

# GUNS DICTIONARY

a guide to firearms, airguns,  
inventors, patentees, manufacturers,  
distributors, brand names, trademarks  
and military-unit markings

JOHN WALTER



# THE DIRECTORY: L-LZA

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- L *above* '↑'. A mark applied by an inspector working in the →Lithgow small arms factory in New South Wales, Australia. See also "British military inspectors' marks".
- L *cursive, beneath a crown*. Found on Bavarian weapons: the mark of Kings Ludwig II (1864–86) and Ludwig III (1913–18). See also 'Cyphers, imperial and royal'.
- L *often cursive, beneath a crown*. Found on Belgian weapons: the mark of Kings Leopold II (1865–1909) and Leopold III (1934–50). See also 'Cyphers, imperial and royal'.
- L Stamped into the woodwork of 'Long' British military rifle butts, which were two inches longer than standard.
- L *above crossed rifles and a pistol*. A mark found on butt cylinder airguns made by Friedrich →Langenhan of Zella St Blasii, Thüringen, Germany, from c. 1896 until 1914.
- L *as 'L' or 'L I<sup>o</sup>', beneath a crown*. Found on Portuguese weapons: the mark of King Luis I (1861–89). See also 'Cyphers, imperial and royal'.
- L. This code letter was used on weapons and accessories issued to the Bavarian Leib-Infanterie-Regiment prior to 1918, though it usually appeared as 'B.L.5.45.' rather than simply 'L.5.45.'.
- L.A.** Applied prior to 1918 by the German *Feldluftschiffer-Abteilungen*, the field airship detachments. Marks take the form 'L.A.I.15.', the 15th weapon issued to Abteilung Nr. 1.
- La Coruña**, Spanish arms factory: see 'Mauser'.
- L.A.E.** Applied under the provisions of the 1909 German army hand-book, this mark belonged to the *Luftschiffer-Ersatz-Abteilung*, or supplementary airship (or balloon) detachment. It appears as 'L.A.E.2.15.', for the 15th weapon issued to the 2nd company. See also 'L.A.'
- La France Specialties** of San Diego, California, U.S.A., has specialised in the manufacture of silencers suited to handguns such as the →Government Model Colt-Browning.
- La Fury**: see 'LA Fury', below.
- La Industrial** A small Browning type pocket pistol usually attributed to →Orbea Hermanos of Eibar, Guipuzcoa, Spain, though on uncertain grounds; 6.35mm, six rounds.
- La Lira** This Spanish semi-automatic pistol, the work of →Garate, Anitua y Cia of Eibar, was essentially a 1901-pattern →Mannlicher in all but two respects: the chambering, for 7.65mm Auto cartridges, and the substitution of a detachable box magazine for the original integral charger-loaded design. A few thousand guns seem to have been made immediately prior to the First World War, but

were then superseded by simpler →Browning copies.

**La Mignonne** A folding .410 shotgun, with a revolver-type grip and a skeleton stock, made in the 1920s by (or perhaps for) Leopold →Ancion-Marx of Liège.

**La Reine**, a small airgun: see 'Carabine la Reine'.

**La Rosa**, a Spanish gunmaker/patentee: see 'La →Rosa'.

**La Rosa**. A small Spanish-made revolver, customarily a six-shot chambered for the 7.65mm Auto cartridge, with a barrel/cylinder assembly that could be slid forward to load. Essentially similar to the →Galand type.

**LAB** Found on U.S. military firearms and accessories. See 'Lester A. →Beardslee'.

**Laballe** or **La Balle** Said to have been used by W. & J. →Jeffrey of London, England, on large →Gem type butt cylinder airguns sold in the early 1890s. It may signify French or Belgian origin—*La Balle*, 'The Bullet', perhaps indicating that the guns were either capable of firing conventional cartridges when required, or that they were rifled to fire slugs instead of being smoothbored for darts.

**Labonte** H.J. Labonte, using an 'HBL' mark, accepted firearms and accessories made for the U.S. armed forces by →Colt's Patent Fire Arms Mfg Co. They date from 1939. See also "U.S. arms inspectors' marks".

**L.A.C. or L.A. Co.:** 'London Armoury Company' (q.v.). See also 'James Kerr'.

**Lacey** Arthur Lacey; Bridge Street, Stratford upon Avon, Warwick-shire, England. Lacey—who also traded as an ironmonger—handled sporting guns and ammunition prior to the First World War. Some of the shotgun cartridges apparently bore the names →Welcome or 'Welcome Smokeless'.

**Lachat** Jules Lachat; rue de Vernay 50, Saint Étienne, France. Listed in 1892 as a gunmaker.

**Lacroix**; Liège, Belgium. A maker of revolvers active in the 1870s.

**Lacy & Company**; London. The marks of this English gunmaker have been reported on self cocking →pepperboxes dating from the middle of the nineteenth century. A trading style of Lacy & Witton, perhaps?

**Lacy & Reynolds** ['& Company' after c. 1852]. Based in Birmingham, this English gunmaker and sword cutler was listed in London in 1850–3, maintaining an office at 21 Great St Helen's.

**Ladmore** Edwin Ladmore, a gunmaker trading in Widemarsh Street, Hereford, England (1841–70), is known to have marked sporting guns and self-cocking →pepperboxes dating from the middle of the nineteenth century.

**Lady Colt** A brand name applied unofficially in the early 1870, by →Kittredge & Company of Cincinnati, Ohio, U.S.A., to the .32 →New Line Colt revolver.

**Lady Model** Similar to the 'Fourth Model' →Lord derringer, made by →Colt's Patent Fire Arms Mfg Co. in 1959–63, this had gold plating on the frame and barrel, and pearlite grips. See also →Thuer derringer.

**Lady's Model** A tiny 6.35mm-calibre revolver made in Liège by Établissements A. Lebeaux, c. 1908–14.

**lae** Allotted to Heinrich →Zeiss (Union Zeiss KG), for use on sights and optical equipment made in a factory in Gostingen/Wartheland, Germany, in 1943–5.

**La Fury** or **LA Fury** Associated with semi-automatic pistols made in Germany by →Reck of Lauf bei Nürnberg and distributed in the U.S.A. by →Hawes Firearms Company of Los Angeles. The mark should be considered as a corruption of 'L.A. Fury' (i.e., 'L.A.', Los Angeles).

**Lagesa, Lago** →Landeslieferungs-genossenschaft.

**Lahaye** Arno ld Lahaye; Suhl in Thüringen, Germany. This gunmaking business was trading in 1900 under the proprietorship of Leonhard & Peter Lahaye.

**Lahti** Aimo Johannes Lahti (1893–1970) is best known for the 9mm Lahti pistol adopted by the Finnish army prior to the Second World War and then made in larger numbers in Sweden. He also developed submachine-guns (see 'Suomi'), the Lahti-Saloranta light machine gun described below, the 20mm L-37 aircraft cannon and the 20mm L-39 anti-tank rifle.

**Lahti pistol** Developed from 1929 onward, this recoil-operated semi-automatic pistol was officially adopted by the Finnish army in 1935. The 9mm *Pistooli L-35* was made in small numbers by →Valtions Kivääritehdas (VKT) the state-owned rifle factory, but only nine thousand had been produced—in several subvarieties—when work stopped in 1954. Excepting one batch of 200, which were subsequently converted, these guns all had →accelerators to improve reliability in sub-zero conditions. They also had stock lugs on the butt heel and loaded-chamber indicators on top of the barrel extensions.

¶ VKT made 1250 additional guns in 1958, with plain-top barrel extensions. Finnish service pistols have plain serial numbers, but about a thousand failed inspection and were subsequently sold commercially; these have 'VO' number prefixes.

¶ Lahti pistols were used in large numbers in Sweden, nearly 84,000 being made by →Husqvarna in 1942-6. Issued to the Swedish forces as the 'Pistol M/40', owing to the unavailability of the Walther P. 38 and the FN-Browning GP-35 (the first and second choices), the M/40 Lahti was not as successful as its Finnish prototype. It can be identified by its plained contours, especially in the shape of the barrel extension and the trigger guard, and by the 'crowned h' moulded into the grips. Comparatively little has been written about the Lahti in English, though "Simply Reliable: Finland's Lahti Pistol" in *Shooter's Bible*, no. 72 (1981), gives a summary of its history.

**Lahti-Saloranta** This 7.62×54R light machine-gun, designed by Aimo Lahti and Arvo Saloranta, was adopted by the Finnish army in 1926 and made in small numbers prior to the Winter War of 1939–40; it remained in service until displaced by Soviet weapons in the late 1940s. However, the guns were held in reserve until sufficient 7.62×39 m/62—a derivative of the original LS-26 design—had been introduced. The action of the recoil operated LS-26, locked by a tipping bolt, includes an →accelerator to improve reliability. Firing is accomplished from an open bolt position just before the parts reach the limit of their forward stroke. Detachable box or drum magazines can be used.

**Laidley** Theodore Thadeus Sobieski Laidley was born in West Virginia in 1822, graduated from the U.S. Military Academy, West Point, in 1842 and was

immediately posted to the Ordnance Department. Laidley wrote the *Ordnance Manual* of 1861, before becoming commandant of Frankfort Arsenal (1862–4) and then Springfield Armory (1864–6), where he oversaw production of →Joslyn and →Allin metallic-cartridge rifle-musket conversions, Laidley is best known as the designer and co-patentee with C.A. →Emery of the →Laidley Emery rotating-block rifle (U.S. no. 54743 of 15th May 1866). Designer of ‘Tompson for Fire Arms’ (patented in 1868) and a centrefire cartridge (U.S. no. 140144 of 1871), Laidley resigned his commission in 1880 and died in Florida in 1886. His ‘TSL’ marks will also be found on firearms and accessories accepted on behalf of the Federal and U.S. armies in 1864–6. See also “U.S. arms inspectors’ marks”.

**Laidley-Emery rifle** Similar externally to the Remington →Rolling Block, but with an additional locking bar pivoted on the hammer axis-pin, this was patented in 1866 by Major Theodore T.S. Laidley and Charles A. Emery, respectively the commandant and a ‘machinist’ of →Springfield Armory. The prototype carbine was submitted to trials in 1865 by ‘M.Y. Chick of New York’, camouflaging its origins, but failed to impress. Though a few additional guns were made in the Armory, the →Allin conversion system was preferred owing to the ease with which existing rifle-muskets could be altered. →Colt’s Patent Fire Arms Mfg Co. made a few Laidley-Emery rifles in the late 1860s, but rights were acquired by the →Whitney Arms Company c. 1871. Whitney made military-style rifles and carbines of this type alongside sporting guns until 1882, when the lapse of patents granted to Joseph →Rider allowed copies of the simpler Remington-type rolling block to be substituted.

**Laird** J.W. Laird & Company. Listed as a member of the London gun trade, operating in 1889–96 from ‘6 Bishopsgate Street, Without’.

**Laird-Meteyne machine-gun.** Some .303-calibre guns of this type, designed in France by Menteyne & Degaille and promoted by the →Cventry Ordnance Works, were tested in Britain in 1908–12. They were rejected on the grounds that they failed to meet then-current tactical doctrines.

**Lake** Henry Harris Lake; London and New York. This British patent agent is believed to have been the son of William Robert →Lake, and was active from 1884 to 1904 and later. His address is usually listed as 7 & 8 Southampton Buildings (that of the ‘International Patent Office’) and 60 Wall Street in New York. Lake acted for Elbert H. →Searle in 1910—see British Patent 12723/10.

**Lake** William Robert Lake commenced his operations as a patent agent and consultant engineer in the middle of the nineteenth century, working from chambers in Chancery Lane, London. He formed the ‘International Patent Office’, 7 & 8 Southampton Buildings, London, in 1865 and entered partnership with Henry Haseltine four years later. Lake acted for, among other people, →Smith & Wesson, protection for the S&W Model No. 3 auto ejecting revolver being granted in Britain on 17th May 1869. See also ‘Charles A. →King’. William Lake was eventually succeeded by his son, Henry Harris →Lake.

**Lakeside** One of the many brand names to be associated with shotguns made by the →Crescent Gun Company.

**Lambin** Louis Lambin; Liège. A gunmaker working in Belgium in the second half of the nineteenth century. His marks have been reported on double-barrel sporting rifles and on single-shot cutlass pistols, sharing the lines of the revolvers of the day and usually chambering pinfire ammunition. ‘L. Lamblin & Company’ (sic) employed a British agent, Henry Haschke, from 1868 until 1893. The office stood at 60 Watling Street, London EC, until 1871, and then stayed for eighteen years at 6 Love Lane, EC. The trading style was changed in 1883 to ‘Lamblin & Theak’, the the agency was moved in 1890 to 5 London Wall Avenue. The last directory entries were made in 1893, when the premises were listed as 15 George Street, London EC. See also ‘Lenders-Lambin’.

**Lamotte** Robert S. Lamotte, a captain in the U.S. Army using an ‘RSL’ mark, accepted →Sharps breech-loading rifles and carbines in 1867–9, immediately after the end of the American Civil War. See also “U.S. arms inspectors’ marks”.

**Lampo** An Italian-made repeating pistol, designed by gunsmith Catello →Tribuzio and patented in Italy in 1890. Chambered for the 8mm →Gaulois cartridge, the pistol was operated simply by pushing the ring trigger that projected from the lower front edge of the butt/magazine unit to open the breech, then pulling it back to load the chamber, close the breech and fire the gun.

**Lamson** E.G. Lamson [‘& Company’]; Windsor, Vermont. A U.S.-based gunmaking business active from 1850 to 1867; exhibitors at the Great Exhibition (London) in 1851 and makers of the breech-loading carbines patented by William →Palmer, a thousand being sold to the Federal government in 1864–5.

**Lamson Engineering Co. Ltd**; Hythe Road, Willesden Junction, London. A maker of magazines for the British 9mm →Sten Gun during the Second World War. The code ‘S 64’ may have been used instead of the company name. See also “British military manufacturers’ marks”.

**Lamson, Goodnow & Yale Company**; Windsor, Vermont, and Shelburn Falls, Massachusetts, and also New York City. Active only during the U.S. Civil War of 1861–5, this short-lived gunmaking business was granted one contract to make 25,000 .58 1861-pattern rifle muskets for the Federal army on 11th July 1861 and another on 7th October 1861. A total of 50,019 guns had been accepted by the summer of 1863, each marked ‘L.G. & Y’ beneath a displayed eagle.

**Lamure et Gidrol**; rue d’Annonay 2, Saint Étienne, France. Listed in 1892 as a gunmaker.

**Lancaster**, usually encountered as ‘The Lancaster’, this brand name found on shotgun cartridges handled by J. →Hodgson of Lancaster.

**Lancaster** Alfred Lancaster, an English gunmaker, traded first as part of ‘Charles William & Alfred Lancaster’—with his elder brother—but then began working

independently first at 27 South Audley Street, London (1862–85), and secondly at 50 Green Street, Grosvenor Square. Lancaster was the recipient of British Patents 2753/59 of 1859, protecting a breech-loading firearm and a cartridge charger system, and 1525/65 of 1865 for an improved breechloader. Alfred Lancaster died in 1890, and the executors subsequently transferred his business to Charles →Lancaster & Company.

**Lancaster** Charles Lancaster founded his gunmaking business in 1826, at 151 New Bond Street, London, where duelling pistols, shotguns, sporting rifles and pendant ball reservoir airguns were made. The operations were subsequently inherited by Charles William Lancaster, son of the founder, and became 'Charles Lancaster & Company' in 1867.

**Lancaster** Charles William Lancaster, son of gun-barrel maker Charles Lancaster (above), worked from 151 New Bond Street from 1847 until entering into partnership with his brother Alfred in 1855. After the dissolution of this agreement in 1860, Charles William continued to trade from 151 New Bond Street and 2 Little Bruton Street, London, until his death in 1878. The business was then sold to Henry A.A. →Thorn, its former manager, and continued to trade as 'Charles Lancaster & Company'. C.W. Lancaster was renowned for his →oval bore rifling, protected by English Patent no. 13161 of 1850, and for the appropriate machinery (English Patent 13454 of 1851). He also designed a pillar breech rifle, in 1848, and a variety of guns and accessories protected by British Patents granted between 1853 and 1869. Lancaster was one of the major innovators in sporting gun design in the middle of the nineteenth century, among his many designs being a shotshell with the primer concealed behind a thin brass 'cover all' base.

**Lancaster** Charles Lancaster & Company. Formed by the sale of the business of Charles William Lancaster (above) to Henry →Thorn, in 1878, this continued to trade from the New Bond and Little Bruton Street premises into the twentieth century. Trading was subsequently undertaken in London from 11 Panton Street in 1904–25, 99 Mount Street (1925–32) and 151 New Bond Street from 1932 onward. In addition to guns and ammunition, Lancaster sold a variety of shotgun cartridges under names such as 'Generally Useful', 'Leicester', 'Norfolk' or 'Twelve Twenty'. Charles Lancaster & Co. Ltd was eventually absorbed by →Grant & Lang.

**Lancaster** Charles & William Lancaster. A partnership of the brothers Charles William and Alfred Lancaster, each listed separately, this traded from 151 New Bond Street and 2 Little Bruton Street, London, from 1856 until 1860.

**Lancaster's Pygmies** A shotgun cartridge made by →Eley Bros. prior to the acquisition of the company by Explosives Trades Ltd in 1918.

**Lancer** A name given to the .22 LR Star Modelo HK blowback semi-automatic pistol made by →Star–Bonifacio Echeverria SA in 1955–68. It was essentially similar to the →Starfire, excepting that it was chambered for rimfire ammunition.

**Lanchester** The 'Machine Carbine, Lanchester, 9mm Mark I' (1941) was a British

→submachine-gun, used largely by the Royal Air Force and the Royal Navy as the army took priority on deliveries of the →Thompson. It was a copy of the German MP.28 (see →Bergmann) and accepted a sword bayonet. The Mk I had a selector ahead of the trigger lever and a tangent leaf back sight; the Mark I→ (1943) had a simple sight and was capable only of automatic fire. Mk I Lanchesters were usually converted to Mk I→ standards after returning for repair. About 80,000 were made—59,000 by the →Sterling Engineering Co. Ltd, 17,000 assembled by →Greener and 3900 by →Boss & Co.

**Landes** Maschinenfabrik 'Landes'; München, Bavaria. A maker of about four thousand M/69 →Werder carbines for the Bavarian army in 1869–70.

**Landeslieferungsgenossenschaft.** Better known by the acronym 'Lago', or much more rarely as 'Lagesa' when applied specifically to saddlers, this was a regional delivery association formed during the Third Reich to regulate supplies of military equipment from independent craftsmen. Many different groupings were attempted, those relevant to military leatherware including saddlers (*Sattler*), paper hangers (*Tapezier*) and upholsterers (*Polsterer*).

¶ The products were forwarded to agencies such as the Reichszentrale für Handwerkslieferungen eGmbH, the central bureau for the delivery of craft products, or the SS Wirtschafts Verwaltungs Hauptamt (principal trade administration office) in the Lichterfelde district of Berlin. The Lago system collapsed with the end of the Second World War. A more comprehensive list of Lago will be found in *German Military Letter Codes*. The following have been identified as holster makers.

**LAGO, AACHEN.** *Landeslieferungsgenossenschaft Rheinland für das Sattler u. Tapezier Handwerk eGmbH* occupied offices at Jülicher Strasse 4. Code: 'hud', granted in August 1941.

**LAGO, BRESLAU.** The offices of *Landeslieferungsgenossenschaft des Sattler u. Tapezier Handwerks Schlesien* were sited in Breslau, at Am Ohlau Ufer 58. Code: 'goq', allotted in July 1941.

**LAGO, DANZIG.** Officially known as *Landeslieferungsgenossenschaft des Sattlerhandwerks im Reichsgau Danzig–Westpreussen eGmbH*, this was based at Milchkannengasse 9. Code: 'jhs', dating from September 1941.

**LAGO, DRESDEN.** The life of the *Landeslieferungsgenossenschaft der Sattler in Dresden* may have been short. A theory has been advanced that it was moved to Erfurt at the beginning of the Second World War, explaining the lack of a code, but the destruction of much of Dresden in February 1945 has made the truth difficult to determine.

**LAGO, GRAZ.** Operating in German annexed Austria, *Landeslieferungsgenossenschaft des Sattler , Tapezier u. Polsterer Handmarks Südmark rGmbH* was based at Josefigasse 28. Code: 'gtu', granted in July 1941.

