GUNS DICTIONARY

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

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M

THE DIRECTORY: M–MYŠKA

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m Found on rifle and other small arms components made in Germany in 1940 by ➔Limbacher Maschinenfabrik Bach & Winter of Limbach/Sachsen.

M *and a number*. Found on components of a range of British military stores (including firearms) made during the Second World War, this indicates a company operating in the 'Midlands' (of Britain). The numbers identified the individual companies. Among the many examples associated with small-arms are 'M 1', ➔Accles & Pollock; 'M 8', ➔Anstey & Wilson; 'M 13', the ➔Austin Motor Co. Ltd; 'M 47', ➔BSA Guns Ltd (plus suffixes 'A' for Small Heath, 'B' for Redditch and 'C' for Shirley); 'M 78', ➔Elkington & Co. Ltd; 'M 91', ➔Godins Ltd; 'M 94', W.W. ➔Greener Ltd; 'M 109', ➔Harrison Bros. Ltd; 'M 111', Frank ➔Hawker Ltd; 'M 117', the ➔Hercules Cycle & Motor Co. Ltd; 'M 136', ➔Willen, Jones & Sons Ltd; 'M 158', Joseph ➔Lucas Ltd; 'M 170', the ➔Midland Gun Co.; 'M 183', ➔Parker-Hale Ltd; 'M 224', ➔Skimmin & Wood; 'M 233', ➔Standard Sporting Guns; 'M 260', ➔Walls Ltd; 'M 264', ➔Webley & Scott Ltd, Birmingham; 'M 265', ➔Webley & Scott Ltd, Stourbridge; 'M 268', Westley ➔Richards & Co. Ltd; 'M 292', the ➔Morris Motor Co.; 'M 601', I.L. Berridge & Co.; 'M 602', Alfred ➔Bray & Son; 'M 615', BSA Guns Ltd, Leicester; 'M 616', BSA Guns Ltd, Mansfield; and 'M 634', ➔Mettoy Ltd. See also "British military manufacturers' marks".

M *and* '**2**' *beneath a crown*. Found on Portuguese weapons: the mark of King Manuel II (1908–10). See also "Cyphers, imperial and royal".

M1 Carbine Developed in 1941 in answer to a requirement formulated by the U.S. Army as early as 1937, the prototype of this .30 calibre light automatic rifle reached Aberdeen Proving Ground on 9th August 1941 and immediately showed more promise than either the ➔Springfield Light Rifle or the ➔Hyde/Bendix pattern, which had survived previous trials. On 30th September 1941, the perfected Winchester Carbine was recommended for immediate adoption, and the *Carbine, Caliber .30, M1* was standardised on 22nd October 1941. A wide range of manufacturers was subsequently entrusted with production, including... The M2 Carbine was a selective fire version of the semi automatic M1, adopted on 23rd October 1944. The guns were outstandingly successful, as more than six million M1, M2 and M3 Carbines were made for the U.S. armed forces prior to 1946. The M1 Carbine is customarily credited to David M. ➔Williams, but was really an amalgamation of a rotating bolt action developed by Jonathan ➔Browning rifle and the Williams short stroke piston gas system.

MA on Australian ➔Lee Enfield rifles and other small arms made by the ➔Lithgow Small Arms Factory in New South Wales.

MA *superimposition-type monogram with both letters equally prominent*. Correctly

interpreted as ➔'AM'; used by August ➔Menz of Suhl.

M.A. These letters are believed to have been the abbreviation of *Matrosen-Artillerie-Abteilung*, five of which were formed during the Second Reich. The marks of these pre-1918 German coast artillery units would, therefore, read typically 'IV.M.A.51.'

M.A. This naval mark, for the *Minenabteilung* (minelaying and minesweeping detachment), will be found on German naval firerms, edged weapns and accessories dating prior to 1918. These are said to have included a few 'Artillery Lugers'—*langen Pistolen 08*—reissued to personnel of gunboats and inshore minesweepers towards the end of the First World War. Stampings are assumed to have read 'M.A.51.' or, perhaps, 'I.M.A.51.' even though there was only a single detachment.

MA *superimposition monogram, usually encircled or enwreathed.* This has the 'M' splayed to accommodate 'A' and (sometimes) an accompanying ring target. Correctly read as 'AM' (q.v.); associated with August ➔Menz of Suhl.

MA *superimposition-type monogram, usually encircled*. Found with 'A' formed by extending the medial strokes of 'M'. Effectively formed of two opposed right-angle triangles, overlapping at the foot, this actually reads MANN with one 'N' reversed; it will be found on the grips of pocket pistols made in Germany by Fritz ➔Mann of Suhl.

ma Found on German small-arms ammunition and components made during the Second World War by F.A. ➔Lange Metallwerke AG of Aue/Sachsen.

Maadi Military & Civil Industries Company; Port Said (?). This firearms-making manufactory, operated by the Egyptian government, was built with Soviet aid in the early 1960s to make a copy of the ➔Kalashnikov AKM known as the ➔Misr. See also 'Ljungmann'.

MAB ➔Manufacture d'Arms de Bayonne.

MAC ➔Châtellerault.

Mac… , Mc… This Scottish name-label—'son of'—may be encountered in several forms, e.g., 'MacLean', 'McLean' or even simply "M'Lean". Owing to potential confusion, the permutations are treated here in a single alphabetical sequence.

McAboy Isaac E. McAboy of Huntingdon, West Virginia, U.S.A., designed an 'automatic rapid-fire gun' protected by U.S. Patent 566214 of 18th August 1896.

McAlister James R. McAlister of Hailesboro, New York, perhaps related to 'J.R. McAllister', was granted a patent protecting a 'firearm': U.S. no. 804255 of 14th November 1905. The claims concerned an auxiliary barrel clamped to the top of a sporting gun (the drawings show a pump-action shotgun), loaded by swinging the bolt mechanism laterally.

McAllister A U.S. arms inspector: see 'McCallister'.

McAllister Albert H. McAllister of Cotton Plant and New Albany, Mississippi, U.S.A., was the patentee of 'machine-guns' (U.S. 201810 of 26th March 1878 and 674811 of 21st May 1901), rights in the latter being assigned to the

McAllister Machine Gun Company.

McAllister Gun- and metalsmith Charles McAllister was recorded at 343 King Street, Charleston, South Carolina, U.S.A., in 1853–5.

McAllister J.R. McAllister of Williamsport, Pickaway County, Ohio, U.S.A., made cap-lock sporting guns in 1858–65.

McAllister The McAllister Machine Gun Company of Memphis, Tennessee, U.S.A., was assignee of rights to the machine-gun patented in 1901 by Albert McAllister. Production seems to have been meagre.

McAlpine James McAlpine of New Haven, Connecticut, U.S.A., patented a breech-loading firearm (U.S. no. 204675 of 11th June 1878).

McArdle *or 'McCardle'.* Gunsmith J. McArdle was listed in commercial directories in Boston, Massachusetts, U.S.A., shortly before the Civil War began in 1861.

McAusland Marks applied by the gunsmithing business of McAusland Brothers of Deadwood, Dakota Territory [South Dakota], and Miles City, Montana, U.S.A., a partnership of Alexander, John and William McAusland, will be found on sporting guns and ammunition. Most of the breech-loaders were purchased from major manufacturers such as ➔Colt's Patent Fire Arms Mfg Co., E. ➔Remington & Sons, or the ➔Winchester Repeating Arms Company. The move from Dakota Territory to Montana occured in 1880, and may have affected only Alexander of the three brothers.

McBeth James E. McBeth of New Orleans, Louisiana, U.S.A., designed a 'safety gun-lock for firearms' (U.S. Patent 58443 of 2nd October 1866) and two breech-loaders, with enclosed locks contained in a block that pivoted laterally to expose the breech, which were protected by 73357 of 14th January 1868 and 80985 of 11th August 1868. Rights to the earlier of these were part-assigned to Sheldon Sturgeon.

McCall William McCall [& Company]. This business, subsequently William McCall & Sons, based in the southern Scottish town of Dumfries, handled sporting guns and ammunition. These included shotgun cartridges marked 'The Border' and 'The Tally-Ho!'.

McCallin G.J. McCallin, working on behalf of the U.S. Army, accepted firearms and acessories c. 1902. They bore a ➔GJM identifier. See also "U.S. arms inspectors' marks".

McCallister Julian McCallister, a major in the Federal Army Ordnance Department, active during the American Civil War, accepted firearms and accessories marked 'JM'. Dated '1865', they can be difficult to distinguish from equipment attributed to John ➔Maggs, J. ➔Mills and Justice ➔Murphy. See also "U.S. arms inspectors' marks".

McCandless James W. McCandless of Florence, Colorado, U.S.A., patented an 'Auxiliary Rifle Barrel for Guns' on 28th October 1890 (U.S. no. 439543). The patent, protecting a sub-calibre insert, was part-assigned to William Venard of Florence.

McCarthy, Buck & Company A member of the London gun trade, perhaps a merchant, listed at 40 St Andrew's Hill, E.C. in 1899–1900. Possibly still

trading in 1914.

McCarty On 11th March 1837, Thomas McCarty of Elmira, New York, was granted U.S. Patent 147 to protect 'improvement in the construction and mode of loading fire-arms'. This consisted of a small auxiliary tube (with a nipple for the cap), which could be inserted in the breech of a break-open gun or small cannon to be held by a spring-loaded 'stirrup' or latch. The idea was far from new, as similar chamber-loaders had been made in the fifteenth century!

McCarty William B. McCarty of Cale, Indiana, U.S.A., was granted U.S. Patent 913756 of 2nd March 1909 to protect an extraordinary revolver. The 'cylinder' was a flat lightweight disc placed in the frame laterally, encircling the trigger and grip. The chambers (eighteen in the patent drawings) were bored tangentially from the inner disc-edge, aligning with the bore as the disc was rotated. The genesis of the idea may be seen in the Turret Repeaters (q.v.) that had enjoyed brief popularity in the middle of the nineteenth century.

McChesney Reuben McChesney of Ilion, New York State, was granted U.S. Patent 58444 on 2nd October 1866 to protect a rifle with a breech-block that moved radially down and back as the hammer was moved to half-cock. An improvement of this mechanism was patented on 28th May 1867 (U.S. no. 65103).

McClean Samuel N. McClean of Washington, Iowa, and Cleveland, Ohio, U.S.A., was a surprisingly prolific patentee—among many relevant U.S. grants being several for 'magazine firearms' (575265 of 12th January 1897 and 601838–601844 of 5th April 1898). U.S. Patent 723706 of 24th March 1903 protected a 'magazine bolt gun', whereas 735131 and 783453 of 4th August 1903 and 28th February 1905 were granted for gas-operated firearms (for former for a pistol). McClean developed a series of recoil buffers, a 'one-pounder machine-gun' (858745 of 2nd July 1907), and a gun carriage (862502 of 6th August 1907). He was also responsible for the unsuccessful prototypes of the ↠Lewis Gun, protected by U.S. Patent 933098 of 7th September 1908. Most patents granted after 1906 were assigned to the McClean Arms & Ordnance Company (see next entry).

McClean Arms & Ordnance Company ['The…'] of Cleveland,Ohio, U.S.A., was the assignee of patents granted to Samuel McLean (above), but failed in 1909. Rights were then acquired by the ↠Automatic Arms Company of Buffalo, New York State.

McClellan Gunsmith Hugh McClellan traded from 16 Beaver Street, Albany, New York, U.S., in 1819–20; the U.S. census of 1850 records 'Hugh McClellan'—presumed to be the same man—with premises at 9 North Street, Auburn, New York. McClellan's marks have been found on a variety of cap-lock sporting guns, including a few with an underhammer lock.

McClintock George W. McClintock of Quincy, Massachusetts, U.S.A., obtained two U.S. Patents on 17th June 1890 (nos. 430396 and 430397) to protect a 'Lock for Fire-Arms'. A half-interest in the designs, relating principally to internal-hammer sporting guns, was assigned to Mellen N. Bray of Brookline.

McClure James M. McClure traded as a gunsmith in Bucyrus, Ohio, in 1848–56. Cap-lock sporting guns have been reported with his marks.

McColl & Fraser, a gunsmithing partnership trading in Dunfermline, Fifeshire, Scotland, marked sporting guns and shotgun ammunition made in the 1950s by ➛Eley-Kynoch.

McComas Alexander McComas (1821–*c*.1877) established his gunmaking business in Baltimore, Maryland, U.S.A., in 1843. There he made a variety of cap-locks, including handguns and combination rifle-shotguns, until the mid 1870s.

McComas Nicholas McComas, probably the brother of Alexander (above), was listed in the U.S. census of 1860 at 44 West Pratt Street, Baltimore, Maryland, where he had been for at least seven years.

McCord Marcius McCord of Nashville, Illinois, was granted U.S. Patent 195518 of 25th September 1877 to protect a gun sight.

McCord William McCord of Sing Sing, New York, received protection for a machine-gun (no. 31933 of 2nd April 1861) and 'repeating ordnance'. He was also granted U.S. Patent 39940 for 'Projectile for Many-Chambered Gun', though the drawings show that this was intended more for ordnance than small-arms.

McCormick Henry McCormick, perhaps the son of Robert (below), worked as a gunsmith in Oswego, New York, U.S.A. The U.S. census of 1820 reveals that he emplyed four men and three boys, making rifles, pistols and muskets with the assisatance of three forges and a boring mill. Work seems to have ceased in the mid 1820s.

McCormick Robert McCormick, lessee of the Globe Mills, Northern Liberties, Philadelphia, Pennsylvania, U.S.A., contracted in 1798 with the U.S. government to make three thousand M1795 flintlock muskets and in 1799 with the State of Virginia to make an additional four thousand. However, only a few hundred had been completed when McCormick was imprisoned for debt in 1801. The incomplete contracts were subsequently acquired by James Haslett (q.v.), who had been Foreman of the Globe Mills.

McCosh Samuel McCoch of 22 Diamond Street, Philadelphia, Pennsylvania, U.S.A., was making guns and rifles at the time of the U.S. census of 1850, with the assistance of one man.

McCoy James W. McCoy, a government inspector working c. 1927–40, accepted firearms and accessories on behalf of the U.S. Army, marking them 'JWM'. Most seem to have been .38-calibre revolvers made by ➛Colt's Patent Fire Arms Mfg Co. See also "U.S. arms inspectors' marks".

McCoy & Baker of Princeton, Caldwell County, Kentucky, U.S.A., were making single-shot cap-lock sporting guns when the Civil War began in 1861.

McCracken According to the 1850 U.S. census, William G. McCracken was making guns and rifles in Pittsburgh, Pennsylvania. He was then employing only one other man.

McCririck & Sons A gunmaking business trading from 38 John Finnie Street, Kilmarnock, Ayrshire, Scotland. Its marks have been seen on sporting guns

and ammunition, including shotgun cartridges made by ➔Eley-Kynoch.

McCrum Formerly a partner in ➔Thompson & McCrum, James McCrum of Locust Grove, Ohio, U.S.A., worked as a gunmaker until 1886.

McCue Edward McCue, a Federal government employee using the identifier 'EM', accepted guns and accessories destined for the Federal army. His activities seem to have been confined to 1863/4, though they may be difficult to distinguish from those of Edwin ➔Martin. See also "U.S. arms inspectors' marks".

McCullough John L. McCullough; Brooklyn, New York City. This inventor was responsible for several magazine-rifle designs , including some that were operated electrically: see U.S. Patents 509091 of 21st November 1893, 509548 of 28th November 1893, 557863 of 7th April 1896 and 626501 of 6th June 1899.

McCullough Nathaniel G. McCullough made cap-lock guns and rifles in Muncie, Indiana, in the mid-nineteenth century.

McDougall Scottish gunsmith Duncan McDougall, trading in Oban, Argyllshire, sold sporting guns and ammunition. Among the shotgun cartridges were some post-war ➔Eley-Kynoch examples marked 'The Lorne'.

McElroy John McElroy of Locke, New York State, U.S.A., made cap-lock sporting rifles in 1857–60.

McElroy William H. McElroy traded as a gunsmith in Kingston, New York, in 1871–4.

McElwaine William S. McElwaine (*c.* 1816–82) of Holly Springs, Mississippi, U.S.A., made rifles and rifled muskets for the Confederate States of America during the Civil War. His marks will also be encountered on a variety of sporting guns.

McEntee W.C. McEntee; Birmingham. Co-recipient, with J. ➔Hughes, of British Patent 8314 of 1885 to protect a drop-barrel action for sporting guns. The patent notes that McEntee was 'trading as J. Reeves & Co.' at this time.

McEntee & Company An English gunsmithing business listed at 17 Great St Helen's, London E.C., in 1885. Possibly a sales office maintained by W.C. McEntee, above.

McEvoy C.A. McEvoy of Richmond, Virginia, U.S.A., was granted U.S. Patent 31815 protecting 'Improvement in the Mode of Loading [muzzle-loading] Fire-Arms' on 26th March 1861.

McFadden James McFadden of Portage, Ohio, U.S.A., made cap-lock sporting guns in 1857–60.

McFall Henry McFall of East Liverpool, Columbiana County, Ohio, U.S.A., worked as a gunsmith in 1883–6. Sporting guns, often made elsewhere, have been reported with his marks.

McFarland Albert C. McFarland of Upper Lisle, New York State, patented a 'gun-lock for firearms' on 4th October 1887 (U.S. no. 370966).

McFarland G.B. McFarland made sporting guns in Zionville, Indiana, U.S.A., in 1882–5 and possibly later.

McFarland William P. McFarland of Chicopee Falls, Massachusetts, U.S.A., was

the co-patentee with George W. Hadley of a gun sight: U.S. no. 172465 of 18th January 1876. The drawings show a sight of the type customarily mounted on the butt-wrist of target rifles.

McFarlane Andrew McFarlane made sporting guns and rifles in New York, using premises at 5 Dey Street from 1844 until the census of 1860, when McFarlane was employing three men. His business may have been succeeded by McFarlane & Sons, below.

McFarlane & Sons of New York made sporting guns and pistols in the 1870s.

McGarvey J.W. McGarvey of Seneca Falls, New York State, U.S.A., made sporting guns in 1879–82.

McGee Henry McGee of Norwich, Connecticut, U.S.A., designed a 'Cylinder Stop for Revolving Firearms', protected by U.S. Patent 239821 of 5th April 1881. Rights to the design, acknowledged as an improvement on the 1878 patent granted to Alonzo Sweet (q.v.), were part-assigned to Freeman ➛Hood.

Macglashan Air Machine Gun Corporation ['The…'] (also listed as 'Mcglashan') of Long Beach, California, U.S.A., was the developer and manufacturer of the air- or gas-powered machine-gun that bears its name, marketed in 1942 as a training device ('Trainer, Aerial, Gunnery, Type E3') for aerial gunnery. The gun had electromagnetic feed mechanism containing up to two thousand BB shot, and could be powered by a tankful of compressed air, carbon dioxide or similar gas. Several hundred were made, as no. 1453 and others survive.

McGovern John McGovern of New York City received U.S. Patent 88890 of 13th April 1869 to protect a simple tip-barrel action suitable for single-shot rifles or pistols.

MacGregor Charles MacGregor. Trading in Kirkwall in the Orkney Islands, this gunsmith/ironmonger handled sporting guns and ammunition. Kynoch-made shotgun cartridges loaded with ➛E.C. powder have been seen with his marks.

MacGuder George A. MacGuder, sometimes listed as 'MacGruder' or 'Magruder', holding the rank of captain in the U.S. Navy, accepted small arms and accessories prior to the American Civil War. Marked 'GAM', they apparently date from 1855–7. See also "U.S. arms inspectors' marks".

McGuinness J.P. McGuinness, a lieutenant in the U.S. Navy, accepted ➛Colt and ➛Smith & Wesson revolvers in the early 1900s, marking them 'JPW'. See also "U.S. arms inspectors' marks".

McGuinness J.R. McGuinness or 'McGinness', a captain in the U.S. Army, accepted guns and accessories in the late 1860s; they bore the identifier 'JRM'. It seems likely that the two McGuinnesses were father and son. See also "U.S. arms inspectors' marks".

MacGuire James H. McGuire, working on behalf of the Federal army in 1862, during the American Civil War, accepted firearms and accessories marked 'JHM'. See also "U.S. arms inspectors' marks".

MacGuire John MacGuire was a member of the English gun trade, operating in 1865–87 from 7 Chambers Street, London, E.

McIlwraith William McIlwraith & Company; Elgin, Morayshire. This Scottish gunsmithing and ironmongery business sold sporting guns and ammunition, including shotgun cartridges bearing its own name. These appear to have been loaded prior to 1914 by ➔Kynoch.

McIntyre J.D. McIntyre, a captain in the U.S. Army, accepted firearms and accessories marked 'JDM'. Customarily made by ➔Colt's Patent Fire Arms Mfg Co., they date from the mid 1920s. See also "U.S. arms inspectors' marks".

MacKay Alexander MacKay & Son, trading in the small Scottish town of Tarbert in Argyllshire, distributed sporting guns and shotgun ammunition marked 'The Argyll'.

McKee George W. McKee, a captain in the U.S. Army, accepted firearms and accessories in the mid 1870s. His 'GWM' marks have been confused with those said to have been applied prior to the American Civil War by George W. ➔Morse. See also "U.S. arms inspectors' marks".

McKee William McKee of Detroit, Michigan, U.S.A., was the patentee (U.S. 868616 of 15th October 1907, sought in October 1904) of a simplified trigger mechanism for bolt-action rifles. Rights in the design were part-assigned to A.N. Ericsson of Detroit.

McKeen Emroe A. McKeen of Boston, Massachusetts, received protection on 26th December 1905 for a 'magazine gun'. See U.S. Patent 808107.

McKenney Henry H. McKenney; Biddeford, Maine, U.S.A. Active from 1855 until *c*. 1867, and then a partner in 'McKenney & Bean', this gunsmith was co-patentee with Fredereck Goth of a 'repeating firearm': U.S. Patent 22,969 of 15th February 1859.

McKenney & Bean of Biddeford, Maine, U.S.A. A gunmaking partnership of Henry McKenney (previous entry) and Joseph Bean, active only in 1867–9.

MacKenzie Brothers A gunmaking business listed at 84 Mark Lane, London E.C., in 1881–92, and then at 132 Queen Victoria Street in 1893–4.

Mackenzie & Duncan This Scottish gunsmithing business in Brechin, Angus, possibly doubling as an ironmongery and distributor of sporting goods, handled shotgun ammunition marked 'The Dunmax'. They were possibly loaded on the premises using ➔Eley or ➔Eley-Kynoch made components.

Mackie James Mackie. A gunmaker registered at 42 Cambridge Street, Pimlico, London, from 1879 until 1883.

Mackintosh & Sons The marks of this British gunsmithing business, trading in Cambridge, have been reported on shotgun ammunition loaded by ➔Eley with Schultze powder prior to 1900.

McLean James Henry McLean; St Louis, Missouri, U.S.A., 1829–*c*. 1890. This Scottish born 'physician' and purveyor of patent medicines was also the promoter of gimcrack schemes ranging from an 'impregnable floating fortress' to the 'Hercules Gun', a large-bore repeating cannon. Among them were several small-bore machine-guns patented by Myron ➔Coloney in 1880. McLean and Coloney jointly received U.S. Patent 282548 of 7th August

1883 for a 'breech-loading composite gun' and 282549 for a machine-gun on 7th August 1883. On the same day, McLean alone was granted U.S. Patents 282552 and 282553 for a machine gun, together with 282551 and 282553 for a magazine gun. His last U.S. patent, 290905, was granted on 25th December 1883 to protect a 'breech-loading firearm'. Few of McLean's schemes came to much, though it is believed that prototype machine-guns made the transition from outlandish claim to reality.

McMillan Gunworks, Inc.; Phoenix Arizona. A maker from 1987 of ➔Mauser-type bolt-action rifles under names such as 'Signature' and 'Talon'. Short-action guns were chambered for cartridges ranging from .22–250 to .308 Winchester; long-action guns for .25-06 to .375 H&H Magnum. A Talon Safari Super Magnum rifle has been chambered for cartridges as powerful as .416 Remington Magnum, a series of sniper rifles (M86, M89) has also been made, and there have been .50 bolt-action anti-matériel rifles. Most of the guns made after 1995 seem to have been markered under the 'Harris Gun Works' banner.

MacNaughton James MacNaughton & Sons. This gunmaking business traded from 1865 until 1947. The principal workshop was always maintained in Edinburgh, but a branch office was maintained for many years in Perth. In addition to sporting guns, MacNaughton also sold ➔Eley-made shotgun cartridges marked with its own name.

McNeely Robert W. McNeely accepted military firearms on behalf of the U.S. Army, applying his 'RWM' markings. They date from the early 1890s, distinguishing them from guns accepted in an earlier era by Commander Richard W. ➔Meade. See also "U.S. arms inspectors' marks".

MacPherson John MacPherson [& Sons], based in Inverness, Scotland, from 1887, handled fishing tackle, sporting guns and ammunition under a variety of brand names—'The Angler', 'The Bargate', 'The Barrage', 'The Clach', 'The Killer' and 'The Royal'. A trademark of a standing grouse was sometimes also used.

MacPherson Robert MacPherson. Trading from Kingussie in Inverness-shire, Scotland, this distributor of sporting goods sold shotgun ammunition marked ➔The Badenoch'.

McWilliam J.T. McWilliam. This member of the London gun trade—perhaps a gunmakers' or patent agent—was recorded at 16 East India Chambers in 1871. Practically nothing else is known of him.

Mäckinen Eino Mäckinen: Finland. A gun-designer employed by ➔Sako.

Macher F.W. Macher, a government employee, accepted firearms and accessories marked 'FWM' on behalf of the U.S. Army. They date from *c*. 1906. See also "U.S. arms inspectors' marks".

Madden H.E. Madden, active in 1902 on behalf of the U.S. Army, accepted the firearms and accessories marked 'HEM'. See also "U.S. arms inspectors' marks".

Mädel E. Mädel; Suhl in Thüringen, Germany. Listed in the 1930 and other pre-

1939 editions of the *Deutsches Reichs Adressbuch* as a gunsmith.

