Thompson gun is mostly used by police for motor patrols… [The] authorities are often called upon to stop high powered bandit cars. The Thompson gun can completely destroy such a car in the short space of a few seconds where a fleeting shot from a shotgun or pistol would not do the work. The Thompson is also valuable where those on the side of law and order are apt to be outnumbered. If the authorities are equipped with the same type of weapon as the bandits, the latter are often disinclined to shoot it out. A good single demonstration with the Thompson Anti-Bandit gun staged for your local police chief and sheriff will be more convincing than any number of written pages of literature or talks by your salesmen. The gun speaks eloquently for itself by its actual performance.

Richardson took Auto-Ordnance at their word and embarked on a sales tour of Ohio and the neighbouring states of Michigan, Kentucky and Indiana, making the first sale in January 1929 to the police force in Hancock County, Ohio. Interest grew in the guns, and the more he sold, the greater the interest. In the same year, he began to establish a nationwide sales force. County police were soon clamouring for the Thompson and sales were progressing well, so Richardson was asked to act as instructor to the newly formed police submachine gun school at Camp Perry, a post he held for four years. It proved popular, because the

Captain Rand, in the basement firing range of the Columbus, Georgia police department, with an M1921A.

tempting prize to the course winner was a new M1921AC. Meanwhile, there was an unfortunate parallel situation becoming apparent, as commercial sales to individuals who were somewhat less than honest began to increase around the country. This new demand was unwittingly fuelled by the changes that had occurred in the senior management of the company. Following the death of Thomas Ryan in 1928 and the withdrawal from business of the founder, General Thompson, the control of the company went to the president, John Larkin, and his secretary, G. McNaughton. Marcellus Thompson stayed on the board, but had little day-to-day control over the running of the company. Both Larkin and McNaughton were financiers who had no interest in the product, only the profit margins, and they embarked on an open sales policy, despite General Thompson's assertion that 'There is no desire on the part of the Auto-Ordnance Corporation for civilian use of the Thompson. Its use should be confined by law to Governments, National, State, County and Municipal.' In reality, dealers were now encouraged to sell to any individual who had the money to buy a Thompson. John Sturm was appalled at this casual policy adopted by the company, and eventually went on to write an exposé of the company and its double-standards where sales were concerned.

While John Thompson's sentiment was fine, in practical terms commercial sales of the gun were both vital and profitable to the company and dealers alike. Profit for the company and their dealers on an M1928 was large, about $90 each (about £680 or $1,100 in modern terms), and while orders from organizations such as the police were valuable, they were often glacially slow in being processed and could be abruptly cancelled by a sudden lack of funds. A ready-cash buyer was, on the other hand, quite literally money in the bank. Nor did the law do much to restrict the flow of guns to criminals, for in very few states of America was it actually illegal to buy and own a full-auto weapon. At the time, Thompsons fell into the same category of firearms as sporting rifles, so any individual could purchase one.The result was, predictably, that many of the gangs operating in the major eastern cities in America – New York, Boston, Chicago, for example – began using fictitious names to buy

This picture of the Birger Gang, photographed in Illinois in 1924, illustrates why police and Federal agents were often out-gunned. Aside from at least five pump-action shotguns, four rifles and a revolver or two as well as other weapons, there are three Model 1921 Thompsons evident, with 100-round magazines, which would have provided a fearsome amount of firepower.

quantities of Thompsons and use them to deadly effect. There was no way of knowing how many guns found their way into criminal hands. Sturm estimated that of the 15,000 Thompsons manufactured up to 1928 some 9,000 had gone to military or police buyers. Of the remaining, he reckoned that 500 or more were in the hands of gangs, a total that represented a considerable amount of firepower on the streets. The ease with which Tommy guns could be acquired was illustrated when a man claiming to be an ex-officer of the US Army walked into the New York office of Auto-Ordnance and bought ten guns for cash. He returned for more, but the clerk had reported the sale (and the fact he had been short-changed by $100) and the office refused. But as Sturm noted, 'All he had to do was go down the street to an arms dealer calling himself John Smith, and he could have bought them.' While initially the spate of crime-related killings did little more than make minor headlines, the gangs began to broaden their horizons and take on the forces of law and order.

The first sign of the growing problem was in April 1926, when a Chicago-based gang leader ordered the killing of state attorney William McSwiggin, who was shot dead with a Thompson. The police recovered the gun and were able to trace the dealer who had sold it. So seriously did General Thompson take this event, that he accompanied the police to the dealer's premises in an armoured Buick. The dealer was unable to shed any light on the sale, for the gun had been bought for cash by an anonymous man, who had been understandably disinclined to answer any questions. While taking the gun dealer back to police headquarters for questioning, the Buick was shadowed by another car that tried to close with it on several occasions. When a curious Thompson enquired who they were, an officer of the State Department casually said 'Hoods'. They shook off the car in heavy traffic, but the unsettled general commented afterwards that 'I've been on the battlefields of France, but have never seen anything like this. I'm glad I'm getting out alive.' Shortly afterwards a gang of eight men all armed with Thompsons ambushed a mail truck in Elizabeth, New Jersey, in broad daylight, one man opening up on the truck and its guards, the others laying a protective barrage of fire across the

traffic light junction of the busy town, sending pedestrians and drivers diving for cover. They fled, leaving behind one guard dead and three badly injured, as well as a Thompson. It was traced to a batch sold by a local dealer, but the names on the bill of sale were, inevitably, false. The gang escaped with $100,000 ($6,000,000 in current value).

In late 1926, things began to get even more out of hand when a prominent gang leader, 'Hymie' Weiss, was shot dead with a Thompson in the street, an act that seemed to open the floodgates for Thompson use among gang members, particularly in Chicago. A convoy of eight cars, packed with 'Tommy-men' as the gun-carrying gangsters were known, even cruised down a street in north Chicago in territory owned by an up-and-coming 'businessman' named Al Capone, riddling every shop with bullets. Then as now, there appeared to be an element of fashion among criminals in carrying a modern firearm, and Sturm commented that 'There was every evidence that machine guns were … an essential part of every efficient gangster's equipment.' Amazingly, at that time the Chicago Police Department did not possess a single Thompson, and they belatedly decided that it might be useful to purchase some. They bought 35, but unaccountably the firearms were returned some months later, after senior officers decided that the danger to the public in the event of a shoot-out was too great.

Such considerations appeared not to concern the gangs, however, and shooting incidents continued across the eastern seaboard, with gang killings occurring in New York, Boston, Baltimore and across the Midwest. Use of the guns was spreading like a virus across the country, and the *Lincoln Star* newspaper of Lincoln, Nebraska, noted in March 1928 that 'a gang of robbers, some armed with Thompson machine guns, today entered the savings bank and walked out with $30,000. No shots were fired by the gang, who fled in a large automobile.' Undoubtedly the bank's guard thought twice about taking on anyone armed with a Thompson, doubtless to the relief of all the customers and staff who were present. Calls were increasing for there to be some form of legislation to prevent the sale of these guns to the general public, but things were to speed-up dramatically after the events of 14 February 1929.