**LAGO, KÖNIGSBERG.** The East Prussian Lago—known as *Landeslieferungsgenossenschaft für das Tapezier u. Sattlerhandwerk Ostpreussen eGmbH*—occupied offices at Weidendamm 28/30. Code: 'jtu', allotted in September 1941.

**LAGO, SALZBURG.** Operating from Weiserstrasse 1 in the Parsch district of Salzburg, the *Landeslieferungsgenossenschaft des Sattlerhandwerkes für Salzburg, Tirol, Vorarlberg, Steiermark u. Kärnten* is recognised as a holster maker. Code: 'cfz', granted in March 1941.

**LAGO, STUTTGART.** *Landeslieferungsgenossenschaft für das Sattler, Tapezier u. Polsterer Handwerk in Württemberg u. Hohenzollern eGmbH* was based at Gutenbergstrasse 74 in Stuttgart W. Code: 'ett', allocated in May 1941.

**LAGO, WIEN.** The Vienna association, *Landeslieferungsgenossenschaft des Sattler, Tapezierer u. Polstererhandwerkes für Wien u. Niederdonau GmbH*, was based at Regierungsgasse 1. Code: 'cga', granted in March 1941.

**Land of Burns** ['The...']. This name was associated with shotgun cartridges sold by →Kirk of Ayr. The name refers to the locality, as the Scottish poet Robert Burns was born nearby.

**Lands** The raised portions of a gun barrel bore between the grooves of the →rifling.

**Lane** Charles Lane. Best known as an ammunition maker, Lane apparently trained as a gunsmith. He is recorded in London directories in 1889–91, trading on his own account from 60 Queen Victoria Street, but soon afterward formed →Lane Brothers.

**Lane** Charles Lane, Ernest Lane—see 'Lane Brothers'.

**Lane** George J. Lane. A gunsmith listed as trading from 4 Duck Lane, Edward Street, Soho, London W, in 1879. He may be the 25-year old 'Charles Lane 2' identified by Howard Blackmore in *A Dictionary of London Gunmakers 1350–1850*, found at Little George Street, St Pancras, by the census of 1841. George Lane may also have been the father of Charles Lane, above.

**Lane** John Burr Lane. A principal of →Lane Brothers & Co., and patentee of an improved trigger mechanism for →Gem type spring air guns (British Patent 20598/95 of 1895). He was also co patentee of the Musketeer rifle with his brothers Charles and Ernest, and invented several projectiles—see British Patents 297612 of 1928 and 308943 of 1929. British Patent 1827/04 of 1904 protected an airgun piston.

**Lane** Thomas Lane. Marks applied by this English gunmaker, trading from 1 Tavistock Street in Leamington, Warwickshire, in 1850–65, have been reported on self-cocking →pepperboxes. He was succeeded in the mid 1860s by his son John, who continued operating until 1870 or later.

**Lane Brothers**; Faringdon, Berkshire (now Oxfordshire). This ironmongery and agricultural supply business handled sporting guns and ammunition, including shotgun cartridges sold under the brand name →Eclipse.

**Lane Brothers & Co. Ltd** Trading from 45a New Church Street in Bermondsey, London, from 1893 onward, Lanes were the manufacturers and patentees of a large number of shot, airgun pellets and slugs. These were distributed under a variety of brand names. The business eventually moved to Footscray, Sidcup, Kent. British Patent 1560/02 of 1902 depicts a typical Lane projectile of the early twentieth century. *Lane's Bango* was an airgun slug with a change of

match composition in the rear, which exploded on hitting a hard substance. It dated from 1907, but was rapidly discontinued. *Bully Bullets* were diablo pellets made from 1906. *Lane's Cat* was a lead airgun slug, with a short body roughly 5mm long and a rounded shallow head. Small side ribs on the sides of the 'Cat' were intended to adapt to differing bore diameters. *Lane's Expanded Bullet*, or 'Expanded Number 1 Gem', an airgun slug similar to the →Gem, was designed for use with the Patent Bullet Expander to expand airgun slugs into the rifling of any given gun (assuming the approximate calibre matched). *Lane's Heavyweight*—developed some time prior to 1902—was a short-bodied airgun slug, similar to the →Gem, specifically intended for use in air pistols. The *Perfect Bullet* was an airgun slug introduced some time prior to 1902, and the Perfect Number 1 Gem (c. 1900) was similar to the 'Cat' but had a longer body. *Lane's Patent Shot Cartridge* was basically an airgun projectile comprising several small ball shot in a paper body; it dated from 1900–2. The *Rotary Bullet* was a slug with soft lead wings, designed to effect rotation; it was patented in 1902. The *Triumph* was another of the proprietary airgun slugs, patented by John Burr Lane in 1929 and marketed by Lane Brothers from 1930–1 onwards. It had a diablo body, with a rounded head separated from the body by an additional flange; the Japanese →Jet and →Silver Jet are essentially similar. The *Turbite* projectile was little more than serrated lead shot. Lanes made large numbers of pellets for other companies to market, including, for instance, the Sussex Armoury's →Jackal and →Magnum types. A spring-air rifle known as the →Musketeer, protected by British Patent 15773/01 of 1901, was also marketed in small numbers—though the guns themselves may have been made by the →Midland Gun Company.

**Lang** Aug. Lang; Mäbendorf bei Suhl in Thüringen. According to the *Deutsches Reichs-Adressbuch*, this metalworking business made gun-parts and tools during the Second World War.

**Lang** Chr. Lang; Suhl in Thüringen, Germany. Registered as a gunsmith in 1919.

**Lang** Edward Lang. This English gunmaker began trading from 88 Wigmore Street, London W, in 1880. He is best known for sporting guns and rifles, though his marks have also been found on air canes and walking stick guns.

**Lang** Hermann J. Lang. This Prussian gunmaker/sword cutler, based in Solingen, employed →Heintzmann & Rochussen as his British agents in 1867–9.

**Lang** James Lang. This gunsmith began his career in 1887, at 33 New Bond Street, London, but had moved to 18 Brook Street by 1888. The trading style became 'James Lang & Co. Ltd' in 1891 and a move to 102 New Bond Street was made in 1894. 'Lang & Hussey' followed in 1896, then 'Lang & Hussey Ltd' in 1897. By 1900, premises were being kept at Wells Mews, Wells Street, London, in addition to the New Bond Street shop.

**Lang** Joseph Lang ['& Sons']. Lang opened a shop in Haymarket, London, in 1825, but moved to 22 Cockspur Street, Charing Cross, London, in 1853. 'The Turnover' four and six shot revolving pistols (pepperboxes) were shown at the Great Exhibition in London in 1851. Joseph Lang is also noted as an inventor

of a breech loading gun with drop down barrels (British Patent 1785/67 of 1867), but died in 1869. His business was continued after 1874 as 'Joseph Lang & Sons', moving to 10 Pall Mall and 102 New Bond Street in 1890, but amalgamated with Stephen →Grant & Sons in c. 1899. Lang also handled shotgun ammunition sold under brand names such as "Lang's Special" and 'Ventracta'.

**Langdon** Gunmaker John Langdon of 20 St Mary Street, Truro, Cornwall, England, marked sporting guns, accessories and ammunition, including 12-bore shotgun cartridges sold as 'The Langdon'.

**Langenham** A popular misspelling of 'Langenhan' (q.v.).

**Langenhan** Emil Langenhan; Zella Mehlis in Thüringen, Germany. Listed in the 1930 *Deutsches Reichs Adressbuch* as a retailer of guns and ammunition, but possibly also maintaining repair facilities. Langenhan was still listed in 1939 as a weapon maker.

**Langenhan** Friedrich Langenhan; Zella St Blasii and Zella Mehlis in Thüringen, Germany. Valentin Friedrich Langenhan began his operations in 1842 in Mehlis, moving to nearby Zella St. Blasii in 1855. Revolvers, sporting guns and bicycles were made in the 1890s—under the direction of Hermann Langenhan—and airgun production began about 1900. See British Patent 15802/00 of 1900, granted to Friedr. Langenham (sic) of Zella St. Blasii through Martin →Pulvermann, to protect a barrel catch for spring air guns. An improved version was covered by British Patent 10411/05 of 1905, both being used on →Millita guns made by Langenhan and imported by Pulvermann into Britain. The 1911 ALFA catalogue records the appearance of the new 'Modell 1909' (or 'Original V') airgun, and various other patterns are known to have been made—including the post war →FLZ spring air pistol. In addition to sporting rifles, shotgun and airguns, Langenhan made semi-automatic pistols. These included the 7.65mm →FL-Selbstlader of 1915 and the 6.35mm FL Model 3. The business was listed in the *Deutsches Reichs Adressbücher* for 1900–20 as a gunmaker and bicycle manufacturer. It was listed in 1930 simply as a gunmaker, owned by Fritz & Ernst Langenhan, and traded until the end of the Second World War. Langenhan was unable to overcome competition from →Mayer & Gammelspacher, →Haenel and others during the 1930s and appears to have restricted airgun making operations—though guns were marked with the previously unattributed brand name →Favorit. Normal marks included →Ace, →FL, →FLZ, and 'FLZ' in a three segmented circle.

**Langenhan** Heinrich Langenhan; Mehlis in Thüringen, Germany. Listed in 1900–14 as a gunmaker, H. Langenhan was granted a British patent in May 1906 (apparently from Suhl) to protect a distinctive stick gun. A small centre fire revolver with a folding trigger could be attached to a solid walking stick shaft by a peg and catch retainer, or, alternatively, held to a rifled barrel extension doubling as a stick. The revolver could be hidden inside a suitable cover until needed.

- Langenhan** R. Langenhan; Zella Mehlis in Thüringen, Germany. Listed in 1930–9 as a master gunsmith.
- Langguth** Gebr. Langguth; Suhl in Thüringen, Germany. A partnership of Julius & Paul Langguth, this business was listed in the 1900 *Deutsches Reichs Adressbuch* as a gunmaker. By 1914 it was owned by Paul Langguth, but seems to have ceased trading in the late 1920s.
- Langley & Company**; Hitchin, Hertfordshire, and (later?) Park Square, Luton, Bedfordshire. Marks applied by this English gunmaking business have been found on sporting guns and →Kynoch made shotgun cartridges sold prior to 1914 under the brand names →Blue Roc (or “Langley’s Blue Roc”) and →Prize Winner. See also →Langley & Lewis.
- Langley & Lewis**; Park Square, Luton, Bedfordshire, and Maldon, Essex. This partnership of Albert Langley and Aubrey →Lewis handled the shotgun cartridges—apparently made in France—that were sold under the brand names ‘Blue Roc’ (or “Langley’s Blue Roc”) and ‘Prize Winner’. See also ‘Langley & Company’.
- Lanman** Joseph L. Lanman, a lieutenant in the U.S. Navy, accepted firearms and edged weapons marked ‘JL’. They date earlier than 1845, distinguishing them from equipment accepted thirty years later by J. →Lippold. See also “U.S. arms inspectors’ marks”.
- Lanston Monotype Company**; Philadelphia, Pennsylvania, U.S.A. Well-known as a maker of typesetting machinery, Lanston Monotype acted as contractor for 100,000 .45 M1911 →Colt-Browning pistols during the First World War. No guns are known to have been made, as the contract was cancelled immediately after the 1918 Armistice.
- Laport**; Liège. A gunmaking business working in Belgium in the last quarter of the nineteenth century. An associated dealership, Laport Irmaos, was formed in Rio de Janeiro, Brazil, in 1839. Marks of both businesses have been reported on firearms ranging from pepperboxes to double-barrel shotguns.
- L.A.R.** According to the 1909 Prussian army regulations, this mark was used prior to 1918 by the recruiting depot of the supplementary airship (or balloon) detachment—the *Rekrutendepot der Luftschiiffer-Ersatz-Abteilung*.
- LARC International** Based in Miami, Florida, this gunmaking business made (or perhaps simply marketed) the LARC Model 19 and Model 19A BB ‘slug gun’ designed by its president, Russell →Clifford.
- Lard** Allan Lard; St Joseph, Missouri. Lard was granted five U.S. patents to protect single trigger mechanisms—630061 of 1st August 1899, 636050 of 31st October 1899, 668526 of 19th February 1901, 674508 of 21st May 1901, and 747191 of 15th December 1903. The perfected design was used on shotguns made by L.C. →Smith as the ‘Hunter One Trigger’ system.
- Largo** Spanish for ‘large’, used to identify chamberings for the 9mm Largo (9mm Bergmann-Bayard) pistol cartridge. See also ‘Corto’.
- Laroche**; rue de Paris 7, Saint Étienne, France. Listed in 1879 as a distributor of and agent for arms and ammunition.

- Larrosa** A brand name associated with pinfire sporting guns and rifles made in Spain by José Ramón la →Rosa.
- Larsen** August Larsen of Liège patented a butt magazine system in 1883. Similar to the →Schulhof type, the gravity feed mechanism could be built into the 1871 pattern German Mauser, the Dutch Beaumont and other bolt-action rifles. Multi-chamber butt compartments could hold 7+5+3 rounds (and one in the feeder), but a simple single chamber design had merely five rounds in the butt plus three in the feed tube. An elevator bar transferred cartridges from the magazine to the chamber as the bolt was operated. The ‘Larsen & Winteross’ rifle, patented in 1884, was a lever action design with a locking bolt and a cartridge elevator operated by a rocking sector plate attached to a self sprung shank.
- LAS** Found on U.S. military firearms and accessories. See ‘Laurence A. →Stone’.
- Lasagabaster Hermanos** of Eibar, Guipuzcoa, Spain, made the →Douglas pistol.
- Lashermès**; 99 rue Antoine Durafour, Saint Étienne, France. Listed in 1951 as a gunmaker.
- Lashnev** Tikhon Ivanovich Lashnev was born in Tula in 1919, graduating from the local technical manufacturing school into a design bureau. He transferred to the Tula ordnance factory in 1940, soon after the German invasion of Russia, and worked there until his retirement. In addition to a variety of sporting and hunting firearms, Lashnev was the co-designer, with Lev →Kulikov and Anatoliy →Simarin, of the Soviet →PSM pistol. He died in 1988.
- Laspoussas, Driol et Cie**; Saint Étienne. Listed in 1933 as gunmakers; this French-based business was still operating in 1951, from 8 place Villeboeuf.
- Laszlo** Stephen Edwin Laszlo. Residing at 375 Riverside Drive, New York, Laszlo was the co-patentee with Andrew →Lawrence of the Hy Score spring-air pistol and the co-founder of the →Hy Score Arms Company. Laszlo was noted as the ‘Old importee’ of British-made →Warrior air pistols in an *American Rifleman* advertisement in 1934.
- Laszlo** S.E. Laszlo House of Imports—the trading name used by →Hy Score in the 1970s.
- Latger**; Saint Étienne, France. Listed in 1933 as a gunmaker.
- Lathe** Homer S. Lathe, using an ‘HSL’ mark during the American Civil War, accepted firearms and accessories on behalf of the Federal army. His activities were apparently confined to 1862. See also “U.S. arms inspectors’ marks”.
- Lathrope** H.L. Lathrope accepted .44-calibre cap-lock revolvers made in 1862 on behalf of the Federal army. Made by →Colt’s Patent Fire Arms Mfg Co., they were marked ‘HLL’. See also “U.S. arms inspectors’ marks”.
- Latimer Clark, Muirhead & Co. Ltd**; Millwall, London. A short-lived ammunition manufacturer, formed in 1885 to make .45 →Martini Henry cartridges and closed c. 1889, this business used a distinctive ‘L.C.M. & Co.’ headstamp. Little else is currently known about its history.
- Lau.** J.H. Lau & Company. A rarely-seen brand name associated with shotguns

- made in the U.S.A. by the →Crescent Gun Company.
- Laudensack.** Albert Laudensack, a gun designer associated with the →Winchester Repeating Arms Company, was a prominent member of the team led by Edwin →Pugsley that developed the highly successful Model 70 bolt-action rifle.
- Laumann.** Josef Laumann—see ‘Mechanical repeating pistol’ and ‘Schönberger’.
- Laurent.** Trading in Liège, this Belgian gunsmith made breech loading sporting rifles and shotguns in the 1860s. Essentially similar to the →Ghay pattern, the barrel and fore end were slid forward after a lever on the right side of the breech ahead of the back action lock had been raised to release the locking collar from the interrupted thread cut into the barrel. The barrel could then be tipped downward to give access to the chamber.
- Laute.** J. Laute; Berlin. Marks applied by this Prussian entrepreneur have also been found on a crank wound gallery gun dating from the 1850–80 period. Eldon Wolff assumes that Laute was its maker, but swords with similar marks have also been examined, and it is concluded that Laute was merely a *Hoflieferant* or purveyor to the royal household, active until c. 1920.
- Lavaux;** Liège, Belgium. See ‘Levaux’.
- Lavigne** A. Lavigne, sometimes listed as ‘Lavidne’, was responsible for accepting the U.S. military stores marked ‘AL’. They date from 1894–1909. See also “U.S. arms inspectors’ marks”.
- Law** Scottish gunmaker Thomas Law, trading in the twentieth century in Castle Douglas, Kirkcudbrightshire, sold sporting guns, shooting requisites and shotgun ammunition. Some cartridges have been listed under the brand name ‘Capercaillie’, but this may have referred simply to the illustration on the case wall.
- Law Enforcement** A name occasionally used in 1976–85 used by →Valmet to describe semi-automatic versions of the Valmet-made →Kalashnikov assault rifles.
- Law Enforcement Bulldog** A revolver made in the U.S.A. by →Charter Arms and its success, Charco. The name applies specifically to a variant of the standard .357 or .44 Special →Bulldog with a spurless ‘Pocket Hammer’ and a blued finish.
- Lawman**, or ‘Lawman Mark III’. Made by the Firearms Division of →Colt Industries in 1969–83, this .357 Magnum revolver was customarily supplied with a 2in or 4in barrel, the shorter having an integral ejector-rod shroud. Improvements on previous Colts included the use of stainless-steel springs and the adoption of surface hardening on all major parts. The Lawman Mark V (1984–5) had a more efficient trigger mechanism offering a significant reduction in →lock time.
- Lawton** A. Lawton, listed in the London directories for 1861–6 as a gunmaker, worked from 27 Duke Street, Bloomsbury.
- Lawrence** Andrew Lawrence of ‘6 Bay Avenue, Seacliff, New York State’, U.S.A., designed the Hy Score spring-air pistol in collusion with Stephen →Laszlo.

Smith claims that the gun was designed in 1938, but its British patents were not granted until the late 1940s. British Patent 621417 was accepted 8th April 1949 (suggesting also that the comparable U.S. patent was issued on 28th February 1946) for the basic pistol action. Three part patents each protected an individual feature: 621461 for the spring compressing mechanism, 621462 for the breech construction, and 621463 for the trigger and sear train.

**Lawrence** Charles Lawrence & Son; London and Battle, Sussex. A gunpowder-making business operating in the early 1870s.

**Lawrence** George A. Lawrence, a government inspector, accepted rifle and carbine stocks made for the Federal army in 1862–3, during the American Civil War. They bore 'GAL'. See also "U.S. arms inspectors' marks".

**Lawrence** Richard Smith Lawrence. Born in 1817 in Chester, Vermont, Lawrence served an apprenticeship with Nicanor →Kendall after leaving the U.S. Army in 1838; by 1843, Lawrence and Kendall were in partnership. By 1847, however, Lawrence and a businessman named Robbins had bought Kendall's share of the business and what had been Robbins, Kendall & Lawrence became 'Robbins & Lawrence'. The company grew in stature, particularly after a contract to equip the British →Royal Small Arms Factory in Enfield had been negotiated in 1851 and work on Sharps rifles had commenced in 1852. In 1854, however, after a disastrous foray into the manufacture of railway rolling stock, Robbins & Lawrence collapsed. The Hartford factory was sold to the Sharps Rifle Company, Lawrence being retained initially as factory superintendent. Richard Lawrence is credited with the perfected gas seal system embodied in the →Sharps breech mechanism, patented on 20th December 1859 (26501), and rose to become co owner of the →Sharps Rifle Company. He retired in 1872 and died in Hartford in 1892.

**LB** *usually in monogram form.* Found on No 4 →Lee-Enfield rifles made in the →Long Branch Arsenal, Canada.

**LB** *with an arrow and a target.* A trademark associated with the products of Louis →Bader, Valt. Sohn of ?Suhl, Thüringen, Germany, 1905–14.

**L B** or **L.B.** or **LBC** or **L B C** or **L.B.C.** or **L.B. & C.** Marks found in the headstamps of cartridges made by Leon →Beaux & Co. of Milan.