Madsen Designed by Jens Theofor Suhr →Schouboe, this interesting →recoil-operated machine-gun used a pivoting breech-block instead of a reciprocating bolt and fed from a box magazine mounted on top of the receiver. Despite its apparent complexity, the Madsen had soon attained a reputation for reliability that persisted as late as the Second World War and enabled it to be chambered for a variety of rimmed and rimless cartridges. Trials undertaken successfully prior to 1914 persuaded many of the combatants to acquire guns for use in the First World War. The Austro-Hungarians acquired more than six hundred 6.5×55mm examples from →Dansk Rekyriffel Syndikat in 1915, altering them in Vienna arsenal for the 7.9×57mm cartridge (known as '7.92mm' in Austria-Hungary). The German Madsens first saw service in the Champagne district of France in September 1915, but they were withdrawn after the Somme battles. The Russians also used the Madsen in large quantity, making 7.62×54 weapons in a Danish-financed factory in Kovrov. Many were subsequently captured by the Germans, adapted for the rimless 7.9×57 cartridge and issued to mountain troops (*Gebirgsjäger-Maschinengewehr-Abteilungen*). The light weight and box-magazine feed of the Madsen were particularly advantageous in highland areas.

MAFCO, *superimposition monogram with 'M', 'F' and 'A' prominent*. Correctly 'MFACO' (q.v.); found on revolvers and accessories made in the U.S.A. by the →Meriden Fire Arms Company.

Magazine The container in which the cartridges are held to permit repetitive fire with only occasional reloading. Magazines take many differing forms. Among the earliest were tubes, usually contained in the fore end beneath the barrel (e.g., Henry, Vetterli, Winchester) or, more rarely, in the butt (Chaffee Reece, Hotchkiss). These were superseded by box patterns, credited—though not without dispute—to James →Lee. Some boxes were detachable, others have been fixed. Fixed magazines are customarily described as internal if they are carried entirely inside the stock (introduced on the Spanish Mauser of 1893) and fixed or integral if they project externally but are part of the receiver or frame (e.g., most Mannlichers, Mosin Nagant). Some of the earlier Mausers, such as the Argentine gun of 1891 have semi integral magazines, which can be removed with the aid of a tool but are not genuinely readily detachable. Magazines described as blind are carried internally, but are not visible from the outside of the gun owing to the lack of a floor plate. Other patterns which have reached service status include a pan (lateral) magazine, featured by guns suich as the Krag-Jørgensen, or the spool (rotary) mechanism embodied in Mannlicher-Schönauer and similar guns. Military magazines may be loaded from chargers or with clips (qq.v.).

Magazine Repeating Pistol →'E. Remington & Sons'.

Magazine safety This ensures that the firing mechanism cannot function, the objective being to prevent a common accident where a live round remains in the chamber even after the magazine has been removed. However, magazine

safeties have always been unpopular on military weapons—which would otherwise be prevented from firing single shots by the absence of a magazine. On guns destined for commercial sale, safety systems of this type have found renewed popularity in recent years.

Maggs John Maggs, active in 1862, during the American Civil War, accepted firearms and accessories on behalf of the Federal Army. They were marked 'JM', date alone distinguishing them from guns attributed to Julian ➛McCallister, J. ➛Mills and Justice ➛Murphy. See also "U.S. arms inspectors' marks".

Magna or **Magna Classic** Brand names assocated with variants of the Model 629 ➛Smith & Wesson ➛Magnum revolver.

Magnet ['The...']. A mark be found on shotgun cartridges loaded by R. ➛Robinson of Hull from ➛Eley-Kynoch components.

Magnum Used generically for any ammunition (or the guns chambering it) developing high power. It owes its origin to the introduction of the .357 Magnum cartridge by Smith & Wesson.

Magnum *or '357 Magnum'*. Mechanically identical with the ➛Trooper, but fitted with a heavy frame, extended grips and adjustable Accro target sights, this was made from 1953 until 1961 by ➛Colt's Patent Fire Arms Mfg Co. The distinction between Magnum and Trooper was then abandoned, use of the latter name being extended to cover both patterns.

Magnum A name originally associated with a large-frame .357 revolver (see next entry) by ➛Smith & Wesson, but now generally associated with any gun chambering 'Magnum Power' cartridges.

Magnum A name originally associated with a large-frame .357 revolver introduced in the 1930s by ➛Smith & Wesson. The project was initiated by the writer Philip B. Sharpe, who had developed ammunition for the 38/44 ➛Heavy Duty 'N'-frame revolver developing far greater power than the ➛Smith & Wesson's normal loads.

¶ The 'Model .357 Magnum' revolver appeared in 1935, with adjustable sights, a ribbed barrel, and a choice of grips. Production continued until the end of 1941, though the original idea of separately registering each gun for a lifetime warranty had ended in 1938. Work began again in 1948, when an improved version with 'S'-prefix numbers appeared in a selection of barrel lengths, and the .357 Magnum became the 'Model 27' in 1957. Changes have been made on several occasions, but, in 1975, the revolver gained a target-style hammer, trigger and grip.

¶ The .44 Magnum, introduced in 1955 for the powerful .44 Magnum cartridge and renamed 'Model 29' in 1957, owed its existence to the handgunner Elmer Keith and the participation of the ammunition-making division of the ➛Remington Arms Company. Sales were greatly boosted by the film *Dirty Harry*, and continue today. A Model 629 stainless-steel version appeared in the 1970s, followed in 1990 by the Model 29 Classic and Model 29 Magna Classic; the Classic had a Hogue combat grips, a squared butt and

provision for a telescope sight, whereas the Magna version had a 12-inch (305mm) ported barrel with a full-length ejector-rod shroud. The Model 629 Classic DX, introduced in 1992 in stainless steel, gave a choice of square-heel Hogue or round-heel Morado wood butts; and the Model 29 Silhouette, dating from 1992, offered a 10-inch (254mm) barrel, adjustable sights, and Goncalo Alves target grips.

¶ The Smith & Wesson Model 53 Magnum revolver was a convertible pattern capable of firing either the standard .22 Long Rifle rimfire or the .22 Remington Jet. Only about fifteen thousand guns were made in 1961–74. The Model 57, chambered for the .41 Magnum cartridge, appeared in 1963, but has never achieved the popularity of the .44 version. See also 'Highway Patrolman'.

Magnum Military & Police A name applied to the Model 58 ➛Smith & Wesson swing-cylinder revolver. See 'Military & Police'.

Magnus Moritz Magnus the Younger of Hamburg was one of the leading large scale wholesalers of weapons and equipment working in Germany in the 1925. Operations seem to have ceased in the early 1930s.

Maguin Berthéas, place Dorian 1, Saint Étienne, France. Listed in 1879 as a gunmaker.

Mahely Compania y Industria, Buenos Aires, Argentina. Little is known about this business, apparently active in 1949–65, excepting that ➛Webley style air pistols were made from about 1953 onwards. The company now seems to have disappeared and no further information has yet been obtained.

Mahillon; Brussels, Belgium. Styled as *Arquebusier du Roi* ('gunmaker to the king'), this man seems to have bought many of the firearms in Liége. Working in 1937.

Mahrholdt Richard Mahrholdt & Sohn, also known as the 'Tiroler Waffenfabrik Peterlongo'; Innsbrück, Austria. This company was founded as 'Tiroler Waffenfabrik' in 1854 and became Mahrholdt & Sohn in 1939; it now trades from Saturnerstrasse in Innsbruck, and was responsible for the simple barrel-cocking spring-type air rifles noted by Smith as the products of the 'Tirol Arms Co.' in the early 1950s. Similar weapons were still being made in the 1970s. The company also seems to have made gas-powered guns and cartridge rifles.

Mainardi Giuseppe Mainardi, Italy: ➛Mannlicher.

Main spring *or* **mainspring** The spring that propels the hammer or striker into the primer of a chambered cartridge.

Maisonnial, Saint Étienne, France. Listed in 1933 as a gunmaker, trading in 1951 from 13 rue Clément Forissier.

Makarov Nikolay Federovich Makarov, born in Sasovo in 1914, was the son of a railway engineer. After serving an apprenticeship on the railway, he graduated from the Tula Mechanical Insitute just as the Germans invaded the Soviet Union in the summer of 1941. Makarov then worked for a factory producing the Shpagin ('PPSh') submachine-gun and was transferred after

the war to a design bureau. He is best known for the 9mm →PM semi-automatic pistol and the AM-23 aircraft cannon, but also worked on rocketry before retiring in 1974 with a host of decorations. He died in 1988.

Makina v Kimya Endüstrisi →MKE.

Maleham Charles H. Maleham. Trading in Sheffield about 1868 from 5 West Bar, in succession to his father George, this gunmaker was also a member of the London gun trade—listed at 20 Regent Street in 1878–82 and again from 1884 until 1900 or later. The trading style changed to 'Maleham & Company' in the early 1900s, but was sold to Arthur Turner shortly after the First World War and ceased operating under it own name. In addition to sporting guns and rifles, a variety of →Eley-made shotgun cartridges has been reported. Brandnames included 'The Clay Bird', 'The Double Wing', 'The Regent', 'The Steeltown' and 'The Wing'. A trademark was also popular, comprising six shot-holes around a central seventh, with a heraldic pinion or 'wing' extending from each side.

Malherbe E. Malherbe; Liége, Belgium. A gunmaker involved in the 1870s with le →Grand Syndicat.

Malherbe P.J. Malherbe & Cie; Liége. One of Belgium's leading manufacturers of firearms, edged weapons and accessories, working c. 1830–57, Philip-Joseph Malherbe retained the agent Frederick L. →Homer of London in the mid 1850s.

Prosper Malherbe & Company Probably a successor to Philip Joseph Malherbe, above, this gunmaking business was also based in Liége. A British agent, Rochussen & Co. of London, was maintained in 1858–61.

Mallard ['The…']. A mark used on shotgun ammunition loaded by the →Chamberlain Cartridge Company of Cleveland, Ohio, U.S.A.

Malloch Gunmaker P.D. Malloch, trading from 24 Scott Street, Perth, Scotland, sold sporting guns and shotgun ammunition under brand names such as 'The Matchless', 'The Red Grouse', 'The Standard' and 'The Triumph'.

Maloney James A. Maloney; Washington DC, U.S.A. Recipient of U.S. Patent 271645 of 6th February 1883, protecting an extractor mechanism for drop-barrel guns.

Maltby Royal Ordnance Factory [→ROF]; Maltby, Yorkshire, England. Work on this site began in May 1940, the first guns being completed in the summer of 1941. About 737,000 →Lee Enfield No. 4 Mk 1 rifles were made during the Second World War. The guns were marked 'ROF[M]'.

Maltby, Curtis & Company; New York City. This U.S. distributor of sporting goods also handled double action five shot revolvers made in accordance with the patents of John →Smith (1889), which had a distinctive rifled barrel liner. Like virtually all of Maltby guns, these were made by the →Norwich Pistol Co. Maltby, Curtis & Co. and its 1889 vintage successor (Maltby, Henley & Co.) also sold revolvers made by →Otis Smith; guns offered under the 'Metropolitan Police' brand name were protected by patents granted to William →Bliss in 1878–85, but also made elsewhere.

Manby Fred. Manby & Brother, trading in Skipton, Yorkshire, England, distributed sporting guns and ammunition. The latter included shotgun cartridges marked "Manby's Special".

Manchester Airguns; Manchester, England. Originators of the Mercury Magnum, etc. Material to add.

Manchester Ordnance & Rifle Company ['The…']. Listed in London in 1865, at 28 Pall Mall, but registered in Manchester. Possibly associated with Sir Joseph Whitworth.

Mandall Shooting Supplies, Inc.; Scottsdale, Arizona. A distrubutor of ➔Krico bolt-action rifles in the U.S.A. from 1990 onward.

Manente Giuseppe Manente; Brescia, Italy. This gun and airgun maker, trading from Via Trento in 1979, apparently made spring-type barrel cocking airguns.

Manganese Bronze Holdings Ltd ➔BSA Guns Ltd.

Mangeot Henri Mangeot; Brssels, Belgium. A gunmaker trading in the middle of the nineteenth century, styling himself *Arquebusier du Roi* ('gunmaker to the king'). His marks have been found on a variety of sporting rifles, shotguns and revolvers.

Manhattan A ➔Suicide Special revolver made in the U.S.A. by ➔Johnson, Bye & Company and/or ➔Iver Johnson of Worcester and Fitchburg, Massachusetts. It dates from the late nineteenth century.

Manhattan Fire Arms Company; Newark, New Jersey. This U.S. gunmaking business made .31 pocket and .36 navy type ➔Colt copies in accordance with a patent granted to ➔Gruler and Rebety in December 1859 to protect the inclusion of safety notches on the cylinder. Colt managed to stop production in 1864, but not before five thousand .31 and eighty thousand .36 guns had been made. Some bore spurious LONDON PISTOL COMPANY markings. Manhattan subsequently turned to close copies of the Smith & Wesson Model No.1 in .22 and .32 rimfire, with seven and six chambers respectively, until Smith & Wesson successfully removed the guns from the market. The Manhattan Fire Arms Co. was succeeded in 1870 by the ➔American Standard Tool Co., though the relationship between the two businesses is not known.

Manila Ordnance Depot ➔Krag-Jørgensen.

Mann Gunsmith Fritz Mann of Suhl, Thüringen, Germany, designed the Mann pistols, described below.

Mann Otto Mann of Suhl in Thüringen owned a sales agency operating in Germany in 1930.

Mann pistols Designed by Fritz Mann of Suhl, this series of small semi-automatic pistols began with an extraordinary-looking 6.35mm 'Model 1920' design with a short centrally-placed grip, the slide reciprocating on internal rails, and the return spring above the barrel. The larger 7.65mm and 9mm Short 'Model 1921' patterns had more conventional Browning-type construction.

Mann Werke AG; Suhl Neundorf, Thüringen. This business was founded shortly after the end of the First World War (probably in 1921) to exploit patents

granted to Fritz ➔Mann. Most directory entries describe the business as *Feinmaschinen-, Waffen- und Werkzeug Fabrik* ('maker of precision machinery, weapons and tools'). The Mann pistols were described in 1925 as the 'smallest, lightest and longest lasting automatic pistols of any calibre', but the gunmaking side of the business had apparently failed by 1929–30. A distinctive encircled 'MA' monogram will often be encountered.

Manning Alfred C. Manning accepted firearms and accessories on behalf of the Federal Army, marking them 'ACM'. His activities were confined to 1863, during the American Civil War. See also "U.S. military inspectors' marks".

Mannlicher Ferdinand [Ritter von] Mannlicher was born on 30th January 1848 in Most, a small town in Bohemia. He was educated in the Vienna technical college and then retained as an engineer by the state-run Austrian railway system. Visiting the World Exhibition in Philadelphia in 1876, primarily to inspect developments in railway technology, he was instead intrigued by rifles exhibited by ➔Winchester and ➔Hotchkiss. Determining to produce repeating firearms of his own, Mannlicher embarked on a new career as a gun-designer, though maintaining his interests in railways until the premature end of his life in Vienna on 20th January 1904. In addition to a knighthood, conferred in 1887, he gained a Gold Medal from the 1900 International Exposition in Paris. Ferdinand von Mannlicher was granted more than a hundred patents in Austria-Hungary and abroad, some of the last bearing the name of his widow Cäcilie, but whether he truly deserves his place in the Pantheon of gun designers is arguable: many of his designs were failures, and even the first to be officially adopted by Austria-Hungary had serious weaknesses. Though the 1886, 1888, 1890 and 1895-pattern 'straight-pull' bolt-action rifles were made in huge quantities, they were not as robust or efficient as the 'Mannlichers' made by ➔Österreichische Waffenfabriks-Gesellschaft on the basis of the German ➔Reichsgewehr action. Comparatively little information concerning Mannlicher firearms is available in English, though Konrad Edeler von Kromar's *Repetier- und Automatische Handfeuerwaffen der systeme Ferdinand Ritter von Mannlicher* (1900) was reprinted in 1976. A summary may be found in John Walter, *Rifles of the World* (Krause Publications, third edition, 2006) and *Central Powers' Small Arms of World War One* (Crowood Press, 1999); Walter H.B. Smith's book *Mauser, Walther and Mannlicher Firearms* (combined edition, Stackpole Books, 1962) is also useful, though basically a translation of Kromar's work. See also 'Austro-Hungarian fireams' and 'Waffenfabrik ➔Mauser AG'.

Mannlicher pistol The first design, protected by a German patent granted in December 1894, was a 6.5mm or 7.6mm ➔blow-forward pattern with a return spring between the barrel and the front of the breech housing. The case-magazine in the frame above the grip could be loaded with a clip. Very few 'M. 1894' pistols were made, mostly by Waffenfabrik ➔Neuhausen (SIG) in Switzerland. A ➔blowback design was patented in 1896, with a box magazine ahead of the trigger and a special elongated cocking lever protruding at

the rear of the frame. It was not successful, but another patent granted in the same year was much more successful. Now customarily known as the 'M. 1896', few guns of this pattern had been made by the time the basic design had been revived as the 'Model 1903'. Superficially resembling the ➔Mauser C/96 externally, the 1896/1903 pattern Mannlicher was locked by a flimsy strut between the bolt and the rear of the receiver. Blowback pistols protected by a German Patent granted in October 1898 were subsequently marketed as the models of 1900, 1901 and 1905. The earliest examples were made by Waffenfabrik von ➔Dreyse in Sömmerda, but later guns emanated from ➔Österreichische Waffenfabriks Gesellschaft in Steyr (1902–11). They could be identified by their slender appearance and a charger-loaded box magazine in the frame above the grip. Small quantities were used by the Argentine army, but only about ten thousand had been sold by 1914.

Mannlicher rifle, *automatic/semi-automatic*. Locked by special struts or 'tongs' which dropped into a frame-well, the recoil-operated *Handmitrailleuse* (1885) had a ten-round gravity magazine above the left side of the breech. An improved version (1891) was locked by a transverse lug on the top rear of the tongs engaging a recess on the underside of the bolt, and had a fixed clip-loaded magazine. A delayed-blowback mechanism patented in 1893 relied either on steeply pitched lugs on the bolt head rotating in seats in the receiver, or on 'straight pull' systems relying on cam-lugs moving in helical grooves to rotate the bolt head in relation to the bolt body. The 1895-patent gas operated rifle had a two piece stock and a five-round magazine within the receiver. Gas tapped from the bore forced the cocking slide back, pivoting the breech block laterally to disengage the locking lug. This was replaced by a better design, introduced in 1900 and perfected posthumously in 1905–8. Gas forced an operating rod backward to rotate the bolt handle base from its seat in the receiver. Most of the guns had spool magazines in a detachable housing.

Mannlicher rifle, *bolt-action* The original *Repetir Gewehr mit Rohrbündel Magazin in Kolben* (1880) had a triple tube magazine in the butt and ➔Kropatschek-like bolt. It was soon followed by the *Repetir Gewehr mit anhangbarem Magazin M1881*, with a box magazine, and the *Repetir Gewehr mit Vorderschaft Magazin M1882* with a tube magazine under the barrel. The *Repetir Gewehr mit aufsteckbarem Magazin M1882* had a gravity feed magazine on the right side of the receiver.

¶ However, the rifles most commonly associated with Mannlicher were the 'straight-pull' patterns (*Geradzug Verschluss*), originally made with a gravity magazine offset on the left side of the receiver but replaced in 1885 by the 11mm Repetier Gewehr 'Österreichische Vorlage' made by ➔Österreichische Waffenfabriks Gesellschaft of Steyr. A bar beneath the back of the bolt pivoted down into the bolt-way floor as the bolt was closed, and the projecting case-type magazine was loaded with a clip.

¶ The *Infanterie-Repetier-Gewehr M1886*, chambering long and cumbersome

11mm ➛Werndl cartridges, soon recognised to be ineffectual, was hastily revised to become the 8mm M1888. This could be readily distinguished by the shallowness of its magazine case, and an improved straight-pull mechanism patented in 1889. Cam-tracks on the bolt acted with lugs inside the bolt sleeve to rotate lugs into engagement with the receiver, a much stronger lock than the pivoting bar of older guns. The 1890-pattern 8mm short rifles and carbines had soon been accepted for service, but trials with infantry rifles dragged on until the perfected *Repetiergewehr M1895* was approved in 1896. ¶ The straight-pull action remained in service in Austria-Hungary until the end of the First World War, but guns of this type were never popular on the export market; only Bulgaria purchased them in quantity. The Germans made limited use of straight-pull Mannlichers in the First World War, though the exact circumstances are still unknown.

¶ Turn-bolt Mannlichers, excepting pre-1885 prototypes, were customarily built on the basis of the ➛Reichsgewehr. This situation had arisen from patent-infringement lawsuits successfully brought against the German government by Österreichische Waffenfabriks-Gesellschaft. Rifles of this pattern enjoyed success in Romania and the Netherlands and also, fitted with Schönauer rotary magazines, in Greece. However, they were not 'Mannlichers' in the truest sense.

Mannlicher-Schönauer The 1887/88-pattern rifle, the first Mannlicher to embody a spool magazine patented by Otto ➛Schönauer, had a straight-pull bolt system with the locking lugs on the connecting piece between the bolt-head and the body. The magazine could be loaded from a stripper clip or *Patronen Packet*, but military trials were unsuccessful. A modified 1900-pattern gun was tested in Portugal, losing to the ➛Mauser-Vergueiro, but fared better in Greece. The Greek army adopted the Mannlicher-Schönaeur in 1903, many thousands being supplied by Österreichische Waffenfabriks-Gesellschaft prior to the First World War. Others were subsequently made by Società Ernesto Breda. In addition, the Mannlicher-Schönaeuer proved popular with sportsman; many thousands were stocked and finished by gunsmiths in ➛Ferlach, and Steyr-Mannlicher GmbH continued to make them until the 1980s.

Mansfield William Mansfield of Wolverhampton, Staffordshire, England, a gun-lock maker, began trading in Cornhill in 1875, moving to Lord Street West in 1878. The business of Joseph Brazier was purchased shortly afterwards, as a British Patent granted to Mansfield in 1887 to protect a game counter (10343/87), developed in collusion with Sir Ralph Payne-Gallwey, notes that he was 'trading as J. Brazier & Sons'. Mansfield also received British Patent 9450 of 1893, protecting a safety system for hammeless sporting guns, and 11068 of 1896 (sought jointly with H.W. ➛Holland) for a single-trigger mechanism for double-barrelled guns.

Mansvelt P. Mansvelt & Zoon; 's-Gravenhage, Dennenweg 10b, the Netherlands. A distributor of sporting guns and ammunition active in 1912–14.

Manteuffel Reinhold Manteuffel & Companie; Zella Mehlis in Thüringen, Suhler Strasse 9a (1941). Founded in 1911, listed in 1920 as a gunmaker (owned by Reinhold Manteuffel, Hugo Manteuffel, Moritz Roth and W. Roth), and also in 1930—when the ownership was the same, with the addition of A. Schmidt and M. Heyer. By 1941, the business was being described as a maker of firearms and accessories.

Manton George Henry Manton. Son of the gunmaker John Manton, and the proprietor of John ➔Manton & Co. from 1834 until his own death in 1854, George Manton was granted several English Patents. These included 7965 of 1839 for a percussion cap magazine, and 12543 of 1849 (in collusion with J. Harrington) for a 'magazine lock'.

Manton & Company; 'of London and Calcutta'. Gunsmiths and distributors of sporting guns and ammunition, including pre-1914 shotgun ammunition offered under brand names such as ➔Contractile and ➔Standard Smokeless.

J. Manton & Company A name found on shotguns handled in the U.S.A. by the H. & D. ➔Folsom Arms Co., possibly imported from Europe.

John Manton & Son One of the most famous of all the London gunmakers, John Manton (1752–1834), was superseded by his son George Henry Manton (1789–1854). Trading initially as 'John & George [Henry] Manton', it became 'George & Gildon Manton' in the 1840s. However, George died in 1854 and his son Gildon followed in 1856; business was continued by Gildon Manton's widow and Charles Coe from 1856 until 1867, being listed alternatively as 'John Manton Son & Coe' or 'John Manton & Company'. Charles Coe then traded on alone until liquidation occurred in 1878. The premises had stood at 6 Dover Street since 1815. An alternative address of '4 South Street, Grosvenor Square' given by H.J. Blanch, writing in *Arms & Explosives* in 1909, is now known to have been Mrs Gildon Manton's home address.

Manufacture [d'Armes] ➔'Châtellerault', 'Saint-Étienne' and 'Tulle'.

Manufacture d'Armes Automatiques Trading in Saint-Étienne, France, this gunmaking business is believed to have been responsible for 6.35mm calibre automatic pistols marked ➔Le Steph and ➔Securitas.

Manufacture d'Armes de Bayonne ('MAB') Founded in Bayonne, France, shortly after the First World War, this gunmaking business was best known for its ➔Browning-type blowback pistols. Most of the individual variants were identified by letters: the 6.35mm MAB Modèle A and the 6.35mm MAB Mle B pocket pistols were similar to the ➔FN-Browning of 1906 and the ➔Walther Model 9 respectively; the 7.65mm MAB Mle B was essentially an exposed-hammer derivative of the ➔FN-Browning Mle 10/22; the 7.65mm or 9mm Short MAB Mle C of 1933 was smaller, with a safety lever set in the back strap and a detachable muzzle bush; and the 1935-vintage MAB Mle D, in 7.65mm or 9mm, was basically an enlarged 'C'. The MAB Mle E was a 6.35mm version of Mle C with a nine-round magazine. Most of the guns made since *c*. 1965 had their slide-retraction grooves milled diagonally and a streamlined trigger-guard/frame fillet. The MAB Mle R (1951) was offered in .22 LR rimfire

and four centrefire chamberings, 7.65mm Auto, 7.65mm Longue, 9mm Short and 9mm Parabellum. The 7.65mm Longue and 9mm Parabellum ('R-Para') versions incorporated a rotating-barrel delay adapted from the ➔Searle-patent Savage, the others being ➔blowbacks. The Mle G and Mle GZ, in .22 LR rimfire and 7.65mm Auto, were made for MAB by ➔Echave y Arizmendi, and were identical to the Echasa 'Fast' patterns. The MAB PA-8, introduced in 1966, was a derivative of the R-Para with the same delayed-blowback breech system. A hold-open was added, the slide stop was modified, and the contours of the frame were refined. The PA-15 was similar, but its magazine held fifteen rounds instead of eight., and the PAP F-1 (*Pistolet Automatique Précision F-1*) was a target-shooting derivative with an elongated barrel and adjustable sights. Handgun production finally ceased in 1985. See also ➔Defender'.

Manufacture d'Armes de Chasse; Belgium ➔Masquelier.

Manufacture d'Armes de Paris of Paris, France, was founded in 1915 to make small-arms components as "Manufacture Parisienne d'Armes" by a group of French industrialists and Gustave Joassart and Alexander Galopin, two directors of ➔Fabrique Nationale d'Armes de Guerre who had escaped from Belgium to France. Part of the stockholding was purchased by Fabrique Nationale in 1921; thereafter, MAP made typewriters alongside a few FN-type motorcycles.