Chicago gangsters, 1927 (previous pages)

A raid goes wrong. Three 'Tommy-men' armed with M1921AC Thompsons slug it out with a trio of out-gunned lawmen in Chicago in 1927. One Federal agent has already fallen to a hail of .45 calibre bullets and the two uniformed officers bravely take on the robbers with a .38 revolver and Remington pump-action shotgun. Neither gun was a match for the range or firepower of a Thompson, whose heavy bullets could easily penetrate the steel of a car body, which provided little protection in a gunfight. The distinctive burst of flame from the muzzle of the centre Thompson is not exaggerated – in poor light conditions the flash of a Thompson firing was highly distinctive. The very high 700rpm rate of fire of these guns made the 50- or 100-round content of the drum magazines very practical indeed, despite the weight penalty, and there was no firearm that the police or Federal agents possessed that could match it.

ST VALENTINE'S DAY, AND THE AFTERMATH

By the late 1920s, most large cities had been parcelled up into areas controlled by organized crime gangs, and the police and Bureau of Investigation were seemingly incapable of controlling them. At 10.45am on 14 February 1929, a local woman, Jeanette Landesman phoned the Chicago PD to say she had heard shooting next to her apartment on North Clark Street. The space was rented to the SMC Cartage Company, and was known to be an illegal alcohol storage facility owned by George 'Bugs' Moran. When police arrived, they found the bodies of six men, and a seventh crawling towards the door, begging to be taken to hospital. This lone survivor was Frank Gusenberg who was, astonishingly, alive after having been shot 14 times by a Thompson. When asked who had shot him, he replied, 'I'm not gonna talk.' He lived for three hours. The police launched a huge manhunt, but they needed little in the way of clues about what guns were used, for there lay on the floor some 70 spent .45-calibre cartridge cases, as well as two 12-bore cartridges. Although no individuals were ever brought to trial for the killings, the repercussions were many. A Bureau raid on a suspect named Fred Dane found two M1921s, several drum magazines and 900 rounds of ammunition. Tracing the origin of the guns was not difficult: one had been bought by a known gangster from a Chicago sporting goods shop, the other by a deputy sheriff from Illinois, who had known connections with a Chicago gang. Forensic tests on the guns provided bullets that matched those taken from bodies in the garage, and further investigations showed that Dane was actually the pseudonym of Fred 'Killer' Burke, a professional hitman. It was a further year before he was arrested, but while he was found guilty of the subsequent murder of a policeman, he was never charged with the St Valentine's killings. He died in prison in 1941. Other gang members suffered a more bloody fate, retribution killings accounting for six men who were probably involved. The ringleader, Al Capone, had previously enjoyed some public popularity for his flamboyant lifestyle. Although there was no link to the killings that could be proven in court, the police and Bureau had little doubt he was behind them. As a result of media attention, he found himself not only labelled public enemy number one, but also in very hot water with other gang bosses, who disliked the level of police attention that was now being given to their operations. On leaving a meeting with other crime bosses, he was 'coincidentally' arrested for illegal possession of a pistol and then subsequently jailed for tax fraud. He died, insane, in his Florida home in 1947.

The dangerous but personable John Dillinger, posing with a Thompson and small automatic pistol. (© Bettmann/Corbis)

As a result of the widespread condemnation of the killings in such a public place, there were changes at Auto-Ordnance. In October 1930, the board of management was replaced and a new president, W.B. Ryan Jr, took over. His secretary was a lawyer, A.F. Long, who immediately instigated a change in sales policy, suspending all civilian sales of the Thompson. Orders currently in process were permitted, but thereafter only military and law enforcement agencies could purchase the guns directly. This policy was to launch the gun into a new realm of crime-fighting.

OPPOSITE
Dillinger's gang relied on massive firepower, as is evidenced by the haul put on display by the FBI after Dillinger was shot dead in 1934. Aside from the M1928 Thompson, of particular interest is the M1911 Colt automatic pistol (centre left) converted to fully automatic and fitted with a Thompson fore-grip and extended magazine. It would have been almost impossible to control when firing.

THE TURBULENT THIRTIES

Of all the criminal groups that were to spring up in the 1930s, it was the rising breed of professional armed robbers that captured the public imagination. Indeed, one newspaper commented that robbery had grown almost into a national pastime. The hundreds of small county police forces spread across America began to find themselves at the mercy of gangs that were often better armed, and who had faster cars and the ability to move quickly from state to state to evade pursuit. It was one of the most violent periods in American history. In many respects it mirrored the cowboy era, but instead of gangs robbing banks on horseback, it was machine-gun wielding robbers using fast cars to plunder gas stations, post offices and small-town banks. Only the Bureau of Investigation was able to track criminals across the country as local police were, to their huge frustration, limited to state lines during pursuit. Many of the criminal raids were amateur affairs, but often hugely successful, as they targeted banks or post offices in remote communities that had few resources to track the bandits. One gang was estimated to have netted $130,000 ($780,000 or £485,000 today) in a series of raids across Texas, and none were ever identified or brought to court. Few had started out as career criminals, but soon names like Bonnie and Clyde, 'Machine Gun' Kelly, 'Pretty Boy' Floyd, Harvey Bailey, John Dillinger and the Baker Gang became commonplace on the radio and in newspapers. Because of the lingering effects of the depression, myths soon arose about the Robin Hood nature of a few of these robbers, and occasionally some of it was even true. Charles 'Pretty Boy' Floyd had come from grinding poverty and often gave money from his robberies to destitute families.

Yet generally the truth was far less appealing, for many of the gang members were psychotic: Bonnie and Clyde would kill on a whim; 'Baby Face' Nelson, despite his child-like appearance, often shot bank guards for fun, and would kill a Bureau agent on sight; and John Dillinger killed seven men in 14 months. As they became richer, they were able to buy from commercial gunsmiths any firearms they wanted, and top of the list was soon the Thompson. County police forces, invariably under-equipped and short-funded, found themselves in shoot-outs where their shotguns and revolvers were no match for the Thompsons, rifles and semi-automatic pistols of these gangs. One of the most popular weapons was the fully automatic Browning Automatic Rifle (the BAR), whose .30-calibre bullets

The capture of 'Machine Gun Kelly', who despite his name rarely used a Thompson. His guards are taking no chances and carry two Thompsons and a pump-action shotgun. (© Bettmann/Corbis)

could penetrate engine blocks and even armour plate (it was the weapon of choice for Bonnie and Clyde, who never actually used a Thompson). But it was the Thompson-wielding gang members who began to imprint themselves on the public imagination. There even arose specific terms for the guns. A 'chopper' became a common soubriquet for a Thompson; professional gangs employed hired-in 'Tommy-men' like Fred Burke; and on the East Coast it was known as a 'Chicago Piano'. The Thompson guns became synonymous with the crime wave sweeping the country, and the criminal's overpowering advantage in weaponry was something that few local sheriff departments wanted to face, for doing so invariably left behind a trail of dead officers. When 'Pretty Boy' Floyd and two companions, armed with two Thompsons and a shotgun, set out to free a captured fellow gang member named Frank Nash in Kansas City, they ambushed the police and federal agents from a distance of 5 yards (4.5m), killing five officers as well as their unfortunate prisoner. When eventually cornered in their hideaway in Florida in summer 1934, the Baker Gang used Thompsons with 100-round 'C' drum magazines to increase their

firepower. The police surrounded the house and took no chances, firing no fewer than 1,500 rounds into the building, mostly with their own privately purchased Thompsons, thus ensuring Ma Baker and her son Fred did no more damage. One robber, George F. Barnes-Kelly, became known in the press as 'Machine Gun' Kelly, which was slightly surprising in view of the fact that he did not own a Thompson. In fact, as far as we know he didn't even handle one until early 1933, when his then girlfriend, Katherine, bought one and taught him to use it. Fascinated by its potential, Kelly practised with it for hours (presumably somewhere very remote), until he could shoot accurately from the hip and knock walnuts from fence posts at 27 yards (25m) , but he never used one in a robbery.