**LCA, LCB** Found on U.S. military firearms and accessories. See 'Lucius C. →Allen' and 'Lucius C. →Brown' respectively.

**L.C.M. & Co.** Found in the headstamps of .45 military rifle cartridges made by →Latimer Clark, Muirhead & Co., London.

**L.E.** An abbreviated form of →Lee Enfield, in designation marks on British-pattern rifles.

**L'Avengueur** Found on a small six-shot double-action revolver made in Belgium prior to the First World War. Most guns have grips with a double-eagle motif, suggesting export to Russia.

**Le Brong** See 'Brong'.

**Le Clairon** A nickname—"The Bugle"—applied to the 5.56mm →FA MAS automatic rifle, owing to its unusual configuration with an elongated skeletal

carrying handle above the receiver.

- Le Dragon** A small 6.35mm Browning type automatic pistol made by →Aguirre, Zamacolas y Compañía of Eibar, Guipuzcoa, Spain; seven rounds. Identical with the →Basculant pattern, apart from markings.
- Le Dragon** A small Browning type automatic pistol made in Eibar for a major distributor and wholesaler, Tomás de →Urizar of Barcelona; 6.35mm, six rounds.
- L'Éclair** Found on solid-frame double-action revolvers, chambered for the 8mm Lebel cartridge, made in Spain prior to 1914 by →Garate, Anitua y Cia. The cocking spur of the enclosed hammer projects above the back of the grip.
- L'Explorateur-Mitraille**, or 'Explorateur-Mitraille'. This name was given to a large revolver, chambered for the 5.5mm →Velo-Dog cartridge, which was most probably made in Belgium (by Fabrique d'Armes 'HDH'?) prior to 1914. Its two barrels were placed side-by-side, and the twelve chambers in the cylinder were fired in pairs each time the trigger was pressed. Loading alternate chambers allowed the firer to economise on ammunition when necessary. Solid-frame guns had swinging ejector rods; break-open patterns were customarily auto-ejectors.
- Le Français** A brand name associated with 8mm revolvers made by M. →Berger et Cie of Saint Étienne.
- Le Français** A series of →blowback semi-automatic pistols made c. 1925–69 by →Manufacture Française d'Armes et Cycles de Saint-Étienne in accordance with patents granted in 1913 to Étienne Minort (Mimard?). The guns were distinguished by a tipping barrel and a double-action trigger mechanism that enabled the first round to be fired without retracting the slide. The recoil spring in the front of the grip was compressed by a pivoting lever as the slide ran back. Several variants of the basic *Pistolet à répétition automatique 'Le Français'* were offered by →Manufacture Française d'Armes et Cycles. The standard 6.35mm gun or *Modèle de Poche* had a short barrel and a seven-round magazine, though an eighth could be inserted directly into the barrel; engraving could be applied to order, and highly decorative guns can still be found. The *Modèle Champion* was a long-barrelled 6.35mm gun, intended for unsophisticated target-shooting. The grip was elongated simply by fitting a deep base-unit to the otherwise standard seven-round magazine. The *Modèle de Gendarme* ('de Police' or 'Policeman') was mechanically identical with the standard 6.35mm pistol, but originally had a 15cm barrel and weighed about 350gm. Later guns, however, were 7.65mm short-barrelled patterns. The *Modèle Militaire* (or 'Type Armee'), the largest and least common of the series, chambered the 9mm Browning Long cartridge.
- Le Majestic** A 6.35mm six-shot →Browning-type pocket pistol made in France prior to 1940 by →Manufacture d'Armes des Pyrénées. The slides may display *Pistolet Automatique à Double Sûreté* and often also *Fabrique à St. Étienne* in addition to the tradename.
- Le Martiny** A compact 6.35mm Browning-inspired semi-automatic pistol,

customarily identified as Belgian but more probably Spanish. Maker unknown.

- Le Mat** François Alexandre le Mat; New Orleans, Louisiana. This ‘physician’ was the grantee of U.S. Patent 15925 of 21st October 1856, which protected the substitution of an extra barrel for the cylinder axis pin and a ‘gun cock with double hammer’. A metallic cartridge version of the Le Mat →cap-lock revolver was protected by U.S. Patent 97780 of 14th December 1869.
- Le Mat revolvers** Patented in 1856 by François le Mat (see previously), these unique open frame guns had a .67-calibre shot barrel acting as an axis pin for the nine chamber .40-calibre cylinder. The guns seem to have been made by several manufacturers in Britain and France, though none has been positively identified and detail differences are common. An improved version handling pin- or centre fire cartridges was made in small numbers in Europe in the 1870s, probably in Liège.
- Le Monobloc** A 6.35mm semi-automatic pistol made in Liège c. 1911–14 by Jules →Jacquemart. The name drew attention to its one-piece frame, necessitating a separate reciprocating breech-block.
- Le Novo** A five-chamber 6.35mm pocket revolver, with a folding butt and a folding white-metal butt, invented by Dieudonné Oury of Mortier and made by Établissements Derkenne for F. →Dumoulin & Cie of Liège, c. 1927–30.
- Le Page;** France. See ‘Lepage’, below.
- Le Personne** L. Le Personne & Company. Merchants and wholesalers listed in London from 1894 onward, first at 24 Great Winchester Street, EC, and then (from 1895) at 99 Cannon Street. Le Personne traded on into the twentieth century, handling, amongst other goods, →Kennett brand airguns and the →Lepco automatic pistol from 7 Old Bailey, London EC. Appropriate marks have also been found on shotgun cartridges sold under the brand names ‘Lepco’ and (possibly) →Metalode. The ammunition was usually Belgian. The company also supplied Canadian-made →Cooley rifles and shotguns to the British authorities in 1941.
- Le Petit Formidable**, or ‘Petit Formidable’. A 6.35mm revolver with an enclosed hammer, a swing-out five-chamber cylinder, and a folding trigger. Though customarily believed to have been French, it may simply have been made in Spain by Francisco →Arizmendi—or perhaps by →Arizmendi y Goenaga—for sale in France.
- Le Pistolet Automatique** A small Browning type automatic pistol made by Francisco →Arizmendi of Eibar; 6.35mm, six rounds, striker fired.
- Le Protecteur:** see ‘Protector’.
- Le Rapide** A small 6.35mm semi-automatic pistol advertised in Liège c. 1910 by Manufacture Générale d’Armes et Munitions Jules →Bertrand. Possibly made in Spain.
- Le Sans Pareil** A 6.35mm six-shot →Browning-type pocket pistol made in France prior to 1940 by →Manufacture d’Armes des Pyrénées, apparently for Piot-Lepage of Paris. The slides usually display FABRICATION FRANÇAISE in addition

to the tradename.

**Le Secours** Another of the many pocket pistols, based on the FN Browning of 1905, made in the Eibar district of Spain for the wholesaler Tomás de →Urizar of Barcelona; 7.65mm, seven rounds, hammer fired.

**Le Steph** A 6.35mm semi-automatic pocket pistol, made in France shortly after the end of the First World War. Perhaps a modernised 'Hermetic' (q.v.), it may well have been the work of →Société Française d'Armes Automatiques de Saint-Étienne. A detachable plate on the left side of the frame facilitates identification.

**Le Vaux**, Belgium: see 'Levaux', below.

**Leader**: see 'King Leader'

**Leader** Usually found as 'The Leader' on shotgun cartridges marked by George →Bate of Birmingham, Warwickshire, England.

**Leader** A →Suicide Special revolver made either by the →Harrington & Richardson Arms Company of Worcester, Massachusetts, or the →Hopkins & Allen Arms Company of Norwich, Connecticut, U.S.A. They all date from the late nineteenth century.

**Leader Gun Company** A brand name associated with shotguns made in the U.S.A. by the →Crescent Gun Company.

**Lean** Clement Lean & Company. This British patent agency had its chambers at Thanet House, Temple Bar, 231 & 232 The Strand, London WC2, in 1902—when it acted for Harold →Edenborough.

**Leavitt** Daniel Leavitt invented a manually-rotated 'revolving firearm', protected by U.S. Patent 182 of 29th April 1837, and subsequently made by the →Massachusetts Arms Company. An improved mechanically-rotated version was known as the →Wesson & Leavitt.

**Lebeau** Ernest Lebeau; of Liège, Belgium, was the owner of a gun-part polishing and ironmongery-making business. He entered into partnership with Auguste Courally in the 1860s, creating 'Lebeau-Courally' (below).

**Lebeau-Courally** Founded in 1865 and trading since 1896 as 'Société Anonyme Continentale pour la Fabrication des Armes à Feu Lebeau Courally', this gunmaking business is one of Belgium's leading makers of high-quality sporting guns. →Mauser-action sporting rifles have been offered from time to time, though the product-range currently concentrates on break open patterns sold under names such as 'Ambassadeur', 'Ardennes', 'Battue', 'Big Five', 'Safari' and 'Tyrol' (qq.v.).

**Lebel** Nicolas Lebel was born in Paris in 1838 and commissioned into the French army, rising to the rank of lieutenant-colonel when he was appointed to the infantry-weapon commission. Lebel became commandant of the marksmanship school at Châlons, where the first 8mm rifle was tested in 1886. His name was attached to the Mle 1886 rifle largely because he was chairman of the trials board. Lebel himself protected vociferously, but the name became inseparably attached to the 8mm tube-magazine repeater that served the French army reliably for many years. Promoted colonel in 1887,

Lebel died in Vitré in 1891.

**Lebel rifle** Developed from the 11mm →Kropatschek, this 8×51R rifle was adopted by the French army on 22nd April 1887. It had a two-piece stock, separated by a massive machine-steel receiver, and a bolt handle that projected horizontally ahead of the receiver bridge. A tube magazine ran forward beneath the barrel. Problems with the earliest back sights were cured in 1892 by the substitution of an improved design with claws that extended around the barrel. An improved 'Mle 86/93' or 'Mle 86 M. 93') had changes in the action that included a lighter striker retainer, a non-rotating obturator on the bolt head to deflect gas in the event of a case-head failure, and a sticking hook on the noscap. Changes were made after 1901 for the high-velocity Balle D, necessitating sight leaves graduated to 2400m instead of the original 200m type.

¶ The Lebel was the principal French infantry rifle when the First World War began, the issue of the box-magazine →Berthiers being confined largely to cavalrymen and colonial forces. The biggest drawbacks of the Lebel was its tube magazine, which prevented the use of sharply-pointed ammunition, and the absence of satisfactory manual safety features. However, though the Mle 15 and Mle 16 Berthier rifles were made in quantity during the First World War, principally by private contractors, work on the Mle 86/93 Lebel continued in the government small-arms factories in Châtellerault, Tulle and Saint-Étienne until 1919. Fitted with the 3× Mle 1916 telescope sight, the Lebel was preferred by snipers to the flimsier Berthiers. Use of V-B grenade launchers was also restricted to the Lebel.

¶ A few Mle. 1886 M.93 Lebel rifles were converted in 1927 for the short-lived 7.5×58 Balle 1924 C. These had internal Mauser-type staggered-row magazines. However, though issued for field trials in 1928 they were not deemed successful and progress with →MAS rifles soon rendered the converted Lebel obsolete. However, large numbers of surviving rifles were converted after 1935, apparently in the Châtellerault factory, to provide a compact weapon for cavalrymen and motorised regiments pending the introduction of the new MAS 36. The principal changes concerned a reduction in barrel length and, consequently, a reduction in the capacity of the tube magazine to just three rounds (though a fourth could be carried on the elevator and the fifth in the chamber). The refurbishment programme had not been completed when the Second World War began, and it is believed that most of the rifles had been sent to Africa. Those that survived after 1945 were modified for the Balle 1932 N and placed in store.

**Leclair** N. Leclair, active in the early 1900s, accepted firearms and accessories on behalf of the U.S. Army; they were marked simply 'NL'. See also "U.S. arms inspectors' marks".

**Lecocq & Hoffmann** Based in Brussels, this gunmaking business offered Mauser type sporting rifles prior to 1940, and again in 1955–70 on the basis of refurbished military-surplus actions. Chamberings ranged from 8×60 to

- 10.75×68. A big game rifle in .375 H&H Magnum was also offered; pre-war guns had flat panels alongside the action, rounded pistol grips and schnabel tip fore-ends, whereas post-war examples usually had ventilated rubber butt plates, capped pistol grips and rounded fore-ends.
- Lee** George Arthur Lee of 7 Hadley Road, Enfield, Middlesex, England, was co-patentee with →Millard Brothers and Charles Claude →Bater of a pump-up pneumatic gun—British Patent 575543 of 1946, though the design apparently dated from 1942–3.
- Lee** Gunsmith and sporting-goods supplier Herbert O. Lee of Bishop's Stortford, Hertfordshire, England, handled shotgun cartridges marked 'The Sharpshooter'. They appear to have been made by the →Midland Gun Company.
- Lee** J.J. Lee, using a 'JJL' identifier, accepted firearms and accessories on behalf of the U.S. Army in 1898. See also "U.S. arms inspectors' marks".
- Lee** James Paris Lee, born in 1831 in Hawick, Scotland, was raised in Canada and apprenticed to his clockmaker father before starting out on his own account from 1850 onward. He moved to Janesville, Wisconsin, in 1858 and thence to Stevens Point. His earliest gun-designing activities dated from this period, when a breech-loading conversion of the →Springfield rifle musket was produced. After a long and successful career, Lee died in Short Beach, Connecticut, in 1904.
- Lee Arms Company;** Wilkes Barre, Pennsylvania, U.S.A. This short-lived successor to the Pittston Arms Company continued to make →Imperial, →Red Jacket No. 1–4, →Royal and →Wm. Tell →Suicide Special revolvers from 1880 until trading ceased in 1889. The guns were offered in chamberings ranging from .22 to .32 Long rimfire. Some were made in accordance with a patent granted in 1881 to Roland →Brewer, who apparently remained Superintendent of the Lee Arms Company until its demise. The name arose from the elevation to the Presidency of the Pittston business of J. Frank Lee, and had nothing to do with James P. →Lee except the similarity of surnames.
- Lee Arms Company;** Bridgeport, Connecticut, U.S.A. This promotional agency was formed in 1879 by the →Sharps Rifle Company and James P. →Lee to promote the latter's bolt-action rifle. The factory and office premises in Clinton Avenue, Bridgeport, were shared with →Sharps until 1881. After the demise of Sharps, it is believed that the Lee Arms Company operated in Bridgeport to 1886.
- Lee Arms Company** Also known as the 'Lee Small Arms Company', this promotional agency was apparently formed in South Windham, Connecticut, U.S.A., in 1886 to safeguard the interests of James P. →Lee and control licensing of his patents after the demise of E. →Remington & Sons. An agency was also maintained in New York through the offices of Lee's attorney, Joseph W. Frazier. The Lee Arms Company survived until Lee's death in 1904.
- Lee Beilin Ltd;** Alpine Works, Empire Way, Wembley. A maker of magazines for the British 9mm →Sten Gun during the Second World War. The business

used the brand name 'Lebel' on commercial goods, but the code 'S 66' may have been used instead of the company name on gun parts. See also "British military manufacturers' marks".

**Lee-Enfield rifle** This was a modernised Lee-*Metford* rifle (q.v.), the polygonal →*Metford* rifling, which wore too quickly when →*Cordite*-loaded ammunition was used, being replaced by a new five-groove pattern. Lee-*Enfield* rifles had detachable box magazines, holding ten rounds in a staggered column, and the bolt handles were turned down behind the receiver bridge to bring the grasping ball closer to the trigger.

¶ Full-length rifles, usually about 50in long, included the Mk I Lee *Enfield* (1895), which was otherwise identical with the Mk II Lee *Metford*. The Mk I\* rifle (1899) lacked a clearing rod and the associated rod groove in the underside of the fore-end. Experience in the South African War of 1899–1902 led to the development of shortened 'universal' rifles, usually about 45 inches long, which were designed to be issued to infantry and cavalry alike. Changes were made to the bayonet fitting and the sights, but the most important advance, however, was the advent of a →*Watkin & Speed* charger loading system.

¶ The experimental guns made in 1900–2 were followed by the 'Rifle, Short, Magazine, Lee *Enfield*, .303 inch (Mark I)' or Mark I *SMLE*, originally sealed in December 1902. The Mark I\* *SMLE* of 1906 had a trap in the butt plate for the oiler and pull through, a swivel on the butt, and a modified magazine. The Mk III *SMLE* (1907) had improved monoblock charger guides instead of the older split pattern. Approved in 1916, the simplified Mk III\* *SMLE* was a wartime expedient, lacking the long-range sights and sometimes also the cut-off mechanism. Guns remaining in service after May 1926 were re-designated No. 1 Mk III (or 'III\*'), work finally ending in 1943. About 907,000 Marks I and I\* rifles were made, and the output of *SMLE* rifles between 1st August 1914 and 31st December 1918 alone totalled 3.84 million.

¶ Attempts made after the end of the First World War to simplify the *SMLE* design led to the experimental Mk V and VI of 1922–9. The Mk VI was subsequently adopted as the Rifle No. 4 Mk 1 in 1939, but did not reach service until 1942. Guns of this type had a squared receiver and a simplified nose-cap which accepted a short spike bayonet. A modified No. 4 Mk I\* was approved in 1941, but made only in Canada and the U.S.A. A sniper rifle known as the No. 4 Mk I (T) was approved in 1942, for issue with No. 32 telescope sight. Most of these guns were set up by →*Holland & Holland* (code 'S/51'). The No. 4 Mk 2 rifle was approved in 1947, with its trigger on underside of the body instead of the trigger guard.

¶ Conversions of .303 No. 4 Lee *Enfields* for the 7.62×51 cartridge, the L8 series, were made in the 1960s. The most important was the L42A1 sniper rifle (1970), made on the basis of existing No. 4 Mk 1 (T) rifles. A commercial variant was sold in small quantities as the 'Enfield →*Envoy*' or L39A1.

¶ Carbine-length Lee-*Enfields* (usually measuring forty inches or less)

included the Mk I and I\* carbines, approved in 1896 and 1899 respectively, the principal difference being the omission of the clearing rod from the Mk I\*. Six-round magazines were retained, fitting all but flush with the stock, and neither gun accepted a bayonet. The half-stocked Lee Enfield 'Jungle Carbine', or Rifle No. 5, arose from a 1943-vintage request for a lighter weapon for use in the Far East. The No. 5 Mk I was approved in 1945, but was never successful and was declared obsolete in 1947.

¶ Lee-Enfield rifles have been made by a variety of contractors, particularly during the world wars. The principal manufacturers were the →Royal Small Arms Factory, Enfield; the →Royal Ordnance Factories in Fazakerley and Maltby; the Birmingham Small Arms & Munitions Co. Ltd and →BSA Guns Ltd; the Indian government factory in →Ishapur; the Australian government factory in Lithgow; the →London Small Arms Co. Ltd; →National Rifle Factory No. 1; the →Savage Arms Company; →Small Arms Ltd, Toronto; and →Standard Small Arms Ltd. There were many lesser variants of the Lee-Enfield rifles, particularly the charger-loading conversions, →Aiming Tube guns, and a selection of →India Patterns.

**Lee Fire Arms Company**, also known as "Lee's Fire Arms Company"; 454 Canal Street, Milwaukee, Wisconsin, U.S.A. A maker of rimfire carbines in accordance with U.S. Patent 35491 granted to James P. →Lee in 1862, this gunmaking business was founded on 13th October 1864 and incorporated on 8th March 1865. The directors were James Kneeland (President), James P. Lee ('Superintendent of Works'), Charles Ilsley, Thomas Ogden, Lester Sexton, Solomon Tainter and Daniel Wells Jr. The Federal government gave Lee an order for a thousand guns in 1864, but none had been accepted when the American Civil War ended. Only 255 had been completed, with barrels supplied by →Remington. The contract was rescinded, apparently because the carbines had been chambered for the .44 rimfire cartridge instead of the .56–50 Spencer pattern. Work continued after the end of the Civil War, until 1250–1300 guns had been made; however, though still trading in December 1866, the Lee Fire Arms Company disappeared early in 1867.