Manufacture d'Armes des Pyrénées; also known as 'MAP', "Manufacture d'Armes des Pyrénées Françaises", 'MAPF', or ➔'Unique'; Hendaye, France. Founded shortly after the end of the First World War by Basques with strong family links over the border with Spain, this gunmaking business specialised in sturdy blowback pistols derived from the ➔Ruby patterns supplied in great numbers to the French army during the First World War. In addtion to the 'Unique' guns of its own, MAP also promoted a range of 6.35mm ➔Browning-type pocket pistols. Essentially similar to some of those made in Eibar, it seems likely either that either the entire guns or at least their unfinished components were simply brought over the Franco–Spanish border. Among the many names associated with these pistols are 'Audax', 'Furor', 'Gallia', 'Helepco', 'Kitu', ➔'Le Majestic', ➔'Lepco', ➔'Le Sans Pareil', ➔"Société d'Armes Paris" and ➔'Triomphe Français'; others were listed as the Unique Mle 10, Some guns had extended butts, often to chamber the larger 7.65mm Auto cartridge, whilst a second ➔'Audax' and the Unique Model 18 were based on the streamlined 1910-type FN-Browning instead of the earlier pocket-pistol. French-made (or assembled?) guns are often marked FABRICATION FRANÇAISE, or bear LE VERITABLE PISTOLET FRANÇAIS 'UNIQUE' on the slide. Rifles are now also being made alongside the 6.35mm and 7.65mm ➔Mikros pistols.

Manufacture de l'Armes de l'État; rue (?faubourg) Saint-Léonard, Liége. This, the Belgian government-owned small-arms factory, was founded in 1838 and entirely re-equipped in the late 1880s with machine-tools supplied by Ludwig

➔Loewe & Co. This enabled the manufactory to produce a range of weapons, including rifles and machine-guns, until the German invasion of Belgium in 1914. Maker of many Belgian Mle 1889 Mauser rifles, short rifles and carbines, *c*. 1895–1914.

Manufacture de Machines du Haut Rhin, 'Manurhin'; Mulhouse, Alsace. This engineering company became involved in the production of firearms in the 1950s, when a licence to make ➔Walther pistols was negotiated. Manurhin made the Walther PP and PPK until work began in the Walther factory in Ulm/Donau in the ?late 1960s. A few P-38 (P1) will also be found with Manurhin marks; these were made in Ulm, shipped to France, and specially marked so that they could be supplied to the police in West Berlin without breaking treaty-terms agreed with the Russians. Manurhin subsequently contracted with ➔SIG to make the Swiss-designed 5.56×45 SG540-series assault rifles in France.

Manufacture Française d'Armes et Cycles ('MFAC', also known as "Manufacture d'Armes et Cycles" or 'Manufrance SA') was once the largest privately-owned gunmaking business in France. A catalogue dating from the mid 1920s reveals the existence of two enormous factories in Saint-Étienne, as well as impressive retail and administrative premises at 42 rue du Louvre in Paris. Sales offices were also maintained at 125 cours d'Alsace-Lorraine in Bordeaux; at 122 rue Nationale in Lille; at 25 rue Childebert in Lyon; at 36 rue de la République in Marseilles; at 54 rue Saint-Jean in Nancy; at 3 rue du Feltre in Nantes; at 19 rue Thiers in Rouen; and at 45 rue de Metz in Toulouse. The factories made goods ranging from canoes and bicycles (the latter under the name 'Hirondelle') to agricultural machinery ('Coq'), cameras ('Luminor'), fishing rods, sewing machines ('Omnia'), sports equipment, tools ('Grenade') and typewriters ('Typo'). They also made large quantities of guns and ammunition. Trademarks included an enwreathed 'MF' monogram and 'M' and 'F' accompanied by a target, two cannons and an arrow. MFAC is best known for the ➔Le Français pistols, but also made a variety of rifles and shotguns. See also 'Buffalo', 'Étoile', 'Express', 'Idéal', 'Populaire', 'Reine', 'Rival', 'Robust', 'Simplex' and 'Supra-Simplex'.

Manufacture Générale d'Armes et Munitions de Jules Bertrand; Liége, Belgium. Maker of the 6.35mm ➔Le Rapide pistol.

Manufacture Générale de Munitions; Bourges les Valence, France. A manufacturer of military and sporting ammunition, identified by the headstamp 'M.G.M.'

Manufacture Liégeoise d'Armes à Feu, Robar & Companie. This Liége-based Belgian gunmaking business maintained representation in London in 1867–80 (through ➔Heintzmann & Rochussen), and then on its own account—as 'Société Anonyme'—from 8 Coleman Street in 1882–4. A founding shareholder in ➔Fabrique Nationale d'Armes de Guerre in 1889, when the relevant documents were signed on the company's behalf by Léon Collinet as *Administrateur délégué*, Manufacture Liégeoise unsuccessfully promoted the

➔Engh rifles in the late 1880s. Firearms made by this source can often be recognised only by the crowned 'ML' trademark. A series of 6.35mm, 7.65mm and 9mm automatic pistols were marked ➔Melior or ➔M.L.

Manufacture Nationale d'Armes, Saint Étienne, Loire. This, one of the French government's small arms factories, was established in the reign of Louis XV in 1718 and worked as the 'Manufacture Royale' until the Revolution of 1789; it then became variously known as the 'Manufacture Impériale' (1815–71) and then 'Manufacture Nationale' again. It was finally known simply as ➔MAS. The factory is better known for its pistols, rifles and machine-guns, but made a spring-type air pistol, the Modèle 50, in the early 1950s. This pistol, intended as a trainer, balanced similarly to the cartridge pistol sharing the designation.

Manufacture Parisienne d'Armes ➔Manufacture d'Armes de Paris.

Manufrance SA, formerly known as "Manufacture Française d'Armes et Cycles"; Saint Étienne. This world-renowned gunmaking business was offering a selection of refurbished ➔Mauser-action sporting rifles as late as 1965. These guns were sold under the brand name ➔'Rival'. See also "Manufacture Française d'Armes et Cycles de Saint Étienne".

Manurhin ➔Manufacture de Machines du Haut Rhin.

Manville Gunsmith Cyrus Manville of 208 Orange Street, New Haven, Connecticut, U.S.A. (trading 1864–7), is believed to have made the two-shot rifle-muskets sold to the Federal government during the Civil War by John P. ➔Lindsay.

MAO Found on rifles and small-arms components made in the Australian government small arms factory in Orange, New South Wales.

MAP, **MAPF** ➔"Manufacture d'Armes des Pyrénées".

Mappin & Webb Makers of the holster and carrying straps for the ➔Welrod pistol, but better known as the Crown Jewellers!

MAR A short-barrelled or 'compact' version of the Israeli ➔Galil, otherwise known as the 'Micro Assault Rifle'.

Marathon Products, Inc.; Wethersfield, Connecticut, U.S.A. This distributor of guns, ammunition and accessories introduced the 'Sportsman Bush & Field' ➔Mauser-type sporter in 1984.

Marcaido ➔Ojanguren y Marcaido.

Marck; Liége, Belgium. A maker of revolvers active in the 1870s.

Marco This mark was used on ➔Will/Venuswaffenwerke latch-lever locked spring-type air guns made prior to *c*. 1925, and then on ➔Haenels sold in Britain by the ➔Modern Arms Company of London from 1925 until 1939.

Marcy Samuel Marcy, a lieutenant representing the U.S. Navy Board of Ordnance, accepted firearms and accessories in 1852–61. They were marked 'SM', making them difficult to distinguish from the U.S. Army guns attributed to Stillman ➔Moore. See also "U.S. arms inspectors' marks".

Marengoni Tullio Marengoni designed many auto-loading weapons for ➔Beretta prior to the 1950s, including the Mo. 31 and Mo. 37 rifles and the Mo. 38

submachine-gun.

Marga Uldarique Marga, a Belgian army officer, was responsible for a range of bolt and auto loading rifles designed in 1885–1907. The earliest bolt action rifles were made in accordance with a series of patents granted in 1889–92. The so called 'Model 1888' had a very simple striker system with a 'V'-spring contained in the bulbous bolt handle, and a sliding safety catch on the back of the bolt where the cocking piece would normally appear. Patents of addition granted in 1891 and 1892 protected a clip-fed magazine and an improved extractor respectively. All Marga rifles had an interrupted-thread lock on the rear of the bolt body and a magazine case formed as an integral part of the trigger guard. Most of them were the work of Auguste ➔Francotte & Cie of Liége; the most popular chambering seems to have been 7.65×53. About 2500 of the 'M1894' rifles were made by Francotte prior to *c*. 1902, with an internal five-round box magazine. Possibly destined for trials in Brazil, rifles of this type were exhibited by Francotte at the Paris Exposition Universelle of 1900.

Mariette of Cheratte was a Belgian gunsmith, patentee of a 'revolver' in 1839. This was actually a ring-trigger pepperbox. The ➔Herman version was essentially similar. Mariette is also credited with the introduction of the ➔fist revolver, a modification of the pepperbox.

Mariette A generic name for any ring-trigger pepperbox.

Marina A Spanish 6.35mm calibre Browning-type automatic pistol made in Eibar by Gregorio ➔Bolumburu; six rounds, hammer fired.

Marine Corps Model or 'M1905'. Less than a thousand of these .38 revolvers were made in 1905–7 for the U.S.M.C., by ➔Colt's Patent Fire Arms Mfg Co. Mechanically identical with the ➔New Army Model, they had characteristically small round-base butts.

Marion & Sanner French or possibly Belgian, these makers of a volute spring crank-wound air pistol signed themselves *Charles Marion & Ch. Sanner*, but nothing else is known. The gun probably dates from 1850–65.

Mark Down ['The…']. Found on shotgun cartridges distributed in England by William ➔Richards of Liverpool and Preston.

Markham William F. Markham; Plymouth, Michigan, U.S.A. Recipient of several U.S. Patents granted to protect the design of air- or spring-air guns. They included 372161 of 25th October 1887; 473633 of 26th April 1892; 483159 of 27th September 1892; 553716 of 28th January 1896; 557849 of 7th April 1896; 651634 of 12th June 1900; 655170 of 31st July 1900; 696461 of 1st April 1902; 718646 of 20th January 1903; and 842324 of 29th January 1907, assigned to the Markham Air Rifle Company. His last patent, 911056 of 2nd February 1908, sought jointly with E.S. ➔Roe, was also assigned to the company. In addition to air guns, William Markham also patented improvements in manufacturing technology. Typical of these was U.S. Patent 698502, granted on 1st April 1902 to protect a method of making rifled barrels.

Markham Air Rifle Company ['The…']; Plymouth, Michigan, U.S.A. Markham made the ➔Challenger wood-body BB gun in 1885–6, then graduated to

improved guns designed by George W. ➔Sage, David F. ➔Polley, Ernest S. ➔Roe and William B. ➔Greenleaf. The ➔Challenger of 1886 was followed by the Improved Challenger of 1887, the ➔Chicago of 1888, a series of ➔Kings (marketed from 1890 onward), the ➔Prince of 1900, and the ➔Sentinal of 1908. Markham's strengths never lay in advertising and so, finally, Daisy's competition proved too strong. Markham sold out to Edgar Hough and Charles Bennett in 1916 and was eventually renamed the ➔King Rifle Company in 1928.

Markor ['The…']. This mark is associated with shotgun cartridges asociated with English gunmakers ➔Cogswell & Harrison.

Markoroid ['The…']. Another of the marks to be found on shotgun ammunition handled by ➔Cogswell & Harrison of London.

Mark Over ['The…']. A brand name found on shotgun cartridges loaded by William ➔Evans of London.

Marks & Clerk This British patent agency occupied chambers at 18 Southampton Buildings, London, as well as in Birmingham and Manchester prior to 1914; a new address at 57 & 58 Lincoln's Inn Fields, London, appeared after 1920. Marks & Clerks worked for a number of inventors—e.g., Walter Rogers ➔Benjamin (in the applications for what became British Patent 22554/02 of 1902), George ➔Hookham (11557/06 of 1906), Edward ➔Jones and ➔Kynoch Ltd (13716/06 of 1906), Arthur Vane ➔Dickey (122854), William ➔Baker and Arthur Herbert ➔Marsh (160057 and 162923), William Filmore ➔Markham (191291), Eugene Edwin ➔Miles (202106) and Etore ➔Caretta (219261).

Marksman Products of Torrance, California, U.S.A., made ➔Marksman repeating pistols and other guns, the former having been developed by the ➔Harris Company in 1955–7. Break-barrel spring-type air rifles have been made, and limited numbers of British ➔Milbro Diana rifles were also distributed.

Mark X. A brand name associated with ➔Interarms sporting rifles, introduced on the basis of Zavodi ➔Crvena Zastava ➔Mauser actions in 1972 in chamberings ranging from .22–250 Remington to .300 Winchester Magnum. The stock had a Monte Carlo comb. The 'Mark X Cavalier' of 1974 was similar, but had a roll over comb. 'Mark X Viscount' rifles had a plain stock with a low Monte Carlo comb and a plain round tipped fore end. 'Mark X Continental Carbines' had full length ➔Mannlicher' stocks with a straight comb. The 'Mark X Marquis' was similar to the Continental Carbine, but had a Monte Carlo comb and a steel fore end cap. The 'Mark X Alaskan' of 1976, in .375 H&H Magnum or .458 Winchester Magnum, had a recoil bolt through the stock beneath the chamber.

Marlboro ['The…']. Found on shotgun ammunition loaded by William ➔Evans of London.

Marlin John Mahlon Marlin; Rock Falls, New York, U.S.A., a gunmaker and patentee, was responsible for ➔Plant revolvers in 1866–7 and ➔Ballard rifles in the 1870s.

Marlin Fire Arms Company; New Haven, Connecticut. This gunmaking business

had its origins in the affairs of John Mahlon Marlin (1836–1901), a one-time apprentice with Philos Tyler's ➛American Machine Works, who was listed as a 'Manufacturer of Fire Arms' in Hartford, Connecticut, directories from 1871. Marlin received his first patent in February 1870 (U.S. no. 99690) and had produced a lever-action rifle by 1879 (no. 222064). Marlin was also a prolific handgun patentee, receiving ten patents for pistols and revolvers between February 1870 (U.S. no. 99690) and October 1889 (413197).

¶ The Marlin Fire Arms Company was incorporated in 1881 to succeed Marlin's operations, its first president being Charles Daly of ➛Schoverling, Daly & Gales. Among the earliest products were about forty thousand ➛Ballard rifles (*c*. 1875–90), single shot 1863-type pistols improved by an 1870 patent ejector, and a few small 'XXX Standard' tip-barrel revolvers chambering .30, .32 and .38 rimfire cartridges. Marlin also made Smith & Wesson-style break-open .32 and .38 centrefire double action revolvers in the 1880s, but production of handguns had ceased by 1898. The company rapidly became much better known for its rifles.

¶ The M1881 lever-action rifle was made in accordance with patents granted to Henry ➛Wheeler, Andrew ➛Burgess, Adolf Toepperwein and John Marlin. It was followed by the M1888, with a short action suited to the .32–20, .38–40 and .44–40 WCF cartridges; by the M1889, the first of the 'side ejectors'; by the .22 rimfire/.32 centrefire M1891 and M1892; by the centrefire M1893 and M1894 (short receiver); by the long-receiver M1895; and by the 'take-down' .22 rimfire M1897. Much of the development work on these guns had been entrusted to Lewis ➛Hepburn. A slide or pump-action .22 rimfire rifle (the Model 18) appeared in 1906, the first of many such guns made until the Model 47 was abandoned in the early 1930s.

¶ In 1910, Marlin purchased the Ideal Mfg Co. of New Haven, Connecticut, but sold it to Phineas Talcott in 1916; Talcott in turn sold it to the Lyman Gun Sight Company in 1925.

¶ The advent of the First World War in Europe brought Marlin a request to quote for 100,000 ➛Mauser-type rifles, the order apparently to be placed by Britain on behalf of the Belgian government in exile. A few thousand of these 7.65×53 1889-pattern guns were subsequently made by Hopkins & Allen, a company that became the 'Norwich Division' of Marlin-Rockwell in 1917. Marlin also made ➛Colt-type machine-guns, beginning with a contract placed in 1914 by Russia; these (and the shotguns) are listed separately.

¶ The Marlin Arms Corporation was incorporated on 8th December 1915, but was superseded by the Marlin-Rockwell Corporation in 1916. Among the wartime products were the M1918 ➛Browning aircraft machine-gun and the ➛Browning Automatic Rifle. The post-war collapse of the arms industry hit Marlin-Rockwell hard, and a sale of assets ensued. The Marlin Firearms Corporation was incorporated in Delaware in July 1921, but had failed by 1924. It was replaced by a new 'Marlin Firearms Company', incorporated in Connecticut in January 1926, which prospered under the presidency of Frank

Kenna (1874–1947) even though its most talented designer—Carl Swebilius—had left to form ➔High Standard.

¶ The Marlin Firearms Company continued to make lever-action sporting guns such as the M1936, M36 and M336 until the Second World War began. A return to war-work then brought production of the UDM42 (Sweibilius) and M2 (Hyde) submachine-guns alongside parts for the ➔Garand and the ➔M1 Carbine, work that resumed during the Korean War of 1950–3.

¶ Modern sporting guns have included a variety of inexpensive lever-action patterns, such as the M62 Levermatic; there have been .22 rimfire auto-loaders ranging from the Model 50 (introduced in 1931) to the Model 70 Papoose (1986); bolt-action rifles from the Model 65 to the 880 series of 1988; two rimfire sporters made on ➔Sako actions in 1954–8, the M322 and M422; and a few .30–06 or .308 centrefire rifles built on ➔FN-Mauser actions in 1955–9. These have been sold alongside well-proven lever-action patterns such as the Model 444, introduced in 1965 for the .444 Winchester cartridge; the New Model 94 of 1969; and the Model 375 (1980–3), also chambering proprietary Winchester ammunition.

¶ In addition to guns bearing the Marlin name, the company has offered a range of plain budget-price versions under the 'Glenfield' banner. It has also made 'private brand' guns for distributors such as Cotter & Company of Chicago ('West Point' brand); Montgomery ➔Ward & Company ('Western Field'); the Oklahoma Tire & Supply Company ('Otasco'); J.C. Penney ('Formost'); ➔Sears, Roebuck & Company ('Ranger', 'J.C. Higgins'); and the Western Auto Supply Company ('Revelation').

¶ By far the best source of information about all these guns is the amazingly comprehensive *Marlin Firearms. A History of the Guns and the Company that made them* by Lt-Col William S. Brophy (The Stackpole Company, 1989).

Marlin machine-guns The only other gun adopted prior to April 1917 was the Marlin Machine Gun M1915, a minor variant of the old ➔Colt 'Potato Digger' (M1895) with cooling fins on the barrel and a lightened tripod. This had been licensed to Marlin in 1915 to enable ground guns to supplied to Russia. The Canadian Army successfully used some guns of this type on the Western Front until they were replaced by ➔Vickers patterns. In 1916, at the request of the U.S. Navy, Marlin replaced the original radial actuating lever with a straight-line piston and produced the M1916 aircraft machine-gun. Though most of the parts remained interchangeable with the M1915, changes were required to slow the opening of the breech, minimise casehead separations and reduce the number of extractors broken by the violence of the revised action. However, no sooner had these changes been proven than a change was made from mechanical to hydro-pneumatic propeller synchronisers and the M1916 was replaced by the modified M1917 in July 1917. Purchases of M1915 (ground) machine-guns during the First World War amounted to 4805. More than thirteen thousand M1917 aircraft guns had been delivered by the 1918 Armistice, 428 being converted into M1918 tank guns by the addition of

large aluminium radiators and pistol grips.

Marlin shotguns The company made a variety of exposed hammer slide action shotguns, beginning with the 12-bore Model 1898 'Take Down'. Made until 1905, this was followed by the 16-bore Model 16 (1904–10), the 'Take Down' Model 19 of 1906–7, and the solid frame Model 17 (1906–8). The Model 21 was a Model 19 with a straight wrist stock, and the Model 24 (1908–15) had a 'recoil safety lock'. The Model 26 was a solid-frame variant of the Model 24, while the Model 30 of 1910 was a 16- or 20-bore version of the Model 16 with a recoil safety lock. The hammerless 12-bore slide action Model 28 appeared in 1913, in 'Take Down' form, and the Model 31 (16- or 20-bore) followed in 1915. Both guns were made until 1922, but a variety of designs followed over the succeeding forty years.

Marmey et Tétafort; rue des Jardins 19, Saint Étienne, France. Listed in 1892 as a distributor of and agent for arms and ammunition.

Marnas; 13 rue du Rozier, Saint Étienne, France. Listed in 1951 as a gunmaker.

Marnes John Marnes, a gunmaker listed at 31 Cumberland Road, Walworth Road, London, from 1844 until 1852, moved successively to 14 Cross Street, Newington Butts (1853), 7 Kennington Row (1854–65), 190 Kennington Park Road (1866–8) and 2 Windmill Row, Kennington, until 1874. See also 'William Marnes', below.

Marnes William Marnes. A gunmaker listed at 2 Windmill Row, Upper Kennington Lane, Kennington, London, from 1875 until 1881; the son of John Marnes (above).

Marnette Joseph Marnette; Herstal-lèz-Liége, Belgium. Best-known as a maker of double-barrel sporting guns, Marnette patented a sliding-barrel system in the mid 1870s. Pulling down on a ring-tip lever beneath the front of the trigger guard pulled the barrel-block away from the standing breech. Surviving guns are usually found with back-action locks and external hammers.

Marocchi Stefano Marocchi e Figli; Gardone Val Trompia, Brescia, Italy. This well-known shotgun manufacturer, founded in 1922, marketed a line of gas powered rifles and shotguns during the 1960s under the brand names ➔Artemis, ➔Luna Park and ➔Competizione.

Maroney. T.P. Maroney accepted guns and accessories on behalf of the U.S. Army, marking them 'TPM'; they dated from the last few years of the nineteenth century. See also "U.S. arms inspectors' marks".

Marquis ➔'Mark X'.

Marquis of Lorne. A ➔Suicide Special revolver made by the ➔Ryan Pistol Company of Norwich, Connecticut, U.S.A., in the late nineteenth century.

Marr Friedrich Marr; Zella-Mehlis in Thüringen. A maker of guns and accessories active in Germany between the world wars.

Marr Fritz Marr; Zella St Blasii and Zella Mehlis in Thüringen, Germany. Listed in 1914 as a gunmaker, and in 1920 with the qualification '(Elektr.)': guns with electric ignition, perhaps? Still listed as a master gunsmith in 1930.

Marr Richard Marr; Zella Mehlis in Thüringen. Listed in 1939 as a master gunsmith.

Marres Joseph Marres. A member of the London gun trade listed at 110 Cannon Street (1878–83) and 24 Great Winchester Street (1889–93). Marres is believed to have been the principal promoter of the ➔Martini Marres Braendlin ➔Mitrailleuse pistol, made by the ➔Braendlin Armoury of Birmingham in the 1880s.

Marrison The marks applied by gunmaker Samuel Marrison of Norwich, Norfolk, England, have been reported on self cocking ➔pepperboxes. Marrison operated from St Benedict's in 1821–42, and then from 50 Great Orford Street until 1853. He may have been succeeded by Benjamin Marrison, listed in Stalham in 1857.

Marrow & Company Sometimes listed as 'Morrow', this business was trading from 25 Corporation Street in the Yorkshire town of Halifax as early as 1864. It was then owned by gunsmith John Marrow, but had adopted the syle '& Company' by the time shotgun cartridges marked 'Challenge' were being sold in the twentieth century. A shop was also open in Harrogate for some years.

Mars A powerful British pistol, operated by long recoil, locked by a rotating multi-lug breech-block, and incorporating an elevator to raise cartridges from the magazine to the feed position. Designed by Hugh W. ➔Gabbett Fairfax, the Mars was apparently made under contract *c*. 1899–1905 by the ➔Webley & Scott Revolver & Arms Co. Ltd. Chambered for a variety of 8.5mm, .36 or .45 high-velocity cartridges, the Mars was a failure; Gabbett Fairfax was bankrupted in 1902 and the Mars Automatic Pistol Syndicate, formed to exploit his patents, eventually entered liquidation in 1907. Some guns will be found with the marks of a French agent, A. ➔Guinard.

Mars Usually found as 'The Mars': a shotgun cartridge made by ➔Eley Bros. prior to the acquisition of the company by Explosives Trades Ltd in 1918.

Mars These 6.35mm and 7.65mm semi-automatic pistols, based on the ➔Browning blowbacks, were made in the early 1920s in the Czechoslovakian town of Kdyne, firstly by ➔Kohout & Spol. and then by ➔Pošumavska Zbrojovka. Later guns, therefore, will bear 'PZK' marks.

Mars A German-made semi-automatic pistol, with a detachable box magazine ahead of the trigger. See 'Bergmann-Mars'.

Mars Found on bolt action ball firers made in Germany by ➔Venuswaffenwerke of Zella Mehlis from 1935 until *c*. 1940, and possibly also in the late 1940s under Russian control.

Mars Equipment Corporation ➔CETME.

Marsh John Marsh; 30 Drapery, Northampton. This English gunsmith, known to have been trading independently in 1869, sold specially-marked sporting guns and ammunition. The business subsequently passed to Alfred ➔Rutt.

Marsh M.R. Marsh, using an 'MRM' mark, accepted revolvers made by ➔Colt's Patent Fire Arms Mfg Co., apparently dating from the early 1900s though confirmation is lacking. See also "U.S. arms inspectors' marks".

Marsh Samuel W. Marsh of Washington DC, U.S.A., received U.S. Patent 26362 of 6th December 1859 to protect a tip-barrel rifle with a 'detachable headed breech-pin' obturator. Guns of this type were marketed by the Marsh Breech & Muzzle-Loading Arms Company (q.v.). A later patent, 33655 of 5th November 1861, protected a rifle with a breech-block that turned up and forward around a transverse pivot.

Marsh & Baker, Birmingham, England: ➛Midland Gun Company.

Marsh Breech & Muzzle-Loading Arms Company; Washington DC, U.S.A. This gunmaking business was formed in 1859 under the presidency of R.H. Gallagher to exploit the patent granted to Samuel W. Marsh. Its failure in 1862, even though the Civil War had begun, testifies to its inability to translate the prototype tip-barrel breech-loading carbines into series production.

Marshall Made in Hartford, Connecticut, by ➛Colt's Patent Fire Arms Mfg Co., this was a version of the .38 ➛Official Police revolver with barrels of 2- or 4 inches. Only 2500 were made in 1954–5.