Indeed, it is hard now to look at this period without images of Tommy-gun wielding robbers in fedoras and raincoats battling in the streets against the beleaguered Bureau of Investigation but the truth was that the law enforcement agencies were shockingly ill-equipped during the early 1930s. While the Bureau possessed a large armoury of firearms, many were inadequate for this new form of gang warfare. Model 81 Remington rifles, in .30-06 and .35 calibres, and Colt Monitors, a commercial variant of the BAR, were certainly powerful enough, but had limited ammunition for full-auto fire. The Winchester and Remington pump-action shotguns were of course useful only for very close-range shooting, as were the .38 Colt and Smith & Wesson revolvers normally carried by agents. In firefights, agents often found themselves hopelessly outgunned by gangs:

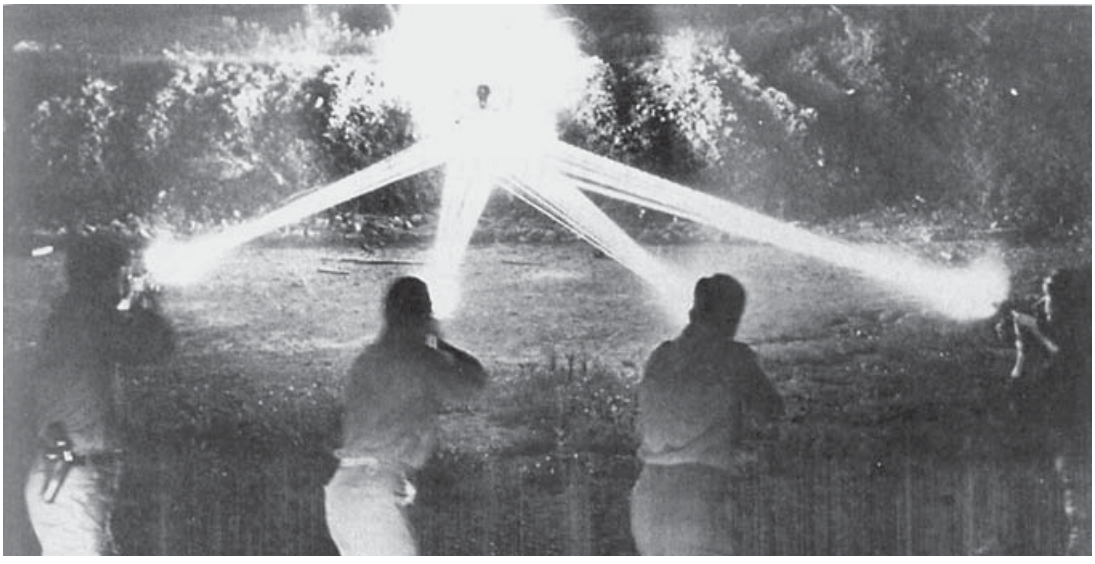
> Federal agents had blocked the road when Floyd's car skidded to a halt then executed a handbrake turn. The muzzle of a Thompson poked from the shattered rear window and another from the side window. Two long bursts sent officers diving for cover, killed two and wounded a third. Bullets from the agent's Remingtons penetrated the car and wounded the driver, Miller, but it sped off while the agents tried to find a drivable car that didn't have its hood and engine riddled by .45 calibre slugs.

The Bureau of Investigation had appointed J. Edgar Hoover as its director in 1924, after his professionalism had been demonstrated during the IRA investigations. It was at his insistence that the Bureau became a separate law-enforcement agency and he was determined that it would be the smartest and best equipped in the whole of the United States. He fired many corrupt and inept agents and began a series of improvements, such as introducing an in-house crime laboratory, proper training programmes and organized, cross-referenced criminal records. He was incensed at the lack of government funding and the poor training, and lobbied Congress for proper financing. (The old Bureau of Investigation finally came under the control of the Department of Justice in 1935, and was renamed the Federal Bureau of Investigation.)

Aside from getting the right men, he wanted the right weapons too, and was furious at 'Pretty Boy' Floyd's open killings of five agents during the bungled attempt to free Frank Nash in Kansas. When he asked the

Jersey City Police aboard their Police Emergency Service vehicle in 1931, one examining an apparently brand-new M1921AC.

local agent what he needed to combat the violence, the unequivocal reply was 'a machine gun'. Hoover promptly purchased one himself and posted it to Kansas. He was not a man to sit around when things needed doing, and he believed the Bureau's armoury needed re-equipping and the agents properly training with their firearms.This belief was reinforced after a report on 22 April 1934 that the Dillinger Gang was staying at a remote country lodge in Wisconsin. An agent had to borrow half a dozen Thompsons, which he then handed out to officers who had little idea how to use them. One policeman was wounded as he sat in a car trying to work out how it functioned; another opened fire on a car and group of innocent tourists, killing one and badly wounding two more; and many bullets from the agents' Thompsons found their way into the normally quiet hotel. Subsequently, proper firearms training facilities were set up at the US Marine Corps base at Quantico, where the federal agency initiated its own shooting academy. Each agent had to shoot 20 rapid-fire shots with his pistol at 15 yards (14m), and ten slow shots at 25 yards (23m). Thompsons were used in single-shot and full-auto modes at 25 yards, and the Remington rifles at 200 yards (183m). Colt Monitors were then fired on full and semi-automatic at 100 yards (91m). All agents had to reach minimum accuracy standards. Hoover was determined to source still more Thompsons, although acquiring the necessary funding was an uphill struggle. It seems rather ironic that it was not until 1935 that the new FBI finally received 115 Thompsons, in specially supplied carry cases. By then the majority of gang members were either dead or in prison. But if anyone believed that there was no foreseeable future for the Thompson, they were about to be proved wrong.



A dramatic illustration of the volume of fire that the Thompson is capable of; here tracer fire from four FBI Thompsons converges on a single target.

THE US MILITARY AND THE THOMPSON

In the wake of the US Postal Service's order for Thompsons in 1926, the US Marines decided that they had better re-examine the potential of the gun, as the Marine postal guards who carried it were unanimous in singing its praises. Even as they re-evaluated it, some guns sold to Mexico had already found their way into the hands of guerrillas and were instrumental in the taking of the National Guard fort at Pearl Lagoon, where massed fire from a dozen Thompsons were estimated to have caused some 250 casualties. The significance of this demonstration of firepower did not escape the notice of US Army observers, and the effectiveness of the Tommy gun in close combat was further reinforced in its first use by US troops in Nicaragua in the summer of 1927. After a coup d'état by Emil Chamorro, the American government sent a company of Marines equipped with 65 of the Postal Service Thompsons to fight a small war in a big jungle. What the soldiers discovered was that at closer range the heavy bullets of the M1921s would punch through the thick undergrowth, and flatten any living thing within range. The war, such as it was, was soon over, as the factions were quickly disarmed, but the positive outcome was that the Marines ordered 200 more Thompsons, on the basis of providing two guns per combat squad.