**Lee-Metford** The Lee action appeared in Britain in the Spring of 1880, when five .45 1879-pattern rifles and carbines were tried by the Small Arms Committee. By April 1883, a new Lee rifle chambering the .45–70 U.S. Army cartridge was being tested, and a .402 'Improved Lee' was made in the Enfield factory in 1885; it had a one piece →Arbuthnot type stock. A .43-calibre 1885-type Remington-Lee rifle passed a stringent test in 1885, when three hundred similar guns were ordered for trials against the Lee →Burton. However, the development of an 8mm smokeless cartridge in France persuaded the British to abandon the short-lived .402 pattern. Sealed in 1888, the 'Rifle, Magazine, .303 inch (Mark I)', later known as the Mk I Lee-Metford, had a detachable box magazine holding eight cartridges in a single row, a cut off, and a long range dial sight on the left side of the fore-end. Much of the developmental work is now generally credited to Joseph →Speed, but the guns also had a distinctive

nose cap/bayonet retaining system patented by John →Rigby.

¶ Omitting the original safety catch advanced the designation to Mark I\* in 1890, and the 'Lee-Metford' name was adopted in 1891 to honour the parts played in development of the rifle by James Paris →Lee and William Ellis →Metford. Extensive changes were made in the early 1890s, including the addition of the →Deeley & Penn bolt head and a staggered row ten round magazine; the Mk II rifle was formally sealed in 1893, but, though a Mk II\* Lee-Metford rifle was approved with a new cocking-piece safety catch, the Lee-Enfield (q.v.) had been substituted within two years. About 635,000 rifles were made, though many were subsequently converted.

¶ A Charger Loading Lee-Metford Mk II rifle was sealed in 1907, but most Lee-Metfords were altered by the substitution of →Enfield rifled barrels (in addition to charger guides) and were reclassified as Lee-Enfields. A Mk I Lee Metford carbine, with a flattened bolt handle and a six-round magazine contained almost entirely within the stock, was sealed for cavalry use in 1894. Virtually all service-issue Lee-Metford rifles and carbines were made by the →Royal Small Arms Factory, Enfield Lock, or by the principal private contractors: the →Birmingham Small Arms & Munitions Co. Ltd ('B.S.A. & M. CO.') or the →London Small Arms Co. Ltd ('L.S.A. CO.'). Others were made for sale commercially, or to volunteer militia.

**Lee rifles** James P. Lee is best known for his turning-bolt design, developed in the U.S.A., then perfected in the U.S.A. and Britain. These guns were service-issue not only in Britain and the British Empire, but also in many former colonies after independence had been gained (e.g., India and Pakistan). The earliest patent obtained by James Lee was U.S. no 35491, granted to protect a 'breach-loading firearm' on 22nd July 1862; the barrel swung sideways at the breach, and a manually-operated sliding ejector expelled the spent case. This was followed by U.S. Patent 54744 of 15th May 1866—which protected a vertically sliding breach-block operated by a lever doubling as an extractor—and then by three more patents for pivoting-block breach systems: U.S. 114951 of 16th May 1871, 166068 of 20th June 1871 and 122772 of 16th January 1872. The two 1871 patents were assigned to Philo →Remington. A prototype was tested by the army in 1872 (as the 'Lee no. 61') alongside an early straight-pull system (no. 53) and an alternative block-action gun (no. 54). Manufacture of 145 .45–70 'improved no. 61' rifles began at Springfield in 1874. They were operated by striking the hammer lever above the receiver forward with the heel of the palm, to pivot the breach down to expose the chamber. After protecting a cartridge box (U.S. Patent 162481 of 27th April 1875), Lee produced another 'breach-loading firearm' design covered by patent 193821 of 7th August 1877 and a 'Primer for Cartridge', 193524 of 24th July 1877.

¶ Then came the first of several grants to protect bolt-action rifles with detachable box magazines, U.S. Patent 221328 of 4th November 1879 (British Patent 2786/79 of 1879 was comparable), and the formation of the →Lee Fire Arms Company in Bridgeport, Connecticut, to exploit the design. The bolt

handle of the original or 1879-type Lee rifle turned down in front of the split receiver bridge, but this was changed on the 1882 pattern so that the handle turned down behind a solid bridge. The action was locked by the base of the bolt-guide rib and a small diametrically-opposed lug engaging seats in the receiver immediately behind the magazine.

¶ A U.S. Navy contract was obtained in 1880 for three hundred .45–70 1879 pattern rifles, but the collapse of Sharps forced Lee to license production to E. →Remington & Sons. Remington and its successor, the Remington Arms Co., continued to promote Lee-pattern rifles for many years. Two patents for turning-bolt magazine firearms followed: 295563 of 25th March 1884 (with Louis P. →Diss), assigned to E. →Remington & Sons, and 383363 of 22nd May 1888. Lee was also granted British Patent 11319/87 of 18th August 1887, for a bolt with a movable head, an improved extractor, a gas venting system, and an improved magazine; and then received British Patent 8117/89 of 15th May 1889 for his perfected staggered-row magazine. Lee's next design was for a 'straight pull bolt gun', U.S. Patents 506319–506321 of 10th October 1893; these were ultimately exploited by →Winchester in the form of the 1895 pattern .236 →Lee Straight Pull Rifle for the U.S. Navy. U.S. Patent 506322 of 10th October 1893 protected a 'magazine gun', and 506323 was for an integral box magazine. The last grant to Lee was U.S. Patent 547583 of 8th October 1893 for another 'magazine bolt gun'. See also 'Enfield-Lee', 'Improved Lee', 'Lee-Enfield', 'Lee-Metford', 'Lee Straight Pull', and 'Remington-Lee'.

¶ The best source of information is *The British Service Lee* by Ian Skennerton (second edition, 1995), though *The Lee Enfield Rifle* by the late Major E.G.B. Reynolds presented more of a narrative approach. *Guns of the Empire* by George Markham (Arms & Armour Press, 1990) and the third edition of *Rifles of the World* by John Walter (Krause Publications, 2006) have contained useful lists of individual models.

**Lee Small Arms Company:** see 'Lee Arms Company', 1896.

**Lee Special** A brand name associated with shotguns made in Norwich, Connecticut, U.S.A., by the →Crescent Gun Company. They date prior to the First World War.

**Lee Straight Pull** This unique rifle was made by the →Winchester Repeating Arms Company of New Haven, Connecticut, in accordance with patents granted to James P. Lee in 1893. Adopted by the U.S. Navy in 1895, it was chambered for a .236 (6mm) high velocity cartridge; its most unusual feature, however, lay in the design of the bolt. This could be unlocked by pulling back on the pivoted bolt handle, and then slid back and slightly upward to give access to the breech. The magazine was a clip-loaded type. Unfortunately, the rifles performed so badly in service that they had been replaced by army-pattern .30 →Krag-Jørgensens by the early 1900s.

**Leech** Thomas Leech of Greensboro, Georgia, Confederate States of America, assembled about a hundred →Leech & Rigdon type revolvers in 1864.

**Leech & Rigdon;** Novelty Works, Columbus, Mississippi, Confederate States of

America. Makers of a few .36 →Navy Colt type revolvers with round barrels, before moving to Greensboro (Georgia) in 1863. Trading ceased in January 1864, each partner continuing alone; about 1500 guns had been made.

**Leech & Sons;** Chelmsford, Essex, England. This gunmaking business sold sporting guns and accessories, together with shotgun cartridges offered under brand names such as 'Chelmsford', 'Essex County', "Leech's Special Load" and 'X.L.'

**Leek** Wayne Leek, a designer employed by →Remington, working in collusion with Charles Morse, is credited with the development of the simplified 'Model 788' bolt-action rifle of 1967.

**Lees;** Perth, Scotland. The marks of this gunmaker have been reported on self cocking →pepperboxes dating from the middle of the nineteenth century.

**Leeson** William R. Leeson. A member of the English gun trade working at 29 Maddox Street, London, in 1899.

**Leeson** W.R. Leeson Ltd; Ashford, Kent, England. The name of this gunmaker has been reported on sporting guns and shotgun cartridges sold under the brand name →Invicta. Possibly the same as (or at least related to) 'William R. Leeson', above.

**Leet** C.D. Leet; Springfield, Massachusetts, U.S.A. This gunmaking business was founded in 1864, acquiring →Hall & Hubbard in 1873. Many of its cartridges were distinguished by the inclusion in their headstamps of 'CDL'. It is assumed that Charles S. Leet was a relative, perhaps a son of C.D. Leet.

**Leet** Charles S. Leet; Bridgeport, Connecticut, U.S.A. This 'mechanic' was granted two U.S. Patents in 1883: 282997 to protect a spent-shell extractor and 288459 for a 'gun wiper'.

**Leetch** James Leetch, often wrongly listed as 'Leech' or 'Leitch', began his working life as a gun-wadding maker. However, he is best known for his breechloading longarms protected by British Patents 2235/58 of 1858, 990/61 of 1861, 2907/64 of 1864 and 2279/66 of 1866. Directories published after 1858 list Leetch as a gunmaker, trading successively in London from 68 Margeret Street, Cavendish Square (1858); from 29 Great Portland Street (1860); from 315 Oxford Street (1864); and, finally, from 19 New Church Street, Paddington, in 1866.

**Leetch carbine** Distinguished by a breech chamber which hinged sideways to the right, operated by a sidelever, this carbine was tested exhaustively by the Board of Ordnance in 1853–6. It was eventually rejected largely because a cartridge could jam across the joint between the chamber and the barrel. However, a few sporting guns were also made to the same general pattern prior to 1860.

**Lefauchaux** Casimir Lefauchaux was the inventor and first large scale exploiter of the pinfire cartridge and associated drop-barrel sporting guns. He received his first French patent in 1827, and was offering a single-barrel drop-barrel rifle commercially by 1832. The earliest guns were →cap-locks relying on the flash to penetrate paper-body cartridges with reinforced bases, which were

unacceptable militarily and susceptible to damp. However, the advent of metal-body pinfire cartridges in the mid 1830s improved efficiency greatly. Lefauchaux rifles and shotguns were locked when lugs on the spindle of a radial lever beneath the breech engaged recesses cut in blocks attached to the underside of the barrels. Guns of this type were made until the 1870s or later, by a variety of European gunsmiths, until the rise of chamber pressures highlighted the tendency of the barrel-block to pull away from the standing breech when fired.

**Lefauchaux** Eugène Lefauchaux (1820–71), son of Casimir, is associated with the open-frame →double-action pinfire revolvers that originated in the 1850s and were still being made in their smallest chamberings when the First World War began. The 11mm revolver adopted by the French navy in October 1847 (as the ‘Modèle 1858’) typifies the larger guns of this type, but minuscule 5mm folding-trigger guns were also made in quantity. The younger Lefauchaux was granted U.S. Patent 31809 of 26th March 1861, protecting a barrel opened by a rack-and-pinion mechanism and another opened by pivoting a radial lever on the right side of the breech upward.

**Lefever** Charles Frederick Lefever (1870–1961) of Toledo, Ohio, and Syracuse, New York State, was the third son of Daniel M. Lefever (below) and Sarah Stead. Trained as a gunsmith under his father’s eye, ‘Fred’ was granted many firearms-related patents. These included U.S. no. 536636 (‘Ejector Mechanism for Break-Down Guns’) and no. 650182 (‘Gun Cleaner’), each granted jointly with Daniel M. Lefever; and 732420 of 30th June 1903 for ‘Break-Down Guns’, and 944448 of 28th December 1908 for ‘Breech-Loading Fire-Arms’ (in reality a revolver). U.S. Patents 795991 of 1st August 1905 and 810871 of 23rd January 1906 (the latter jointly with Daniel Lefever) were obtained for single trigger mechanisms for double guns, and 865310 of 3rd September 1907—sought in April 1898!—protected a ‘Cocking Mechanism for Guns’. No. 992720 of 16th May 1911, for a ‘Firearm’, protected the design of an abortive (?) pump-action shotgun.

¶ Lefever was hired by →Daisy in the Spring of 1912 to develop a vague idea the company had had for a pump-action BB Gun, and stayed for more than forty years! During this time he was granted more than sixty patents relevant to BB Guns—beginning with one sought to protect the elbow pump, dismantling system and back-sight of the Daisy No. 25. Marks on a typical 1932-vintage No. 25 acknowledged five of Lefever’s U.S. patents: 1097244 of 19th May 1914 (‘Spring Gun’, sought in May 1913), 1114491 of 20th October 1914 (‘Shot Magazine for Spring Air Guns’), 1136470 of 20th April 1915 (‘Spring Air Gun’, sought in June 1913, which actually depicts the No. 25), 1220649 of 27th March 1917 (‘Magazine Barrel for Spring Guns’) and 1573383 of 16th February 1926 (‘Air Gun [Magazine]’). Twenty million of these highly successful guns had been made by 1977.

¶ U.S. Patent 1589975 of 22nd June 1926 was granted for a break-action airgun, whereas 1686702 of 9th October 1928 protected a lever-action cocking

system; and no. 2131173 of 4th October 1938 ('Air Gun') allowed claims for a slide-cocking pistol, subsequently marketed as the No. 118 →Targeteer.

**Lefever** Daniel Myron Lefever was born on 27th August 1835 in Hopewell, New York State. He was apprenticed to gunmaker John →Cutler at the age of fifteen, and began trading in 1857 as a gunsmith on his account in Canandaigua, New York State. Lefever made muzzle-loading sporting guns until 1861 when, at the outbreak of the Civil War, he entered into partnership with James A. →Ellis to make 'long range rifles'. Some of these were duly supplied to the New York State Sharpshooters, but few survivors are known. ¶ The business failed in 1867 and, after a short period trading as a grocer and ironmonger, Lefever opened a gunsmith's shop c. 1869 in Auburn, New York State. In 1872, he joined with Francis →Dangerfield, described in the 1871 U.S. census as 'Machinist', to make double-barrelled breech-loading shotguns in accordance with a patent (U.S. no. 130984) which had been granted to Dangerfield in September 1872. Though the business has often been listed as 'Lefever & Dangerfield', it actually traded as 'F.S. Dangerfield & Company'. The guns were marked DANGERFIELD & LEFEVER; the patent had been granted to Dangerfield, but part-assigned to Lefever.

¶ In 1874, Dangerfield left the partnership to be replaced by Lorenzo Barber. 'L. Barber & Co.' continued the work of Dangerfield and Lefever, making breech-loading double-barrelled shotguns and converting muzzle-loaders to load at the breech. John A. →Nichols bought Barber's share in 1876, and Nichols & Lefever continued to trade. The introduction of an improved breech-closure patented by Daniel Lefever on 25th June 1878 (U.S. no. 205193 sought on 12th February 1878) and then a lever-cocking hammerless shotgun patented on 29th June 1880 (229429, sought on 21st July 1879), caused friction within the business. It seems that Nichols was less keen to promote the new designs, which were initially none-too-well received, than the well-established traditional external-hammer patterns. But a prototype of the new hammerless gun had won a prize at an important sporting-goods show held in St Louis in 1878, as the 'Best Shot Gun made in America', and so, in 1879, Lefever struck out on his own from 78 North Water Street in Syracuse, New York State.

¶ A hammerless auto-ejector which cocked as the breech closed was patented on 12th September 1882 ('Breech-Loading Fire-Arm', U.S. no. 264173) by Daniel Lefever and Franklin R. →Smith, also embodying what became known as the →Lefever Ball Joint. No sooner had series production got underway, however, than the factory, which was not insured, was seriously damaged by fire in 1883. The loss of stock and much of the manufacturing capability led to a financial crisis; Lefever was forced to relinquish control to a consortium led by A. Ames Howlett, and had to be content with superintending what had become the 'Lefever Arms Company' (below) until the Durston family took control of the business late in 1901. Daniel Lefever then formed 'D.M. Lefever Sons & Company' (below).

¶ Lefever was a prodigious patentee. In addition to the patents mentioned previously, he received four granted for 'Breech-Loading Fire-Arms': 329397 of 27th October 1885, 343040 of 1st June 1886, 372684 of 8th November 1887, and 423521 of 18th March 1890 (jointly with Jesse H. Brown). The 1890 patent was assigned to the Lefever Arms Company. Other protection included U.S. Patent 385360 of 3rd July 1888, 'Charge Indicator for Breech-Loading Fire-Arms' (also assigned to the Lefever Arms Company), and three—475873 of 31st May 1892, 525272 of 28th August 1894, and 536636 (jointly with Charles F. Lefever) of 2nd April 1895—for improved gunlock or ejector systems. Daniel Lefever's last patent, 810871, obtained on 23rd January 1906 jointly with his son Charles, protected a single-trigger mechanism. He died unexpectedly on 29th October 1906 before his perfected box-lock shotgun had become truly established.

¶ Daniel Lefever is regularly claimed in the U.S.A. to have invented the 'first hammerless shotgun', but this completely overlooks the claim of the English gunmaker Theophilus →Murcott, who had produced just such a design several years earlier.

**Lefever** D.M. Lefever, Sons & Company; 107 North Franklin Street, Syracuse, New York, and Defiance and Bowling Green, Ohio, U.S.A. This gunmaking business was formed late in in 1901 by Daniel Lefever (see above) and his sons Edward (1859–1918), Charles F. ('Fred', 1870–1961), Frank (1871–1950) and George (1880–1927). Excepting the patented self-compensating ball joint, the box-lock shotguns, locked by a cross-bolt, were very different from the side locks being made contemporaneously by the →Lefever Arms Company. But only 2500 box-lock Lefevers were ever made in Syracuse (1902–4, 1906–7), Defiance (1904–5) and Bowling Green (1905–6), in grades ranging from 'o Grade Excelsior' to 'Uncle Dan'. Manufacture ceased when Daniel Lefever died in 1906, though small-scale assembly continued long enough to allow the Syracuse office to remain open until 1908.

**Lefever Arms Company**; 213 Malthrie Street, Syracuse, New York State, U.S.A. (in 1892 and 1908). Lefever was offering his →Automatic Hammerless gun as early as January 1885. The guns had compensated actions, compensated cocking levers and other advanced features. A few double rifles and combination guns were also made on this action. Ejector guns were made from 1891, in accordance with patents ultimately granted to Lefever in May 1892 (no. 475873) and April 1895 (no. 536636, jointly with Charles F. Lefever), an improved top-lever shotgun appeared in 1894, and a single-trigger mechanism is said to have been introduced as early as 1898 (the only relevant Lefever patents date from 1905/6, and this may actually have been granted as late as November 1911 to Charles Green, no. 974259). Work continued even after the business was sold to the Durston family in 1901 and then to the →Ithaca Gun Co. in 1915. The assets were transferred to Ithaca in 1916, where side-lock Lefevers were assembled, probably largely from existing parts, until the end of 1921. Ithaca also offered the 'Lefever Nitro Special', but this was an

entirely different design.

**Lefever Ball Joint.** This consisted of a short hemispherical-tip bolt which acted in concert with the cupped face of the barrel under-lug to reduce the effects of wear in break-open shotguns. It was patented by Daniel M. →Lefever and Franklin R. →Smith of Syracuse in September 1882 (U.S. no. 264173), and assigned to the Lefever Arms Company.

**Lefever Nitro Special** A double-barrelled shotgun offered by the →Ithaca Gun Company from c. 1923 until the entry of the U.S.A. into the Second World War at the end of 1941 (though production had probably ceased years earlier). Though bearing the legendary 'Lefever' name, the guns owed almost everything to Ithaca's own designers.

**Legia** A brand name used on a 6.35mm calibre automatic pistol made in Belgium by N. →Pieper of Liège.

**Legia** A tradename used by →Fabrique Nationale d'Armes de Guerre on shotgun ammunition loaded with cube-shot, c. 1925–40.

**Legia Star.** A tradename used by →Fabrique Nationale d'Armes de Guerre on shotgun ammunition, c. 1955 to date (?). 'Star' refers to the design of the crimp.

**Leicester** Usually encountered as 'The Leicester', this name was once associated with shotgun cartridges sold by Charles →Lancaster & Co. Ltd of London, England.

**Leigh** John Leigh. This English gunmaker began working on his own account from 1 Duncan Street, Whitechapel, in 1844. The trading style became 'John Leigh & Son' in 1856, but the elder Leigh died in 1859 and the son followed in 1862. Their executors subsequently continued operations until 1864.

**Leipolds** Ch. Leipolds Witwe; Suhl in Thüringen, Thüringen, Germany. Registered as a gunmaker, 1919.

**Leitch** James Leitch. An English gunmaker listed by H.J. Blanch, writing in *Arms & Explosives* in 1909, at 29 Great Portland Street. There is little doubt that this is actually James →Leetch.