Marshall Joseph C. Marshall; Springfield, Massachusetts. Co-patentee of G.L.*Holt of a breech-loading pistol with the hammer and trigger made in one piece (U.S. no. 138157 of 22nd April 1873, which was assigned to E.H. & A.A. Buckland. Marshall also collaborated with Dexter ➛Smith in the design of a firearm with a breech-block that swung down and back (U.S. 141603 of 5th August 1873), and in the development of 'revolving firearms' (162863 of 4th May 1875).

Marshall J. Plympton Marshall of Millbury, Massachusetts, designed breech-loading firearms protected by U.S. Patents 25661 of 4th October 1859 and 35107 of 29th April 1862. The former was an underhammer rifle with a breech which broke up and forward; the latter was a crude form of straight-pull bolt opened by raising and then pulling a ring-handle.

Marshall Simeon Marshall of Philadelphia, Pennsylvania, U.S.A., was the co-patentee with Jesse ➛Butterfield of a 'cartridge opener' (U.S. 14850 of 13th May 156) and a self-priming gunlock (24372 of 14th June 1859).

Marshwood A brand name associated with shotguns made in the U.S.A. by the ➛Crescent Gun Company.

Marson Samuel Marson, an English gunmaker who apparently specialised in pistols, traded in Birmingham, Warwickshire, in 1872–8, and then as '& Co.' from 1879 until the period of the First World War. The directories list the premises as 37 & 40 or sometimes 39–40 Livery Street

Marston Stanhope W. Marston; New York City, U.S.A. Listed in the directories as a gun and pistol maker, trdaing from 197 Allen Street and then 348 Houston Street, Marston received U.S. Patent 7887 on 7th January 1851 to protecting the lock of a double-action pepperbox ('fly-tumbler lock for firearms'), reissued in 1859 and assigned to James M. ➛Cooper. Stanhope Marston also sought protection for a 'revolving trigger-opeated firearm', U.S. Patent 45712 of 4th January 1865.

Marston William W. Marston; Phoenix Armory, Second Avenue & 22nd Street, New York City. A successor to Marston & Knox (Jane and Washington Streets, 1850–4), Marston made a single-shot pistol patented in the U.S.A. on 18th June 1850 (no. 7443) and the break-open .22 or .32 derringer protected by U.S. Patent 17386 of 26th May 1857. The pistol breech-block slid vertically in the frame, whereas the derringer had a three-barrel monoblock and a striker which fired the barrels sequentially from the bottom upward. Marston also made ➔Whitney type cap-lock revolvers and ➔Gibbs patent breech-loading carbines until the Phoenix Armory was destroyed during the New York Draft Riots of June 1863.

Marte. A compact Spanish 6.35mm calibre automatic pistol of Browning type, made in Eibar by ➔Erquiaga, Muguruzu y Compañía; six rounds, hammer fired.

Marthourey; cours Saint Paul, Saint Étienne, France. Listed in 1892 as a distributor of and agent for arms and ammunition.

Martial A ➔Smith & Wesson-type revolver made in Spain in 1969–76 by ➔Llama–Gabilondo SA. A double-action pattern with a conventional swing-out cylinder mounted on a yoke, it could be obtained in .22 LR or .38 Special. Adjustable sights and chequered wooden grips were standard, though finish could be blue, chrome or gold-plate.

Martian A 6.35mm Browning type pocket pistol made in Eibar, Spain, by Martin A. ➔Bascaran; six rounds, striker fired.

Martin Rue Badouillère 38, Saint Étienne, France. Listed in 1892 as a gunmaker.

Martin Alexander Martin & Company. Founded in the 1830s, this well-known Scottish gunmaker eventually opened a number of workshops—20 Exchange Square, Glasgow; 25 Bridge Street, Aberdeen; and 2 Friars Street, Stirling. Premises at 22 Frederick Street and (possibly) 12 Andrew Street, Edinburgh, were inherited with the goodwill of the business of Alex. ➔Henry. Martin was known for sporting guns and ammunition, but assembled a few hundred .22 No. 2 ➔Lee-Enfield training rifles and 420 .303 'Rifles No. 3 Mk 1* (T) A' in the early days of the Second World War. Substantial quantities of 12-bore shotguns were also handed to the British military authorities in 1942. Martin's shotgun ammunition included ➔Eley-Kynoch cartridges marked with brand names such as 'The AGE' (an abbreviated form of 'Aberdeen–Glasgow–Edinburgh'), 'The Caledonia', 'The Scotia', 'The Stirling', 'The Thistle' and 'The Velm'. An 'AGE' trademark was also used, sometimes in the form of a monogram.

Martin Arthur Martin. A gunsmith or gunmaker operating from 11 Princeton Street, Red Lion Square, London W.C., from 1886 until 1890.

Martin Edwin Martin, using an 'EM' identifier, accepted firearms and accessories on behalf of the Federal army during the American Civil War. His activities were apparently confined to 1862, which may enable them to be separated from those of ➔Edward McCue. See also "U.S. arms inspectors' marks".

Martin J.E. Martin; Glasgow. This Scottish gunsmith, associated with Alex

Martin & Co. (above), was granted British Patent 23423/1914 for a 'luminous fore sight for the Lee Enfield rifle'.

Martin, Jack & Company. Operating from chambers at 88 Chancery Lane, London WC2, this agency helped to obtain British Patent 607444 for Leslie ➛Wesley.

Martini Alexander Martini, son of Friedrich von ➛Martini, this Swiss-born engineer was granted British Patent 1531/80 of 14th April 1880 to protect a multi barrelled self cocking pistol. This was subsequently made in Britain by the ➛Braendlin Armoury Co. Ltd and promoted as the ➛Mitrailleuse.

Martini Friedrich von Martini is best known for his breech-loading rifle, developed in the 1860s from the ➛Peabody, but was also active in the production of first steam engines and then gas engines in his factory in Frauenfeld, Switzerland. The rifle was protected by British Patents 2305/68 of 22nd July 1868 and 603/70 of 1st March 1870, and roughly comparable U.S. Patent 90614 of 25th May 1869. Martini was also granted U.S. Patents for improvements to his basic design: 115546 of 30th May 1871 (with a leaf instead of spiral striker-spring), 120800 of 7th November 1871, and 132222 of 15th October 1872. The rifle was very successful, in both its British ➛Martini Henry guise and the American ➛Peabody Martini version.

Martini Enfield rifle: see below.

Martini Francotte The British pattern ➛Martini rifle was extensively copied in sporting guns made in Liége in 1880–1910, principally by Auguste Francotte. Many guns incorporated Francotte,s patented cocking indicator in the right receiver wall. Belgian-made guns can usually be identified by their proof marks, but may be misleadingly marked as a product of the ➛Braendlin Armoury Co. Ltd of Birmingham.

Martini Henry Breech Loading Rifle Company ['The…']. Formed to protect the rights of inventor Friedrich von ➛Martini, and collect royalties due to him, this agency maintained an office at 65 Gracechurch Street, London E.C., in 1877–90—being known for at least part of the post-1887 period as the 'Martini Henry & Martini Enfield Breech Loading Rifle Co.' At least one directory lists an additional address at '2 Chatham Buildings, London E.C.' in 1878–9, which may have been a private residence. A move of office to 31 Queen Victoria Street, E.C., occurred in 1891, thence to 140 Leadenhall Street in 1894. Operations seem to have continued until *c*. 1912.

Martini-Henry, Martini-Metford, Martini-Enfield The Martini was submitted in prototype form to Swiss government trials in 1866, but then appeared in Britain in 1867—where it faced severe competition from a rifle submitted by Alexander ➛Henry. Eventually, with the trials all but tied, the committee recommended amalgamating the compact Martini tilting-block breech mechanism, which was simpler than Henry's, with the Henry barrel. The Martini-Henry resulted, the first of the perfected long-action rifles being made in Enfield in 1869.

¶ They were followed by a shortened action, consequent on the development

of a bottleneck cartridge which was substantially shorter than the previous elongated straight-case design. This allowed the .450 *Mark I Martini-Henry rifle* to be approved for service on 3rd June 1871, though problems delayed final acceptance until July 1874. It was followed by the improved Mark II rifle (sealed in April 1877) and Mark III rifle (August 1879), and also by a series of carbines. The Mark I Martini-Henry Cavalry Carbine was sealed in September 1877, followed by a Garrison Artillery Carbine in April 1878; a Mk I Artillery Carbine in July 1878; a Mk II Artillery Carbine in June 1892; and a Mk III Artillery Carbine (never made in quantity) in 1894.

¶ The guns were made by the Royal Small Arms Factory in Enfield, the Birmingham Small Arms & Metal Co. Ltd ('B.S.A.& M. Co.'), and the London Small Arms Co. Ltd ('L.S.A.Co.').

¶ The .450 calibre Martini Henry was followed in British service by an abortive .40 version, about fifty P/1882 rifles being made in Enfield in 1882–4. They had combless butts, and the body was cut away behind the block axis-pin to facilitate grip. All but two of the earlier rifles were subsequently upgraded to P/1883 standards. These experiments led to the .402 ↠Enfield Martini. Introduction of the original .450 Mark IV rifle was abandoned in 1882, but the designation was re-used in September 1887 to allow Enfield-Martini rifles to be converted from .402 to .450. These were made in three patterns ('A', 'B' and 'C') depending on the manner of alteration.

¶ The introduction of the .303 ↠Lee-Metford magazine rifle persuaded the British authorities to convert hundreds of thousands of sturdy Martini-breech rifles and carbines for small-bore ammunition. This produced the *Martini-Metford* and then the *Marini-Enfield*, the differences being almost exclusively in the style of rifling: Metford-type barrels had seven-groove polygonal rifling, whereas those of Enfield type had five-groove concentric rifling which was less susceptible to erosion. Many Martini-Metfords, however, had soon been converted to Martini-Enfield pattern simply by substituting barrels; consequently, accurate classification can be difficult!

¶ The Mark I Martini-Metford rifle was adopted on 30th July 1889, followed by the Mark II on 10th January 1890. These were converted from Mk III and Mk II Martini-Henry rifles respectively. The .303 Marks I* and II* rifles of February 1903 had front sights that could be adjusted laterally. The Mk I Martini-Metford Cavalry Carbine (May 1892) was a conversion of the Mk II Martini-Henry rifle; the Mk II Cavalry Carbine (1892) and Mk II* (1893) had once been Martini-Henry artillery carbines; and the Mk III Cavalry Carbine (1892) had been a Mk II .450 rifle. The Mk I Artillery Carbine (June 1893) was once a Mk I .450 Martini-Henry artillery carbine; the Mk II Artillery Carbine (October 1893) had been a Mk II .450 rifle; and the Mk III Artillery Carbine (March 1894) had been a .450 Mk III rifle. Most of the conversions were the work of the Royal Small Arms Factory in Enfield or the Birmingham Small Arms & Metal Co. Ltd ('B.S.A.& M. Co.'), but some emanated from the ↠Henry Rifled Barrel Company ('H.R.B.').

¶ The guns of the Martini-Enfield series were essentially similar to their 'Metford' predecessors, excepting for rifling, and were often created simply by substituting barrels. The Mark I Martini-Enfield rifle (sealed in October 1895) and the Mark II rifle (February 1896) were converted from .450 Mk III Martini-Henry rifles. The Mks I* and II* rifles, with laterally adjustable front sights, were approved in January 1903. Martini-Enfield carbines included the Mark I Cavalry Carbine (August 1896), converted from a Mk II .450 Martini-Henry rifle; the Mark I Artillery Carbine (November 1895), once a .450 Mk III rifle; the Mark II Artillery Carbine (December 1897), formerly a Mk I or Mk III .450 Martini-Henry artillery carbine; and the Mark III Artillery Carbine (July 1899), which had been a .450 Mk II rifle. Most of the guns were converted in Enfield, but a few were the work of the Henry Rifled Barrel Company and others emanated from the ➔Beardmore Engineering Company and bore 'BECO' marks.

¶ Many sporting rifles were made in Britain, Belgium, Switzerland and elsewhere in Europe on the basis of military-surplus or purpose-built Martini actions (sometimes in Peabody-Martini form). These may be chambered for a variety of black-powder sporting amunition. In addition, small-calibre .297/210 or .310 'Cadet Rifles' were made prior to 1914 by companies such as the ➔Birmingham Small Arms Co. Ltd, C.G. ➔Bonehill, Auguste ➔Francotte and W.W. ➔Greener, and rimfire target rifles were made by ➔BSA Guns, ➔Vickers Ltd and others after 1920. Indeed, the BSA-Martini International Mk V ISU and Mk V Match rifles were still being made in 1986.

¶ The best source of information about British military rifles is unquestionably the first two volumes of *A Treatise on the British Military Martini* by B.A. Temple and I.D. Skennerton (privately published, 1983-93); John Walter's *Rifles of the World* (Krause Publications, third edition, 2006) gives brief details of both military and commercial patterns; and George Markham, *Guns of the Empire* (Arms & Armour Press, 1990) lists the British military patterns.

Martini Marres Braendlin ➔'Mitrailleuse pistol'.

Martini-Metford rifle: see above.

Martinier Charles Martinier et fils jeune; place Chavanelle 6, Saint Étienne, France. Listed in 1879 as a gunmaker.

Martinier Denis Martinier; rue de la Charité 11 (later 7), Saint Étienne, France. Listed in 1879–92 as a gunmaker.

Martinier Collin; rue Badouillère 21, Saint Étienne. Listed in 1879 as a gunmaker.

Martouret et Boisson; cours Saint Paul 8, Saint Étienne, France. Listed in 1879 as a distributor of and agent for arms and ammunition.

Martz John V. Martz; Lincoln, California, U.S.A. Renowned for his innovative work, particularly on ➔Parabellum pistols, this gunsmith was granted U.S. Patent 3956967 of 1976 to protect the Martz Safe Toggle Release (below).

Martz Safe Toggle Release ('MSTR'). Patented by John V. Martz (above), this allows the toggle of a suitably modified ➔Parabellum or ➔Luger' pistol to

close safely over an empty magazine; alternatively, simply rotating the safety lever to its rear (safe) position automatically shuts the open action once a new magazine has been inserted in the feed way.

Marvel ['The…']. This mark was applied to shotgun ammunition loaded by or for ➛Curtis's & Harvey of London, prior to 1918.

MAS ➛"Manufacture d'Armes de Saint-Étienne".

Maschinen- und Apparätebau 'Wagria' GmbH; Ascheberg/Holstein. This airgun maker was active from 1953 until 1961 or later, though it is assumed that the business was liquidated in the early 1960s. A limited range of barrel-cocking spring-type air rifles included the Wagria ➛Aerosport, Wagria ➛Scout, Wagria Standard and Wagria ➛Rapid.

Maschinenbau Gesellschaft Nürnberg; Nürnberg, Bavaria. A maker of 70,000 actions for the ➛Podewils-Lindner-Braunmühl rifle in 1867–8. The guns were assembled in the ➛Amberg manufactory. The business amalgamated with ➛Maschinenfabrik Augsburg in 1899, forming ➛Maschinenfabrik Augsburg–Nürnberg (MAN).

Maschinenfabrik Augsburg; Augsburg, Bavaria. A maker of ten thousand actions for the ➛Podewils-Lindner-Braunmühl rifle in 1867–8. The guns were assembled in the ➛Amberg manufactory. The business also made about 25,000 new ➛Werder actions in the mid 1870s. It amalgamated in 1899 with ➛Maschinenbau-Gesellschaft Nürnberg to form ➛Maschinenfabrik Augsburg–Nürnberg (MAN).

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

Mason James M. Mason; Washington DC, U.S.A. Designer of the breech-loading firearms protected by U.S. Patents 112523 and 117908 or 7th March and 8th August 1871 respectively. The earlier bolt-action design seated the cartridge by cam action; the later one was a variant of the rolling-block mechanism popularised in the early 1870s by Remington.

Mason Joseph Mason; New Haven, Connecticut, U.S.A. Patentee on 5th November 1889 of a 'breech-loading firearm' (U.S. no. 414651).

Mason Robert Mason. A gunsmith listed at 47 Tenter Street South, London E., from 1855 until 1861.

Mason William Mason of Taunton, Massachusetts, U.S.A., designed an improved ejector rod for the first cartridge conversions of cap lock ➛Colts, protected by U.S. Patent 128644 of 2nd July 1872. See also 'Richards Mason Transformation'. Mason was also responsible for the cylinder-locking bolt and loading gate of the ➛New Line revolvers made by ➛Colt, being part of a patent issued in September 1874, and for additional improvements in revolver design allowed by U.S. Patent 158957 of 19th January 1875. Elements of all these were included in the ➛Single Action Army Model Colt revolver. William Mason was credited with the trigger system of the double-action Colt revolvers—'Double Action Army & Frontier', 'Lightning' and 'Thunderer' (qq.v.). These exploited parts of U.S. Patents 247374, 247379, 247938 and

248190, granted on 20th September, 4th and 11th October 1881. Mason also obtained U.S. Patent 250375 of 6th December 1881 to protect a solid frame revolver with a cylinder which swung out laterally; this was also exploited by →Colt. Mason then patented a simplified hammer and spring mechanism, on 29th August 1882. The perfected Colt swing-cylinder system was protected by a patent granted on 6th November 1888.

Masquelier Manufacture d'Armes de Chasse Masquelier of Liège handled a variety of →Mauser type sporting rifles: 'AMD 1', 'AMD 2' (both in 8×68S) and 'AMD 3' (7×64). The actions seem to have been →FN Mausers, though it has been suggested that the rifles were actually purchased in a finished state from →Raick Frères.

Massachusetts Arms Company Based in Chicopee Falls, Massachusetts, U.S.A., this gunmaking business, incorporated on 5th March 1850, was an outgrowth of the →Wesson Rifle Company. Principal sharehoplders included such men as Daniel →Leavitt, William →Miller, Horace →Smith, Joshua →Stevens, Benjamin Warner and Daniel →Wesson, Thomas →Warner being the factory superintendent. The Massachusetts Arms Company made →Wesson & Leavitt cap lock revolvers, which were efficient enough to attract the attention of Colt—who successfully sued for infringement of his patents. Production of →Wesson & Leavitts ceased in favour of .28 Pocket and .31 Belt Model guns with manually-rotated cylinders. Almost all were fitted with Maynard Tape Primers, while a few .31 examples made after 1853 had a rammer patented by Joshua →Stevens. Stevens was also responsible for two trigger systems developed in an attempt to outwit Colt. No more than 3500–4000 revolvers of all types had been made when Colt's master patent expired in 1857, allowing the Massachusetts Arms Company to revert to hammer-rotated cylinders. A manufacturing licence was obtained to make the →Beaumont Adams revolver, but only about six thousand .31 five shot and .36 six shot guns had been made by 1861. In addition to making →Maynard carbines during the American Civil War, the company also made a selection of 20- and 28-bore 1865- and 1873-pattern tipping barrel shotguns on the same basic action. A few single-barrel shotguns with box locks and exposed central hammers were also made.

Massachusetts Arms Company A brand name associated with shotguns made prior to 1920 by the →Crescent Gun Company of Norwich, Connecticut, U.S.A.

Massey D.W. Massey, using the identifier 'DWM', accepted military firearms on behalf of the U.S. Army in 1909.

Massey F.A. Massey, possibly the brother of D.W. Massey, accepted guns and accessories destined for the U.S. Army in 1903–6, applying 'FAM' stamps. See also "U.S. arms inspectors' marks".

Master *or* 'Model 52 Master'. This →Smith & Wesson was a target-shooting derivative of the Model 39 pistol, introduced in 1961 to fire .38 Wadcutter ammunition. The lockwork was initially that of the double-action Model

39, locked into a single-action mode, and the barrel was ➔swamped at the muzzle to engage a hand-finished bush. In 1963, a purpose-built single-action trigger mechanism was substituted on the Model 52-1, and the coil-cpring extractor was fitted from 1971 ('Model 52-2').

Masterpiece *or* 'K-22 Masterpiece'. Built on a medium or 'K'-frame, this .22 rimfire ➔Smith & Wesson swing-cylinder revolver superseded the ➔Outdoorsman in 1940. When work began again after the end of the Second World War, improvements were made in the sights and the trigger mechanism, and three new guns appeared: the K-22, the K-32 and K-38, known also (after 1957) as the Models 17, 16 and 14 respectively. The Model 14 was discontinued in 1981 and the Model 16 was reintroduced in 1990 chambered to fire the .32 H&R Magnum cartridge interchangeably with .32 S&W Special. See also 'Combat Masterpiece'.

Masterpiece Magnum *or* 'K-22 Masterpiece Magnum'. A name given to a swing-cylinder revolver, also known as the 'Model 48', made by ➔Smith & Wesson until 1986. It was essentially similar to the K-22 Masterpiece (q.v.), but chambered the .22 Winchester Magnum rimfire cartridge. Several variants were made, some with barrels as long as eight inches. See also 'Magnum'.

Mâsu Gustave Mâsu represented a gunmaking business originating in Liége. Listed as a member of the London gun trade from 1864 until 1892, he imported and distributed Belgian-made sporting guns, including sliding-barrel shotguns made on the ➔Bastin system. Directories list operations variously as 'Gustave Mâsu', 'Gustavus Mâsu', 'Mâsu Bros.' or 'Mâsu Bros. & Co.' at 3a Wigmore Street (1864–9) and then 10 Wigmore Street (1870–92).

Mat ➔'François Alexandre Le Mat'.

MAT ➔"Manufacture d'Armes de Tulle".

Mata Onofre Mata, a Spanish army officer, patented a magazine rifle in 1883. Based on the Remington rolling block, it relied on an operating lever on the right side of the breech to transfer cartridges from the case magazine in the butt to the chamber by way of an elevator tube.

Matchless ['The…']. Associated with shotgun cartridges and possibly also accessories sold by P.D. ➔Malloch of Perth, Scotland. The ammunition usually proves to have been made by ➔Eley-Kynoch.

Matchmaster The half-stocked .22 LR rimfire Model 513TR Matchmaster (1941, 1945–69) had a heavy semi-floating barrel, a patented trigger mechanism with an adjustable stop, and Redfield competition sights.

Match Rifle A single-shot ➔Remington-Hepburn target rifle made by E. ➔Remington & Sons and the ➔Remington Arms Company from 1883 until 1907, this was chambered for cartridge ranging from .25–20 Single Shot to .40–65. A vernier sight was fixed to the upper tang behind the hammer.

Mather J. Mather & Company. Trading in Newark and Southwell, Nottinghamshire, England, this ironmongery business also sold sporting guns and ammunition. Shotgun cartridges marked 'The Britannia' have been seen with Mather's markings, though they were apparently made by James R.

➛Watson & Company.

Mathieu; 25 rue Badouillère, Saint Étienne, France. Listed in 1951 as a gunmaker.

Matthews James Matthews. Best-known as a dealer of iromongery and sporting guns—the business was founded in 1906 in Ballymena, County Antrim, Ireland—Matthews sold shotgun ammunition with brand names such as 'Hawk', 'Kingfisher', 'Swift' and 'Wizard'. Their origins are still unclear.

Matthews R. Matthews, using a simple 'RM' identifier, accepted firearms and accessories on behalf of the U.S. Army. They date from the early 1900s. See also "U.S. arms inspectors' marks".

Matthews W.J. Matthews. A gunmaker of Aston in Birmingham, Warwickshire, England, co-recipient with Walter ➛Scott of U.S. Patent 144870 of 25th November 1873.

Maumey; 35 rue Mulatière, Saint Étienne, France. Listed in 1951 as a gunmaker.

Mäurer Ernst Mäurer; Suhl in Thüringen, Germany. Registered as a gunsmith in the 1920s, and still trading in 1939.

Mauser Alfons Mauser. Brother of 'Paul and 'Wilhelm Mauser, this gunsmith was the recipient of U.S. Patent 496691, granted on 2nd May 1893 to protect a 'breech-bolt for guns'.

Mauser [Peter-] Paul Mauser. Born in Obendorf, Württemberg, on 27th June 1838, Mauser was the son of a gunsmith employed by the state firearms factory, serving his time as an apprentice and then as a journeyman gunsmith. He designed an auto-cocking version of the ➛Dreyse needle gun in the mid 1860s and then produced an improved gun chambered for metal-case ammunition. Mauser's reputation as a designer, however, is obscured by the patenting of everything in his name, particularly after the formation of Waffenfabrik Mauser AG in 1884, and it is possible that the work of many anonymous employees laid the basis of his success. He died in Oberndorf on 29th May 1914. Too many patents were granted to Mauser to list individually in any detail, though the most important are summarised in the relevant sections below. The best source of details is R.H. Korn's book *Mauser Gewehre und Mauser-Patente*, which lists each and every patent granted prior to 1908... virtually in full!

Mauser Wilhelm Mauser. Born on 2nd May 1834, an elder brother of the better-known [Peter-]Paul Mauser, Wilhelm also underwent a traditional gunmaking apprenticeship in the state firearms factory in Oberndorf and then worked there as a journeyman gunmaker until 1867. After participating in the design of the first single-shot rifles, he undertook the sales and promotional activities after the withdrawal of Samuel ➛Norris. The part played by Wilhelm Mauser in the success of Gebr. Mauser & Cie is difficult to assess, though he may have been more inventive than supposed. His death on 13th January 1882 robbed the company of a guiding hand.

Mauser Gebrüder Mauser [& Companie]; Oberndorf am Neckar, Württemberg. This great arms-making business was founded on 23rd December 1872 by Paul and Wilhelm Mauser, to make parts for the 1871-pattern Mauser rifle. The

workshop initially employed about fifty men, but the work-force had doubled by mid-1873 and a new factory (subsequently known as the 'Oberes Werk') became operative in October 1873. The Württemberg state government then sold the Mausers the state-owned firearms factory in Oberndorf, which had been formed in 1811 in an old Augustine friary, and 'Gebr. Mauser & Cie' was the result. Financial aid was provided by the Württembergische Vereinsbank of Stuttgart, and rifles were made in large numbers. The death of Wilhelm Mauser (1882), however, was soon followed by the formation of 'Waffenfabrik Mauser AG' (q.v.).