These guns were very quickly put to further use when Marines were despatched to China in the wake of the civil war that broke out after Mao Tse-Tung was expelled by the Chiang Kai-shek government. The Marines, with their M1921s, showed very quickly how proficient the guns were in another form of close-combat: street fighting. One Marine commented that after they landed in Shanghai and came under fire from rebels, their Thompsons were used to great effect on their hiding places. While effective in the jungle, the Thompson had perhaps found its metier in urban warfare, and it taught the Marine Corps a valuable lesson in street-fighting tactics that it would need to recall before very long.

Two Marines and two Nicaraguan National Guardsmen armed with Thompsons pose with a pair of Thompsons and the boots of a rebel leader – who was reportedly blown out of them by a burst from a Tommy gun.

Adopting any new form of weapon in the armed services was always a slow process. Exhaustive tests had to be carried out and experts consulted, which invariably led to modifications being recommended. Alterations then had to be carried out by the manufacturers. This process could take years, and in the interim the requirements of the purchasers could well change. The US Cavalry had examined the M1921 in 1924 for possible issue to both mounted and dismounted units. As already noted, there had always been a problem in equipping the cavalry with long arms – rifles were too cumbersome, carbines had limited range and both were slow firing. The two types also required expensive parallel manufacturing processes, so the concept of a fast-firing, compact side-arm that could be universally issued was appealing to the Cavalry Board. The test results, however, were not encouraging. The board recommended that the Thompson not be adopted because:

US Marines peacekeeping in China, 1927. The rearmost man holds an M1921AC Thompson and a pair of Browning M1917 medium machine guns provide considerable backup.

1. It was effective only up to 200 yards (183m).
2. Cavalry often fought at longer ranges.
3. Although useful for repulsing sudden assaults, it was only suited for wars against a civilized country.
4. It was unsuitable for use when mounted and when dismounted, at close quarters, a pistol would be just as effective and more convenient.
5. Equipping a squadron leader with a Thompson would rob him of his leadership qualities.
6. That it was an undesirable weapon, suitable only for short ranges and was unsuitable for cavalry use.

As long as the cavalry commanders clung to the notion that there was a place on the battlefield for mounted troops when faced with machine guns and tanks, then it was unlikely that any new form of firearms would be adopted. Most of them probably still mourned the loss of the sabre, but times were changing fast, and the Cavalry Board was forced to re-evaluate the Thompson in 1931. This change of heart was mainly due to the rapid mechanization of the cavalry – engines were replacing horsepower, and the tactical requirements for cavalrymen were changing. They were increasingly used as advance scouts, highly mobile infantry combat units

and for reconnaissance.The conclusions of the new test report were somewhat different to the previous one. It was grudgingly accepted that the submachine gun *did* have a role to play in warfare, but the Board stopped short of recommending wholesale issue of the Thompson. They wrote that 'The Thompson gun be not adopted for general use in the cavalry … [but] in exceptional circumstances … consideration be given at the time to advisability of using this weapon … in armoured cars at the rate of one per armoured car. Twenty one Thompsons … Navy Model 1928, [are to] be issued to The Cavalry School … for test purposes.'

Thus when in March 1932, the M1928 Thompson was standardized for 'limited procurement' for the US Army, it was not a wholehearted endorsement of the usefulness of the gun, but it was at least a crack in the brick wall that had previously faced Auto-Ordnance. This reluctance was in part engendered by the US military's awaiting the issue of the new M1 Garand semi-automatic rifle. When it finally appeared in early 1936, tests showed it was an impractical weapon for use in armoured vehicles. So when in 1938 the guns were given the designation 'Gun, Submachine, Caliber .45, Model of 1928A1' the Thomson had overcome the final obstacle to being accepted for full-scale military issue. Even so, it was not until June 1939 that the US Army placed its first order for the guns with Auto-Ordnance, specifying 950 M1928A1s. There seems little doubt that the flurry of activity that followed this order was based on intelligence reports about events happening in Europe, and Auto-Ordnance realized that they would not be able to meet demand using their existing production facilities at the Colt factory. Although they had entered into an agreement with the Savage Arms Company for manufacturing under licence, they also purchased an old factory in Bridgeport, Connecticut, which was re-equipped to manufacture the Thompson.The timing was perfect, for by September 1940 the US Army had placed orders for 20,405 more M1928A1s, and further orders pushed this number up to 319,000. In order to control production more effectively, the US Ordnance Department divided the country into 13 manufacturing districts, of which New York and Hartford contained manufacturing plants for the Thompsons. Savage-made guns were rolling off the production lines by early May 1940 as part of an initial contract for 10,000 firearms. The newly formed Thompson Automatic Arms Corporation had the first completed guns ready for delivery from their Bridgeport works by August 1941, and were in full production by October. Because of a lack of interest in the development of similar submachine guns by other Allied countries, the Thompsons had the field to themselves. On 7 December 1941, Japan launched its unprovoked attack on the US naval base at Pearl Harbor, catapulting America into a war it did not want. Demand for all types of war materiel soared; ships, tanks, jeeps, small arms and clothing needed to be procured, manufactured and distributed, and the Thompson was no exception. Production figures show that 562,511 M1928A1 Thompsons had been produced by February 1943. From spring 1942, manufacture of the simplified M1 began, and a further 285,480 were produced with 539,153 M1A1 variants, up to the cessation of production in late 1944.

Fighting in the Pacific

As it was initially the only submachine gun in the inventory of the United States and Great Britain, the Tommy gun was used from the earliest days of the war. At the outset, it proved an excellent weapon for close-quarter fighting, particularly in the jungles of the Pacific, where the first US Marines landed in Guadalcanal. John George was a young army lieutenant who accompanied the Marines. He commented that the Thompson was good for jungle fighting, as its bullets would clear a path through the thickest vegetation, but its limited range was a shortcoming. This was perhaps unfair – George himself was a sniper, so preferred long-range shooting – and reach was never really an issue in jungle combat, which was generally conducted at point-blank range or a distance of a few yards. Marine Raiders also realized that because the Thompsons shared the same ammunition as the ubiquitous Colt .45 pistol, they didn't need to carry a double supply of different calibres. One soldier commented:

> On patrols we moved in single file, with a point man carrying the Thompson – ours preferred a fifty round drum because the time it took to change the box magazine could cost your life. Sure it was heavy but most of us carried extra .45 ammo for it. There were several times when a long burst from that gun saved our skins.

Two young Marines who served on Guadalcanal pose with their M1 Thompsons 'somewhere in the Pacific' alongside another soldier. Note the man on the right wears the five pocket 20-round web belt designed specifically for the Thompson magazines.

There were dissenters, however: 'The .45 calibre bullet will not penetrate the branches of trees, roots and dugouts, to anywhere near the degree of the .30 calibre bullet, and this is vital in jungle warfare.'[7] Most Marines would have disagreed, for the heavy bullet and high rate of fire cleared jungle vegetation like a scythe, although admittedly it did lack the ability of the .30-calibre round to penetrate trees. But in reality no single weapon existed that was perfect for jungle fighting, being suitably portable as well as able to deliver a high volume of fire of a suitable calibre to penetrate any obstacle. Besides, there was no doubt that the Thompsons were purely close-quarter weapons; they had never been designed with any other purpose in mind, and the fact that the Marine Corps was not entirely happy with them was not the fault of the gun itself. While the BAR was a good compromise, its 20-round box magazine was a severe limitation (it could empty it in under three seconds), as was its length of nearly 4ft (1.2m).