**Leman** Henry E. Leman; Lancaster, Pennsylvania, U.S.A. Born in Pennsylvania in 1812, Leman served his apprenticeship with the gunmaker Melchior Fordney before working for George Tryon in Philadelphia. A return to Lancaster, and the foundation of the Conestoga Rifle Works, persuaded the U.S. government to order small batches of rifles annually from 1837 almost until the start of the Civil War in 1861. The original Conestoga Works had been destroyed in 1860, but operations soon began again on a new site on the corner of East James and Christian Streets. Leman's output was considerable; in 1849–50, his factory made 5000 gun barrels and 2500 rifles, and the census of 1860 indicated that not only was he employing a steam engine but also had a workforce numbering 62. Leman died in Lancaster in 1887.

**Lemille** Pierre-Joseph Lemille; Liège, Belgium. A leading gunmaker, active in the 1860s and 1880s. He made firearms ranging from double-barrelled sporting guns to →Lefauchaux-type pinfire cutlass revolvers.

- Lemon Squeezer** A nickname conferred on the →Smith & Wesson .32 →Safety Hammerless, owing to the ‘squeeze in’ safety lever set in the back strap.
- Lenders** Charles Lenders; Liège. This Belgian gunmaker was granted protection for a variety of firearms developed in the middle of the nineteenth century, including a seven-barrel breech-loading volley gun with its barrel cluster locked by a rotating collar.
- Lenders-Lambin rifle** A bolt-action pattern developed in Liège in the 1860s, this provided an inexpensive method of converting cap lock rifle muskets such as the British P/53 (Enfield) and French Mle 57. A cylindrical extension attached to the breech contained a bolt with a small handle on the right side. Most guns retained conventional side or back action locks and external hammers, but some were altered to fire a proprietary cartridge with an internal priming pellet in the base. However, ignition of this type was rapidly overtaken by rim and centrefire metal case ammunition.
- Lengerke** [Von] Lengerke & Antoine; Chicago, Illinois., U.S.A. This sporting goods distributorship was founded in 1889, trading by 1900 from 277 & 279 Wabash Avenue and 35–39 Van Buren Street. Its trademarks included ‘V.L. & A.’.
- Lengerke** [Von] Lengerke & Detmold (U.S.A.); New York City. Undoubtedly related to Von →Lengerke & Antoine of Chicago, this sporting goods business was formed in 1897. Trading was being undertaken from 349 Fifth Avenue in 1928, when the business was purchased by →Abercrombie & Fitch, but Von Lengerke & Detmold retained independence until c. 1939. The premises were then sited at the corner of Madison Avenue and 45th Street. The principal trademark consisted of a triangle containing a soaring duck and ‘V.L. & D.’
- Lenz** August Lenz; Zella St Blasii in Thüringen, Germany. Listed in the 1900 edition of the *Deutsches Reichs-Adressbuch* as a gun and weapon maker.
- Leo** Heinrich Leo; Suhl in Thüringen, Germany. Listed in the directories for 1939 as a gunsmith.
- Leo** Th. Leo; Suhl in Thüringen, Germany. A gunmaker trading in 1914 and 1920.
- Leonard** Charles S. Leonard, a government inspector employing a ‘CSL’ mark, accepted U.S. military firearms and accessories in the mid 1870s. They can be distinguished by date from those accepted prior to the American Civil War by Charles S. →Lowell. See also “U.S. arms inspectors’ marks”.
- Leonard** D. Leonard & Son. Listed in London in 1880 at ‘15 & 18 Bishopsgate Street Without’, this gunmaking business was trading from 90b Aston Street, Birmingham, by 1891.
- Leonard** Frederick S. Leonard—possibly the son of Charles Leonard (above)—accepted firearms and accessories on behalf of the U.S. Army in 1899–1902; they bore ‘FSL’. See also “U.S. arms inspectors’ marks”.
- Leonard** George Leonard; Shrewsbury, Massachusetts. This U.S.-based gunmaker, once employed by →Allen & Thurber, made →pepperboxes in accordance with U.S. Patent 6723 of 18th September 1849 and 7493 (‘Revolving hammer firearms’) of 9th July 1850. Leonard also received 9922 of 9th August

1853 and 14820 of 6th May 1856, each protecting a 'Repeating Firearm'.

**Leonard** Samuel Leonard, using the mark 'SL', accepted →Savage cap-lock and →Colt cartridge revolvers on behalf of the U.S. Army in 1862–75. See also "U.S. arms inspectors' marks".

**Leonhardt** A 7.65mm →Beholla-type semi-automatic pistol, made (or perhaps simply distributed) in the early 1920s by Hans →Gering of Arnstadt.

**Lepage** This name includes a number of French and Belgian gunmakers, the most notable being Perin Le Page, *Arquebusier de l'Empereur* (later 'Arquebusier du Roi') active in Versailles in 1793-1813 and then in Paris from 1816 until the 1840s. A Le Page breech-loading →cap-lock carbine, with a barrel that pivoted laterally to expose the breech, was unsuccessfully tested by the French army in 1835. 'Le Page Mourtier', active in Paris c. 1840–65, exhibited firearms and edged weapons at the London Great Exhibition of 1851, and 'Le Page Faure', established in 1865 at 8 Rue Richelieu, Paris, continued to trade until the end of the nineteenth century.

**Lepco** *usually in a diamond*. This trademark will be found on Langenhan made →Millita spring air guns, shotgun cartridges, and 6.35mm six-shot →Browning-type pocket pistols made in France prior to 1940 by →Manufacture d'Armes des Pyrénées. Customarily marked 'The Lepco Fire-Arms Company, London' (see →Le Personne), the slides also display MADE IN FRANCE in addition to the distributor's name.

**Lepersonne**: see 'Le Personne'.

**Lepper** Hugo Lepper; Zella Mehli in Thüringen, Germany. Listed in the 1920 edition of the *Deutsches Reichs-Adressbuch* as a weapon maker.

**Lepper** Max Lepper; Zella Mehli in Thüringen, Germany. Founded in 1888 and still listed in 1930 as a master gunsmith. His operations apparently ceased at the end of the Second World War.

**LES** Found on the long-range dial sight plate of British Short →Lee Enfield rifles Mk I, I\*, II and II\*\*—or, as 'LES III', for the Mk III and Converted Mk IV patterns. Guns converted to fire .303 Mk VII ball ammunition were marked 'LES 2'.

**Leser** Ernst Leser; Suhl in Thüringen, Germany. Operating in 1930–9 as a gunsmith.

**Lespinasse** This French army officer, the director of the Châtellerault arms factory, has been credited with changes made (in collusion with arms inspector Close) in the design of the 1878-pattern bolt-action 11mm →Kropatschek navy rifle. These laid the basis for the 1885 pattern, with a two-piece stock, and ultimately for the small-calibre →Lebel.

**Levaux** D.D. Levaux; Liège, Belgium. A patentee of revolvers in the early 1870s, including solid-frame guns with a yoke-mounted cylinder and a sliding ejector on the right side of the barrel/frame unit. Levaux was also responsible for a break-open simultaneous-ejecting design with a latching bar protruding above the hammer. These guns were made in .32, .38 and possibly other chamberings by 'Établissements Levaux' from the 1880s until overtaken by better designs

at the end of the nineteenth century.

**LeverBolt Rifle Company** [“The...”]; New Haven, Connecticut, U.S.A. This was formed to promote the last of the distinctive sporting guns designed by Charles →Newton, a straight-pull ‘rocking lever’ bolt-action design patented in 1929. A batch of five hundred guns was to be made by →Marlin if sufficient orders were forthcoming, but sales were poor and the project failed when Newton died in 1932.

**Levin** Moses L. Levin. A merchant, or possibly gunmakers’ agent listed at 1 Bevis Marks, London EC, in 1885–8.

**Levy:** see ‘Heilprin’.

**Lever action** A mechanism that relies on a lever or system of levers to open the breech, extract, eject, reload and then re lock. The Winchester M1873 or Marlin M1895 are typical examples, but many differing patterns have been made. The term is now normally confined to magazine rifles (strictly, ‘lever action repeaters’); otherwise, it could be applied to many single shot block action guns.

**Lewis sights** were invented by Lieutenant Colonel Lewes of the Northamptonshire Regiment, and eventually protected by British Patent 14093/93 of 1st October 1893. Used on the →Martini Metford rifle, they were also adopted for the →Lee Metford—but were abandoned when a reversion to ‘V’ and barleycorn sights was approved in July 1891. The essence of the design was a ‘slit in post’ at the front and a broad square notch at the back.

**Lewis** A.H.G. Lewis. Active in 1906, this government employee accepted the U.S. Army firearms and accessories with ‘AHGL’ identifiers. See also “U.S. arms inspectors’ marks”.

**Lewis** Aubrey Lewis; 19 Church Street, Luton, Bedfordshire. This English gunmaker succeeded →Langley & Lewis after the end of the second World War and traded in Luton until 1969. His marks will be found on sporting guns and shotgun cartridges sold under names such as ‘Blue Roc’, ‘Chelt’, and ‘Severn’.

**Lewis** C.F. Lewis accepted firearms and accessories on behalf of the Federal army in 1863, during the American Civil War; they bore ‘CFL’ identifiers. See also “U.S. arms inspectors’ marks”.

**Lewis** Gunmaker Edward Lewis of Basingstoke, Hampshire, England, handled sporting guns and shotgun cartridges in the post-1945 period.

**Lewis** George Edward Lewis; Birmingham, Warwickshire. This gun rifler and pistol maker began trading from 32 & 33 Lower Loveday Street in 1859, making breechloading rifles in addition to pumps for air canes. Lewis received British Patent 2100/63 of 25th August 1863 (jointly with H. Walker and J.B. Wayne) to protect the design of a drop barrel breechloader. Trading after c. 1905 as ‘G.E. Lewis & Son’, the business also handled shotgun cartridges.

**Lewis** Isaac Newton Lewis, born in 1858 in New Salem, Pennsylvania, U.S.A., was commissioned into the Coast Artillery after graduating in 1880 from the West Point Military Academy. His inventive skills were embodied in a depression position finder, adopted in 1891, and he eventually became Director of

the Coast Artillery School in 1904. He was subsequently approached by representatives of the →Automatic Arms Company to perfect a machine-gun designed by Samuel McLean, and, apparently after a disagreement with the Chief of Ordnance, retired from the U.S. Army in 1911. Work on the gun was successfully completed in 1912–13. Lewis died in Hoboken, New York, in November 1931.

**Lewis Gun** Developed by Isaac N. Lewis from patents granted to Samuel N. →McLean, prototype guns of this type were unsuccessfully demonstrated to the U.S. Army in 1911. Lewis then went to Europe, where he accepted an offer of help from the →Birmingham Small Arms Co. Ltd ('BSA') in 1913. The perfected gas-operated Lewis had a rotating pan magazine above the receiver and a large helical spring in a prominent housing beneath the receiver, ahead of the trigger, to return the piston and bolt assembly to battery.

¶ The British Army were initially as sceptical about the Lewis Gun as the U.S. Army had been, but a 7.65mm version was ordered in quantity to the Belgian army shortly before the First World War began. These were marked by →Armes Automatiques Lewis, but made by BSA. Desperate to acquire effectual weapons, the British government then adopted the 'Gun, Machine, Lewis, .303 inch Mark I' in 1915. The Birmingham Small Arms Co. Ltd alone made nearly 150,000 guns for the British, Belgians and Russians prior to 1919. The Mark I\*, introduced in November 1915, had a spade grip and a two-tier magazine, but lacked the forced draught cooling system. The Mark II\* (converted) and Mark III (newly made) of 1918 were Mk I\* variants altered to give a higher rate of fire.

¶ The Lewis Gun was the standard British light machine gun until replaced by the →Bren Gun in the 1930s. Guns were also made in the U.S.A. by the →Savage Arms Company, and a few hundred .303 Savage-Lewis Guns were bought by the U.S. Army in 1916, for use in the border wars with Mexico. A .30-calibre M1917 U.S. Army Savage-Lewis was unsuccessful, owing to the increased power of the .30–06 cartridge. However, the U.S. Navy and Marine Corps took the .30 Savage-Lewis in quantity.

¶ The M1918 air-service gun, with 47- or 97-round pan magazines, was a great success: by the 1918 Armistice, 32,231 had been completed, followed by about 7500 in 1919. Many obsolescent guns were altered in Britain during the 1920s and 1930s by the →Solely Armament Company, seeking to improve their performance, and others were brought out of store in 1939–40 to serve the British merchant navy and home-defence forces.

**Leyh** G. Leyh; Suhl in Thüringen, Germany. Listed as a gunsmith, 1930.

**Lfb** or **LfB** or **lfb**: abbreviations for *Lang für Buchse*, the German equivalent of 'Long Rifle' applied to the most popular of all .22 rimfire cartridges.

**I.F.M.** to be read as 'L.F.M.' These letters were applied by the *leichte Feldhaubitzen-Munitionskolonnen* of the pre-1918 Prussian army, the munitions columns carrying ammunition for the light field howitzers. They were usually applied as 'I.F.M.II.52.10.'—the remainder of the stamp indicating that the column

was attached to II. Abteilung of Feldartillerie-Regiment Nr. 52—and are occasionally encountered on rifles, carbines and handguns of obsolete or substitute pattern.

- lgp** Found on machine-gun and small-arms components made during the Second World War by →Veltener Maschinenbau GmbH of Velten/Mark, Germany.
- I.H.M.** *to be read as 'L.H.M.'* These descriptors appeared in the property stamps applied by a *leichte (Feld-)Haubitze-Munitionskolonne*: an ammunition column carrying shells, etc., for light field howitzers. See also 'I.F.M.' for details of the marks themselves. They were introduced prior to 1909 and lasted until the end of the First World War in 1918.
- Liberator** A simple .45 single shot pistol made for use in occupied Europe during the Second World War by the →Guide Lamp Division of General Motors.
- Liberty A** →Suicide Special revolver made in the U.S.A. by the →Hood Firearms Company of Norwich, Connecticut, in the late nineteenth century.
- Liberty A** →Suicide Special revolver made by Otis →Smith of Middlefield and Rock Fall, Connecticut, U.S.A., in the late nineteenth century.
- Liberty** A compact 6.35mm Browning type pistol made by →Retolaza Hermanos of Eibar, Guipuzcoa, Spain; six rounds, striker fired. These are sometimes marked by Fabrique d'Armes de Grande Précision (q.v.) and have been attributed to Gregorio Bolumburu.
- Libia** A Spanish FN Browning type automatic pistol made in Eibar by →Beistegui Hermanos in two patterns: 6.35mm Auto or 7.65mm; six rounds, striker fired. The guns were often marked by Fabrique d'Armes de →Grande Précision.
- Lida** A brand name said to have been used by Libero →Daffini of Brescia, Italy.
- Liddell & Sons**; Haltwhistle, Northumberland, England. This gunmaker sold sporting guns, shooting accessories and shotgun cartridges. See also 'Liddle'.
- Liddle**: see also 'Liddell'
- Liddle** John Liddle was a patent agent, working from chambers at 154 St Vincent Street, Glasgow, Scotland, when he secured British Patent 26329/12 of 1912 for Edgar P. →Cook.
- Liddle** Robert Liddle, or 'Liddell'; San Francisco, California. A maker of cap-lock rifles and shotguns, established by 1853, Liddle traded from Washington Street until shortly after the end of the American Civil War. His operations were succeeded by Liddle & Kaeding (q.v.).
- Liddle Gun Company**; San Francisco, California, U.S.A. Successor to Liddle & Kaeding (below), this gunmaking business is assumed to have retained the Washington Street premises until work finally ceased in with the death of Robert Liddle in 1894.
- Liddle & Kaeding**; Washington Street, San Francisco, California. Makers of sporting guns and rifles, this partnership succeeded to the business of Robert Liddle c. 1870 and traded until in turn succeeded by the Liddle Gun Company in 1889.
- Lieberknecht & Schurg** Trading in Coburg, from Postweg (1978), this maker of suitcases, packing cases and woodware was founded shortly prior to 1906. The

business is said to have made Luger holsters during the Third Reich. Code: 'gce', allocated in July 1941. WaA inspector: 869.

**Liebig**; Baltimore, Maryland, U.S.A. A maker—or perhaps simply a distributor—of spring air →Gallery Guns of 'New York Secondary' pattern.

**Liebmann** Helmut Liebmann. An employee of →Anschütz and designer of several recoilless airguns.

**Liebtruth** F. Liebtruth & Co. Ltd; Angel Road, Edmonton, Middlesex. A maker of magazines for the British 9mm →Sten Gun during the Second World War. The code 'S 304' may have been used instead of the company name. See "British military manufacturers' marks".

**Lieferungsgenossenschaft der Sattler** Based in Nürnberg, this association of saddlers and leatherware makers was formed on 3rd March 1915, handling a variety of military equipment—including cartridge pouches and holsters—until the end of the First World War in 1918. Trademark: 'L.G.S.'

**Lieferungsverband Sattler u. Tapezier Zw. Innung** Reportedly found on Luger holsters (Mersbach, *Auto Mag*, March 1997), presumably dating from the First World War. Said to have been based in Eutin, no other details are known.

**Lieferungs Verband von Mitgliedern der Berliner Sattlerinnung** Operating in Berlin, apparently with a sub-office in München, this delivery association was formed c. 1915 from members of the Berlin saddlers guild. Military saddles and harness, ammunition pouches, rifle-slings and handgun holsters (including Luger patterns) have been reported with marks which included L.V.M.B.S.

**Liège** The premier Belgian gunmaking centre, this has been renowned for the large-scale production that began many years before independence was finally gained from France in 1830. The census of 1856 revealed the existence of 9675 men employed directly in the gunmaking trades, and 97 'manufacturers'. However, there were few apart from the →Société des Anglais, the →Petit and →Grand syndicates (all themselves co-operatives) capable of fulfilling the large-scale contracts demanded by armies of ever-growing strength and sophistication. Yet by 1896, when the totals given forty years earlier had risen to 11,402 'men' and 180 'manufacturers', much of the industry remained primitive. This has been ascribed by Claude Gaier to three principal factors: an over-reliance on piecework, the employment of vast numbers of homeworkers, and an extraordinary multiplicity of manufacturing patterns.

¶ The 1896 census had also shown that, though the largest businesses such as →Fabrique Nationale d'Armes Guerre and the →Manufacture d'Armes de l'État could make guns by the thousand, three in every four of those who classed among the 'gunmakers' traded from their homes—and that mechanisation in these homes amounted to just forty horsepower! This was also true of ancillary trades; in 1894, for example, only four of nearly thirty gun-barrel manufactories in the Vesdre valley owned steam engines. Virtually all the others relied on waterwheels. The number of guns proved in Liège had peaked in 1907 at about 1.58 million and by 1914, the apogee of

local gunmaking, there were 118 private gunmaking businesses; 62 trading companies or partnerships; and merely fourteen joint-stock companies. There were also about 150 makers of gun-parts and accessories.

¶ German invasion in 1914 brought most of the work to an end, excepting that of Anciens Établissements →Pieper (which had had German origins). Though several small-scale manufacturers flourished in the twenty years that separated the world wars, and Fabrique Nationale d'Armes de Guerre recovered much of its one-time glory, the trend was largely downward. This effect was magnified by the Second World War, when what remained of the Belgian gunmaking industry was largely destroyed. A few thousand sporting guns were made each year, peaking in 1943 at 40,747, but a total of 114 gun manufacturers in 1939 had dwindled below fifty by 1945. Though a small-scale revival followed, there were still only about sixty manufacturers operating in the mid 1950s, and the creation of combines such as the Fabrique d'Armes Unies did little to reverse the trend.

¶ Though Liégeois output grew steadily as a result of the success of Fabrique Nationale d'Armes de Guerre (557,623 guns were proved in 1969), only a handful of gunmakers such as →Francotte, →Lebeau-Courally and →Raick remained active in the 1990s. The finest source of information about these gunmakers is unquestionably Claude Gaier's *Five Centuries of Liege Gunmaking* (Éditions du Perron, 1996).

**Liège Arms Company** A brand name found on shotguns handled by the H. & D. →Folsom Arms Company, possibly made in Belgium by Manufacture Liégeoise d'Armes à Feu (but equally possibly used in an attempt to disguise low-grade U.S. manufacture).

**Liégeoise:** see "Manufacture Liégeoise d'Armes à Feu".

**Life Long A** →Suicide Special revolver made by the →Hopkins & Allen Arms Company of Norwich, Connecticut, U.S.A., in the late nineteenth century.

**Light Automatic Carbine:** see 'Carabine Automatique Leger'.

**Light Automatic Rifle:** see 'Fusil Automatique Leger', 'Fusil Automatique Lourd'.

**Light Blue** ["The..."]. A shotgun cartridge made, or perhaps simply assembled in Britain by the →Normal Improved Ammunition Company of Hendon, London.