Mauser Waffenfabrik Mauser AG; Oberndorf am Neckar. This public company was formed in 1884 from Gebr. Mauser & Cie, the assistant director of the Württembergische Vereinsbank, Alfred Kaulla, joining the Mauser boardtoom as financial director. The company's fortunes dipped in the late 1880s, largely due to the adoption of the →Reichsgewehr in Germany, but the advent of the Belgian (1889) and Spanish (1893) Mausers heralded a runaway success that lasted until the end of the First World War. The Württembergische Vereinsbank was purchased by Ludwig →Loewe & Cie in the 1880s, allowing the Berlin-based engineering company to take a substantial stake in Mauser. When a large contract for the Reichsgewehr was attracted in 1889, Loewe fulfilled the order in Berlin to allow the Mauser rifles ordered by Turkey to be made exclusively in Oberndorf. So many contracts were shared that, with effect from 1st January 1897, a cartel was formed of Waffenfabrik Mauser; →Deutsche Waffen- und Munitionsfabriken of Berlin (an amalgamation of Loewe's gunmaking and Deutsche Metallpatronenfabriken), Fabrique Nationale d'Armes de Guerre, and →Österreichische Waffenfabriks-Gesellschaft. Mauser then made large quantities of rifles and semi-automatic pistols until 1918, but the Armistice and the ensuing collapse of the German economy led to the supersession of Waffenfabrik Mauser AG by →Mauser-Werke AG in 1922.

Mauser-Dovitiis rifle This was a conversion of the 1871-pattern Mauser rifle, undertaken in France to chamber the 6.5×53.5 No. 12 Daudetau cartridge. Supervised by an engineer named Dovitiis, this is said to have been used in Uruguay for some years.

Mauser IWK The postwar controlling group of Mauser-Werke Oberndorf GmbH, best known for its highly successful aircraft-cannon designs. See also 'ArmaLite'.

Mauser Jagdwaffen GmbH of Oberndorf/Neckar, the sporting-gun division of Mauser-IWK and Mauser-Werke Oberndorf was responsible for the →Mauser-Parabellums, a modernised →HSc, and bolt-action sporters including the Model 66 rifle credited to Walter →Gehmann. See also 'Heym'.

Mauser pistols *and revolvers*. German Patent no. 1192 was granted to Paul Mauser on 7th August 1877, protecting a single-shot C/77 pistol with a tipping-block breech. Only prototypes of this gun were made. It was followed by the so-called →Zig-Zag revolver, patented in 1878, and then by a mechanical repeater

known as the Repetierpistole C/86, which was protedcted by DRP 38007 of 24th July 1886. However, though the revolver was made in small quantities, none of these guns could be classed as successful.

¶ Next came the recoil-operated *Selbstladepistole C/96*, locked by a pivoting block beneath the bolt. The mechanism was protected by German Patent 90430 of 11th December 1895, British Patent 959/96 of 14th January 1896, and U.S. Patent 584479 of 15th June 1897. Other elements of the design were protected by DRGM 59732 of June 1896 and DRGM 75915 of May 1897, for the wood-body holster stock and the tangent sight, and DRP 142359 of 3rd May 1902 protected an improved hammer safety.

¶ Though patented in Mauser's name, the pistol is said to have been the work of the ➛Feederle brothers. It was powerful, clumsy and badly balanced, and chambered a controversial adaptation of the ➛Borchardt cartridge. Waffenfabrik Mauser was owned at that time by Ludwig ➛Loewe & Cie, the original promoters of the Borchardt pistol. The earliest Mausers jammed distressingly frequently, and the competing ➛Borchardt-Luger was much more successful militarily. However, the C/96 was very popular commercially and remained in production until the beginning of the Second World War; the 100,000th example had been sold in 1910. It is now widely known as the ➛Bolo, owing to extensive service in Russia.

¶ British Patent 2917/08 was sought on 10th February 1908 for the ejector and hold-open system of the *C/06–08 pistol*. Derived from the auto-loading rifle of the same designation, the handgun relied on pivoting flaps to lock its breech. Small quantities were made for trials, but had no lasting effects other than to inspire development of the M12/14 (below). British Patent 28707/09 of 8th December 1909 showed the *Selbstladepistole M/09*, a blowback design with the return spring in a chamber beneath the barrel, with 'Improvements in and relating to Firing Mechanism for Automatic Pistols' (protecting the sear and trigger system) following in 10596/10. British Patent 18363/10, sought on 17th March 1910, allowed claims for a delayed-blowback fixed-barrel pistol adapted from the 1909 pattern, whereas 20221/10 of 3rd August 1910 and 18423/12 of 10th August 1912 protected improved lockwork.

¶ A 'Recoil-Loading Pistol' with flaps beneath the fixed barrel was protected by British Patent 21105/12, sought on 16th September 1912; 22556/12 was granted for a magazine safety/hold-open plate; 24246/12 of 23rd October 1912 allowed claims for a disconnector; and 25172/13 of 4th November 1913 protected the consteruction of a box magazine. Guns of this type are known as the *Selbstladepstole M/12* and *Selbstladepistole M12/14*. Introduced commercially in Germany *c*. 1910, 6.35mm and 7.65mm ➛blowbacks sold in small numbers despite their expense. The hump-backed slide of the earliest guns had been replaced by a straight-top design before war began. Many post-1915 examples will be found with military inspectors' marks, and it is likely that virtually all of them were diverted to the armed forces.

¶ Work resumed after the end of the First World War. Production of

C/96-type pistols began again on a small scale in the early 1920s, and the ➛*Westentaschenpistolen* ('WTP') made their appearance later in the same decade. Eventually, after an amalgamation of the handgun-making operations of Mauser-Werke and BKIW, formerly ➛Deutsche Waffen- & Munitionsfabriken, production of the ➛Parabellum ('Luger') pistol began in Oberndorf in 1930; output rose greatly in the late 1930s, as the German armed forces began to re-equip for war.

¶ Mauser introduced an improved pocket pistol in 1934, based on the guns that were being made before the First World War, but not until the advent of the ➛HSc in the late 1930s was an effectual rival for the Walther ➛PP/PPK series to be found. Military production of the Parabellum ceased in 1942, the last guns being sent to Portugal, though small-scale assembly continued until 1945 and then on into 1946 under French supervision. Towards the end of the Second World War, Mauser took part in the ➛Volkspistole programmes, but the fighting ceased before work could be completed.

Mauser rifles, *automatic and semi-automatic*. Patented in 1898–9, the long-recoil operated *Selbstladegewehr C/98* was locked by struts in the front of the receiver. The patent drawings show a magazine case formed integrally with the elongated trigger guard, though a rifle pictured in *Mauser-Gewehre und Mauser-Patente* has an internal magazine and a small oval trigger guard.

¶ A modification of the C/98, with a sliding barrel, was the subject of a group of patents granted on 20th February 1898: DRP 105618 protected the magazine and lockwork; 105619 allowed claims for the locking system; 105620 protected the barrel-return spring; 105621 covered the trigger mechanism; 105622 protected the striker safety; and 105623 protected the fastening of the trigger and lockwork in the receiver. Patents of addition, DRP 107213 and 109454 (December and May 1898 respectively) improved on the striker-safety mechanism.

¶ U.S. Patent 639421, granted on 19th December 1899, also protected the C/98 autoloader. A variety of lesser German patents followed in quick succession, among them being DRP 147490 (14th November 1902)—and its British equivalent, British Patent 12398/03 of 3rd September 1903—protecting a large auxiliary magazine with two coil springs bent in 'U'-shape around the body. German Patents 151940 and 152454 (6th November 1902 and 20th August 1903) protected methods of manually operating auto-loading guns, whilst 154453 of 17th January 1902 protected a recoil booster allowing sliding-barrel guns to be operate with blank ammunition; its British equivalent was 16252/04, granted in August 1904, for 'Improvements in Automatic Fire Arms'. DRP 155771 of 6th November 1902 protected improvements in the construction of the receiver of autoloading rifles.

¶ The clumsy *Selbstladegewehr C/02*, relying on a rapid pitch thread in the multi-piece bolt to rotate locking lugs out of engagement, was protected by DRP 159157 of 6th November 1902 and DRP 169233 of 8th July 1905. DRP 169234 protected an improved manual cocking system, 164860 of 25th

March 1903 improved the trigger system, and 174456 of 4th December 1904 described a nosecap which isolated the bayonet from the barrel. British Patent 27257/05 of 30th December 1905, 'Improvements in Recoil-operated Small Arms', protected a bolt-cocking system and the coupling of the striker to the cocking piece, but the C/02 was abandoned shortly afterwards. The original German patents show a projecting magazine case, but the few guns that survive customarily have internal magazines.

¶ The C/02 was replaced by the short-recoil *Selbstladegewehr C/06–08*, also offered as a handgun. The barrel and receiver slid back in the frame just far enough to release the bolt, which was locked either with lateral struts protected by DRP 199544 (25th October 1906) or a saddle-type lock described in DRP 199576 of 30th June 1906; British Patent 3496/07 of 12th February 1907 protected the flap-lock, the saddle pattern being part of 4803/07 described below.

¶ Sought on 27th February 1907, British Patent 4803/07 was split into seven parts. 4803/07, 'Improvements in Recoil-loading Fire Arms with Sliding Barrels', protected the single-loading mechanism, the barrel arrester and the safety system; 4803A/07 protected the buffer to reduce the sensation of recoil; 4803B/07 protected the firing-pin arrester/safety unit; 4803C/07 protected the mechanical safety provided by the trigger and the sear; 4803D/07 was 'An Ejector for Fire Arms, especially Recoil-loaders'; 4803E/07 depicted a detachable large-capacity magazine; and 4803F/07 claimed novelty in a saddle-type locking mechanism.

¶ The *Selbstladegewehr C/10–13*, an unsuccessful delayed blowback, relied on an inertia block on top of the breech to pivot locking flaps outward into the receiver walls, but the slender locking bars were particularly prone to breakage. The 'Flieger-Gewehr' (or 'M1915'), a development of the C/06–08, was made in small quantities during the First World War. Fully stocked rifles with military-pattern nose caps and bayonet lugs were tested in the trenches of the Western Front, while half stock patterns were initially issued for air service. Experience soon showed the ↠Mondragon to be preferable.

¶ Experiments undertaken during the 1930s led to the recoil operated 'Model 1935' and then to the gas operated *Gewehr 41 (M)*, which used a ↠Bang-type muzzle cup. Towards the end of the Second World War, Mauser developed the *Gerät 06* on the basis of a gas operated roller-locked breech system originated by Wilhelm ↠Stähle. This led to the Gerät 06 (H) of 1944, which had a delayed blowback action.

Mauser rifles, *bolt action*. The first gun, which remained experimental, was a self-cocking adaptation of the ↠Dreyse needle gun dating from 1866. This was followed by a promising rifle chambering a self contained metal case cartridge, rejected in Württemberg and Prussia in 1867 but at least given a trial in Austria. This led to an association with Samuel ↠Norris, the European sales agent of Eliphalet Remington & Sons, and secret negotiations to begin in France. In the summer of 1867, therefore, Norris and the Mausers

had moved to Liége.

¶ U.S. Patent no. 78603, granted on 2nd September 1868 to the Mauser brothers and Samuel Norris protected the single-shot C/67–69 rifle (or 'Mauser-Norris'), rights being assigned to ➛Samuel Norris of Springfield, Massachusetts'. The patent drawings show an adaptation of the ➛Chassepot and a gun with the striker driven by leaf-spring attached to the rear of the bolt handle. Two patents granted in Austria-Hungary (XIX/9 and XIX/26 of 24th December 1867 and 15th January 1868) improved the basic design, but Remington & Sons learned of Norris's duplicitous dealings and the French government lost interest. Rights to the patents reverted to the Mauser brothers in 1870.

¶ An improved C/70 rifle tested in Spandau in 1870–1 showed that the Mauser was far superior not only to the original Dreyse needle guns but also to ➛Beck Transformation. Consequently, the Prussian government arsenal in Spandau made 2500 *Interims Modell* rifles to facilitate field trials, and the *Infanterie-Gewehr Modell 1871* was adopted officially on 22nd March 1872. Series production was undertaken in ➛Danzig, ➛Erfurt and ➛Spandau; by the Bavarian state rifle factory in ➛Amberg; by ➛Österreichische Waffenfabrik Gesellschaft in Steyr ('Waffenfabrik Steyr'); by Gebr. Mauser & Cie in Oberndorf am Neckar; and by a cartel of ➛Spangenberg & Sauer, V.C. ➛Schilling and C.G. ➛Haenel in Suhl in Thüringen. The British based ➛National Arms & Ammunition Co. Ltd made six thousand rifles, and some guns even went to China.

¶ The 1871-pattern rifle provided the basis for the M78/80 or 'Mauser-➛Koka', adopted by Serbia. Protected by DRP 15204 of 23rd 1880, this embodied a modified action with a rail behind the receiver to support the open bolt. By 1880, however, the first magazine rifles had appeared (cf., Kropatschek, Vetterli) and among the many conversions applied to the Mauser were those of Carl ➛Holub, whose tubular design dated from 1878; Franz von ➛Dreyse, son of the inventor of the needle rifle, patentee of a tube magazine in 1879 and a conventional box pattern in 1882; Louis ➛Schmeisser, who developed a drum unit in 1881–82; Ludwig ➛Loewe & Co., whose saddle unit dated from the early 1880s; and Edward ➛Lindner, who contributed a gravity-feed box in 1883.

¶ Patented in March 1881, the prototype *Mauser-Probegewehr C/81* was adapted from the M78/80 Serbian infantry rifle and protected by DRP 15202 of 16th March 1881. A tube magazine lay beneath the barrel and a cartridge elevator was contained in a new receiver. Another German patent, 20738 filed on 7th May 1882, described refinements to the breech mechanism, and the experimental C/82 rifle passed its field trials well enough to become the *Infanteriegewehr M1871/84* (later known simply as the 'Gew. 71/84'). The first series-made guns appeared in 1886. U.S. Patents 249967 and 270599 (22nd November 1881, 16th January 1883) are broadly comparable to DRP 15202 and 20738 respectively.

¶ A modified extractor/ejector mechanism was patented in Germany in November 1883 (DRP 28109) and protected in the U.S.A. by Patent 289113 of November 1883. DRP 30035 of 30th March 1884 protected improvements to the bolt and cocking piece of the experimental C/82 rifle, but tube magazines were ineffectual and Mauser began work on box patterns. Gravity-feed baskets or boxes, offset on the left side of the breech, were the subject of DRP 41375 and 43073 of 1st May and 18th October 1887, and U.S. Patent 383895 (granted on 5th June 1888) protected a 'Detachable Magazine for Firearms'.
¶ The advent of smokeless propellant in France, accompanied by the ➛Lebel rifle, showed that the action of the 1871 and 1871/84 Mausers was not strong enough. Austro-Hungarian ➛Privilegium' 37/1692 of 14th September 1887 protected an additional locking lug—known as *Mauser-Kammer mit doppletem Widerstand*—incorporated in the 9.5mm Turkish Mauser rifle of 1887. Assigned to ➛Waffenfabrik Mauser AG', U.S. Patent 370964 of 4th October 1887 was essentially similar to the Austro-Hungarian Privilegium, and DRP 44393 of 29th February 1888 protected a bolt-mounted ejector pin driven by a small coil spring. The adoption of the Gew. 88 or ➛*Reichsgewehr* is usually seen as a snub by the German authorities to Paul Mauser. However, the first of the small-calibre Mauser rifles, the C/88 was an ungainly design. Protected principally by DRP 44323 of 2nd March 1888, for the combination of bolt-stop and ejector, and by DRP 45561 of 18th April 1888 for the construction of the magazine, layout of the C/88 breech was extremely awkward.
¶ Though DRP 45792 of 29th February 1888 improved the bolt, the cocking piece and the bolt stop, the gun was almost immediately superseded by first ➛charger-loaded Mauser. This, the 7.65mm M1889 infantry rifle adopted in Belgium, had a compact bolt and a single-column magazine protruding beneath the stock ahead of the trigger. The first guns were made by ➛Fabrique Nationale d'Armes de Guerre; later ones, including a variety of carbines and short rifles (mousquetons) were made by Fabrique Nationale and by Fabrique de l'Armes de l'État. Most could be identifed by the combination of jacketed barrels and protruding single-row magazines.
¶ Austro-Hungarian Privilegium 39/609 of 8th October 1888 protected an improved magazine and charger, while DRP 50306 of 30th June 1889 protected the distinctive combination charger-guide/bolt stop encountered on the 7.65mm M1890 Turkish rifles. U.S. Patent 431668 of 8th July 1890—'Bolt-stop with cartridge-shell ejector for breech-loading guns'—is comparable with German Patent 50306. Guns with protruding single-row box magazines were supplied to several South American countries in the early 1890s, most notably Argentina ('Mo. 1891'), and also in limited quantities to Spain.
¶ The principal recognition features are the chamber crests, described in greater detail in the section devoted to 'National markings' (q.v.). Mauser, meanwhile, continued to improve the rifle, receiving an array of relevant patents. These included DRP 53073 of 4th July 1889 and U.S. Patents 431669

and 431670 of 8th July 1890, protecting improved bolt-mounted extractors. German Patents 51241 and 56499 (15th September 1889, 19th November 1890) protected the under-cut bolt heads that prevented double loading; 56497 of 4th November 1890 protected a single-row magazine with an interruptor, and 59299 of 29th March 1891 claimed novelty in an improved bolt-mounted ↠collar' extractor.

¶ U.S. Patent 449352 of 31st March 1891 was granted to protect a 'Safety Lock for Breech Bolts', whereas 451768 of 5th May 1891 protected a 'Gun Barrel'. Work continued throughout 1892. DRP 65644 of 28th April 1892 protected a ↠charger; DRP 65255 of 16th February 1892 (and its U.S. equivalent, 477671 of June 1892) protected bolt-mounted extractors; DRP 67325 of 31st July 1892 described a cut-off mechanism; and DRP 67343 of 1st April 1892, together with U.S. Patent 488694 of 27th December 1892, protected a trigger-safety preventing the striker being released until the bolt was locked.

¶ Work continued with single-row magazines, DRP 67861 of June 1892 and U.S. Patent 490029 of January 1893 being typical, but the introduction of a double-row magazine was a great improvement. Described in DRP 74162 of 12th July 1893, the first of these was incorporated in the 7×57 M1893 Spanish army rifle together with a detachable magazine floorplate protected by DRP 74163.

¶ The ↠Spanish Mauser', one of the greatest of nineteenth-century weapons, provided the basis for guns used throughout South America, in the Balkans, by Turkey, in Asia, by the Orange Free State and in the South African Republic. Mauser continued to patent improvements to the ↠charger-loaded bolt-action rifles, U.S. Patent 547932 ('Cartridge Pack for Magazine Guns') being granted on 15th October 1895 to protect the C/94 charger. German Patent 127291 of 23rd February 1900 and U.S. Patent 661743 of 13th November 1900 ('Cartridge Holder for charging Magazine Firearms') protected another ↠charger variant.

¶ One of the most important of all Mauser patents was DRP 90305, granted on 30th October 1895 to protect an improved bolt with an extra safety lug. Gradually, German army interest in the new weapons increased, greatly helped by encouraging field trials undertaken in 1895–6. These led to the approval of the *Gewehr 88/97* on 11th March 1897, with the 1895-patent 'safety' locking lug; a cocking-piece housing with integral gas deflector lugs; a special two-band nosecap/bayonet mounting system protected by the DRP 86365 of 30th October 1895; the left side of the receiver cut away (in accordance with DRGM 56068 of 9th August 1895) to allow the thumb to press cartridges from the charger into the magazine; and gas-escape ports cut into the underside of the bolt body in accordance with Belgian Patent 120477 of 12th March 1896.

¶ The Gew. 88/97 encountered so many problems that it was replaced by the *Gewehr 98* ('Gew. 98') in April 1898. Few mechanical changes were made to the Gewehre 98 in 1914–18, though, late in 1915, the markings disc attached

to the right side of the butt was replaced by two washers connected by a short hollow tube and a finger groove was added in the fore end. Stocks were made of walnut until 1916, when substitutes such as birch and European maple were officially permitted.

¶ However, the advent of the British 'Rifle, Short, Magazine ➛Lee Enfield' or 'SMLE' forced the Germans to experiment with *Einheitswaffen* (short rifles for universal issue). The first experimental carbine appeared in April 1900, and about three thousand *Kavallerie und Artillerie Karabiner 98* were made in Erfurt in 1900–1. These were superseded on 26th February 1902 by the *Karabiner 98 mit Aufplanzvorrichtung für das Seitengewehr 98* ('1898 model carbine with attachment for the 1898 model bayonet' or 'Kar 98 A'). Production of the 98 A carbine ceased in 1905, and the *Karabiner 98 AZ* (1908) was developed instead. Surviving Karabiner 98 and 98A were later converted to ➛Zielkarabiner.

¶ After the First World War had ended, surviving Gew. 98 were converted to *Karabiner 98b* (they remained full-length rifles) and Karabiner 98 AZ were retained for mounted troops and ancilliary units. With Mauser in disgrace, the work was entrusted to ➛Simson & Companie of Suhl. However, Mauser-Werke recommenced work in the mid 1930s once ➛Simson & Co., which was Jewish owned, had been appropriated by the state to form the basis of ➛Berlin-Suhler-Werke.

¶ The Wehrmacht had almost entirely re-equipped with the *Karabiner 98k*, a short (➛kurz') rifle derived from the Gew. 98. Millions of these guns were made by a variety of contractors, but quality declined noticeably as the end of the war approached. Mauser actions also provided the basis for a variety of ➛*Volkskarabiner* (VK-98) developed in 1944–5.

¶ Among the best sources of information about the Mauser rifle are R.H. Korn, *Mauser Gewehre und Mauser Patente* (Ecksteins biographischem Verlag, Berlin, 1908. Reprinted by Akademische Druck- und Verlagsanstalkt, Graz, c. 1971); Ludwig E. Olson, *Mauser Bolt Action Rifles* (F. Brownell & Sons, Montezuma, Iowa, third edition, 1976); John Walter, *Rifles of the World* (Krause Publications, Inc., Iola, Wisconsin, third edition, 2006); and *Mauser Military Rifles of the World* by Robert W. Ball (Krause Publications, 199?). *Backbone of the Wehrmacht: The German K98k Rilfe, 1934–1945* by Richard D. Law (Collector Grade Publications, 1993) is a more specifically targeted source.

Mauser-Vergueiro rifle Adopted in Portugal in 1904, after trials initially favouring the ➛Mannlicher-Schönauer, this 6.5mm rifle combined the internal magazine of the Gew. 98 with a simplifed bolt system credited to a Portuguese army commission led by Colonel Vergueiro. The bolt handle turned down ahead of the 'split' receiver bridge. The guns were made in Berlin by ➛Deutsche Waffen- & Munitionsfabriken prior to the First World War. A few ➛'M. 904/37' rifles were subsequently re-chambered for the 7.9×57 cartridge to serve alongside Kar. 98k-type short rifles supplied from Oberndorf in the late 1930s.

Mauser-Werke AG; Oberndorf am Neckar, Berlin and elsewhere in 'Greater Germany'. This was the lineal successor to Waffenfabrik Mauser AG, formed amidst the financial crisis of the early 1920s. Work began again on bolt-action sporting rifles and automatic pistols in 1923, though, owing to the enormity of Mauser's contribution to the pre-1918 war effort, work refurbishing military weapons was given to ➛Simson & Company in Suhl. In 1930, owing to a reorganisation of the holding company that owned both Mauser-Werke and Berlin-Karlsruher Industrie Werke (the post-1922 version of DWM), work on the ➛Parabellum or Luger pistol was transferred from the BKIW factory in Berlin-Wittenau to Oberndorf as part of a programme of rationalisation. One of the ironies was the assembly of Parabellums virtually alongside the Mauser C/96 pistol, which had been an important rival on both commercial and military markets prior to 1914. Mauser also made substantial quantities of 6.35mm and 7.65mm autoloading pistols in this period, including the tiny ➛*Westentaschenpistolen*. However, so much of the rifle-making market had been lost to Belgium and Czechoslovakia that Fabrique Nationale d'Armes de Guerre and Ceskoslovenská Zbrojovka respectively had been able to fill gaps forcibly vacated by the German gunmaking businesses. Though the Oberndorf factory was able to honour a few small export orders in the 1930s, for countries as divese as Abyssinia and China, most Kar. 98k (short rifles) were delivered to the Wehrmacht. Great strides were also made with the design and manufacture of machine-guns, automatic cannon and associated munitions—often for airborne use—and Mauser-Werke once again rose to a position of eminence. The Second World War brought another short-lived boost in profitability and, when the fighting ceased in 1945, Mauser-Werke was operating factories in Berlin (letter code 'ar'), Karlsruhe ('lza'), Köln ('auc'), Neuwied ('amn'), Oberndorf ('byf', 'svw'), and Waldeck bei Kassel ('amo'). See also 'Josef Nickl' and 'Karl Westinger'.

Mauser Werke Oberndorf GmbH; Oberndorf am Neckar. See 'Mauser-IWK' (above), 'CETME' and 'Voere'.

Max 1 *and* **Max-2** Names applied to 5.56mm calibre ➛Daewoo automatic rifles sold in the U.S.A. in the late 1980s by ➛Stoeger Industries of Hackensack, New Jersey.

Maxim A double-barrelled side lock big-game rifle made by Società Armi Bresciane to the designs of Renato ➛Gamba. Chambered only for .375 H&H Magnum, .458 Winchester Magnum or .470 Nitro Express, the guns have 63cm barrels and weigh 4.65kg. An ➛Express back sight with a standing block and three folding leaves is set into the quarter rib.

Maxim Hiram Percy Maxim, the son of Hiram S. Maxim (below), was born on 2nd September 1869 in Brooklyn, New York. By no means an inventive genius, Hiram P. Maxim was granted British Patent 14310/03 of 1903 for ➛Improvements in Devices for Lessening the Sound of Discharge of Guns', followed by 6845/08 and 25269/08 of 1908 and one relevant U.S. patent, 916885 of 30th March 1908. The British specifications all record his domicile

as 550 Prospect Avenue, Hartford, Connecticut. Maxim died in La Junta, Colorado, on 17th February 1936.

Maxim Hiram Stevens Maxim, born on 5th February 1840 at Brockway's Mills, Sangerville, Maine, U.S.A., was one of the world's best-known firearms inventors. However, he was a naturally talented engineer and his association with machine-guns arose only after he had come to Europe in 1881 to visit the Paris Exhibition at a time when his interests lay in electrical equipment. Maxim stayed over on London, where he was persuaded to open a workshop at 57D Hatton Garden to pursue the design of weapons that would function automatically. This marked the foundation of the Maxim Gun Company Ltd (q.v.), which subsequently merged with ➛Nordenfelt and eventually became ➛Vickers, Sons & Maxim.