The Marines soon learned that working the 'buddy' system made up for shortcomings with their guns.

> We worked with the Thompson on point and second squad man with the BAR. When the Tommy-man opened up, the BAR gunner would look for the tracer rounds and then cover with the BAR, while we used rifles. It was a good system as long as the two guys at the front understood each other and the whole squad worked together.

Few soldiers liked to carry the heavy and noisy drum magazines, and many experiments were made to improve the capacity of the original 20-round box magazines, the field trials in late 1941 of the 30- and 40-round magazines being examples. While the 30-round box was a simple extended 20-round magazine, the 40-round capacity was achieved by copying what many soldiers had begun doing in the field, taping two 20-round magazines back to back. The ordnance armourers actually brazed two together, but the tests showed there was little to be gained, concluding:

7. US Marine Corps, *Report of Infantry Weapons in Combat* (October 1943).

Thompsons in the Pacific theatre (previous pages)

A squad of US Marines fight from a foxhole during the Pacific campaign. Men worked in small combat teams, with rifleman armed with a Browning Automatic Rifle and M1 Garand, whose job was to take care of advancing enemy out of submachine-gun range. The BAR gunner took particular care in spraying foliage and treetops with a hail of bullets, in an attempt to dislodge snipers. The Thompson-armed soldier was responsible for dealing with the enemy at closer ranges. As the Japanese were particularly fond of suicidal 'Banzai' charges, and as no bayonet could be fitted to a Thompson, backup men with grenades and Colt .45 pistols were expected to assist with any serious threat. Like most Marines the Thompson man carries a fighting knife, particularly useful when the Thompson had run out of ammunition. The Thompson gunner has an M1932 pistol belt with triple magazine pouch for the .45-calibre magazines used in the Thompson submachine guns, as well as a small M1942 first aid pouch.

A Marine Corps pursuit patrol poses for the camera while pursuing Major General Matsuda and his Japanese forces in Cape Gloucester. Unusually, the leader has a 50-round drum on his M1928, which despite its weight was particularly useful in jungle fighting. Patrolling with a live grenade in one hand was not normally recommended practice. (© Bettmann/Corbis)

> The forty round experimental magazine does not appear to offer any great advantages over the thirty, in that after twenty rounds are fired, it is necessary to remove and reinsert the magazine. The time required for this operation was from five to eight seconds. A definite disadvantage of the forty round clip is that when firing from a prone position, the open end … of the clip has a tendency to gather dust and sand in it. The thirty round magazine offers the advantages of 50% more firepower before changing the clip, over the regular twenty round or the experimental forty round. Either type, however, is superior to the fifty round drum.[8]

Thirty-round magazines were soon being manufactured and shipped to the theatres of combat, but the 20-round version was to remain the mainstay of the Thompson throughout the war.

[8] Report by the Chief of Ordnance (6 December 1941).

Men of the South Staffordshire Regiment armed with Tommy guns climb up onto a harbour wall during an amphibious exercise in Northern Ireland. (IWM H 19112)

Fighting in Europe and Africa

If the Pacific fighting called for special tactics and different combat techniques, then so too did the fighting in Europe. Initial tests with the Thompson by the British 1st Commando Brigade seemed favourable, although the gun's limited range resulted in some early misgivings, prompting the comment that 'Extensive training was carried out in the use of the Tommy gun in assault and in-fighting. Results obtained were good, but the Bren proved a more effective weapon when used from the hip in similar circumstances.'[9] Of course, the Bren's .303in bullet had greater range and penetrative power, but like the BAR the Bren was heavier, at just over 22lb (10kg), and at 42½in (1.15m) long it was considerably bulkier than the Thompson.

[9] *Tactical and Technical Trends*, No. 28 (July 1943).

One of the first uses of the Thompson in combat in Europe was with British Commando units who raided the German docks and harbour on the Lofoten Islands on 4 March 1941, their objectives being to destroy oil-processing factories and shipping, and capture some of the highly secret Enigma equipment. Close fighting proved the worth of the M1928s they carried, and one Commando later said of the Thompson's power that 'A burst would lift a man off his feet. No-one hit by those bullets ever put up any further resistance.'[10] Unlike the Bren, the squat design of the Thompson made it easy to carry close to the body, and it soon became a favourite of all of the British Commando units. After its subsequent use during the ill-fated Dieppe raid, a report on the results of the raid noted that:

> F Troop went through the wood … where they advanced under cover of smoke due north, on either side of the road, to the corner of the perimeter. Here a sergeant records that a number of Germans were surprised in a farmyard, while organizing a counterattack on C Troop. They were killed with Tommy guns. Vigorous opposition was encountered from the buildings and enclosures just inside the perimeter wire, and several casualties were sustained.

So liked was the Thompson for its rugged dependability and knock-down firepower, that when the cheap 9mm Sten guns began to be issued, many Commandos flatly refused to accept them:

> We were told the Sten was going to replace our Thompsons. It was a truly horrible little gun, the bullet wouldn't stop a dog, let alone a bloody big German, and it was very prone to jamming. We went mob-handed to the CO and said if we couldn't keep the Tommy guns, we'd all transfer back to our [army] units. He was sympathetic and I don't know how they swung it, but the Stens never were issued to us.[11]

Undoubtedly one reason for the proposed substitution of Thompson by the Sten was the cost of buying Thompsons, for whereas a Sten cost about £1 to make, a Thompson was still £56 to buy, so from the government's point of view there was little question about which should be procured.

Meanwhile, the Thompsons were being used in an arguably even more hostile environment, the deserts of North Africa. When issued in such hot dusty climates, there were found to be some problems with the design, for sand invaded every part of the guns. Inventive as ever, British, Australian and South African armourers serving in the desert soon found a straightforward solution. The Blish lock was thrown away and a nut and bolt substituted, which had the same mechanical effect of connecting the actuator and bolt. The open-sided cut-outs on the receiver body were

[10] J. Sturm calculated that the impact from a .45 was the same as being struck by a ¼in (6.4mm) steel rod mounted on the front of a car travelling at 55mph (89km/h).
[11] Sergeant Jack Lovell, ex-3 Commando, interview with author.

October 1944. During the Burma campaign, a Royal Scots Fusilier takes cover in the village of Namma and holds his M1A1 in readiness. (IWM SE 2989)

welded shut, and with a magazine inserted and the bolt closed these measures effectively sealed the guns from the ingress of sand and dirt. No lubricants were used either, as they formed a fine grinding paste that could wear out internal components in an incredibly short time, and the guns appeared to function perfectly well with no ill effects. The author's uncle carried a Thompson on his motorcycle during the desert war, and once commented that when removed from the carrying bucket, provided it was shaken hard to clear out all of the loose sand, the gun would work perfectly well. Overheating was a problem in the heat, however, and experienced users fired in short controlled bursts to give the barrel a chance to cool down. It was a particular problem for the M1 variants, which lacked the cooling fins of the M1928A1, but in general desert fighting did not require the high-volume firepower of urban street fighting in Europe.