**Light Fifty** Made in the U.S.A. by →Barrett, this .50-calibre rifle, also known as 'Model 82A1', was designed to strike 'compressor sections of jet engines or the transmissions of helicopters' and to 'destroy multi million dollar aircraft with a single hit delivered to a vital area'.

**Lightfoot Refrigeration Co. Ltd** ["The..."]; Abbeydale Road, Wembley, Middlesex, England. A manufacturer of British rifle-type 'Dischargers, Grenade, 22-inch, No. 2 Mk 1', 1941B3. Code: 'S 67'. See also "British military manufacturers' marks".

**Lightmode** ["The..."]. Associated with shotgun cartridges made by →Eley Bros. prior to the acquisition of the company by Explosives Trades Ltd in 1918.

**Lightning**, usually as 'The Lightning'; found on 12-bore shotgun ammunition

made, apparently by →Eley-Kynoch, for Thomas →Newton of Manchester.

**Lightning** A compact Spanish 6.35mm calibre Browning type automatic pistol, made in Eibar in the 1920s (?) by Echave y Arizmendi; six rounds, striker fired.

**Lightning** A primitive rubber-band powered 'air gun' made by →Quackenbush to his U.S. Patent 302283 of 22nd July 1884 (British Patent 10499/84 of 1884 is identical); 354 were made in 1884, but production thereafter rapidly declined.

**Lightning** A .38 Double Action Revolver announced by →Colt's Patent Fire Arms Mfg Co. on 1st January 1877. The name was coined by Benjamin →Kittredge & Company. The guns typically had bird's head butts, and ejectors were omitted if the barrels were less than 4½ inches long. About 167,000 .38 calibre Lightnings and .41 →Thunderers were made in 1877–1909.

**Lightning Killer** ['The...']. Usually accompanied by a flying grouse, this mark is associated with 12-bore shotgun ammunition made for →Smail & Sons of Morpeth by →Eley-Kynoch.

**Lightning Loader** The No. 108 →Daisy 1000 shot lever action rifle, with a quick loading under barrel magazine; production was apparently confined to 1939–41 and 1946–9. The 'Lightning Loader Military Model' was a bayonet fitted derivative, made in small numbers in 1940.

**Lightweight Commander**: see 'Commander'.

**Lightwood** F.W. Lightwood; Brigg, Grimsby and Market Rasen, Lincolnshire. The name of this English gunmaker has been reported on sporting guns, shooting accessories and shotgun cartridges.

**Lightwood** Joseph Birks Lightwood, later as 'Lightwood & Son'; Birmingham, Warwickshire, England. This gunmaker began trading in Whittall Street in 1887, possibly succeeding 'Joseph Lightwood' (a gun stocker active in 1849), and traded under his own name until at least 1898. Pre 1914 →Eley made shotgun cartridges have been reported with the marks of 'Lightwood & Son' and the brand name 'Ecel'.

**Lignose AG, Theodor Bergmanns Erben**; Berlin, Germany. The marks of this holding company will be found on the slide and grips of →Bergmann-type pocket pistols, including some one-hand cocking variants, made in the former Bergmann 'Abteilung Waffenbau', Suhl (which had been renamed 'Lignose Sprengstoff Werke GmbH, Abteilung Suhl'). Lignose, based in Berlin, apparently purchased the Bergmann gunmaking division in 1921, W. →Fahner of Suhl in 1922, and August →Menz of Suhl in 1937. Airgun pellets have been found in tins marked 'Lignose AG', with a distinctive blue design on a yellow lid.

**L'il Champ** Also known as the "L'il Champ Bolt 22" or the 'Model 2000', this was a simple single-shot .22 rimfire bolt-action rifle made first by Iver Johnson and then by the →American Military Arms Corporation of Jacksonville, Arkansas.

**Liliput** Alternatively known as the →Frommer Liliput, this compact 6.35mm pistol was made by →Fegyvergyár Reszvenytársasag of Budapest, Hungary.

**Liliput** Semi-automatic pistols made in Suhl, Germany, by August →Menz. The 6.35mm Model 1925 and Model 1926 differed in the milling of the slide, the

former having fifteen fine and the latter eight coarse retraction grooves. The original 4.25mm gun may have had a half-length slide/breech block unit, and the barrel and return-spring chambers bored directly into the slab frame, but this was replaced by the conventional Model 1927 with a full-length slide.

**Limit** A tradename associated with the airguns and pellets marketed by Lincoln →Jefferies & Co. Ltd of Birmingham. The highest known serial number of a Limit rifle is 2003, made c. 1929. See also 'Britannia' and 'Scout'.

**Limited Classic** This name was applied to a variant of the →Remington Model 700BDL bolt-action sporting rifle, first offered in 1981 in 7×57 but then reintroduced annually in a single chambering until the 'LC' pattern was merged with the standard Model 700 →Classic in 1992.

**Limmex** S.J. Limmex & Company; Wood Street, Swindon, Wiltshire, England. Marks applied by this gunmaker have been found on sporting guns and shotgun ammunition.

**Lincoln** A name associated with a small rimfire revolver sold in Belgium prior to 1914 by H. →Ortmann.

**Lincoln** Found on .320, .380, .44 S&W Russian or .450 double-action revolvers of →Bulldog type, made in Belgium prior to 1914 by Manufacture Liégeoise d'Armes à Feu, whose crowned 'ML' will usually be found on the frames. A safety slider may lie behind the hammer. The *Lincoln-Bossu* was a five-shot 6.35mm →Browning-revolver with an enclosed hammer and a folding trigger.

**Lincoln** A mark found on shotgun cartridges and butt cylinder spring air →Gems 'made' by Lincoln →Jeffries & Co. of Birmingham, Warwickshire, England, in 1900–5. Though the airguns were often sold as 'Improved', they undoubtedly came from Germany and were then modified in Britain.

**Lincoln** A distinctive .22-calibre spring-and-piston pistol patented in 1911–21 and made in Britain after the end of the First World War by Lincoln →Jeffries of Birmingham. The air cylinder was combined with the butt, and the cocking lever doubled as the trigger guard.

**Lindberg** Charles Augustus Lindberg of Grand Rapids, Michigan, a 'machinist', was co-patentee (with William Henry →Calkins, Matthew →Butts and Austin Kent →Wheeler) of a spring-air BB gun made in the U.S.A. by the →Rapid Rifle Co. See U.S. Patent 614532 of 22nd November 1898. Robert L. Gardner, in *Small Arms Makers*, lists Lindberg—or possibly his similarly named father—as a maker of shotguns and combination weapons in 1875–8.

**Lindner** A.H. Lindner; Suhl in Thüringen, Germany. Founded in 1874 and trading in 1900 as a sporting gunmaker ('Jagdwaffenfabrik'); 'H.A. Lindner', a gunmaker listed in 1914, may prove to be the same.

**Lindner** Edward N. Lindner; New York City. Grantee of several patents between 1854 and 1863, mostly for firearms, Lindner is best remembered for a breech loading rifle patented on 29th March 1859. This gun existed in three versions, the most basic being imported Austrian muskets cut to carbine length. Later guns were made by the →Amoskeag Mfg Co., though they rarely bore anything other than an acknowledgement of Lindner's patent. The .58-calibre cap-lock

carbine had a short grasping handle which rotated the breech cover to the left, allowing the pivoted breech block to be lifted to receive a combustible cartridge. The Federal Ordnance authorities ordered four hundred guns on 6th November 1861; total purchases eventually amounted to 892, though many others were apparently acquired for units raised in individual states. Edward Lindner also patented an air pistol cocked by a butt lever, protected by U.S. Patent 37173 of 16th December 1862. Similar guns, lacking the lever and possibly older, were made by →Lindner & Molo.

**Lindner & Molo**, often wrongly listed as 'Lindner & Mole'; New York City. Manufacturers of a spring-air gallery type pistol patented by Edward N. →Lindner.

**Lindsay** John Parker Lindsay; New York City. Trained as a gunsmith in →Springfield Armory, Lindsay was granted U.S. Patents protecting a cartridge (28090 of 24th July 1860) and a distinctive gun-lock that allowed superimposed charges to be fired successively (9th October 1860).

**Lindsay** J.P. Lindsay Mfg Co.; 208 Orange Street and 20 Howard Street, New Haven, Connecticut, U.S.A. Active in 1864–9, this business made single-barrel two-shot firearms in accordance with John Lindsay's October 1860 patent. These included a thousand .58-calibre rifle-muskets made for the Federal government during the Civil War, and the →Young America pistol. The longarms are believed to have been produced in a factory owned by gunmaker Cyrus Manville, which shared the Orange Street address.

**Lines Bros Ltd**; Tri-Ang Works, Modern Road, Merton, London SW19. Makers of about 880,000 Mark III →Sten submachine-guns during the Second World War. A maker of box magazines for the British 9mm →Sten Gun and drum magazines for the .303 →Bren Gun during the Second World War. The regional code 'S 68' may have been used instead of the company name. The company also renovated 4500 ex-Air Service →Lewis Guns for ground use (1940).

**Ling** William Ling, a gunmaker listed in 1820 at 10 Macclesfield Street, Westminster, London, plied his trade successively from 34 Dartmouth Street, Westminster (1829–32); 16 Church Street, Soho (1833–9); and 61 Jermyn Street (1840–63). Ling is known to have made pepperboxes and butt reservoir tap breech airguns in the mid nineteenth century and had worked for →Forsyth & Company for 22 years according to Eldon Wolff, in *Air Guns* (1958).

**Linington** The marks of J.H. Linington of Newport, Isle of Wight, England, an ironmonger/gun dealer, have been reported on sporting guns and →Eley-made shotgun cartridges made prior to 1914.

**LINLEY** A mark found on →Lee-Enfield components made by Linley & Co. Ltd of Birmingham.

**Linsley Brothers**; Lands Lane and 97 Albion Street, Leeds, Yorkshire, and also in Bradford, Yorkshire. The name of this English gunmaking partnership has been reported on sporting guns and →Kynoch made shotgun cartridges sold under the brand names 'Nomis' and 'Swift'.

- Linzel** Edward A. Linzel; St Louis, Missouri, U.S.A. This maker of spring-air →Gallery Guns may be found in the St Louis directories for the 1864–69 period, at 63 Walnut Street until 1866 (?) and 822 North Fifth Street thereafter.
- Lion** A →Suicide Special revolver made in the U.S.A. by →Johnson, Bye & Company and/or →Iver Johnson of Worcester and Fitchburg, Massachusetts, in the late nineteenth century.
- Lion**, or ‘Chinese Lion’. An underlever cocked fixed-barrel 4.5mm-calibre air rifle made by the →State Industry Factory in Peking. Also known as the B–45–3 and possibly originally designed as a military trainer, as its size and balance resemble those of the SKS rifle. It was imported into Britain by →Nickerson and others; see also ‘Arrow’, ‘Pioneer’ and ‘Hunter’.
- Lip fire** Introduced by →Allen & Wheelock c. 1862, these .32 and .44 cartridges had their priming compound in a lateral extension or ‘lip’ of the rims. Smith & Wesson objected to the use of a bored-through chamber to accommodate them, and so production had ceased by the end of the American Civil War in 1865.
- Lisle** Myron C. Lisle; Grand Rapids, Michigan. This firearms designer was granted U.S. Patents 536960 of April 1895 and 609445 of August 1898 to protect magazine firearms; and 695819 of March 1902 to protect a ‘breech-loading firearm’, a half-interest in the latter being assigned to Frank A. →Simonds. Lisle was also the designer of a ‘lubricated wire-wound bullet’, patented in 1899, which was exploited by the →National Projectile Company.
- Lisle** The name of English gunmaker Robert Lisle of Queen’s Hall Buildings, Derby, has been reported on sporting guns and shotgun cartridges sold under the names such as “Lisle’s Field Cartridge”, ‘Tiger’ and ‘Victa’.
- List** Wilhelm List & Co.; Suhl in Thüringen. A maker of sporting guns active in Germany prior to the First World War.
- Lithgow Small Arms Factory**; Lithgow, New South Wales. This, the principal government small arms factory, was built on a site purchased in 1908 and equipped with machinery from →Pratt & Whitney. It was opened in 1912, the principal product during the First World War being SMLE (→Lee Enfield) rifles. Production peaked in 1918–19 at about 42,100. Substantial quantities of .22 rimfire rifles were made between the wars for →Slazengers, Pty., alongside .22 Hornet centre-fire rifles and .410 shotguns built on Lee actions. The first →Vickers Guns were made in Lithgow in 1920, and the first →Bren Guns in 1941. Rifle production was largely concentrated in the →Orange subsidiary factories during the Second World War—when 136,200 SMLEs were made in 1942/43 alone—but work reverted to Lithgow when hostilities ceased, the last actions being made in 1956. The 7.62mm L1A1 rifle (FN →FAL) was made in 1958–86 and the heavy barrelled L2A1 in 1963–82, but work subsequently concentrated on an Australian version of the Steyr →AUG known as the ‘5.56mm Rifle F88’.
- Little** G. Little & Company were gunsmiths listed at 63 Haymarket, London, in

1889–96.

- Little** George D. Little, active in 1862–5, accepted .44-calibre cap-lock revolvers made for the Federal Navy by →Colt's Patent Fire Arms Mfg Co. They bore a 'GDL' identifier. See also "U.S. arms inspectors' marks".
- Little** H.C. Little & Son; Yeovil, Somerset. This English gunmaking business handled sporting guns and accessories, including shotgun cartridges sold under the brand names 'Blackmoor Vale' and 'Sparkford Vale'.
- Little All Right** A minuscule revolver patented by →Boardman & Peavey.
- Little Colt** A brand name applied unofficially in the early 1870, by →Kittredge & Company of Cincinnati, to the .22 →New Line Colt revolver.
- Little Daisy** A break open single shot BB gun made by the →Daisy Mfg Co. as the No. 20, in three versions: 1908–12; with an enlarged grip frame, 1912–15; and with a ring trigger, 1915–37.
- Little Dog** A name associated with a small six-shot 5.5mm →Velo-Dog double-action revolver with a swinging ejector, a ring-tip hammer and a folding trigger, made in Belgium (perhaps by →Francotte of Liège) prior to 1914.
- Little Giant** A →Suicide Special revolver made in the U.S.A. by the →Bacon Manufacturing Company of Norwich, Connecticut, in the late nineteenth century.
- Little Pal** This name was applied to a pistol-grip clasp-knife pistol made by the L.G. →Polhemus Mfg Co. It was apparently offered in differing forms, chambered for the .22 Short ('Model 23') or .25 ACP cartridges. The Little Pal was basically a bolt-action pistol with additional knife blades beneath the muzzle. The guns generally had a simulated bone or staghorn fore end and chequered plastic grips displaying an encircled 'S' mark.
- Little Pet** A →Suicide Special revolver made by the →Hopkins & Allen Arms Company of Norwich, Connecticut, U.S.A., in the late nineteenth century.
- Little Scott** (sic). A →Suicide Special revolver made in the U.S.A. by the →Hopkins & Allen Arms Company of Norwich, Connecticut, in the late nineteenth century.
- Little Tom** Designed by Alois →Tomiška, this was the first commercially successful small automatic pistol to incorporate a double action trigger system. The first guns seem to have been made by →Wiener Waffenfabrik, perhaps as early as 1913, but series production did not begin until after the First World War had ended. Pistols were then made simultaneously by Wiener Waffenfabrik and the →Tomiška factory in Pilsen; 6.35mm and 7.65mm versions are comparatively common, but a few were also made in Vienna in 9mm Short.
- Liversidge** The marks of Charles F. Liversidge, an English gunsmith trading in Gainsborough, Lincolnshire, has been found on sporting guns and accessories, including shotgun cartridges made prior to 1918 by →Eley Bros.
- Livingston** Joseph W. Livingston; Syracuse, New York State, U.S.A. A gunmaker trading at the corner of Geddes and Fayette Streets in 1877–82, Livingston was the co designer (with John A. →Nichols) of a 'gun lock' and a 'hinge joint

breech loading firearm' protected by U.S. Patents 198669 and 198670 of 25th December 1877. He was also granted U.S. Patent 227907 of 25th May 1880 for a 'breech loading firearm'.

**LJM and LJP** Found on U.S. military firearms and accessories. See 'L.J.

→Megette' and 'Laurence J. →Phelan' respectively.

**Ljungmann** Erik Ljungmann, a consulting mechanical engineer, was responsible for the basic design of the Swedish 6.5mm Ag.42 and Ag.42B automatic rifles. Adapted for production by Erik Eklund, guns of this type were made in quantity by →Husqvarna Våpenfabriks AB in c. 1942–55. Others, differing in detail, were made in Denmark in the late 1940s by Dansk Industri Syndikat AS 'Madsen'—with the gas tube coiled around the barrel—and also in Egypt as the 'Hakim' and 'Rashid' (q.v.).

**Ljubic Industries, Inc.;** Yakima, Washington State, U.S.A. This gunmaking business was responsible in the 1980s for the futuristic →Space Rifle and a similarly quirky shotgun. Among the unusual features were thumb-button triggers, twist-off loading, and a recoil mechanism built into the tubular butts.

**LJW** *superimposition-type monogram, with 'L' and 'J' on the arms of the dominant 'W'*. Found on the grips of semi-automatic pistols made in Belgium by L. & J. →Warnant Frères of Hognée prior to 1914.

**L&K** Found on rimfire cartridges made by the Phoenix Cartridge Company for Liddell & Kaeding of San Francisco.

**lkm** Associated with small arms ammunition components made under German control in 1943–4 by Munitionsfabriken vorm. →Sellier & Bellot in the 'Prag Veitsberg' factory.

**LL** Found on U.S. military firearms and accessories. See 'Luther →Luge'.

**L.L.** These code letters, introduced to the Prussian army by a December 1910 amendment to the 1909 regulations (to replace →'M.L.'), distinguished the equipment of the *Feldtrupp für Lenk-luftschiffe* and were applied in the form 'L.L.I.15'. The field-dirigible detachment was disbanded early in 1917, when its airships were transferred to the naval section.

**Llama–Gabilondo SA** Successor to 'Gabilondo y Cia' (q.v.); a move from Elgoeibar to Vitoria occurred in 1966, helping to date guns by a change in their markings.

**Llama pistols and revolvers** The first semiautomatic pistol, the Llama *Modelo IV*, appeared commercially in 1931. Chambered for the 9mm Largo round, it lacked a grip safety and was replaced almost immediately by the Llama *Modelo V* (1931–40). The *Modelo VI* was a variant of the Model V chambered for the 9mm Short cartridge, but production seems to have been confined to 1931–2; the *Modelo VII* (1932–54) chambered the .38 ACP in addition to 9mm Largo; *Modelo VIII* (1939 to date) was similar to *Modelo VII*, but had a grip safety; *Modelo IX* (1936–54) lacked the grip safety, and could be obtained only in 7.65mm Parabellum, 9mm Parabellum and .45 ACP.

¶ *Modelo IX-A*, introduced in 1950, was essentially the 'IX' pattern with a grip safety set into the back strap. The Llama *Modelo XI* or *Llama Especial* of 1950

was a 9mm Parabellum variant with a ring hammer and a modified grip with less rake and a more prominent toe-spur. The 7.65mm Llama *Modelo I* and 9mm Short *Modelo II* were blowbacks sharing the same general lines as the *Modelo IV*. Dating from 1933, they had soon been replaced by the 7.65mm blowback *Modelo X* and the 9mm Short locked-breech *Modelo III* respectively, which lasted from 1935 to 1954. Introduced in 1950, the 7.65mm *Modelo X-A* and the 9mm Short *Modelo III-A* were modifications of the 'X' and 'III' patterns with a grip safety.

¶ The *Modelo XV-A* was a .22-calibre variant of the 'X-A'; the *Modelo XVI* was a deluxe version of the 'XV'; and the *Modelo XVII* was a compact 'XV' chambered only for the .22 Short rimfire cartridge. Designations prefixed 'B', 'C' or 'G' refer to blue, chrome and gold-plated finishes respectively, with a supplementary 'E' being added to denote engraved examples; the *Modelo BE-III-A*, therefore, is simply a blued III-A with engraving.

¶ Though production of Colt-Browning adaptations continued into the 1990s, Gabilondo devoted much development work to the →Omni, designed by the American Gary →Wilhelm. This has been made in a variety of patterns without ever really encountering universal success. Consequently, a reversion to simplified Colt-Browning principles was made with the double-action Llama *Modelo 82* (introduced in 1988) and *Modelo 87 Competición* (1989), which has an elongated ported barrel, an adjustable trigger and greatly refined sights.