¶ Maxim's machine-guns were protected by a selection of patents, beginning with British Patent 606/84 of 1884 for a gas-operated design. More influential was the design described in British Patent 3493/84 of 1884 and its U.S. equivalent, no. 297278, granted on 22nd April 1884 to protect a 'Mechanism for operating gun-locks by recoil'. Maxim received additional British Patents in 1884: 3844/84, 9407/84 and 13113/84, followed by 1307/85, 8281/85 and 14,047/85 in the following year, usually protecting 'Improvements in and relating to Machine Guns and other firearms...' Contemporaneous with these were a spate of patents granted in the U.S.A. in 1885 to protect machine-guns: 317161 of 5th May, 319596 of 9th June, 321513 and 321514 of 7th July, and then 329471 of 3rd November for a 'Machine-gun support'. A 'recoil mechanism for guns' was patented on 24th August 1886 (U.S. 347945), a 'machine gun' followed on 9th August 1887 (367825), and a 'method of manufacturing guns' was accepted on 24th January 1888 (376990).

¶ With few exceptions, almost all of the patents granted to Maxim in the U.S.A. after 1888 protected machine-guns: 395791 of 8th January 1889, 424119 of 25th March 1890, 430210 of 17th June 1890, 430211 of 17th June 1890, 436899 of 23rd September 1890, 439248 of 28th October 1890, 447524 and 447525 of 3rd March 1891, 447836 and 447837 of 10th March 1891, 459828 of 22nd September 1891, 477485 of 23rd February 1897 (gas operated), 579401 of 23rd March 1897, 583362 of 13th July 1897 (gas operated) and 593228 of 9th November 1897.

¶ Hiram Maxim received a number of patents jointly with his long-time asisstant, Louis Silverman; these included British Patents 7156/92 of 1892 (for a gun) and 16260/94 of 1894 (for a tripod), which were duplicated by U.S. Patents 551779 of 24th December 1895 and 544364 of 13th August 1895 respectively. The British Patents also record Hiram Maxim's progression from a small workshop in Hatton Garden to Crayford Works, Kent, and then Baldwyn's Park, Bexley, Kent, before he ended his days in Thurlow Lodge, West Norwood. In addition to the eponymous machine-gun, Maxim also developed an immense steam-powered 'flying machine'. He became a British subject, was knighted by Queen Victoria in 1901, and died on 24th November

1916.

Maxim Hudson S. Maxim was the younger brother of Hiram Maxim, born in Orneville, Maine, on 3rd February 1855. A short stay in Britain (1886–8) ended when Hudson Maxim returned to the U.S.A. as North American representative of the ➔Maxim-Nordenfelt Guns & Ammunition Co. Ltd, but this lasted only until he moved to the short-lived Columbia Powder Mfg Company in 1891. Most of his patents were concerned with explosives, and the sale of the assets of the Columbia company to E.I. Du Pont de Nemours & Company made him a fortune. Hudson Maxim continued to invent propellant, explosives and a torpedo prior to his death on 6th May 1927.

Maxim Gun This owed its origins to a patent granted in 1884 to American-born Hiram S. ➔Maxim. The earliest Maxims comprised two basic assemblies. The fixed part was mounted on trunnions. The aiming handles and the trigger lever were attached to the breech casing. The recoiling assembly slid inside the breech casing, moving back through a distance of about an inch. The recoil force was absorbed largely by the spiral main spring, though a small portion rotated and cocked the hammer.

¶ Even the prototypes were very efficient, passing their trials with ease. Many outstanding demonstrations were given in Europe, one of the most impressive being a 13,500-round endurance trial held in Austria in July 1888. The Austro-Hungarian authorities purchased 160 8mm-calibre Maxim machine-guns from Britain in 1889; most were apparently intended for fortress use, but a few were given to the navy. The Maxims worked well, but political pressure was brought to bear on the authorities in Austria-Hungary to adopt the rival ➔Škoda.

¶ The British Army was another of the early purchasers of Maxims, the .45 Mark I and the .303 Mark I 'Magazine Rifle Chamber'. Large calibre guns were subsequently rechambered under the designation '.303 Converted, Mark I'. They were customarily accompanied by cumbersome wheeled carriages, but a selection of tripod mounts was also available. However, despite the impressive testimony provided by the Russo–Japanese War to the efficacy of the Maxim, and to the worrying evidence of increasing enthusiasm in Germany (where a production licence had been granted to ➔Deutsche Waffen- & Munitionsfabriken), the British had acquired only 108 guns from Vickers, Sons & Maxim and its successor, Vickers Ltd, when the First World War began in the summer of 1914.

¶ A British-made Maxim Gun was successfully demonstrated in Germany in 1889, and, in 1895, Ludwig ➔Loewe & Cie imported a gun from the Maxim-Nordenfelt Guns & Ammunition Co. Ltd. Loewe also acquired a licence permitting Maxim-type guns to be made and sold throughout much of Europe, excepting Greece, Portugal and Spain. Formation of ➔Deutsche Waffen- und Munitionsfabriken (1897) encouraged production of Maxims to continue in the former Loewe factory in Hollmannstrasse, Berlin. The first guns, displaying many bronze parts, were supplied to the navy in 1897–8.

¶ German army-issue MG. 01 Maxims were much the same as their navy predecessors, but the transverse hole for the tripod-cradle retaining pin was replaced with lugs on the rear of the brass water jacket. Guns of this type were originally issued with a wheeled sled mount known as the *Schlitten 01*, soon replaced by the more robust *Schlitten 03*.

¶ A lightened Maxim Gun was adopted in 1908 as the *Maschinengewehr Modell 1908* (MG. 08), together with the *Schlitten 08*, and a special panoramic optical sight (the *Zielfernrohr für Maschinengewehr* or 'ZFM') developed by C.P. ➔Goerz. This gun provided most of the small-calibre support fire available to the German forces throughout the First World War. It had a steady and efficient action, but its cyclic rate was not much more than 300 rds/min. During the First World War, therefore, a recoil booster (*Rückstossverstärker S*) was added to increase fire rate to about 450 rds/min.

¶ Though the Maxim-pattern MG. 08 was sturdy and reliable, it was not suited to close-range infantry-support roles. ➔Madsen guns were acquired from ➔Dansk Rekylriffel Syndikat of Copenhagen, but these fed from a detachable box magazines and could not sustain fire for long periods. An answer was provided by the *Maschinengewehr 08/15* (MG. 08/15), developed by a team of army technicians led by Oberst von Merkatz, even though it was little more than a lightened MG. 08 with a wooden shoulder stock and a pistol-grip and trigger mechanism beneath the receiver. A 100-round belt could be carried in a drum-like box or Patronenkasten attached to a bracket on the right side of the receiver beneath the feed way.

¶ German Maxims were made in the government factory in Erfurt; by ➔Rheinische Metallwaaren und Maschinenfabrik ('Rh.M.& M.F.') in Sömmerda; by ➔Siemens & Halske ('S.& H.') in Berlin; and also by ➔Maschinenfabrik Augsburg Nürnberg ('M.A.N.'). The ➔Parabellum machine-gun was a lightweight derivative of the basic design.

¶ The first U.S. Army trial of a .45 calibre 1889-pattern Maxim 'Automatic Machine Gun' ocurred in 1890, when the testing board recommended that additional guns be acquired for troop trials. However, money was short and the army authorities were satisfied with the hundreds of service ➔Gatlings. After the Spanish–American Wars had shown the potential of the machine-gun, the U.S. Army tested a British pattern Maxim, the M1895 ➔Colt and a strip feed ➔Hotchkiss. The water-cooled Maxim was preferred owing to the ease with which fire could be sustained.

¶ The U.S. Army brought its first 282 *Maxim Automatic Machine Guns, Caliber .30, Model of 1904* from ➔Vickers, Sons & Maxim in Britain. Rechambered for the .30 M1906 cartridge, they proved to be sturdy and dependable. The increasing number of German Maxim guns captured by the AEF, particularly after the great German Spring Offensive in early 1918, inspired the Ordnance Department to develop a .30 M1906 conversion kit. The MG.08 was, after all, little more than a minor variant of the U.S. .30 M1904 Maxim. By substituting the barrel, changing the feed block and using M1906 cartridges in the

German feed belt, an effectual expedient was produced. However, before mass conversion could be attempted, hostilities ended and the project was abandoned.

¶ The Maxim was outstandingly successful, remaining in service in Russia, China and many other countries until the end of the Second World War. Indeed, the Soviet 1910-pattern *Pulemet Maxima* remained in production until 1944 and the British Vickers Gun, a comparatively straightforward adaptation of the original Maxim design with the locking mechanism inverted, was not declared osbolete until the 1960s. The best source of information is *The Devil's Paintbrush—Sir Hiram Maxim's Gun* by Dolph L. Goldsmith (Collector Grade Publications, revised and expanded edition, 1993).

Maxim Gun Co. Ltd ['The…']. This was formed in London in October 1884 to promote the first patents granted to Hiram S. →Maxim, the offices being listed at 57 Hatton Garden until 1888. The first chairman of the Maxim Gun Company Board was Albert Vickers, representing the Sheffield based manufacturers of heavy ordnance →Vickers, Sons & Company. A factory was built in Crayford, Kent, in 1885–7, but the business was then amalgamated with the →Nordenfelt Guns & Ammunition Company, forming the →Maxim Nordenfelt Guns & Ammunition Co. Ltd.

Maxim-Kolesnikov The 'MK' was a lightweight gun developed in the USSR by Ivan →Kolesnikov. It was produced in small numbers in the mid 1920s to compete with the →Maxim-Tokarev or 'MT'.

Maxim-Nadashkevich Also known as the 'PV' or 'PV-1', this was a lightweight air-cooled derivative of the Soviet Maxim, with a spring-buffer in the back of the receiver to increase the rate of fire. Adopted in 1928 for air service, it was made in quantity for about ten years. It was replaced by the UB or →Berezin 12.7mm design.

Maxim Nordenfelt Guns & Ammunition Co. Ltd ['The…']. This was formed in Britain in 1888 by amalgamating the machine-gun making businesses of →Maxim and →Nordenfelt, whose factories in Crayford and Erith respectively stood only a few miles apart. The first managing director was Sigmund Loewe, younger brother of Ludwig →Loewe; in 1897, however, the business was renamed →Vickers, Sons & Maxim'.

Maxim Silent Firearms Company ['The…']; 38 Park Row, New York. This company was formed in 1907 in the expectation of a patent-grant to Hiram P. Maxim (q.v.), which followed on 30th March 1908. The first silencers were made in 1909, and an associated business was organised to explore the application of silencing to internal-combustion engines. The Maxim factory made grenades and gun parts during the First World War, but apparently stopped making silencers in 1925.

Maxim-Tokarev A lightweight gun credited to Fedor →Tokarev, also known as the →MT', this was produced in the USSR in small numbers in the mid 1920s to compete with the →Maxim-Kolesnikov (→MK').

Maximum ['The…']. A mark associated with shotgun ammunition made by

→Irish Metal Industries Ltd.

May Norman May & Company of Bridlington, Yorkshire, distributed a range of products in the 1970s, including →BSF airguns and →Bimoco pellets. The business collapsed in the early 1980s, owing large sums of money to its creditors, and contributed greatly to the demise of its principal partners. See also →Vixen'.

Mayall A →revolver cannon→ or →Battery Gun, patented in the U.S.A. in 1860 and tested unsuccessfully during the American Civil War. The combustible cartridges were ignited electrically, but trials revealed a rate of fire of just 12 rds/min. As the Federal Army regarded it as a menace to its crew, the Mayall gun was abandoned.

Maybury C. Maybury; Birmingham, Warwickshire. The marks of this English gunmaker have been reported on self cocking →pepperboxes dating from the middle of the nineteenth century.

Mayer. E. & R. Mayer: see 'Mayer & Grammelspacher'.

Mayer & Grammelspacher This partnership was founded in 1890 in Rastatt, Bavaria, by Jacob Mayer and financier named Grammelspacher. Household goods were made until the first simple 'MGR' air pistols, cocked by pressing the barrel inwards, were made in the mid 1890s. Mayer patented a method of latching an airgun breech, the subject of British Patent 20559/01 of 1901, but had soon developed the 'Mayer Detent'—a spring-loaded sliding bolt, protected by British Patent 7218/05 of 1905, that is still used on barrel-cockers.

¶ Mayer & Grammelscher prospered, using the →Diana name from *c*. 1905; children's cork- and dart-firing toys were made under the 'Eureka' brand. Catalogues dating from 1914 reveal the company to be making a 'Junior' rifle, some →Gems, good-quality barrel-cocking rifles (nos 26–28), and a pair of bolt-action (known generically as 'Mauser-Verschluss') trainers.

¶ By 1923, the range had shrunk to the break-action Junior rifle, the simple No. 20, and the No. 27 and No. 27E barrel-cockers. More sophisticated designs appeared in the mid 1920s, with sporting style half-stocks instead of the butt-only pattern that had previously been universal across the range. The Model 25 was followed by the Model 35 (large) and Model 22 (small), and accompanied by a pair of 'hinge-bolt' guns—No. 15 and No. 16—patented in Germany in February 1930. A barrel-cocking pistol, the LP5, was patented in Germany on 13 December 1931 (DRP 524329), and fixed-barrel underlever-cocking rifles were sold as the Models 48, 48E and 58. These were based on the →Jeffries Pattern BSA rifles that had been popular in Germany prior to 1914.

¶ The production of airguns ceased about 1942, wartime M&G products (which often bore the letter-code 'lkp') including butts and associated parts for the Gew. 43 and MP. 43. Work stopped when the war ended and, in circumstances that have yet to be satisfactorily explained, the airgun-making machinery was sold to →Millard Brothers ('Milbro') and installed in a newly-

built factory in Carfin-by-Motherwell, Scotland. This created an anomalous situation in which the Millards controlled the use of the Diana trademark in Britain, forcing Mayer & Grammelspacher to use 'Original' in British territory. This situation lasted until the collapse of Milbro in the late 1980s.
¶ Cork-firing toys were made in Rastatt in 1950, and the airguns were gradually put back into production; first was the LG15, in July 1951, but the LP5 did not reappear until August 1958. The first new gun was the Model 50 (May 1952), which offered the well-known 'Ball Sear' for the first time. The greatest advance made in this period, however, was the perfection of a recoilless airgun patented in Germany in March 1956 by Kurt Giss (see also British Patent 803028 of 15th October 1958). The first gun to incorporate the 'Giss contra-piston' system was the LP6, introduced in April 1960. This barrel-cocking pistol was followed by the first barrel-cocking rifle, the LG 60 (February 1963), and then by the LG65 (August 1968) and LG66 (March 1974); the LP10 competition pistol appeared in August 1974. A fixed-barrel sidelever-cocking LG 75 was introduced commercially in 1977. These guns are all easily identified by the short transverse capped cylinder through the receiver.
¶ Giss-system guns were successful throughout the 1970s and 1980s, but were expensive, complicated and difficult to make. The success at the highest competition levels of gas-power guns and the single-stroke or pre-charged pneumatics offered by ➔Anschütz, ➔Feinwerkbau and ➔Walther forced Mayer & Grammelspacher to abandon all but a junior Giss-type gun in the 1990s; only the LP6 survives today. A similar fate befell a range of .22 rimfire target rifles, the 820 series, even though they offered some very good features at a highly competitive price.
¶ After a period of trying unsuccessfully to be all things to all people, a period that saw experimentation with gaudily painted stocks and the introduction of the new Models 24, 26 and 34 in 1984. The Model 36 and Model 38 followed in 1986. Mayer & Grammelspacher now concentrates on barrel-cocking spring-piston guns, in addition to the Model 48 and Model 52 (1987) sidelever-cocking sporting guns; the Model 54 Air King (1994), a sidelever-cocking sporter with a sliding-action recoil-suppressing system; and the Model 46 (1996), a modern underlever-cocking rival for the ➔Weihrauch HW77. Interestingly, the Model 46 retains the proven ball-sear mechanism. A solitary gas-powered revolver, the R357, was announced in 1997.
¶ Little has been written in English about this company. Some details will be found in W.H.B. Smith, *Gas, Air & Spring Guns of the World* (1958 and various reprints), but a more reliable history is presented by John Walter, 'Diana Airguns. The Story of Mayer & Grammelspacher, Rastatt' in the British magazine *Guns Review* (September-October 1983, March 1984). M&G products will also be found bearing marks applied by the principal distributors: Albrecht Kind ('Akah') and Dynamit Nobel in Germany ('RWS', 'Geco'); Frank ➔Dyke & Company ('Sharmrock') and ➔Millard Brothers

('Milbro') in Britain; ➔Hy-Score, ➔Stoeger, ➔Winchester and others in the U.S.A.

Maynadier William Maynadier, sometimes listed as 'Maynardier', a lieutenant-colonel in the U.S. Army Ordnance Department, accepted a variety of military firearms and accessories from c. 1838 until the beginning of the American Civil War in 1861, marking them 'WM'. See also "U.S. arms inspectors' marks".

Maynard Edward P. Maynard; Washington, DC, U.S.A. Maynard's experiments with metal case cartridges began with U.S. Patent 15141 of June 1856, in which the base of a metal tube was closed by a waxed paper disc. He eventually settled on a closed iron (later brass) tube brazed onto a sturdy perforated base, combining excellent sealing properties with a rim offering good purchase for an extractor. The earliest Maynard carbine did not succeed, but its replacement received excellent testimonials and was adopted by the U.S. Treasury for service on revenue cutters.

Maynard carbine The perfected gun was an unconventional dropping barrel design locked by a trigger guard lever which could tip the barrel so that a new cartridge could be inserted directly into the chamber. Made by the ➔Massachusetts Arms Company, the guns fired a .35 or .50-calibre copper case cartridge, ignited by the flash from a cap struck by a centrally hung hammer.

¶ Though the straight comb wristless butt looked ungainly, Maynards were light and handy. The earliest guns were made with tape primers and a folding back sight on the tang behind the central hammer. Later government guns, made exclusively in .50 calibre, lacked the tape primer and patch box, and had a conventional back sight on the barrel above the frame hinge. Federal government purchases of Maynard carbines amounted only to about twenty thousand between 1st January 1861 and 30th June 1866. Sporting derivatives of the basic design were also made.

Maynard Arms Company; Chicopee Falls, Massachusetts, U.S.A. Formed in 1857, reorganised *c*. 1873 and sold to Stevens in 1890.

Maynard Tape Primer Patented by Edward Maynard, this was a mechanical feeder fitted to a number of guns, beginning with the ➔Jenks breechloading carbines made by E. ➔Remington & Sons in the mid 1840s. The primer was also fitted to ➔Springfield rifle muskets, ➔Sharps rifles and ➔Massachusetts Arms Co. revolvers. It contained priming caps sandwiched between waterproofed paper strips, one being fed over the nipple every time the hammer was cocked.

Mayor Ernest & François Mayor; Lausanne, Switzerland. Makers of the 6.35mm ➔Arquebusier pocket pistol.

MB, **M.B.**, *a floriated monogram often superimposed on a sunburst motif*. Correctly read as 'BM' (q.v.); used by ➔Bernardon-Martin et Cie of Saint-Étienne.

M.B. Found on components for British No. 4 ➔Lee Enfield rifles made during the Second World War by the Metal Box Company. This company was also

allocated the area codes 'S66' and 'S67', but often used its initials instead.

MBT *in a rectangular cartouche*. Found on the grips of ➔Brixia pistols made by ➔Metallurgica Bresciana gia Temprini.

M.C. On shotgun cartridges loaded with explosives supplied by Muller & Co.; see 'Clermont Explosives Co. Ltd'.

MCCO *superimposition-type monogram with 'M', 'C' and 'C' equally prominent*. Found moulded into the rubber grips of revolvers marketed by ➔Maltby, Curtis & Company.

Meade Richard W. Meade, a commander in the U.S. Navy, accepted revolvers made in 1861–8 by ➔Colt's Patent Fire Arms Mfg Co. Marked 'RWM', they included cap-lock patterns and, apparently, some of the earliest metallic-cartridge conversions. Date and pattern distinguish them from the guns accepted in later years by Robert W. ➔McNeely. See also "U.S. arms inspectors' marks".

Mears Brothers A British gunsmithing business trading from 4 Tachbrooke Street, Pimlico, London S.W., in 1886–92.

Mechanical repeating pistol Though strenuous attempts were made to perfect the mechanical repeater in the last quarter of the nineteenth century—mainly in Bohemia—few had any lasting effect on technology. It is suspected that the ➔Bittner pistol achieved the widest distribution, but was never successful militarily. However, the mechanical repeaters developed by Josef ➔Laumann in the early 1890s led directly to the Schönberger autoloader. See also 'Passler & Seidl' and 'Weipert'.

Mechanical safety This term is applied to any method of ensuring that the action does not fire before the breech is properly closed. A mechanical safety is obligatory in an auto loader, but is also present in most manually operated rifles to ensure that the striker cannot reach the primer of a chambered round until the locking mechanism is engaged.

Medallion Grade Used by the ➔Browning Arms Company from 1961 onward, to distinguish Mauser-action sporting rifles with scroll engraving on the receiver and barrel and a select walnut stock. See also 'Olympian' and 'Safari' grades.

Medicus A ➔headstamp found on some .41 rimfire cartridges made shortly after 1945 by the ➔Union Metallic Cartridge Company.

Medved Also known as the 'Bear', this sporting rifle was made in the Izhevsk ordnance factory in 1965–73. It was chambered for the 8.2×53R and 9.2×53R sporting-rifle cartridges, both derived from the original Russian 7.62×54R service-rifle round. The rifle shared the gas system and rotating bolt lock of the SVD or ➔Dragunov sniper rifle, though the receiver was refined and a conventional straight-comb butt was fitted. Military style open sights and an under-barrel cleaning rod were standard fittings, and a stubby 4× optical sight was carried in a trapezoidal mount attached to the lower left side of the receiver.

Medway ['The…']. A mark found on shotgun cartridges, probably made by ➔Eley Brothers (or at least from Eley components) for ➔Sanders of Maidstone. The

name was that of the principal local river.

Meffert Imman. Meffert, Hubertus Jagdgewehrfabrik; Suhl in Thüringen, Steinweg 22 (1940). This well-known German metalsmithing business, specialising in hunting and sporting guns, was founded by Immanuel Meffert in 1839. Listed in the *Deutsches Reichs-Adressbuch* of 1900 as a 'gunmaker', under the stewardship of Friedrich-Justin and Ernst-Richard Meffert; in 1914 it operated under the ownership of Ernst Richard & Bruno Meffert; and, in 1920–45, worked under the proprietorship of Bruno Meffert. Trading ceased when the Russians overran eastern Germany in 1945. A few air pistols seem to have been made under the ➔Hubertus and possibly also the ➔Titan brand names in 1928–33. Meffert's operations continued under the DDR state control, but the company finally disappeared into the Ernst ➔Thälmann organisation in 1958/9. The ➔Hubertus mark is now associated with Albrecht ➔Kind.

Meffert Paul Meffert; Suhl in Thüringen, Amtmannsweg 9 (1941). This gunmaker was active until the end of the Second World War, making sporting rifles and gun parts.

Megastar A variant of the M45 ➔Firestar, made since 1992 by ➔Star–Bonifacio Echeverria SA. Chambered for the .45 ACP round, it has a full-length barrel and a large-capacity magazine.

Megette L.J. Megette, identified by an 'LJM' stamping, accepted U.S. military firearms and accessories in 1898–1900. See also "U.S. arms inspectors' marks".

Méhier frères; rue de la Loire 3, Saint Étienne, France. Listed in 1892 as a maker, distributor and agency for guns and ammunition. Possibly the successor to Méhier Cédier et Cie, below.

Méhier Cédier et Cie; rue de Foy 11, Saint Étienne, France. Listed in 1879 as a distributor of and agent for arms and ammunition.

Mehliser Waffen & Armaturenfabrik, Huster & Hubing; Mehlis in Thüringen, Germany. Listed in 1900–14 as a gunmaker and wholesaler, credited in the early twentieth century with the production of a hundred thousand 'Handwaffen' annually. This seems unbelievable, owing to the low survival rate of guns marked by this particular business. Owned by Gustav ➔Hubing from *c*. 1912.

Meigs Josiah Meigs of Lowell, Massachusetts, was granted U.S. patent 36721 in October 1862 to protect a sliding breech-block locked by a pivoting strut. Few of these guns were made. In May 1866, however, Meigs received U.S. patent no. 54934 for a vertically-sliding block operated by the reciprocating motion of the trigger guard as it slid on a track in the underside of the stock. This mechanism was subsequently improved in August 1868, when a patent of addition was granted, and a few guns were made on the basis of 1855 pattern Springfield rifle muskets by the Lowell Arms Company of Lowell, Massachusetts. One gun was submitted to the U.S. Army trials of 1865, but was not amongst those selected for photography and was presumably rejected

unfired.

Meldrum H.J. Meldrum, sometimes listed as 'Meldrun', accepted firearms and accessories made for the U.S. Army by ➔Colt's Patent Fire Arms Mfg Co. Dating from *c*. 1898, they are customarily identified by 'HJM'. See also "U.S. arms inspectors' marks".

Melior. A mark found on a selection of 6.35mm-, 7.65mm- and 9mm-calibre automatic pistols made by ➔Manufacture Liégeoise d'Armes à Feu.

Melland George S. Melland. A member of the London gun trade listed at 9 St Benet's Place, E.C., in 1861–3 and then at 38 Lime Street until the 1870s. According to W.W. Geener, writing in 1871 in *Modern Breech Loaders*, 'Mr Melland of Lime Street' entered a ➔Lancaster-patent breechloading 12-bore shotgun in the trials undertaken by *The Field* in 1866.

Mendibe: see 'Garate & Mendibe SA'.

Mendoza Productos Mendoza SA; Mexico City. The manufacturer of a lever operated Daisy type spring air gun designed by Rafael Mendoza, and also of a wide range of cartridge weapons.

Menendez José Garcia Menendez: see 'Mauser'.

Menta Made by August ➔Menz of Suhl, apparently in the early 1920s, this ➔blowback semi-automatic pistol was a variant of the pre-1918 ➔Beholla. The 7.65mm Menta had a seven-round detachable box magazine in the butt, whereas the cartridge capacity of the short-grip 6.35mm pattern was just six. See also 'Leonhardt' and 'Stenda'.

Menz Albert Menz; Albrechts bei Suhl in Thüringen. A maker of gun parts active in Germany prior 1939. Few other details are known.

Menz August Menz Waffenfabrik; Suhl in Thüringen, Germany. Founded in 1904. Listed in the 1914 edition of the *Deutsches Reichs-Adressbuch* as a gunmaker; in the 1920 edition as a gunsmith/gunmaker (owned by Alfred Menz); and in 1930–9 as a gun part maker/weapons maker, Menz made a range of good-quality sporting guns. However, he is renowned more for 6.35mm and 7.65mm ➔Beholla-type pistols made in the early 1920s, and a range of 4.25mm and 6.35mm vest-pocket pistols (*Westentaschenpistole*) made in the late 1920s under the tradename ➔Liliput. Guns dating later than 1937 may be found with the marks of the company's successor, AG ➔Lignose of Berlin. The 1941 edition of the *Deutsches Reichs-Adressbuch* still listed 'Aug. Menz' operating at Schleusinger Strasse 122, Suhl, under the direction of Karl Menz, and it is assumed that trading did not cease until the end of the Second World War.