A British patrol armed with Lee-Enfields and Thompsons in the ruins of Monte Cassino. The M1928A1 is fitted with the more practical horizontal fore-grip rather than a pistol grip. He appears to be wearing Bren gun ammunition pouches, which each held about six 20-round Thompson magazines. (IWM NA 14989)

In September 1943, the first US troops landed on European soil, at Salerno in Italy, and a mixture of M1928A1s and M1s came with them. It was in the fighting across Europe that the Thompson excelled. It worked best in the temperate climate and proved its worth time and again in close-quarter combat in the villages and towns of Italy, Holland, France and Germany. During the heavy fighting for Monte Cassino, GIs fought in conditions not unlike the trenches of World War I, with incessant rain, mud and cold. Thompsons worked well nevertheless, although their excessive muzzle flash at night was a problem. Even in the thick of the fighting, the soldiers had time for some fun with their weapons. War correspondent Ernie Pyle recalled how a group of soldiers found a suitable hillside on which they set up impromptu targets, and showed him how to shoot a Thompson. He spent an instructive afternoon learning how to target shoot the gun until they had all run out of ammunition.

In the slow fight across Europe, particularly after the D-Day landings, the Americans equipped with Thompsons learned very quickly that teamwork was everything when fighting across the thickly wooded *bocage* country. As in the Pacific, the variety of weapons carried enabled the squads to work most efficiently if each man used his specific weapon to its fullest advantage. Soldiers armed with Garand M1 rifles were used on point, with the Thompson behind and more M1s following, and an M1 carbine in the rear. This combination provided a comprehensive fire-pattern, with long-range shooting catered for by the Garand, close work by the Thompson and intermediate range fire by the .30-calibre BAR.

Thompson-armed US troops move forward during the German Ardennes offensive, December 1944. (© Bettmann/Corbis)

Although the BAR was extensively carried, its weight made it unpopular with Ranger and Airborne troops. They preferred to be lightly equipped and move quickly, and many opted for a combination of the Thompson and the light .30 M1 carbine. The British Parachute Regiment was equipped somewhat differently, their issue bolt-action rifle, the No. 4 Lee-Enfield, being very accurate but slow firing, and the Sten useful only for very short ranges. Yet these deficiencies were more than compensated for by the Bren gun, whose accuracy and reliability made it one of the most trusted Allied small arms of the war.

Thompsons in North Africa (opposite)

A small infantry fighting patrol uses a Thompson to pin down a German machine-gun team. The Thompson's high rate of fire and heavy bullet ensured that the machine-gun team would keep their heads down while a grenade man approached from a side road. The second Thompson man would ensure that no snipers or stray Germans appeared from hiding. When close enough a grenade flung through the upper window would silence the machine-gun team, and the British soldiers would kick in the door of the house and toss in another grenade, then rake the upper floors with gunfire. Where house clearing was concerned, it paid to take no chances at all.

Carrying the Thompson was best done with the gun slung across the front of the body; some men preferred wearing it left to right, others right to left. Lieutenant Carl H. Cartledge, a very experienced US Airborne officer and Thompson lover, wrote:

> The Thompson shoots naturally from the hip and this reveals its great advantage in combat. Shoulder shooters in combat often don't live very long. The best combat carry is high with the muzzle up because the Thompson drops down quicker than it swings up. The second best carry is across the body with the muzzle pointed left. Shots from left to right hit better … because they follow the natural flow of the gun.

Some GIs simply disliked the Thompson's weight, and in the way of many soldiers decided the enemy's small arms were better. Many adopted the German MP40 submachine gun, which at 8lb 12oz (3.85kg) was about 2lb (0.9kg) lighter than the Thompson M1A1. Unsurprisingly, the Germans had the same opinion about the American guns:

> When we got into Holland we were involved in a lot of house to house fighting. Street fighting was hard as there could be a Jerry in the next house, or even the next room. Once we kicked in a front door and heard them leaving by the back. We killed some after a fight across a street in Den Hag when our Bren was able to outshoot them. When we searched the house, there were three dead Jerries all with captured Thompsons and American web belts for the magazines. They seemed to like them too but they were no good at long range fighting.

Often overlooked was the number of Thompsons that were dropped to resistance units during the war. The actual figures are unknown, but probably run into the tens of thousands. In some parts of France even today, Thompsons, Stens, Colt M1911 pistols and assorted .38 revolvers are commonplace, and sometimes elderly men will show you immaculate examples that have been carefully oiled and stored across the years. The author was talking with a neighbour in northern France who was a keen shooter and hunter, and while looking at the assorted rifles hung in his gun room, noticed a well-used M1A1. When asked if it was a working example, the reply was, 'Of course. It was my Grandfather's, he picked it up as the Allies came through France. He never joined the army but he fought alongside the British and used it to the end of the war.' Even today, occasional arms containers surface with their contents intact, but the only battle fought over them now is between collectors and the local Gendarmerie, who are understandably anxious to retrieve the contents before anyone else. Obtaining accounts of these weapons in clandestine use is difficult, as even today many of the ex-Resistance men are reluctant to speak of their exploits. Yet one elderly man who spoke to the author had an interesting viewpoint on the merits of the Stens and Thompsons:

> We carried the Sten guns inside our clothing, hung on belts because it could be turned around and the stock removed. [With the magazine removed, the receiver could be swivelled parallel with the trigger guard, and a handgrip was fitted in place of the metal butt, reducing its bulk.] They were very small and easy to hide, very good for using in small ambushes, perhaps a car or lorry. But the Thompson was heavy and hard to hide, even if we took the stock off, and difficult to shoot properly. When the Allies came through and we joined them to push the Boches back we could use either of these guns, but I preferred the Sten.[12]

As the war reached its inevitable conclusion, many of the Thompsons first carried into combat had been broken or discarded. (Lieutenant Cartledge recalled he wore out four during his tenure in Europe.) Few original M1928A1s survived to 1945; most still in use by then were M1A1s, and of these many had been replaced by the cheaper and simpler M3 grease gun or Reising Model 50, both .45-calibre submachine guns. Many of the Tommy guns still in service had been field modified – steel bands had been fitted to fore-grips to provide a more secure anchor, swivels put on top of the butt, instead of underneath, and the long Bren gun webbing sling was adopted by many soldiers to carry the Thompson comfortably across the chest. As later recalled by a former Commando 'Right up to the time we got into Germany, I used my Thompson in preference to anything else. I had a Bren sling on it, and in house fighting often took the butt off and stowed it in my pack. I could shoot that gun from the chest or from the eye without moving the sling off my shoulder.'[13]

[12] Msr Jean-Marie Clemenceaux, interview with author.
[13] Sergeant Jack Lovell, ex-3 Commando, interview with author.

IMPACT

A celebrity submachine gun

THE THOMPSON IN THE MOVIES

Almost uniquely, the Thompson has been the subject, directly and indirectly, of more media attention than probably any other firearm. This interest was in part due to the Prohibition-era gangs' love of the gun. Indeed, it was said with some truth that it was their wholesale adoption of the weapon that rescued the Thompson from obscurity and saved Auto-Ordnance from collapse. The Thompson first appeared at the cinema as a live-firing gun in a silent movie called *Underworld*, released in 1927. Hollywood's current requirement for maintaining the safety of its crew and actors had yet to manifest itself, and most guns used on film sets fired live ammunition, albeit normally at out-of-camera-range targets. Close-up shots of bullets striking doors, cars or windows, however, were done using marksmen and required actors to stand very, very still. On-site gunsmiths soon realized that having a full-automatic submachine gun on a film set was a disaster waiting to happen, so several blank-firing attachments were manufactured that retained the outward unmodified appearance of the guns. These consisted of a restrictor or baffle, fitted inside the barrel or Cutts compensator, that cut down on the gas that passed through, creating sufficient back-pressure to work the breech-block and cycle the action.