¶ The first revolvers seem to have been introduced soon after the end of the Second World War, the range comprising three Smith & Wesson-type swing-cylinder guns: the squared-butt *Modelo XII* (.38 Long), with a 10cm barrel; the round-butt *Modelo XII* (.38 Special), with 10cm or 15cm ventilated-rib barrels; and the *Modelo XIV* (.22LR rimfire or .32 S&W), which could be found with adjustable target-type sights and a variety of barrel lengths. All three of these guns could be found marked RUBY EXTRA, generally with less attention to finish than the 'Llama' examples. They seem to have been made in Elgoibar, whereas the pistols came from the new factory in Vittoria.

¶ New guns appeared in the 1960s, doubtless inspired by the Astra–Unceta patterns, though the conventional swing-cylinder design was retained. Post-1960 guns have been sold under names such as 'Comanche', 'Martial', 'Olimpico', 'Piccolo', 'Scorpio' and 'Super Comanche', and are all listed individually. The *Llama XXVI* is a simplified variant of the Olimpico, with standard grips and a half-length ejector-rod shroud; the .32 Long *Llama XXVII*, similar mechanically to the 'XXVI', had a 5cm barrel and fixed sights; the .22LR rimfire *Llama XXVIII* had a 15cm barrel and adjustable sights.

**LLCo.** *linear monogram, with back-to-back letters 'L' sharing a common stem.*

Moulded into the grips of →Smith & Wesson-type →Russian Model revolvers made in Germany in the late 1870s by Ludwig →Loewe & Co., presumably for sale commercially in Russia.

**L.L.E.** This unit mark was applied in the Prussian army, in the form of 'L.L.E.55', by the *Ersatztruppe für Lenkluftschiffe* from December 1910 until the unit was

- disbanded in 1917. See also 'L.L.'
- LLK** Found on U.S. military firearms and accessories. See 'L.L. →Kuralt'.
- Lloyd** James Lloyd, an English gunmaker, began trading from Priory Street, Southover, Lewes, Sussex, in 1831. A move to Station Street took place in 1851. By the beginning of the twentieth century, the trading style 'Lloyd & Sons' had been adopted and additional premises had been opened in Horsham. Appropriate marks have been found on sporting guns and ammunition, including shotgun cartridges sold under the names →Imps (or 'Improved Imps') and →Imperial Champion.
- LM** Found on U.S. military firearms and accessories. See 'L. →Menz'.
- l.M.** *to be read as 'L.M.'* These letters distinguished another minor pre-1918 Prussian/German army unit, a *leichte Munitions-kolonne* or light ammunition-supply column. If the mark simply reads 'l.M.II.5.25', then the weapon was issued to the column attached to II. Abteilung of the 5th field artillery regiment; but see also 'l.M.A.F.'
- L.M.G.** This was introduced to the German army by a November 1909 amendment to the original 1909 marking handbook, to be used by the *Lehr-Maschinengewehr-Kompagnie der Infanter-Schiess-Schule*—the machine-gun training company attached to the infantry marksmanship school at Spandau. Taking the form of 'L.M.G.55', it has been reported on Karabiner 98 and Pistolen 08.
- l.M...K.D.** *to be read as 'L.M...K.D.'* This was applied by the *leichte Munitionskolonnen* attached to the German Kavallerie-Divisionen of the First World War period: light ammunition-supply columns attached to the cavalry divisions. A typical example will read 'l.M.2.K.D.25' for the 25th weapon issued to the light supply column accompanying the 2nd cavalry division.
- lmq** This mark will be found on sights and optical equipment made in 1943–5 by Carl →Zeiss of Jena.
- l.M...R.** *with a cursive 'R'* This combination of letters appeared in the property markings applied by one of the less important pre-1918 German army units: a light ammunition supply column or *leichte Munitionskolonne* attached to a reserve field-artillery regiment. A typical example may read 'l.M.II.5.℞.50', for the 50th weapon issued to the light column attached to II. Abteilung of the 5th reserve field-artillery regiment.
- l.M.r.** This may be found in the property marks applied by the light ammunition-supply columns attached to the mounted detachments of the field-artillery regiments of the pre-1918 German army (*leichte Munitionskolonnen der reitende Abteilungen des Feldartillerie-Regimenter*). A typical example will read 'l.M.r.5.25' for the 25th weapon issued to the supply column of the 5th field artillery regiment's mounted detachment. However, marks of this pattern are now very rarely seen.
- LN** Found on U.S. military firearms and accessories. See 'L. →Newell'.
- Loaded chamber indicator** A pin, blade or other device—sometimes combined with the extractor—which gives visual and tactile indication of the presence

of a cartridge in the chamber.

**Løbnitz** Nicolai Johan Løbnitz was born in the Danish town of Rendsburg in 1798 and died in Copenhagen in 1867. Well-known for an assortment of chamber-loading rifles, he also developed a curious air machine-gun in 1834. The gun was tested a year later and found quite effective, but the two huge flywheels that operated the pump made the whole thing unwieldy and nothing more came of the idea. See also 'Gustav Erik →Fleetwood'.

**Lochat** L. Lochat-Habran & Cie of Jupille-lèz-Liège, founded in 1860 as a metal-working business, grew to become one of Belgium's leading gun-barrel makers. But trading ceased in 1914, never to resume.

**Lock** C.H. Lock; Atherstone, Warwickshire, England. The name of this gunmaker has been reported on sporting guns, and on shotgun cartridges sold as "Lock's Special".

**Lock Fast** A term associated with a locking system patented in 1860 by James →Dougall, moving the breech forward before the barrels could be dropped. It was used on double barrelled 'break open' shotguns and rifles made in 1863–75.

**Lock time** is customarily defined as the period that elapses between pressing the trigger and the impact of the hammer, striker or firing pin on the primer of a chambered cartridge. Alternatively, but much less commonly, lock time has been taken between pressing the trigger and the exit of the bullet from the muzzle, as the aim is susceptible to movement up to the latter point. The shortest possible lock time is desirable to reduce the chance of a shift in aim during the period in which the striker is falling. Lock times as short as two milliseconds (.002 sec) will be encountered in bolt action sporting rifles, which usually have a short light striker propelled very rapidly, to a ponderous ten milliseconds (.01 sec) for some military rifles where heavy cocking pieces—and sometimes even the safety catch—are attached directly to the striker. The fastest lock time of standard military rifles is generally regarded as the German Gew. 98 at about five milliseconds, closely followed by the 1905 pattern Japanese Arisaka. Among the slowest are the U.S. Krag-Jørgensen and some of the early Mannlichers (about eight milliseconds), with the Gew. 88 at nine milliseconds or worse.

**Lockwork** *or* **Lock work**. An expression covering the whole of the mechanism necessary to fire a weapon, from the trigger through to the hammer or striker.

**Locke** William Watts Locke & Company. This London based gunmaking business, owner of the →Adams Small Arms Co. Ltd, was listed at 391 Strand in 1882–92.

**Locking rifle** A variant of the →Remington →Rolling block system, ten thousand of these 'Model 1871' rifles were made at →Springfield Armory in 1872. Similar to the 1870 pattern U.S. navy rifles, they had an additional component to prevent accidents occurring when the rolling block rifles were being loaded at full cock. The hammer of these guns automatically dropped to half cock when the breech piece was closed, and had to be retracted manually before

firing. Though 'Locking Bolt' Remingtons were rejected by U.S. army trial boards, substantial numbers were purchased by the New York state militia.

**Lockwood** J.E.S. Lockwood. Working from chambers in 3 New Street, Birmingham, Warwickshire, this British patent agent acted for Douglas Vaughan →Johnstone, John William →Fearn and Frank →Clarke. See British Patents 208341 of 1922 and 231557 of 1924.

**Lockyer** Colonel William Lockyer of the Royal Artillery was the British Army's Chief Inspector of Small Arms ('CISA') from 1894 to 1900. He is best remembered for the experimental 'Lockyer Carbines'—shortened versions of the →Lee Enfield rifle developed during the early stages of the South African War in 1899–1900. They were not successful, but paved the way for the SMLE.

**Loewe** **Ludwig Loewe & Company**; Berlin and Charlottenburg. Founded by the brothers Ludwig, Sigmund and Isidor Loewe in 1870, to make machine tools and sewing machines, this company was recruited in the early 1870s to make back-sights for the single-shot Mauser service rifle and subsequently tendered successfully to make seventy thousand Smith & Wesson-type revolvers for the Russian government. By the late 1880s, Loewe had diversified so greatly that the company had become Germany's leading manufacturer of machine tools. The original factory had proved too cramped to accommodate the growing work force, so a new one had been built alongside Hutten Strasse in Charlottenburg. In December 1887, Loewe gained control of Waffenfabrik →Mauser; by the end of the nineteenth century, a financial interest had also been taken in FGGY in Budapest. An agency for Loewe's products was even maintained in London by Henry F.L. Orcutt, trading from 145 Cannon Street in 1892–8.

¶ When Mauser gained a huge rifle order from Turkey in 1887, work was to be split between Oberndorf and Charlottenburg. Before it began, however, the German authorities offered a huge contract for the new 1888 pattern service rifles (see 'Reichsgewehr'), but Mauser was not keen to promote a gun incorporating features developed by his arch rival →Mannlicher, so a compromise was arranged; the Turkish guns would be made in Oberndorf, and the Reichsgewehre would be made by Loewe. A suitable gunmaking factory was then built in Kaiserin Augusta Allee in Charlottenburg to fulfil the German order.

¶ Loewe also supplied machine-tools to many arms factories. A catalogue dating from c. 1910 noted that these had included the Prussian arsenals in Spandau and Danzig; the Bavarian establishment in Amberg; the British Royal Small Arms Factory, Enfield Lock; Manufacture d'Armes de l'État, Liège; the Danish factory in Copenhagen; the Norwegian factory in Kongsberg; the Swedish factory in Eskilstuna; the Dutch small-arms factory in Hembrug; the Portuguese factory in Lisbon; the Toledo and Oviedo factories in Spain; the Izhevsk factory in Russia; the Turkish arsenal in Constantinople; the Serbian factory in Kragujevac; the Chinese factories in Hanyang, Canton, Changsha, Kiangnan, Tsinan-fu and Tchow; the Japanese arsenal in Yokohama; the

Brazilian arsenal in Rio de Janeiro; the Mexican factory in Mexico City; the Argentine factory in Buenos Aires; and the Chilean factory in Valparaiso.

¶ Private clients had included DWM, Waffenfabrik Mauser; OEWG; FGGY; Fabrique Nationale d'Armes de Guerre; Vickers, Sons & Maxim Ltd; the Maxim-Nordenfelt Guns & Ammunition Co. Ltd; BSA&M Co. Ltd; Cogswell & Harrison Ltd; and Eskilstuna Jernmanufaktur AB.

**LOH** Found on U.S. military firearms and accessories. See 'Linus O. →Hale'.

**Lohmeyer, Tait & Company** Listed as a member of the English gun trade at 3 Wilson Street, London EC, in 1889, but possibly little more than a manufacturers' agent.

**Lomax** M.P. Lomax, a major in the U.S. Army, accepted firearms and accessories in 1837–45. Distinguished by 'MPL' marks, they included single-shot cap-lock pistols and →Hall breech-loading carbines. See also "U.S. arms inspectors' marks".

**Lombard** B.B. Lombard, using the identifier 'BBL', accepted U.S. military firearms and accessories in the late 1890s. See also "U.S. arms inspectors' marks".

**London** A double-barrelled side lock shotgun made by →Società Armi Bresciane to the designs of Renato →Gamba. It is essentially a plainer version of the →Ambassador Executive, with less ostentatious decoration and a conventional double-trigger system. The standard 12-bore barrels can be replaced with 20-bore on request.

**London** Edward London. This gunmaker began trading from 50 London Wall in 1826, and was still trading from 51 London Wall when he died in 1866. Executors perpetuated business until 1872. Sporting guns and pump-up pneumatic air canes are known with London's marks.

**London Armoury Co. Ltd** ["The..."]. One of the best known of the nineteenth century British series- or 'mass' production gunsmithing businesses, this was listed for the first time in 1857. Premises were then being occupied in Railway Arches, Henry Street, Bermondsey Street, London E, where they stayed until 1863. A move was then made to Victoria Park Mills, Old Ford Road, London E, and offices were opened in 36 King William Street and 27 Leman Street in 1868. The King William Street office moved to no. 54 in 1875, and then to 118 Queen Victoria Street in 1884. This seems to have been renumbered '114' in 1888, and was still there in 1900.

**London, Birmingham & Foreign Armour Agency** ["The..."]. This 'gunmaking' business was listed in London in 1864–8, at 38 Lime Street. Operations are believed to have been concerned more with the promotion of composite ships' armour than infantry weapons, but the agency history remains unclear.

**London Breech Loading Firearms Company** ["The..."]. Operating briefly from an office at 447 West Strand in 1882–4, the affairs of this promotional agency are also uncertain.

**London Firearms Company** This promotional agency was listed at 431 Strand in 1886–7, and may have been a successor to or continuation of the 'London Breech Loading Firearms Company' listed above. Its goals remain unknown.

**London Gun Company** A gunsmithing business—or possibly only a merchant—trading from 42 Wool Exchange, London EC, from 1882 until 1900 or later.

**London Pistol Company:** see 'Manhattan Fire Arms Company'.

**London Small Arms Co. Ltd** ['The...']; Victoria Mills, Old Ford Road (1866–1921) and Albion Works, Ossary Road (1921–5), London. Listed in the directories from 1867, this gunmaking business was formed, like the →Birmingham Small Arms Co. Ltd, to make military rifles with interchangeable parts. →Snider, →Martini Henry, →Lee Metford rifles (Mks I, I\* and II), Lee Enfield rifles Mks I and I\*, and SMLE rifles Mks III and III\* will all be found with appropriate 'L.S.A. Co.' marks, which were still being used when trading ceased in the early 1920s. The company was eventually liquidated in 1925.

**London Sporting Park;** London, England. Marks of this type have been found on shotgun ammunition made by →Eley Brothers prior to the First World War. It is assumed that the 'Park' was a shooting ground maintained by commercial interests, possibly within the Gun Trade, but no other details are known.

**Lone Star** A →Suicide Special revolver made in the U.S.A. by Otis →Smith of Middlefield and Rock Fall, Connecticut, in the late nineteenth century.

**Loneux** André & Charles de Loneux, a Liège-based gunmaking partnership, employed the London-based agents →Heintzmann & Rochussen in 1865–6.

**Long** J. Long; Glasgow, Lanarkshire. The marks of this Scottish gunmaker have been reported on self cocking →pepperboxes dating from the middle of the nineteenth century.

**Long** Richard Long & Company. Based at 31 Threadneedle Street, London, this merchandising business represented the Belgian gunmaker A. Bourchez in 1867.

**Long Branch Small Arms Factory;** Long Branch, Ontario. Approval to build gunmaking facilities was granted by the Canadian government in June 1940 to the Dominion Small Arms Factory Corporation (renamed 'Small Arms Ltd' in August 1940). The first guns were made in 1941 and, by the end of the Second World War, production had amounted to about 911,000 .303 →Lee-Enfield No. 4 Mk I\* and 5200 .22 rimfire No. 7 rifles, 128,200 9mm →Sten Guns, 59,000 .30 and .303 →Browning machine guns, and some 20mm Polsten cannon. About 330,000 of the No. 4 Mk I\* rifles had been made for the British government. The Long Branch factory was officially taken over on 1st January 1946 by the Small Arms Division of Canadian Arsenals Ltd, making →Lee Enfield and then FN →FAL derivatives (C1, C1A1, C2, etc.) until closed in June 1976. Canadian service rifles are now being made by →Diemaco.

**Long Range Military Creedmoor Rifle** Built on the →Remington-Hepburn action, chambered exclusively for the .44–75–520 cartridge, the 'No. 3 Long Range Military Creedmoor Rifle' appeared in 1882. It had a vernier back sight on the tang, a steel ramrod and a full length fore end retained by two bands.

**Long Range Model** This name was applied to a series of →Ballard rifles. The original .45–100 No. 7 *Long Range Model* (1876–82) had a half octagon barrel and a 1300 yard vernier back sight graduated. The wind gauge front sight was supplied with bead and aperture discs, plus a spirit level. The butt had a

chequered pistol grip, and the fore end had a →schnabel tip. The *No. 8 Long Range* also had a pistol grip butt, though much plainer; *No. 9* was simply *No. 8* with a straight wrist butt. Dating from 1877–80, the *No. 7 A.1* rifle was a deluxe variant of the *No. 7*, with Rigby barrels, English walnut stocks, rubber shoulder plates, and vernier sights of the finest pattern. Special *No. 7 A.1 Extra* rifles were made in 1879 and finally, in 1885–6, a few ‘*No. 7 Creedmoor Model*’ guns were assembled.

**Long Range Rifle**, later known as the “Sharps’ Long Range Creedmoor Rifle”.

This .44–77 or .44–90 gun appeared in 1873, before the →Creedmoor name became fashionable. Made by the →Sharps Rifle Mfg Co. and the →Sharps Rifle Company, it had an octagon barrel, chequered pistol-grip butt, a vernier back sight on the tang behind the breech, and a globe pattern front sight, (with wind gauge and spirit level) at the muzzle. There were four versions. The *No. 1* pattern rifle had a half or full octagon barrel, a checkered pistol grip butt, and a checkered fore end, and vernier/spirit level sights; *No. 2* was similar to *No. 1*, but had a plain straight wrist butt and lacked checkering on the fore end; *No. 3* had a straight wrist butt and a plain aperture-type sight on the tang; and *No. 4* was little more than a *No. 3* stocked in poorer wood. These guns were superseded in 1876 by the second pattern listed below.

**Long Range Rifle** Introduced by the →Sharps Rifle Company in 1876, this was a Mid Range Rifle (q.v.) with a longer half or full-octagon barrel chambered for cartridges ranging from .44–90 to .45–100. The *No. 1 Pattern* had a vernier back sight could be mounted on the tang or on the comb of the butt, near the heel, and the globe-type front sight had both wind gauge and spirit level. The chequered woodwork had a silver escutcheon let into the fore end. The *No. 2 Pattern* had a plain fore end and lacked the spirit level on the front sight; *No. 3*, similar to *No. 2*, had a straight wrist butt.

**Long Range Rifle** (Sharps): see also ‘New Model Hammerless Long Range Rifle’.

**Long recoil**: see ‘recoil operation’.

**Long Rifle** A name applied to the →Daisy No. 80 1000-shot lever action BB gun, dating from 1955–6 with plastic furniture. A kneeling rifleman firing a ‘long rifle’ is stamped into the butt and traced with gold paint.

**Long Rifle** Applied to the most popular of the .22 →rimfire rounds, also known as ‘lang für Buchsen’.

**Long Shot** [“The...’]. Associated with 12-bore shotgun cartridges loaded by →Eley-Kynoch for H.E. →Pollard & Company of Worcester, →Fuller of Dorking and →Hunter & Maddil of Belfast.

**Longspur** or **Long Spur** A name associated with a cap-lock revolver made in the middle of the nineteenth century by P. →Webley & Son.

**Long Tom** [“The...’]. Found on shotgun cartridges sold by →Sanders of Maidstone, made, or at least loaded, from components supplied by →Eley Brothers. The name was derived from a long-barrelled cannon kept in nearby Rochester Castle.