Menz Hugo Menz; Suhl in Thüringen, Germany. Trading as a gunmaker in 1914 and 1920.

Menz Karl Menz: see 'Waffen-Versand-Haus'.

Menz L. Menz, a government employee identified by an 'LM' mark, accepted U.S. military firearms and accessories in 1907. See also "U.S. arms inspectors' marks".

Menz & Co.; Suhl in Thüringen, Germany. Listed in the 1939 *Deutsches Reichs-*

Adressbuch as a gunmaker. Possibly the same as 'Waffenfabrik August Menz', above.

Menz pistols The ➛Beholla variants were replaced by an enlarged Liliput, known as the ➛Modell II', chambered for the 6.35mm or 7.65mm cartridges. A 'new model' appeared in the 1930s, with the front underside of the frame cut away to give a streamline effect. The 'P&B Modell III' (external ring hammer) and 'P&B Modell IIIa' (enclosed hammer), available 6.35mm or 7.65mm versions, was a modernised design inspired by the Walther ➛Polizei-Pistole. The 'P&B' mark represented *Polizei und Behörde*—'police and authorities [model]'. The 'PB-Special' of 1935 was a derivative of the P&B pattern with an exposed ring hammer and a double-action trigger mechanism; it will be encountered with 'Theodor Bergmann Erben' or 'AG Lignose' marks instead of the Menz name.

MER Found on U.S. military firearms and accessories. See 'Mark E. Reynolds'.

Mercenier Gunsmith Henri Mercenier of Liège, Belgium, is best known for a solid-frame revolver operated by pressing a ball-like catch ahead of the trigger guard to the left. This pivoted the cylinder out of the frame to the right; the ball could then be pushed forward to extract spent cases simultaneously. Made in .320, .380 and possibly also .44, the design apparently dates from the 1880s.

Mercié Henri Mercié. An engineer employed by ➛Hotchkiss, co-designer with the Laurence V. ➛Benét of the Benét-Mercié Machine Rifle.

Merco A mark used by Oskar ➛Merkel & Companie of Suhl.

Mercury A barrel-cocking spring-and-piston air rifle made in Britain by ➛BSA Guns Ltd and its successors from 1971 until the 1990s, combining the appearance of the ➛Airsporter with the 1959-patent barrel-block system of the ➛Meteor. Made in .177 and .22, the Mercury progressed throigh several patterns: the *Mark I* of 1971–3 (serial numbers prefixed 'W' in .177 or 'Z' in .22); the *Mark 2* of 1974–8 ('WB', 'ZB'); the *Mark 3* of 1978–83 ('WC', 'ZC') with a bluff-contoured stock; and the *Mark 4* of 1983–94 ('WC', 'ZC') with a slim rounded fore-end. The 'Mercury Target' was a short lived (1974–5) variant with aperture sights, and the *Mercury S* (1980–3, 'WH' in .177, 'ZH' in .22) had a walnut stock and a one-piece extruded cylinder. The *Mercury S Mk 2* (1983-95, 'WH', 'ZH') introduced a stock with a slender round-tipped fore-end. A few guns have also been made in .20 and .25, but were often sold under different names—e.g., the .25-calibre 'Manchester Magnum' sold in the 1980s by Manchester Air Guns.

Meriden A ➛Suicide Special revolver made by the Meriden Arms Company (below) of Meriden, Connecticut, U.S.A., in the late nineteenth century.

Meriden Fire Arms Company; 508 North Colony Street, Meriden, Connecticut (in 1908). This gunmaking business was created by ➛Sears, Roebuck & Co. about 1893 Among its products were ➛Fyrberg type auto-ejecting revolvers and shotguns sold under the 'A.J. Aubrey' brand, named after the first factory superintendent, and ammunition including 'M.F.A. Co.' in the headstamps. The company then turned to five-shot .32 and .38 break-open guns, made *c.*

1905–14 in hammer or hammerless forms.

Meriden Manufacturing Company; West Meriden, Connecticut, U.S.A. This gunmaking business—probably founded about 1863 (1865?)—is best known for Triplett & Scott carbines, patented by Louis ➔Triplett in 1864, but also offered the rifle-musket conversions and double-barrel hammer shotguns designed by William H. & George W. ➔Miller. Its president was Charles Parker, who subsequently allowed his sons not only to form ➔Parker Brothers & Co., but also take rights to the Miller shotguns with them.

Mérigneux; grande rue Saint Roch 39, Saint Étienne, France. Listed in 1879 as a gunmaker.

Merke A compact Spanish 6.35mm-calibre Browning-type pistol made by F. ➔Ormachea of Eibar, Guipuzcoa; six rounds, hammer fired.

Merkel Bernh. Merkel of Suhl in Thüringen, Wolfsgrube 16 (1940), was listed in German trade directories for 1914–41 as a gunmaker.

Merkel Ernst Merkel was co-owner with Adolf Schade of Suhler Waffenwerke Gebr. Merkel (below).

Merkel E.A. Merkel; Suhl in Thüringen, Rimbachstrasse 17 (1940). A gunmaker trading in Thuringia during the twentieth century. The business was listed in the Suhl district in 1900–20, trading under the ownership of Marie Merkel), and in 1930–9 as a 'weapons maker' (proprietors: Ferd. & R. Merkel).

Merkel Franz Merkel; Zella-Mehlis in Thüringen. This gunmaking business seems to have succeeded Udo ➔Anschütz in the 1930s and then traded until the end of the Second World War.

Merkel Gebhardt Merkel; Suhl in Thüringen. This man was listed in the 1930 *Deutsches Reichs-Adressbuch* as a gunmaker.

Merkel Gebrüder Merkel; Suhl in Thüringen. This gunmaking business (claiming eighteenth-century pedigree but in reality founded in 1898) rose to become one of Germany's leading manufacturers of sporting guns. Trade directories dating from 1900 usually list the owners as Oskar, Gebhardt & Paul Merkel, changed to 'Gebhardt & Paul Merkel' by 1914. By 1920, 'Suhler Waffenwerk Gebr. Merkel', gunmaker, was still being operated by Gebhardt & Paul Merkel. By 1939, however, the proprietor was listed as Adolf Schade. In 1941, 'Gebr. Merkel, Suhler Waffenwerke' was listed under the ownership of Ernst Merkel and Adolf Schade. Offices were maintained in Strasse der Stumabteilung, Suhl, with a factory at Rimbachstrasse 51. Though best known for shotguns, double rifles and combination guns of impeccable quality, Merkel also made ➔Mauser-type sporting rifles prior to 1939. The actions were purchased from the Mauser factory in Obendorf and could be supplied in any of the standard Mauser chamberings. Most had long half-octagonal barrels and were stocked almost to the muzzle, the fore-end customarily being made in two pieces. Set triggers were common, though individual details were left to the whims of the purchaser. A 'GM' or 'G.M.' mark was sometimes all that distinguished them. Trading ceased in 1945, but the name was resurrected by the post war nationalised GDR firearms industry (see 'Ernst Thälmann') and affairs

continued until the unification of Germany. The company is now trading independently once again, making high-quality sporting guns and rifles.

Merkel Oskar Merkel & Co.; Suhl in Thüringen, Schlageterstrasse 60 (1941). The owners of this German gunmaking business, founded in 1908, were listed in 1914 as Albert Oskar and Frau Merkel. This had changed to Albert Oscar, Paul and Frau Merkel by 1920, and to Albert Oskar, Paul and Franz Merkel by 1930. Paul Merkel had become sole proprietor by 1939, but trading finally ceased at the end of the Second World War. The guns were sometimes marked MERCO.

Merkur This name was associated with a ➔Mauser-type bolt-action sporting rifle sold by Albrecht ➔Kind *c*. 1959–68. Built on refurbished military actions, possibly by ➔Kriegeskorte, the guns had double set-triggers, and half stocks with hog's back combs and small oval cheek pieces. They were chambered for cartridges ranging from .243 Winchester to 8×57.

Merkur Super Sold by Albrecht ➔Kind in 1968–77 or later, this ➔Mauser-pattern sporting rifle replaced the ➔Merkur and the ➔Saturn. The walnut stock had a ➔Monte Carlo comb.

Merkuria A Czechoslovakian export agency, working from Argentinska 38 in Prague 7, distributor of firearms and Czech-made ➔Slavia and other airguns. It replaced ➔Omnipol.

Merlett. John Merlett of Bound Book, New Jersey, U.S.A., patented a 'breech-loading firearm' on 18th August 1868 (U.S. no. 81283), assigned in part to John Smalley.

Merlin Usually encountered as 'The Merlin'; a brand name used on shotgun cartridges sold by Charles ➔Hellis & Sons of London.

Merlin A small underlever-cocking air rifle made in the 1960s by ➔BSA Guns Ltd in accordance with British Patent 978502 granted in 1959 to Josef ➔Veselý and Roger ➔Wackrow. It was distinguished by a loading block that rose automatically as the action was cocked. The first version of 1962–4, made in .177 ('K'-prefix numbers) and .22 ('L' numbers), was replaced by a modified 'Mk 2' pattern ('KA', 'LA') with an automatic safety mechanism and a separate back sight. This version lasted until the end of 1968, but only about twenty thousand Merlins were made.

Merlin: Saint Étienne, France. Listed in 1933 as a gunmaker.

Mermier et Cie; Saint Étienne, France. Listed in 1879 (at rue Beaubrun 21) and 1892 (at rue Désirée 48) as a distributor of and agent for arms and ammunition.

Merriam. Lincoln A. Merriam, a gunmaker of New York City, was granted protection for 'breech-loading firearms' on 19th January 1869 (U.S. Patent 86091) and 16th February 1869 (87058). Magazine rifles followed on 11th February and 1st February 1879 (no. 212105 and no. 217134 respectively).

Merrill George Merrill of East Orange, New Jersey, was the grantee of U.S. Patents 119939 and 119940 of 17th October 1871 to protect breech-loading forearms.

Merrill Ira M. Merrill; Springfield, Massachusetts, U.S.A. Designer of 'hook attachments for bands of firearms' (U.S. Patent 137786 of 15th April 1873) and 'implements for firearms' (174634 of 14th March 1876).

Merrill James H. Merrill; Baltimore, Ohio, U.S.A. This gunmaker was reponsible for the so-called 'Merrill, Latrobe & Thomas' carbine listed below. The first Merrill gun to be issued officially, in the U.S. Navy, was an Ames-made ➔Jenks adapted to handle combustible paper cartridges. The conversion was duly approved on 26th January 1861, guns of this general pattern being protected successively by U.S. Patents 20954 of 20th July 1858; 32032 and 32033 of 9th April 1861; 32450 and 32451 of 28th May 1861; 33536 of 22nd October 1861; and 40884 of 8th December 1863. The major internal difference between the Jenks and Merrill actions was the annular copper disc on the latter's piston head. This was momentarily crushed by the pressure of firing, expanding outward to provide a supposedly effectual gas seal. The carbines have a modified actuating lever, locking on the back-sight base, and a conventional side-hammer lock; five thousand were ordered on Christmas Eve, 1861. The earliest examples had an actuating lever with a flat knurled locking catch, and brass furniture. Later guns had an improved locking catch on the breech lever, and the patch box was eliminated. The .54 calibre Merrill rifles accepted sabre bayonets. The first guns had flat knurled breech latches, but these were superseded by a rounded pattern embodying a sprung plunger. The Federal authorities bought 14495 carbines and 769 rifles prior to 30th June 1866; some guns were made for Merrill by the ➔Brown Manufacturing Company and, therefore, are sometimes listed as ➔Brown-Merrill'.

Merrill Samuel Merrill. Co-founder with Joseph C. White of the ➔White-Merrill Arms Company of Boston.

Merrill, Latrobe & Thomas carbine This carbine was designed by James Merrill in partnership with Latrobe & Thomas, embodying a rotary tap or 'faucet' breech protected by U.S. Patent 14077 of 8th January 1856. The guns were made under contract by E. ➔Remington & Sons, but were too complicated and soon failed in service.

Merrill, Thomas & Company A successor to Merrill, Latrobe & Thomas, this gunmaking business was responsible for the earliest Merrill-type conversion of the ➔Jenks carbines.

Merrill Patent Fire Arm Mfg Co.; Baltimore, Maryland, U.S.A. Active in 1860–9, this promoted (but did not actually make) the plunger-breech rifles and carbines designed by James H. Merrill.

Merrimack Arms & Manufacturing Company; Newburyport, Massachusetts, U.S.A. Makers of ➔Ballard rifles, ➔Southerner cartridge derringers and and an assortment of Martin and Beach sights in 1867–9, then succeeded by the ➔Brown Mfg Co.

Merveilleux A name found on a repeating pistol made by Manufacture Française d'Armes et Cycles of Saint Étienne.

Merwin Joseph Merwin; New York City. Co-designer with Edward ➔Bray of

an auxiliary cap-lock ignition system used on the ➔Ballard rifle: U.S. Patent 41166 of January 1864.

Merwin & Bray Fire Arms Company; New York City and Worcester, Massachusetts, U.S.A. Active in 1863–8, these distributors of arms and equipment handled ➔Plant revolvers immediately after the American Civil War had ended. Merwin & Bray were succeeded in 1868 by Merwin & Simkins, then by Merwin, Taylor & Simpkins (*c*. 1869–71), and finally by Merwin Hulbert & Company (next entry).

Merwin, Hulbert & Company The only military-pattern revolver to be offered by this wholesaler—trading from *c*. 1871 until superseded by ➔Hulbert Bros. & Co. in 1891—was the M1877, made by ➔Hopkins & Allen in accordance with patents granted to Benjamin ➔Williams, Daniel ➔Moore and William ➔Hulbert in 1874–7. The barrel was held to the standing breech only by the cylinder axis-pin and a lock on the frame ahead of the trigger guard, and could be swung laterally and drawn forward until a star-plate extractor, attached to the breech, pulled spent cases (but not unfired rounds) out of the cylinder. The open-frame design proved to be too weak, however, and had soon been replaced by sturdier top-strap patterns. See also 'Double Action Army', 'Double Action Pocket Army', 'Pocket Army' and 'Triumph'.

Merz Carl Merz of Stetten bei Hechingen, Hohezollern, Germany, is generally recognised as a maker of small-arms components during the Second World War. These may be identified by the code 'ah'. Links between Carl Merz and Merz-Werke (next entry) have yet to be established.

Merz Werke Gebrüder Merz GmbH. Established in Frankfurt am Main, Merz had become one of Germany's leading metal-stamping businesses by 1939. Parts were made for machine pistols (MP. 40), the assault rifles (MP. 43/StG. 44 series) and the MG. 42. Many of these can be identified only by the letter-code 'cos'.

Metallwaren, Waffen & Maschinenfabrik: the German name for 'Fémaru Fegyver és Gépgyár'.

Metal Box Company A maker of magazines for the British 9mm ➔Sten Gun during the Second World War. The company had several factories, and it is not currently clear which made the magazines. Most probable was the facilities of the 'Machine Section' in Kendal Avenue, Acton, London W3, which used the code 'S 77'. See also "British military manufacturers' marks".

Metallique, *or* 'Metallique-FN': see 'FN-Metallique'.

Metalode ['The…']. This mark has been associated with Belgian-made alloy-case shotgun cartridges sold by ➔Le Personne of London.

Metcalf William Metcalf, a supplier of sporting guns and ammunition to British military personnel, maintained premises at the corner of Richmond and Shute Roads in the Catterick army camp. Shotgun cartridges made by ➔Eley-Kynoch have been reported with his marks.

Metcalfe Henry Metcalfe, then a lieutenant in the U.S. Army Ordnance Department, accepted martial Smith & Wesson revolvers (1873–4). His 'HM'

identifier may be difficult to distinguish from a similar mark used in the mid 1870s by H. ➔Murdock. Metcalfe is renowned for the quick-loading device (below) that bears his name. See also "U.S. arms inspectors' marks".

Metcalfe Quick Loader Two prototypes were made in 1874, and about a thousand single-shot M1873 'Trapdoor Springfield' rifles were made in Springfield Armory in 1876 with a special detachable block containing eight cartridges carried head upward on the right side of the stock.

Meteor A knife-pistol made by Joseph ➔Rodgers.

Meteor A barrel-cocking spring-and-piston air rifle made by ➔BSA Guns Ltd, incorporating a barrel-block designed by Josef ➔Veselý and Roger ➔Wackrow (British Patent 941711 of 1959), a buffered piston (937658 of 19th May 1959) and an air cylinder made from a single piece of steel formed around a mandrel and then welded along the seam. Several differing variants were made: the *Mark 1* of 1959–62 (serial numbers prefixed 'N' in .177 and 'T' in .22), with three flutes on each side of the fore-end; the *Mark 2* of 1962–8 ('NA' and 'TA', 'NB' and 'TB' numbers) with a simpler back sight, a plain stock, and a spring-loaded ball barrel-lock; the *Mark 3* of 1969–73 ('NE', 'TE') with an 'O'-ring seal on the piston and a reversion to the bolt detent; the *Mark 4* of 1974–8 ('NG', 'TG') with improved sights; the *Mark 5* of 1979–83 ('NH', 'TH') with an articulated cocking lever, a Power Seal piston and blunt-tipped fore-end; and the *Mark 6* of 1983–95 ('NH', 'TH') with a slim round-tip fore-end. 'Super Meteors' have also been made, Mark 3 examples initially being numbered in a separate series (1968–9, 'ND', 'TD') and then intermixed with the standard Mark 3 (1969–73). These were followed by Marks 4, 5 and 6 numbered in the same series as ordinary guns. Their stocks customarily have Monte Carlo combs, ventilated rubber butt plates, and deeper fore-ends than the standard version.

Metford William Ellis Metford, born in 1824, was educated as an engineer, finding his first employment on the railway. His experiments into the accuracy of rifles began prior to 1850, arising from an interest in competitive shooting, and he has been credited not only with the bullets commonly ascribed to Richard E. ➔Pritchett, but also with the mechanically-fitting projectiles credited to Joseph ➔Whitworth. Metford is best remembered for the distinctive polygonal rifling incorporated in rifles ranging from cap-lock match patterns to the .303 ➔Lee Metford. He died in 1899, after several years of failing health.

Metropolitan A ➔Suicide Special revolver made by the ➔Crescent Arms Company of Norwich, Connecticut, U.S.A., in the late nineteenth century.

Metropolitan A brand name associated with shotguns made by the ➔Crescent Gun Company of Norwich, Connecticut, U.S.A.

Metropolitan *or* 'Metropolitan Mark III'. Made in 1969–72 by the Firearms Division of ➔Colt Industries, this was a variant of the Lawman, chambered specifically for .38 Special ammunition. It had a heavy 4-inch barrel.

Metropolitan Fire Arms Company; New York City. This business began trading

in 1864, capitalising on the fire that had destroyed Colt's Hartford factory. It products included six-shot Navy Model, six-shot New Model Navy and five-shot .36 New Model Police Colt copies identified by simple pivoting rammers. Many guns were unmarked, though some were made for H.E. ➔Dimick & Co. and marked appropriately

Metropolitan Police ➔Suicide Special revolvers made by the ➔Hopkins & Allen Arms Company of Norwich, Connecticut, ➔Maltby, Curtiss & Company and ➔Maltby, Henley & Company in the late nineteenth century.

Mettax [The]. Found on shotgun cartridges made by ➔Eley Kynoch Ltd.

Mettoy Co. Ltd ['The…']; Northampton. A maker of magazines for the British 9mm ➔Sten Gun during the Second World War. The code 'M 634' may have been used instead of the company name. See also "British military manufacturers' marks".

Metzner Albin Metzner, Thüringer Waffenhaus; Zella St Blasii in Thüringen, Germany. Listed in pre-1914 directories as a gun and weapon maker. The business was then owned by Albin, Georg, and Max Metzner (though some entries seem to suggest this to have been a single person).

Meunier A French army officer, responsible for the 7mm Fusil A6 briefly adopted by the French army prior to the First World War.

Meunier A French gunmaker, listed in 1951 at 7 rue Jean Baptiste David, Saint-Étienne.

Mewburn J.C. Mewburn was a patent agent, responsible for the affairs of Paul ➔Giffard, acting during the grants of British Patents 2077/86 of 1886, 11050/89 of 1889 and 10308/90 of 1890. The first notes Mewburn's address as 169 Fleet Street, the other two as '55 & 56 Chancery Lane'.

Mewburn O.R. Mewburn & Company. Listed as gunmakers' agents in the London directories for 1874, with offices at 1 & 2 Fenchurch Street.

Mexican Model Found on small solid-frame .320 or .380 double-action revolvers made in Belgium prior to 1914 by Lepage et Cie of Liége. They usually have vestigial round-butt grips and distinctive ring triggers.

Mexican Model A nickname given by Smith & Wesson to two thousand '.38 Hand Ejector Target Model' revolvers assembled immediately after the end of the Second World War from ➔Military & Police Model components. They had Patridge front and micro-adjustable back sights.

Mexico City arms factory: see 'Mauser'.

Meyer: Place Villeboeuf 12, Saint Étienne, France. Listed in 1892 as a gunmaker.

Meyer Gustav Meyer; Zella Mehlis in Thüringen, Germany. Listed in 1939 as a gun-stock maker.

Meyer Gust. Meyer & Sohn; Zella-Mehlis. A maker of guns, gun parts and accessories, often identified simply by a *Starrkrampf* trademark.

Meyer Michel Meyer of l'Impasse Saint Honoré 7, Saint-Étienne, France, was listed in 1879 as a gunmaker.

Meyer Veuve; rue Gambetta 41, Saint-Étienne, France. Listed in 1892 as a gunmaker.

Meyers Albert J. Meyers or 'Myers', a major in the Federal army, accepted pyrotechnic ('flare') pistols during the American Civil War, marking them 'AJM'. See also "U.S. arms inspectors' marks".

MF, **M.F** *in a rectangular cartouche*. Sometimes placed above the date of manufacture or reconstruction, this mark is usually found on the woodwork of Chilean military weapons. Significance unknown.

MF *monogram with the tail of 'M' forming the vertical of 'F'*. Encircled, enwreathed, and/or accompanied by two cannons in saltire, this was ued on a range of guns and accessories made by ➔Manufacture Française d'Armes et Cycles de Saint-Étienne ('MFAC', 'Manufrance'). These included the ➔Le Français pistol, and a range of sporting rifles marketed under the ➔Bufalo brand.

MFAC: see 'Manufrance'.

MFACO, **M.F.A. Co.** *in a banner or cartouche, black-letter or sans-serif lettering*. A mark used by the ➔Marlin Fire Arms Company.

MFACo. A headstamp associated with the ➔Meriden Fire Arms Mfg Co. It is assumbed that the cartridges were made elsewhere.

MFACo. *superimposition-type monogram with 'M', 'F' and 'A' prominent*. Used on revolvers made in the U.S.A. by the ➔Meriden Fire Arms Company. The style of the lettering can vary from cursive to angular.

MG, **M. & G.** Associated with ➔Mayer & Grammelspacher of Rastatt/Baden.

MGB, **MG B**, **MG&B**: headstamps associated with the ➔Midland Gun Company of Birmingham, customarily restricted to shotgun cartridges.

MGC *usually in a diamond*. Correctly 'GMC' (q.v.); used by ➔Garbi, Moretti y Cia of Mar del Plata.

MGCB, **MGC B**, **MGC&B**: another group of ➔headstamps associated with the ➔Midland Gun Company of Birmingham, Warwickshire. They usually appear on shotgun ammunition.

M.G.M. Found in the headstamps of cartridges made by ➔Manufacture Générale de Munitions of Bourges-les-Valence.

MGR *on a target*. This was used by ➔Mayer & Grammelspacher of Rastatt/Baden from *c*. 1895 until replaced by ➔Diana' early in the twentieth century. A variant accompanied by two rubber tipped darts in saltire was registered for use on children's guns in 1905. See also 'Eureka'.

MH&CO *superimposition-type monogram with 'M' and 'H' equally prominent*. Found moulded into the rubber grips of revolvers marketed by ➔Maltby, Henley & Company.

MHW A monogram correctly read as 'WHM', found on sporting guns and shotgun ammunition. See 'William H. Mark'.

Micheels Marius Micheels of Maastricht in the Netherlands, active in 1911, distributed sporting guns and ammunition. He specialised in 'Oorlogs-, Jacht- en Schijfwapens'.

Micheloni A burst of enthusiasm for combination weapons occurred in Britain in the middle of the nineteenth century, owing to a rise in colonial wars. A patent protecting a cap-lock revolver sabre was granted in 1864 to Isaiah

Williams, acting for this Italian designer.

Michie Gunsmith/ironmonger George M. Michie & Company, trading in the Scottish city of Stirling, handled shotgun cartridges branded "Michie's Unequalled", made from ➔Eley or possibly Belgian components prior to 1914.

Michigan Armament, Inc.; Detroit, Michigan, U.S.A. Maker of the ➔Guardian 27C (or 270) compact automatic pistol.

Midget ['The…']. A shotgun cartridge made by ➔Eley Bros. prior to the acquisition of the company by Explosives Trades Ltd in 1918. Also sometimes associated with ammunition handled by ➔Cogswell & Harrison.

Midland ['The…']. Found on shotgun ammunition loaded for H. ➔Clarke & Sons of Leicester, possibly by the ➔Midland Gun Company.

Midland A brand name used by the U.S.-based ➔Gibbs Rifle Co. on guns which were based on components acquired from ➔Parker Hale. They have included 'Midland 2100', built on an 1898-type ➔Mauser action in chamberings ranging from .22–250 to .308 Winchester. The 'Midland 2600' and 'Midland 2800' were similar, but had plain hardwood or laminated birch stocks instead of walnut. A 'Midland 2700 Lightweight' was introduced in 1992.

Midland Gun Company; Demon Gun Works, Bath Street, Birmingham 4. This was a partnership of William ➔Baker and Arthur Herbert ➔Marsh, latterly operating from the Bath Street Works (sometimes known as 'Demon Gun & Gun Barrel Works') in Bath Street, Birmingham. The business was founded in 77 Bath Street in 1888, but is listed in the Birmingham directories for 1890–1901 at 81 Bath Street before moving to Vesey Street in 1902. Trading continued until the business was absorbed in 1956 by ➔Parker-Hale Ltd. The Midland Gun Company seems to have been distributor of some guns while making others under sub-contract. See ➔Lane Brothers, whose airguns seem to have been amongst the latter group. Baker & Marsh apparently produced a copy of the Langenhan ➔Millita as the ➔Bull's Eye, in addition to the ➔Demon and its variations, and air canes were still being sold in 1924. The Midland Gun Company was allotted the code 'M 170' during the Second World War, supplying the authorities with 1450 12-Bore shotguns in 1942. In addition to sporting rifles, shotguns and accessories, there was a bewildering selection of shotgun cartridges. Among the brand names identified to date are 'Best of All', 'Demon', 'Double Demon', 'Edward', 'Imp', 'Jubilee', 'Keeper', 'Rabbit', 'Record' and 'Sudden Death'. See also "British military manufacturers' marks".