The distinctive sound of a Thompson had yet to be captured for the viewing public, and the sound score that accompanied the silent films usually relied on a drum or piano to signify the gunshots, which detracted somewhat from the real thing. It was not until sound was introduced to film that the Tommy gun began to carve its own peculiar niche in the movie world. The first soundtrack featuring gangsters and the Thompson was the 1930 film *Little Caesar* starring Edward G. Robinson. This film

Scarface, or *The Shame of the Nation.* Although ostensibly anti-gun and anti-gang, the 1932 film gave the Thompson a glamorous starring role. (Photo by John Kobal Foundation/Getty Images)

tapped into an apparently insatiable public appetite for the genre, and in four years some 60 films were made, the most prominent in Thompson terms being *Scarface*, released in 1932. Probably the most unusual aspect of this film is that despite the prominence it gave to the M1921, the basic message of the screenwriter was anti-gun. There was a great deal of social comment contained within the film, which mirrored much of the existing public sentiment about the indiscriminate use of firearms, and particularly Thompsons, in crime. Criminals were shown as able to buy them openly, as there were no legal checks on their eventual ownership, while law enforcement officers could not have them, because they couldn't afford them. There was even a sequence where a newspaper man rails against the fact that there are no gun laws restricting the ownership of Thompsons, and all of this two years before any firearms legislation appeared. It was not long before the image of the Thompson-carrying mobster had changed to that of an FBI 'G-Man' (government man) clutching a drum-magazine Thompson and presenting, as far as Auto-Ordnance were concerned, a far more wholesome image. This switch was mainly due to the 1934 National Firearms Act that had been placed before Congress, which would regulate for the first time the sale of weapons deemed to be crime related – sawn-off shotguns, suppressors and machine guns – by taxing and recording them. In future, only law enforcement

agencies would be permitted to own and use them. So serious did the authorities believe the situation had become, that in 1935 a code of conduct was even agreed for Hollywood that limited what could be shown on film screens. The Hays Code, as it was known, would eventually have overly excessive powers of censorship on filmmaking, even to the extent of prohibiting scenes showing a married man and his wife in bed together. But initially, it forbade the showing of Thompsons or any other automatic firearms in films if carried by criminals. This meant the gangsters had to be armed with pistols, rifles and shotguns, which wasn't so far from the truth in many instances.

A side-effect of this ruling was that the tone of films began to change, from concentrating on the lawbreakers to focusing more on the lawmakers, a trend that has continued to this day. Films about the Bureau of Investigation/FBI became immensely popular. For Auto-Ordnance the good news was that instead of the unwanted publicity that surrounded the criminal use of their guns, they were now firmly in the hands of Federal agents and police, who could, under the Hays Code, be shown carrying them. Suddenly the Tommy gun belonged to the good guy. The positive reinvention of the Thompson was to be reinforced in 1941, as the war spread its effects to the United States and the Thompson began a military career. A new wave of films appeared showing Thompsons in the hands of just about every type of military unit conceivable: British Commando, US Army, Marine Corps and Air Force. Thompsons also appeared in a series of gritty war films starring the hugely popular John Wayne, where the set armourers seemed to have little but Thompsons to issue to the actors. If Hollywood thought the public's appetite for war movies would diminish with the coming of peace in 1945, they were wrong. As the power of the Hays Code waned after the war, filmmakers began to look at new types of film to excite the public taste. There were several more John-Wayne-wins-the-war escapades, as well as some bizarre uses of the Thompson in science-fiction films, which were becoming the new darlings of the film industry. Thompsons were featured killing huge ants in the 1954 film *Them*, a use that General Thompson had undoubtedly never foreseen. There was also a new nostalgia for the days of the 'Roaring Twenties', and films came out featuring gangsters depicted in a more modern, but less accurate light. *Bonnie and Clyde* was filmed throughout 1966 with the title actors Warren Beatty and Faye Dunaway carrying Thompsons, which Bonnie Parker and Clyde Barrow never had in real life, but it didn't stop the film from becoming a huge box-office hit. There was a new version of *The St. Valentine's Day Massacre* (1967), and even Ian Fleming's *Goldfinger* (1964) featured a Thompson. The Thompson was rapidly becoming a veteran firearm in Hollywood and it shows few signs of vanishing from the screen. John Dillinger, 'Baby Face' Nelson and other gangster luminaries have long become established fare for the box-office. In fact, Dillinger and Nelson are far more famous in death than life. *Dillinger* was remade in 1973, and both Dillinger and Nelson feature as the central characters in the recent Universal Pictures film *Public Enemies*, released in 2009. Naturally, Thompsons are at the forefront of most of the shoot-outs.

A soldier from 3 Commando at Largs in Scotland armed with an M1 Thompson. It was deservedly popular amongst those who used it in combat and beloved by many Commandos. (IWM H 19271)

THE THOMPSON IN RETROSPECT

What exactly was the legacy of the Thompson? It is strange that a weapon conceived for the trench warfare of the Great War was never actually used for its intended purpose, and yet became one of the most recognizable designs of firearm ever produced – not as a result of war service, but through criminal activity. By any standards this makes the Thompson unusual in the annals of firearms history. In terms of design and manufacture it was the first and last of its breed. It was a submachine gun conceived at a time when there was still a traditional attitude towards the manufacture of firearms, for they were built to last, made of exceedingly high quality materials and requiring a standard of workmanship that would have been familiar to a 19th-century gunsmith but would be both outmoded and unprofitable within a generation. Look closely at a Thompson, particularly an early model, and you will see no corners being cut, no substitution of good materials for something cheaper. It was a firearm firmly rooted in the great gunmaking tradition of America, where craftsmanship counted for something and was still expected by customers. This was at once its strength and weakness, however, for times were changing. Henry Ford had proved that building fast and cheaply was the direction that manufacturing industry was heading in, and gunmaking

Shooting the Thompson

A Thompson is initially a daunting weapon to shoot for the first time, in part because of the many (and usually erroneous) tales told about fearsome recoil, the tendency of its muzzle to climb uncontrollably and blinding muzzle flash. In fact, only at night is the muzzle flash noticeable and the weight of the gun, particularly with a drum magazine fitted, means that it is actually quite stable to shoot, even in fairly long bursts. Firing continuously on full-automatic certainly does cause the muzzle to rise and swing to the right, but it is not violent and is possible to correct if the trigger is released and the gun allowed to drop back on target. Recoil is not at all unpleasant and the gun can be fired one-handed from the hip in short bursts. The Thompson makes a very distinctive clatter when firing, and once heard can be instantly identified thereafter. Contemporary military accuracy tests are interesting, and belie the oft-repeated stories that the Thompson was useless at long range or when fired on fully automatic. British tests at RSAF Enfield showed that at 50 yards (46m) using a 50-round drum, a group 3 x 6in (7.6 x 15.2cm) was made; at 100 yards (91m) it was 14 x 10in (35.5 x 25.4cm); and at 300 yards (274m) the group was 25 x 29in (63.5 x 73.6cm). Guns were fired on full-automatic mode, but in bursts. Firing at extreme ranges of 500 yards (457m) achieved groups covering 24 x 46in (61 x 116.8cm). At 100–150 yards (91–137m) a man-sized target could be hit regularly, although, as the author can attest, at longer ranges there is a distinct time-lag between the sound of the gunshot and the 'thump' of the bullet striking the target! Bearing in mind that the Thompson is firing a pistol cartridge, such performance is surprisingly good. Yet few combat soldiers would ever shoot a Thompson in this manner, for short, accurate bursts at close range were what the Thompson did best. A good Tommy-man could make three- or four-shot bursts that were deadly accurate, even when firing from the hip. Trainee FBI agents were instructed to try to shoot ten shots from a magazine loaded with only ten rounds, and while it took some practice, most could manage nine out of ten after a few days. Magazine reliability was always a thorny problem. Generally, the 20- and 30-round box magazines were good unless the feed lips were dented, in which case jamming would occur. The 'C' and 'L' drums were far more of a problem. The very earliest drums required the front plate to be removed, so the bullets could be inserted (a tediously slow process), then with the plate refitted, the drum was wound, in the manner of a clock spring. Later drums were of riveted construction and did not need to be disassembled to reload them; cartridges were inserted into the mouth of the drum and the mechanism wound to 11 clicks for the M1921 or nine clicks for the M1928. With the introduction of the later M1 models there was no provision for a drum magazine anyway, and military production of them ceased.