**Longford** This brand name was associated with a Mauser pattern sporting rifle,

- built on an →FN action by →Cogswell & Harrison of London. Introduced in the early 1960s in .30-06 or .308 Winchester.
- Looking Glass** A small Browning type automatic pistol made in Spain by →Acha Hermanos y Compañía of Ermua. 6.35mm; six rounds, hammer fired. Some examples may also bear the marks of Fabrique d'Armes de →Grande Précision.
- Loomis** Crawford C. Loomis; Ilion, New York State. Loomis worked for the →Remington Arms Company, designing many cartridge weapons and the Model 26 pump-action BB gun. The patents for the latter, including U.S. no. 1760652 of 27th May 1930 and no. 1830763 of 10th November 1931, were granted after the Depression had stopped production.
- Loomis** Oliver Loomis: see 'Springfield'.
- Lopez** José Lopez de Arnaiz. Designer of the one-hand cocking system applied to the 'Jo-Lo-Ar' pistol (q.v.).
- Lorcin Engineering Co. Inc.;** Mira Loma, California, U.S.A. Maker of the Lorcin 25 pocket automatic.
- Lord** Horace Lord was the inventor of an improved cylinder retainer, patented in the U.S.A. on 5th August 1884 and subsequently exploited by →Colt.
- Lord Model** This was a variant of the 'Fourth Model' .22 Short RF derringer introduced by →Colt's Patent Fire Arms Mfg Co. in 1959B63. A gold-plated frame, a blued barrel and wood grips distinguished it from the →Lady Model. See also "Thuer derringer".
- Lorne** ['The...']. Found on →Eley-Kynoch shotgun ammunition sold by Duncan →Macdougall, a gunsmith/ironmonger trading in Oban, Argyllshire, Scotland. The brand name is usually accompanied by an illustration of a longship, taken from the Arms of Macleod of Dunvegan, Lords of the Isles.
- Loron** Henri Loron; rue Saint Denis 13, Saint Étienne, France. Listed in 1879 as a gunmaker, Loron made the otherwise-mysterious rifle offered to the British trials by Charles →de Grelle.
- Loughran** Benjamin Franklin Loughran, often listed as 'Lougharan', accepted firearms and accessories on behalf of the U.S. Army in 1905-6. He used a 'BFL' identifier. See also "U.S. arms inspectors' marks".
- Lovell** John P. Lovell ['& Sons']; Boston, Massachusetts. This U.S. gunmaker, a partner in Grover & Lovell prior to 1844, made cap lock pistols revolvers on his account until 'John P. Lovell & Sons' was formed about 1866. The business is said to have been acquired by Iver →Johnson in 1868, but the Lovells continued to operate from 27 Dock Square, Boston, until 1873 or later. Revolvers were exhibited in Philadelphia in 1876 and in Paris in 1878, when premises were being occupied in Boston at 145 Washington Street. By 1890, the 'John P. Lovell Arms Company' (below) was being listed at 147 Wade Street.
- Lovell** John P. Lovell Arms Company ['The...']; Boston, Massachusetts., U.S.A. This gunmaking business may have been a successor to John Lovell & Sons (above), though the lineage remains unclear. It made single-barrel shotguns under the name 'The →Champion' from c. 1887 until shortly before the death

of John Lovell in 1897.

**Loveridge & Company** Trading from 172 King's Street in Reading, Berkshire, this English ironmongery business also sold sporting guns and ammunition, including →Kynoch made shotgun cartridges marked 'Royal County'.

**Lovering** E.M. Lovering accepted firearms and accessories on behalf of the U.S. Army, marking them 'EAL'. His activities were apparently confined to 1909. See also "U.S. arms inspectors' marks".

**Lovett** T.J. Lovett, in the employ of the U.S. government, accepted military firearms and accessories. Marked 'TJL', they dated from the early 1900s. See also "U.S. arms inspectors' marks".

**Lowell** Charles S. Lowell, a major in the U.S. (Federal) Army, accepted firearms and accessories in 1858–63. His 'CSL' marks—distinguishable from those of C.S. →Leonard by date—will be found on →Colt and →Starr cap-lock revolvers.

**Lowell Arms Company;** Lowell, Massachusetts. Working in 1865–8, this U.S. gunmaking business was a successor to the Rollin →White Arms Company—though White no longer had a financial interest and so →Smith & Wesson regarded guns made after the reorganisation as infringements.

**Lowell Manufacturing Company;** Lowell, Massachusetts. This agency was formed to promote the Lowell machine-gun, described in the next entry, but does not seem to have direct links with the Lowell Arms Company listed previously. Its operations seem to have been confined to 1876–80.

**Lowell machine-gun** Invented by De Witt →Farrington, and promoted (but probably not actually made) by the Lowell Manufacturing Company of Lowell, Massachusetts, a gun of this type was tested most successfully in October 1876 in Annapolis Navy Yard, firing ten thousand rounds with only one misfire. Only the upper of the two barrels fired, as the lower one was simply rotated into place when its companion overheated. In July 1877, a modified gun fired 55,000 rounds with only two stoppages—a staggering performance for its day. However, though a few guns went to the U.S. Navy, twenty went to Russia, and a few were issued to Californian state militiamen, Lowell had soon disappeared into history.

**Lower** Gunsmith John P. Lower was born in Philadelphia in 1833, establishing his first shop in the town in the early 1850s. There he made 'Indian Guns' until the Civil War began. A move to 281 Blake Street, Denver, Colorado occurred in 1872; a variety of sporting guns, rifles and revolvers have been reported with Lower marks, though many were made by manufacturers such as →Colt or →Remington. Trading continued until John Lower died in 1915, and was thereafter perpetuated for a few years as "J.P. Lower's Sons Company" from a base in 1729 Champa Street, Denver.

**Lowrecoil** ["The..."]. Apparently deliberately written as one word, this mark is found on shotgun cartridges distributed in East Anglia by Charles S. →Rosson of Norwich.

**LP** Found on U.S. military firearms and accessories. See 'L. →Papanti'.

- L and P with crossed pennants.** A military proof mark used during the reigns of George V (1910–36) and George VI (1936–52). See also ‘British military proof marks’.
- lpk** Allotted in 1943, this code will be found on small-arms ammunition made by →Servotechna AG of Prague during the German occupation of Czechoslovakia.
- L.R.** This marking belonged to the *Lehr-Infanterie-Bataillon* of the pre-1918 German army, a comparatively insignificant training unit, and usually appeared in the guise of ‘L.R.5.105.’—the 105th weapon issued to the 5th company.
- LSA or L.S.A. Co. or LSA Co. or L.S.A.Co.Ld.** Marks employed by The London Small Arms Co. Ltd from c. 1864 until 1925.
- L.S.P. or LSP:** marks found on shotgun ammunition used exclusively by the London Sporting Park. See also ‘SPL’.
- LSS, or ‘Laminated, Stainless-Steel’.** A variant of the →Remington M700 bolt-action rifle, introduced in 1996.
- LT or L T or L.T.** Stencilled on the butts of British guns adapted for ‘Line Throwing’, many of which prove by the presence of other identifiable marks to have been made or used in Canada.
- Luca** A brand name associated with the products of Ludwig →Catterfeld of Zella-Mehlis.
- Lucas** Joseph Lucas Ltd; Birmingham. Best known as a maker of electric lights and associated equipment, particularly for automotive use, Luceas made magazines for the British 9mm →Sten Gun during the Second World War. The regional code ‘M 158’ may have been used instead of the company name. See also “British military manufacturers’ marks”.
- Luck** Gebr. Luck; Suhl in Thüringen. Founded in 1879, this German gunmaking business was being operated in 1900 by Franz Aug. Luck. By 1914, however, the proprietors were Richard, Ernestine, Elsa, Hedwig & Aga Luck. Guns were then being made alongside bicycles (‘Waffen u. Fahrradfabrik’). After the First World War, operations were re-registered in the names of Richard Luck and Ludwig Wagner and continued until c. 1933 when they were succeeded by →Luck & Wagner. Individual guns may be identified by ‘GL’ or ‘G.L.’ marks, sometimes in the form of monograms.
- Luck & Wagner,** ‘vorm. Gebr. Luck’; Suhl in Thüringen. Listed in 1938–41 as a maker of gun- and bicycle-parts.
- Luckes** S. Luckes; Bridge Street, Castle Green and St James Foundry, Taunton, Somerset. This English gun and ammunition distributor had depots in Langport, Washford and Wiveliscombe. His name has been found on sporting guns and accessories, including shotgun cartridges sold under the brand name ‘Taunton Demon’.
- Lucking** John Lucking. This patent agent, or possibly mechanical engineer obtained British Patent 14447/07 of 1907 for Gustav →Pabst, acting in conjunction with G.F. →Redfern & Co. Lucking’s address was listed as 102 &

104 Leonard Street, Finsbury, London.

**Lucznik**, or 'Zakłady Metalowe Lucznik'. Airguns made in Poland by a company of uncertain trading style, imported into Britain by the →Viking Arms Company. They included the Model 170 spring air pistol, copied from the Walther LP53, and the Model 188 break barrel rifle—both in 4.5mm.

**Luda** ["The..."]. A brand name found on shotgun cartridges handled by →Hodgson of Louth.

**Ludwig** Walter Ludwig. An engineer employed by →Mauser-Werke GmbH of Oberndorf/Neckar, responsible for the development of the unsuccessful recoil-operated 9×19 →HsP pistol.

**Luge** Luther Luge, a U.S. government employee, accepted military firearms and accessories in 1841–5, marking them 'LL'. See also "U.S. arms inspectors' marks".

**Luger** Georg Luger, son of a doctor, was born in 1849 in Steinach in the Austrian Tyrol. After military service in the Austrian Landwehr, Luger worked for a time as a railway engineer. There he met Ferdinand von →Mannlicher, collaborating in 1875 in the design of a gravity feed magazine for the →Werndl rifle. Luger joined Ludwig →Loewe & Co. in 1891, continuing to design rifles; a 6mm-calibre bolt-action pattern was submitted to the U.S. Navy trials in 1894, but was not successful.

¶ Transferring to the newly formed →Deutsche Waffen & Munitionsfabriken in 1897, Georg Luger was entrusted with transforming the →Borchardt pistol into an acceptable weapon. This he did with great success, millions of the resulting →Borchardt Luger or →Parabellum being made prior to 1945.

¶ Luger's German patents included 78406 of 26th September 1893 and 90433 of 1896, protecting gas-ported strikers for 'bolt guns', and 109481 of 30th September 1898 for a selection of safety devices applicable to the →Improved Borchardt pistol. British Patent 9040/99 of 1899 and U.S. Patent 639414 of 19th December 1899 were both comparable with DRP 109481. A selection of patents was sought in Germany in May 1900, being granted as 129842 for the basic action of the perfected →Borchardt Luger; 130377 for the sliding barrel action and the dismantling system; 130847 for the magazine actuated hold-open system; 130911 for the safety arrangements; 131451 for the toggle train; 132031 for the trigger system; and 134003 for the means of breaking the toggle by ramps on the frame. These individual grants were consolidated in British Patent 4399/00 of 7th March 1900 and U.S. Patent 753414 of 1st March 1904.

¶ German Patent 164853 of 22nd May 1904 was granted for combination extractors and loaded chamber indicators; British Patent 13147/04 of 14th July 1904 and U.S. Patent 808463 of 1904 were broadly comparable. U.S. Patent 851538 of 23rd April 1907 protected a unique toggle-breaking mechanism with cam shoulders on the frame and an extended toggle grip. German Patent 213698 of 7th November 1907 was granted for an improved hold-open mechanism; 237192 of 16th February 1910 protected a chambering system with the cartridge case locating on its mouth; and 312919 of 1st April 1916 allowed

the Parabellum pistol to be loaded even if the safety catch was applied. Luger died in Berlin in 1923.

**Luger Pistol:** see 'Borchardt Luger' and 'Parabellum (2)'. See also 'American Luger', 'Borchardt' and 'Improved Borchardt'.

**Luger Sales Company;** 828 George Street, Chicago, Illinois, U.S.A. This short-lived promotional agency—which may have hid the activities of Hugo →Panzer—was formed immediately after the First World War to handle war surplus firearms, but had ceased trading by 1929. Its trademark comprised two flying geese (cf., →Stoeger).

**Lugerlike** A term coined for its similarity to 'lookalike', describing any pistol based deliberately on the external lines of the →Parabellum ('Luger')—even though they may be simple blowbacks made by →Erma-Werke, →Echave y Arizmendi or →Stoeger Industries.

**Luna** Associated with Ernst Friedrich Büchel of Zella Mehlis; found on sporting guns and target pistols, but also, doubtfully, reported on an air pistol.

**Luna Park** These gas powered rifles were made in the 1960s by Stefano →Marocchi e Figli of Gardone Val Trompia. See also 'Artemis'.

**Lunch:** see 'Harry F. →Lynch'.

**Lund conversion** The first Norwegian breech-loader was the 'Chamber loading Rifle' or *Kammerladningsgevær*, an underhammer cap-lock design adopted in 1842. The breech block, containing the chamber, was pivoted at the rear; a side lever, mounted on an eccentric, opened the action. After the Norwegian army had adopted the →Remington Rolling Block in 1867, many old chamber loaders were altered to fire the same rimfire cartridge. Conversions, depending on pattern, were known as →Landmark's and Lund's. They included the M1855–67 infantry rifle, the M1860–67 rifle musket, the M1860–67 short rifle, the M1866–69 foot artillery carbine, and the M1865–69 cavalry carbine.

**Luneschloss** John D. Lünenschloss. Listed as a member of the London gun trade in 1867B8, with an office in 90 Newgate Street, 'Johann D. Lünenschloss' was presumably a member of the Solingen based sword cutlery business 'P.D. Lünenschloss'. No firearms have ever been identified from this particular source.

**Lunsdale** ['The...']. Found on shotgun cartridges sold by →Fawcett of Kirkby Lonsdale.

**Lunsmann** Franz or Francis Lunsmann; St Louis, Missouri, U.S.A. Working between 1848 and 1870 from premises in South 22nd Street. These are believed to have been numbered '103' until c. 1867 and '410' thereafter, though Gardner lists the address as '105' and the 1864 directory gives '153' (both misprints?). Lunsmann is known to have made spring air →Gallery Guns and breech-loading sporting guns.

**Lurch** David Lurch; New York City. A maker of spring air →Gallery Guns between about 1863 and 1875, Lurch is listed in the city directories as a gunsmith and maker of mechanical targets, airgun darts and springs until the late 1870s.

He then became a sporting goods wholesale business. Lurch traded from 142 Grand Street in New York City in 1863–6 and thereafter at 157 Grand Street. Operations ceased c. 1896.

- Lurch** Joseph Lurch; New York City. Maker of spring air →Gallery Guns (rifles and at least one pistol) in the 1860s and 1870s; possibly a brother of David Lurch.
- Lur-Panzer** A name associated with a .22LR rimfire →Lugerlike pistol copied from the →Erma EP-22 by →Echave y Arizmendi of Eibar. Dating from c. 1968–73, it had a ten-round detachable box magazine and a horizontal toggle-return spring in the frame. Medallions set into the grips customarily bore PANZER in a diamond or an encircled 'EYA', with 'E' and 'A' separated by three short radial arms approximating to 'Y'.
- Lusa** These 9×19 submachine-guns were made in Portugal by →INDEF, the Lusa A1 dating from 1986 and the improved 'A2' pattern from 1994. The basic design relies on an overhung bolt, but there are differences in the design of the sliding steel-rod butt and the barrel-detaching mechanism. The Lusa A2 may be found with an optional three-round burst capability and an integral silencer.
- Lutkovskiy** Nikolai Lutkovskiy, a Russian army officer, is best known for developing a detachable 'quickloader' for the →Berdan rifle. This was apparently issued in small numbers in the Tsarist army until the advent of the magazine-fed →Mosin-Nagant in the 1890s made it obsolete. Lutkovskiy also designed magazine rifles, but none proceeded past the prototype stage.
- Luukkonen** Viotto A. Luukkonen, a government inspector, accepted U.S. Army .45 M1911A1 pistols made in 1940–1 by →Colt's Patent Fire Arms Mfg Co. See also "U.S. arms inspectors' marks".
- Lux** Found in the headstamps of shotgun cartridges advertised in 1911 by A.L. →Frank, possibly the products of →Rheinisch-Westfälische Sprengstoff.
- Lux Metallwarenfabrik:** see 'Haenel'.
- Luzier et Martin;** rue Villeboeuf 28, Saint Étienne, France. Listed in 1892 as a gunmaker.
- LW:** an unidentified government inspector's mark found on some of the earliest M1892 U.S. Army →Colt revolvers.
- lwg** Found on German military optical equipment made in 1943–5 by →Optische Werke Osterode GmbH of Freiheit bei Osterode im Harz.
- LWS** Associated with semi-automatic pistols made in the U.S.A. by L.W. →Secamp.
- lxr** Found on rifle and other small arms components made in Germany in 1943–5 by Dianawerk →Mayer & Grammelspacher of Rastatt in Baden.
- Lyle** David A. Lyle, ranking as a lieutenant in the U.S. Army, accepted →Single Action Army Model →Colt and Smith & Wesson →Schofield revolvers for U.S. Army service in 1876–80. They customarily bore 'DAL'. See also "U.S. arms inspectors' marks".
- Lyman** William Lyman (1854–96) received U.S. Patent 211753 of 28th January

1879 to protect an improved aperture-type 'No. 1 Tang Sight' made by the Lyman Gun Sight Company. This was followed by a variety of U.S. Patents: 298305 of 6th May 1884; 327957 of 6th October 1885 for an ivory-bead target sight; 341426 of 4th May 1886 for an ivory-bead shotgun sight; 348224 of 31st August 1886; 366121 of 5th July 1887; 368598 of 23rd August 1887 for a tang sight adjustable for windage as well as elevation; 396043 of 8th January 1889 for a method of clamping the base screws of a target sight; 447886 of 10th March 1891 for a shotgun sight with a centre in the form of a vertically-adjustable ivory cylinder; 455911 of 14th July 1891 for a folding leaf sight; 541558 of 25th June 1895 for a receiver-sight suitable for top-ejecting lever-action rifles; and 558402 for a peep sight adapted to the bolt-action Mannlicher sporting rifle; and 558403 of 14th April 1896 for revolver back sights. He was also responsible for U.S. Patents 629670 and 629671, granted on 25th July 1899 to his executor George Durrenberger.

**Lyman Gun Sight Company;** Middlefield, Connecticut, U.S.A. This renowned maker of iron and optical sights for firearms was founded in 1878 by William Lyman (see previous entry), who also sold rifles equipped with his sights—including those made by Ballard, Marlin, Maynard, Merwin & Hulbert, Quackenbush and Winchester, as well as 'Double English Express' patterns. The company passed into the hands of Lyman Mills, a cousin of William Lyman, and was incorporated in 1901; a younger brother of the founder, Charles E. Lyman, gained control in 1917 and the business remained in the hands of the Lyman family until the business was sold in 1969 to The Leisure Group, Inc., of Los Angeles. Improved sights had continued to appear, many being the work of James Windridge, and the Ideal Reloading Tool Company was acquired in 1925. The first optical sights followed in 1929, after Lyman had purchased the optical-sight business of both the →Winchester Repeating Arms Company and J. →Stevens Arms & Tool Company. A series of famous brand names followed, including the Lyman Alaskan sight developed in 1937 and introduced commercially in 1939. →Cutts Compensators were also made in large numbers from c. 1932 until recent times. The company centenary history, *Lyman Centennial 1878–1978*, is an invaluable source of additional information.

**Lynch** Harry F. Lynch (sometimes listed as 'Lunch'), using an 'HFL' mark, accepted military firearms made for the U.S. armed forces by →Colt's Patent Fire Arms Mfg Co. They date from 1940–1.

**Lynch** John J. Lynch accepted .45 M1911A1 semi-automatic pistols made by →Colt's Patent Fire Arms Mfg Co. Bearing 'JJL' identifiers, they dated from 1940 and can thus be distinguished from guns accepted many years earlier by J.H. →Lyons. See also "U.S. arms inspectors' marks" for both entries.

**Lyndon** W.M. Lyndon, using the identifier 'WML', accepted firearms on behalf of the U.S. Army in 1898. See also "U.S. arms inspectors' marks".

**Lynn** C.P. Lynn, a government employer using the identifier 'CPL', accepted U.S. military firearms and accessories in 1905. See also "U.S. arms inspectors' marks".

**Lynton** ['The...']. Found on 12-bore and other shotgun cartridges sold in Britain by →Gallyon & Sons.

**Lyon** Benjamin Lyon, a government employee, accepted the U.S. Army firearms and accessories marked 'BL'. They date from the mid 1870s. See also "U.S. arms inspectors' marks".

**Lyons** J.H. Lyons accepted firearms and accessories on behalf of the U.S. Army, marking them 'JHL'. His activities were confined to 1898–9, distinguishing them from those of John J. →Lynch. See also "U.S. arms inspectors' marks".

**Lyttleton Engineering Works Pty Ltd**, Pretoria, Republic of South Africa. This manufacturing business has been responsible for the R4, R5 and R6 rifles. Issued to the South African armed forces, these are minor derivatives of the 5.56mm Israeli →Galil distinguished principally by their marks and long butts. The business became →Vektor Engineering in the 1980s.

**LZ** A mark applied prior to 1919 by →Langenhan of Zella St Blasii, most commonly found on butt cylinder →Gems.

**lza** Allotted in 1943 to identify machine-gun and other small-arms components made in the →Mauser Werke AG factory in Karlsruhe/Baden

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