(Image: The author firing a Tommy gun at the range.)

was, whether those involved liked it or not, now an industry of mass-production. What counted against the Thompson was the sheer cost of manufacture. The dozens of machining operations, the close tolerances required from the internal parts (the Blish lock is a prime example) all conspired to make the Thompson an expensive gun. True, it would probably never wear out, but within military circles the realization was dawning that this longevity was not necessarily desirable. Military firearms that lasted for decades were seldom used to the point of becoming worn out. Moreover, they required careful storage, frequent inspection and refurbishment and were often rendered obsolete by technological advancement long before their physical service life had been reached. They were, in short, too well built. Germany had proven this to an extent in developing the 9mm MP18/1 at the end of World War I. It was simple and strong but not excessively over-designed and was relatively easy for non-skilled labour to build. It was a submachine gun in the modern tradition, whereas the Thompson certainly was not.

And yet how many people today would recognize an MP18? The Thompson is instantly recognizable even by those with little knowledge of military firearms. The finned barrel, pistol grips and drum magazine are unlike any other firearm and its visual effect is stunning. Neither was the Thompson a case of form over function, for there was no denying it did all that was asked of it. It was reliable, hard-hitting and easy to care for. It accomplished everything, in fact, that a soldier could ask of his weapon. True, it was heavy, but to a combat soldier there was often a comfort in having a weapon that felt as though it meant business – hence the great reluctance of British Commandos to hand in their Tommy guns for the much-reviled Sten, which was generally regarded as a gun manufactured from scrap bicycle parts. To a great extent this was the biggest weakness of the Thompson, for it was simply too much of everything for a modern army. It was too expensive to make, too complex internally and too heavy. Like it or not, submachine gun design was heading in the direction of the Sten.The German Army thought similarly, and their beautifully made MP38 submachine guns were gradually simplified until they too were producing clones of the cheap, effective Sten by the end of the war. Despite simplifying the Thompson into M1/A1 models the US Army had to introduce its own replacement in 1942, in the form of the M2 'grease gun'. Cheaply made of pressings and stampings, it was all that the Thompson was not. Like most of its genre, it was merely a tool, one that few soldiers developed any emotional attachment for. There was no denying that it was a reasonably efficient submachine gun, but it was effectively disposable and by the end of the war it had been consigned to the dustbin of history – quite unlike the Thompson, for the iconic status of the Tommy gun has survived into the 21st century. Its reputation endured to the extent that it was copied by Communist China and the Vietcong, who produced good serviceable examples during the Vietnam War. Original Thompsons still turn up in Afghanistan, Iraq, the Middle East and in countless African countries, shouldered by militiamen, terrorists and even by police forces. It seems that the Thompson will, like old soldiers, never die.

It is always difficult to determine exactly what the factors are that give an object the status that determines it to be 'iconic'. There is no denying that visual familiarity is a major factor, and the Thompson has featured in dozens of Hollywood epics, bringing it to the attention of a very wide audience. Its emergence as a gangster gun also helped, but there was something else about it, something indefinable. Veterans talked fondly of 'their' Thompsons, and many expressed regret at having to hand them back at the end of the war – surely an emotion that seldom arose with the Sten or the 'grease gun'. There are today countless products, and even pop groups and artwork based around the gun, for interest in it is still very high. It is sufficient even for it to still be in production, albeit as a modified semi-automatic variant. Originals now change hands among collectors and shooters at phenomenal prices, and $50,000 for a good Model 1921 is not uncommon. Surely there have been no other firearms manufactured that can lay claim to have invented the term for a whole generation of subsequent weapons, and for that the 'Tommy gun' is truly unique.

GLOSSARY

ACTUATOR: Cocking handle.

BLISH LOCK: An 'H' shaped device that locked the breech-block under pressure and helped reduce the high rate of fire.

BLOWBACK: Using the inertia of the breech-block to hold the cartridge in place at the moment of firing. Pressure generated then pushes the breech back to re-cock the weapon and repeat the cycle.

BLUED: A chemical process that turns bare steel a deep blue-black and helps prevent rusting.

BREECH-BLOCK: The component that closes the breech, usually a rectangular or conical machined piece of steel within which the firing pin and cartridge extractor are incorporated.

CUTTS COMPENSATOR: A slotted muzzle attachment that directs the fired gas upwards and/or sideways, helping reduce the tendency of the muzzle to rise on firing.

CYCLIC RATE: The theoretical rate of fire of an automatic weapon, assuming an uninterrupted supply of ammunition. Normally shown as rounds per minute [rpm]

FORE-END/FORE-GRIP: The front grip of a submachine gun or rifle.

PARKERIZED: A wartime form of blueing, but one that produced a matt, blue-grey finish.

PEEPSIGHT: A simple open rearsight, used mainly for close range shooting.

RECEIVER: The body of a weapon within which the breech-block travels.

RECOIL SPRING: Also known as the return spring. It is the spring in an automatic weapon that cushions the rearward movement of the breech-block, eventually returning it to its forward firing position.

SEAR: A small angled bar linked to the trigger which locates in a slot in the bolt or breech-block, holding it to the rear. When the trigger is pulled, the sear is released and the firing mechanism moves forward to ignite the cartridge.

SEMI-AUTOMATIC: A weapon that fires one shot and automatically re-cocks but will not fire a second shot until the trigger is pulled. Most submachine guns have a fire selector that enabled them to shoot in semi- or fully-automatic mode.

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WEAPON

DEVELOPMENT ▪ USE ▪ IMPACT

THE THOMPSON SUBMACHINE GUN

Developed late in World War I to be a fearsome trench-warfare weapon, the Thompson submachine gun's fame and success came in unexpected quarters. An iconic and innovative design, the M1921 Thompson was soon adopted by Prohibition-era gangs and used ruthlessly on the streets of New York and Chicago.

In the 1930s the Thompson was more often seen on Hollywood sets than on Chicago streets, but its military career was relaunched with the outbreak of World War II. Simplified to become the M1 Thompson and produced in huge numbers, it was used by armies, commandos and resistance groups worldwide.

Using expert knowledge and first-hand accounts, this history of one of the world's greatest submachine guns analyzes the Thompson's development, its legacy and the experiences of the men who used it in combat.

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