Midland Gun Company A trading name used by ➔Parker Hale on the 'Midland Model 2100' rifle, built on an 1893-type Spanish ➔Mauser action. See also ➔Gibbs Rifle Company'.

Mid-Range Model Dating from 1878–85, the ➔Ballard No. 42 rifle had a pistol grip butt, a half-length fore-end, and a peep-and-globe sight system. Chamberings ranged from .38–50 Ballard to .50–70 Government. The 'No. 4 A.1' of 1879–83 had an English walnut half-stock, Marlin's improved 800-yard

vernier back sight, and a wind-gauge front sight with bead and aperture discs.

Mid Range Rifle, *No. 1 Pattern*. Introduced by the ➔Sharps Rifle Company early in 1876, this .40–70 gun had a half- or full-octagon barrel, a chequered pistol-grip butt, a nickelled rifle-type butt plate, and vernier/spirit level sights. The *No. 2* was similar, with a plain finish and a straight-wrist butt; and the *No. 3* was a No. 2 chambered for the .40–50 cartridge.

Mid Range Target Rifle Built in 1875–90 by E. ➔Remington & Sons and the ➔Remington Arms Company, on the basis of the No. 1 ➔rolling-block action, this had a half-octagon barrel chambered for rounds ranging from .40–50 Sharps to .50–70 Government. A pistol-grip butt was usually fitted, together with globe-and-vernier aperture sights. See also 'Remington rifles, rolling-block action'.

Mieg Armand Mieg of Leipzig and Heidelberg, Germany, has been credited with at least part of the design of the 8mm ➔Reichsgewehr. He was granted U.S. Patent 400472 of 2nd April 1889, jointly with H. Bischoff of Berlin, to protect a magazine rifle; and 533911 of 12th February 1895 for a 'recoil-operated firearm'.

Mikros Made in France by ➔Manufacture d'Armes Pyrénées of Hendaye, the first six-shot 6.35mm and 7.65mm pocket pistols of this name were based—very closely!—on the striker-fired ➔Walther Modell 9 and FN-Browning respectively. They could be distinguished by their markings, which often included FABRICATION FRANÇAISE ('French make'). Post-1958 examples, the Unique Mikros ('Mle 5', 'Mle 58' or 'Mle K'), had squared contours, an enlarged trigger guard, a cross-bolt magazine release and an external hammer.

Milanovic. Koká Milanovic: see 'Mauser'.

Milbank Isaac M. Milbank of Greenfield Hill, Connecticut, U.S.A., was granted a wide range of patents in the 1862–77 period, but few of his designs encountered tangible success. The earliest patent, U.S. 37048 of 2nd December 1862, protected a gun with a detachable powder chamber locked by a radial wedge in the back of the breech. The gun shown in the papers accompanying U.S. Patent 46125 of 31st January 1865 had a breech-block which could be swung laterally on a longitudinal pin once a wedge-plate lock had been swung clear. U.S. Patent 52734 of 20th February 1866 was granted for a lifting-block breech locked by a wedging bar which slid down into the floor of the receiver to take the shock of firing; U.S. Patent 55520 was granted on 12th June 1866 to protect a variation of this locking system with a locking lever which swung laterally. U.S. Patent 61082 (granted 8th January 1867) protected a rotary breech plug which lifted up and forward, whereas 61751 of 5th February 1867 showed a block which swung sideways. Comparable in general terms to the ➔Needham system, the side-swinging block Milbank was tested by the U.S. Army in 1867 on a converted .58-calibre Springfield rifle-musket. Milbank subsequently received U.S. Patent 65585 on 11th June 1867 to protect a breech-block which swung upward at the rear when a rotary

lateral locking-bar had been released. U.S. Patent 84566 of 1st December 1868 protected an improved version of the side-swinging breech (61751, above) with an internal striker instead of an external side-hammer. The rifle shown in drawings accompanying U.S. Patent 125829 of 16th April 1872 was a bolt-action pattern with a trigger safety system and a separate inertia striker; the mechanism was locked by pivoting the breech-lever base plate so that it abutted the receiver. U.S. Patent 136850 of 18th March 1873 allowed claims for an improved bolt-action rifle, baed on 125,829, with the locking latch set in the under-edge of the operating handle. Milbank's last patent, 147567 of 17th August 1874, protected yet another improvement of his bolt-action design. Although Isaac Milbank was never able to convince the U.S. authorities of the merits of his rifles, a modified form was officially adopted in Switzerland once improvements had been made to the design by Rudolf ➛Amsler.

Milbank-Amsler rifle Patented in the U.S.A. by Isaac ➛Milbank in 1866, then adapted by Rudolf ➛Amsler of Schaffhausen, this swinging-block mechanism was adopted in Switzerland on 22nd December 1866. The block hinged laterally once the hammer had been retracted to half-cock; a spring-loaded striker ran slightly diagonally through it. Several conversions were made, including the M1851–67 short rifle, the M1856–67 short rifle, the M1863–67 infantry rifle, the M1864–67 short rifle (all 10.4mm) and a selection of 18mm calibre ex-French Mle 1840 T.59 and Mle 1842 T.59 infantry rifles.

Milbro Found on ➛Mayer & Grammelspacher 'Diana' spring-and-piston air guns sold by Millard Brothers of London prior to 1945.

Milbro Found on copies and derivatives of the ➛Mayer & Grammelspacher 'Diana' spring-and-piston air guns made by ➛Millard Bros. Ltd of London and ➛Milbro Ltd of Carfin by Motherwell, 1949–82.

Milburn, usually as 'The Milburn'. A shotgun cartridge loaded by ➛Milburn & Son of Brampton, using components supplied by ➛Eley-Kynoch.

Milburn & Son The name of this English gunmaking business has been reported on shotgun cartridges sold under brand names such as 'Don', 'Milburn', 'M.S.B'., 'Noxall' and 'Rex'. Trading was undertaken from 5–7 Cross Street, Brampton, Cumberland.

Milford ['The…']. A mark associated with shotgun cartridges sold by ➛Jobson of Milford.

Militär-Pistole, 'Military Pistol'. A term associated with an enclosed-hammer predecessor of the P. 38, better known as the ➛Armee-Pistole' (q.v.), and also with a prototype of the P. 38 made by Carl ➛Walther Waffenfabrik *c*. 1938.

Military Found on a Spanish 6.35mm Browning type automatic made by ➛Retolaza Hermanos of Eibar; six rounds, hammer fired.

Military Armament Corporation; Powder Springs, Georgia, U.S.A. Promoters of the ➛Ingram submachone-gun, *c*. 1966–75.

Military Creedmoor Rifle: see 'Long Range Military Creedmoor Rifle'.

Military Model. An alternative name for the Model 4S ➛Remington rifle (rolling-block action), also known as the "Boy Scout's Rifle", made by the

➛Remington Arms Company in 1913–33.

Military Model. Often used as a generic term, but specifically associated with a variant of the 1902-pattern ➛Browning locked-breech pistol made by Colt's Patent Fire Arms Mfg Co. It had diced panels on the front of the slide, a slide-lock and a hold-open catch, and a lanyard ring on the butt. The magazine held eight rounds instead of seven.

Military & Police Model Originally known as the ➛Hand Ejector Military & Police', this .38 six-chamber swing-cylinder revolver, now built on the medium or 'K-Frame', was introduced commercially in 1899. The original or 'First Model' gave way to the 'Second Model' in 1902, and then to the 'Third Model' or 'Model of 1905' after nearly 62,500 guns had been made.

¶ The Model 1905 underwent a series of changes until work fnally stopped in 1942 after about 927,500 had been made in a variety of barrel-length options. The total included more than 568,000 guns produced for the British forces in 1940–5, chambered for the British .38/200 (.38 S&W) cartridge instead of the .38 S&W Special version. Guns made after 10th April 1942 had plain wood grips and a Parkerised finish. When numbers reached 1000000, they began again at V1 (see 'Victory Model').

¶ Production began again after the end of the Second World War, using a simple 'S' prefix to distinguish them from the last of the 'VS'-marked Victory Models. A new short hammer-throw appeared in 1948, at S990184, and a new 'C'-prefix series began when the million had been reached again. The 'C'-prefix series reached C999999 in November 1967, when ➛D' commenced.

¶ When numerical designations were introduced, the standard .38 Special Military & Police revolver became the 'Model 10'; the *Model 11* (*c*. 1948–63) was a variant chambering the British .38/200 cartridge; the *Model 12* was the ➛Airweight pattern; the *Model 13* was a .357 Magnum variant, introduced in 1974 to satisfy the New York State Police; the *Model 64* (1970–?) was the .38 S&W Special 'Stainless Steel Military & Police', and the *Model 65*, developed for the Oklahoma Highway Patrol in 1974, was a .357 Magnum version of the Model 64. A heavy-barrel option was introduced in 1959, these guns being distinguished by barrels with parallel sides instead of the customary taper.

¶ The *Model 58 Magnum Military & Police* revolver of *c*. 1964–85, chambered for the .41 Magnum cartridge, had a 4-inch barrel and fixed sights. It did not prove to be popular, and only a few thousand were made. The *Model 547 Military & Police* was a short-lived variant chambered for the 9mm Parabellum ('9mm Luger') round, with a snubbed hammer and a sharply-curved grip to improve control; it was also abandoned in 1985.

Millard Brothers Ltd; London and Carfin by Motherwell. This company was founded in 1887 by Oliver L. and Samuel E. Millard, when the premises were opened in Stockwell Road, London S.W. Incorporation occurred in 1900, and 'Millard Brothers Ltd' moved to Caledonian Road, London N7, in 1926. Millard Brothers supplied ➛Savage rifles to the British authorities in 1941. Shortly after the end of the Second World War, they purchased the entire

moveable contents of the ➔Mayer & Gammelspacher factory in Rastatt from Allied occupation authorities, and the Carfin Works, Wishaw, Motherwell, Scotland, opened in 1949. Many ➔Diana rifles were assembled from existing pre-1939 components, and production of several pre-war models commenced on ex-German machinery. Millard Brothers joined the Grampian Group (Grampian Holdings Ltd) in 1961, and by the 1970s had developed a new line of Diana rifles to replace the old Mayer & Grammelspacher patterns. Pistols were also made, including push-in-barrel designs and the G4 series based on the pre-1939 Moritz & Gertensberger ➔Zenit, which leaves suspicion that Millard Brothers also acquired equipment from elsewhere. In addition to the Diana rifles, the company also imported Daisy products and the Russian ➔Baikal shotguns. These were customarily sold under a new 'G'-prefix designation. The G5 ➔Cougar pistol and G85/1 ➔Bobcat rifle were often sold under the brand name 'Caledonian', but Milbro collapsed in the mid 1980s and was liquidated. A successor company, Milbro Caledonian Pellets Ltd, was salvaged to continue the well established production of airgun ammunition.

Miller Arthur Miller. An engineer emplyed by ➔Armalite, Inc., credited with transforming the unsuccessful AR 16 rifle into the AR 18 in 1964–5.

Miller Calvin Miller; Canadia, New York State. A U.S. gunmaker active from 1837 to 1861.

Miller G.E. Miller, a government employee, accepted firearms and accessories on behalf of the U.S. Army in 1905–6, using a 'GEM' identifier. See also "U.S. arms inspectors' marks".

Miller James Miller; Brighton and Rochester, New York State. A gunmaker active until 1843, then succeeded by John Miller (below).

Miller John Miller; Rochester, New York State. Successor to James Miller, trading from 1843 onward.

Miller Gunmaker William H. Miller of West Meriden, Connecticut, U.S.A., was granted a number of firearms-related patents, beginning with 47902 of 23rd May 1865. Obtained jointly with George W. Miller, this rifle-musket conversion system (with a lifting breech block) was assigned to Edmund Parker and the ➔Meriden Manufacturing Company. U.S. Patent 51739 of 26th December 1865 protected a 'breechloading firearm' with a radial breech-block, and 59723 of 13th November 1866 protected a breechloading shotgun with a spring-loaded locking bar in the top of the breech. This bar was pushed out of engagement by a vertically sliding latch ahead of the trigger guard, guns of this type being made by the Meriden Mfg Co. and then by ➔Parker Bros. & Co. Miller's last patents were U.S. 64786 of 14th May 1867 and 68099 of 27th August 1867 (both jointly with G.H. Miller), protecting a radial-breech firearm and an ejector respectively. A short-barrelled Miller carbine, 'Gun No. 39', tested by the U.S. Army in 1865, was made in accordance with U.S. Patent 47902. The essence of the design lay in a hinged breech-block which could move up and forward to expose the chamber. A transverse bar on the underside of the breech-block mated with a slot across the top of the

receiver when the action was closed. The Miller carbine had a conventional sidelock, and a one piece half-stock with a single band. Another version of the basic design was tested by the U.S. Army in 1867, on the basis of a converted 58-caliber Springfield rifle-musket, but was withdrawn after failing the defective cartridge trial. A few Miller-action guns, often converted from Springfield rifle-muskets, were offered for sale by the ➔Meriden Mfg. Company in the mid-1860s. However, these often prove on closer inspection to be smooth-bored shotguns.

Miller William R. Miller; Baltimore, Maryland, U.S.A. Believed to have been the son of William H. Miller (above), this mechanic received three U.S. Patents protecting loading indicators for magazines—394872 of 13th December 1888, 387531 of 7th August 1888 and 393653 of 27th November 1888. He was also granted U.S. Patent 395913 of 8th January 1889, 'hammer for firearms', and 404921 of 11th June 1889 for a method of changing the balance of sporting guns at will.

Millita This mark is associated with spring-type air guns made by Friedrich ➔Langenhan for Martin ➔Pulvermann & Co. of London prior to 1914.

Mills J. Mills, active in the mid 1870s, accepted firearms and accessories on behalf of the U.S. Army. Marked simply 'JM', they can be difficult to distinguish from equipment attributed to John ➔Maggs, Julian ➔McCallister and Justice ➔Murphy.

Mills W.M. Mills, a government inspector using a 'WMM' identifier, accepted military firearms and accessories in the mid 1890s. See also "U.S. arms inspectors' marks".

Mimard Étienne Mimard; Saint-Étienne, France. Sometimes listed as 'Mimort', 'Minort' or 'Minard', Mimard was co-founder of ➔Manufacture Française d'Armes et Cycles de Saint-Étienne and designer of the ➔Le Français pistol patented in France in 1913.

Mimart et Blachon; cours Fauriel, Saint Étienne, France. Listed in 1892 as a gunmaker. Étienne Mimart and Pierre Blachon were the founders of ➔Manufacture Française des Armes et Cycles.

Minerva A Browning type pocket automatic made in Eibar, Spain, by Fabrique d'Armes de ➔Grande Précision; 6.35mm; seven rounds, hammer fired.

Miniature Pattern Rifle A term applied to the ➔Martini cadet rifles used by several individual Australian states, and also by the Commonwealth of Australia after its formation in 1900.

Mini-Beryl A short-barrelled version of the Beryl assault rifle, a variant of the ➔Kalashnikov.

MiniMax Made in Hungary in recent years, this squeeze-grip repeating pistol may be chambered for 9mm Short, 9mm Makarov or 9mm Parabellum cartridges. Among its advantages are one-hand operation and compact dimensions: the 9mm Short/9mm Makarov version is 96mm long, 68mm deep and 24mm thick.

Ministry of Light Industrial Production; Peking, People's Republic of China. This

agency has been responsible for the development of the PRC airgun industry. Guns have been made in the Ministry's factories in Peking, Shanghai ('I Brand', 'Industry Brand') and Tientsin. The guns have been made under names such as 'Arrow' (Shanghai), 'Deer' (Tientsin), 'Lion' (Peking), 'Hunter' (Shanghai) 'Super Hunter' (Shanghai), 'Mao' (Tientsin), and 'Pioneer' (Shanghai).

Minneapolis Fire Arms Company; Minneapolis, Minnesota, U.S.A. This distributor promoted the seven-shot .32 Short rimfire 'Protector' turret pistol, patented by Jacques →Turbiaux. The guns were made by the →Ames Sword Co, and usually have a manual safety lever. Distribution was subsequently switched to the →Chicago Firearms Company.

Minnesota Arms Company A brand name associated with shotguns made by the →Crescent Gun Company.

Minories *or* 'The Minories'. A name given to a small district of London close to the Tower of London (later known as 'EC3'), once the centre of the city's gunmaking industry. The name derived from a 'minor' abbey of the nuns of St Clare, replaced in the sixteenth century by storehouses for arms and armour and then by the gunsmiths. However, with the rise of mass-production in the middle of the nineteenth century, the Minories lost ground to the →London Armoury Company and to 'Best' makers, such as Purdey, clustered in St James's. By 1891, one observer recorded that the district was a place of 'general trade, without a gunsmith from end to end'.

Minort: see 'Mimard'.

Minx A .22-calibre pocket automatic pistol made by Pietro →Beretta of Gardone Val Trompia, Brescia, Italy.

Miroku Firearms Mfg Co., or 'Miroku Taiyo Zuki'; Japan. A maker of handguns, bolt-action rifles and shotguns.

Mirus ['The…']. A brand name reportedly found on shotgun cartridges sold by →Kavanagh & Son of Dublin, Ireland.

Misr An Egyptian AKM-type →Kalashnikov copy made by Factory No. 54 of Maadi Military & Civil Industries Company. Guns of this type were sold in the U.S.A. in the 1970s by Steyr-Daimler-Puch of America, Inc., under a variety of names and designations including 'ARM'. Intended for sporting or security use, these guns were invariably restricted to semi-automatic fire.

Mississippi Valley Arms Company A brand name associated with shotguns made by the →Crescent Gun Company.

Mitraille: see 'Buffalo-Mitraille'.

Mitrailleuse *('grape shooter')* This sophisticated volley gun, an early competitor of mechanically operated machine-guns such as the →Gatling, was developed from the work of a Belgian artillery officer named Fafschamps. Created in the early 1850s, it was patented in 1867 by Joseph Montigny and Louis Christophe. A few guns were made in Belgium by →Montgny & Mangeot, but the basic design attained greater notoriety during the Franco–Prussian war. The French Mitrailleuse was an improved 25-barrel form of the Belgian

prototype. Credited to de ➔Reffye and Pothier, 190 were made in the Atelier de Meudon in 1866–8. Badly handled tactically during the Franco–Prussian War, though effective when deployed properly as infantry-support weapons (e.g., at St Privat), the volley guns failed to have the decisive effect predicted by promoters. Their day had passed by 1875, and the rise of the automatically-actuated machine-gun put an end to *les mitrailleuses*.

Mitrailleuse Pistol A few of these interesting four-barrel repeaters were made in the 1880s by the ➔Braendlin Armoury Co. Ltd of Birmingham, and marketed by Joseph ➔Marres of London as the ➔Martini-Marres-Braendlin Mitrailleuse'. The self-cocking trigger mechanism was protected by British Patent 1531/80, granted to A. ➔Martini in April 1880.

Mitrailleuse à Poche *('Pocket machine-gun')* The original name for the French ➔Gaulois pistol.

Mix & Horton A gun of this type was submitted to the U.S. Army trials of 1865, but was not among those that were photographed at the time; this may simply indicate that it failed to pass the examination stages. Eugene Mix and Henry Horton of Ithaca, New York State, were granted U.S. Patent 41343 of 19th January 1864 to protect a vertically-sliding block operated by the trigger lever. The hammer was pivoted in the breech-block, which also contained its 'S' spring, and the extractor was activated automatically at the end of the opening stoke.

Mixte: see 'Express-Mixte'.

MK: see 'Maxim-Kolesnikov'.

MKE: see 'Makina Kimya v Endustrisi'.

ML, **M.L.** *sometimes in monogram form*. A trademark associated with ➔Manufacture Liégeoise d'Armes à Feu, found on a range of revolvers, in addition to automatic pistols in 6.35mm, 7.65mm and 9mm calibre.

MM Found on U.S. military firearms and accessories. See 'M. Moulton'.

MMJ Found on U.S. military firearms and accessories. See 'Martin M. Johnson'.

MMJ Associated with the designs of Melvin M. ➔Johnson, including the 5.7mm MMJ ➔Spitfire cartridge and an associated variant of the ➔M1 Carbine.

MMMM *in the form of a cross, each limb being crowned*. Found on Romanian weapons: the mark of King Mihai I (1927–30, 1940–7). See also 'Cyphers, imperial and royal'.

MO *superimposition-type monogram, sometimes encircled, usually with neither letter prominent*. Correctly 'OM'; used by ➔Ojanguren y Marcaido.

Mock August Mock of New York City was primarily a surgical instrument maker, according to directories dating prior to 1867, but, after being listed as a machinist and toolmaker, had become a 'gunsmith' by 1875. His gunmaking operations began about 1865, and ended shortly after 1880. Premises were listed successively at 59 Lewis Street, 89 Thompson Street and 211 Spring Street in New York. Mock is best known for spring-type ➔Gallery Guns.

Moddite This was a modified form of ➔Cordite, introduced in 1908 by ➔Eley Bros. Ltd and loaded in all types of 'express and military cartridges of .475

bore and under'.

Modèle de Poche A generic term ('pocket model') for any small revolver or automatic pistol, but specifically associated with the products of ➔Fabrique Nationale, ➔Manufacture Française d'Armes et Cycles, and Nicolas ➔Pieper.

Model Four A sporting rifle introduced by the ➔Remington Arms Company in 1981 to replace the Model 742, chambered for cartridges ranging from 6mm Remington to .308 Winchester The chequered woodwork had a high-gloss polyurethane finish. The Model Four ➔Peerless ('4D') was a variant of the standard rifle with an engraved receiver; the Model Four ➔Premier rifle ('4F') had game scenes inlaid in gold. The *Model 7400* was essentially similar to the Model Four but, at least until the mid 1980s, had a much plainer finish. A short-barrelled carbine variant was offered briefly in .30–06.

Modern Arms Company; Marco House, 28 Marshalsea Road, Southwark, London SE1, in 1930–4. This company distributed ➔Haenel airguns from about 1928 until the outbreak of the Second World War.

Moeller & Kellner; Zella St Blasii in Thüringen, Germany. Listed in 1900 as a gunmaker.

Moggridge. John James Moggridge, or 'Muggridge', an English gunmaker operating in 1849–50 from 23 Bath Place, New Road, London, was probably the son of James Moggridge—an itinerant gunmaker listed in London in the census of 1841. He was born *c*. 1826.

Mohawk Found on ➔Suicide Special revolvers made by the ➔Crescent Arms Company of Norwich, Connecticut, or the ➔Rome Revolver & Novelty Works of Rome, New York State. They all date from the late nineteenth century.

Mohawk A name associated with shotguns made by the ➔Crescent Gun Company of Norwich, Connecticut.

Mohawk *or 'Mohawk 600'.* Applied to 660-series rifles made by the ➔Remington Arms Company prior to 1972, but still being distributed in the mid 1970s.

Mohawk Arms Company A ➔Suicide Special revolver made by Otis ➔Smith of Middlefield and Rock Fall, Connecticut, in the late nineteenth century.

Mohawk Brown A name applied to a version of the ➔Remington ➔Nylon 66 auto-loading rifle with brown synthetic butts and fore-ends. See also 'Apache Black' and 'Seneca Green'.

Mohawk Mfg. Co. A mark found on cartridge shotguns made in the U.S.A. by the ➔Crescent Arms Company.

Mohegan A ➔Suicide Special revolver made by Otis ➔Smith of Middlefield and Rock Fall, Connecticut, in the late nineteenth century.

Molgora Modesto Molgora was the Italian-based manufacturer of the ➔Oklahoma and other break-barrel spring-type air pistols dating from the 1960s, and also of 5.6mm (.22) starting pistols. They were sometimes marked 'Mondiale'.

Moll Sportwaffenfabrik; Lauenberg an der Elbe, Schleswig Holstein, Germany. This airgun 'manufacturer', perhaps simply a retailer, was linked by Dr J.S.E. Gilbart with the brand name ➔Hubertus and the production of push-in-

barrel pistols in 1895–1910. However, Dr Gilbart lists it as 'Sportwaffen Fabrik, Moll Lauenberg', but it seem clear that the Moll is part of the name rather than a location. See also Imman. ➔Meffert, Suhl.

Möller E. Möller; Zella Mehlis in Thüringen, Germany. Listed in 1930 as a master gunsmith.

Moller Max Möller; Zella Mehlis in Thüringen. Listed in 1930–9 as a gun barrel maker.

Molo: see 'Lindner & Molo'.

Molto ['The...']. Found on British shotgun cartridges loaded by the ➔Cogschultze Ammunition & Powder Co. Ltd in 1911–14.

Molton ['The...']. Associated with shotgun ammunition made for T.H. ➔Moor of South Molton and Exford; source unknown.

Mommer: see 'Bildstein, Mommer & Co.'

Monarch A name applied to a group of ➔Suicide Special revolvers made by the ➔Hopkins & Allen Arms Company of Norwich, Connecticut; ➔Johnson, Bye & Company; and/or ➔Iver Johnson of Worcester and Fitchburg, Massachusetts. They all date from the nineteenth century.

Monarch A tradename associated with ammunition made by the ➔Federal Cartridge Company of Minneapolis.

Mondial Found on Spanish 6.35mm-calibre pocket pistols made by Gaspar ➔Arizaga of Eibar, Guipuzcoa.

Mondiale: see 'Modesto Molgora'.

Mondragon Manuel Mondragon was a Mexican gun designer/patentee, best known for his straight-pull bolt action rifle and the semi-automatic weapon adopted by the Mexican army in 1908.

Mondragon automatic rifle. This gas-operated design originated in the 1890s, though progress was slow; its U.S. Patent was not sought until August 1904 and adoption by the Mexican army (as the F*usil Automatico de 7mm »Porfirio Diaz'*) was delayed until 1908. The perfected guns were made in Switzerland by ➔SIG. Four hundred reached Mexico prior to the 1911 revolution, but the remainder were stored until sold to Germany as *Flieger-Selbstlade-Karabiner Modell 1915*. Adopted in December 1915, the German Mondragons proved to be prone to jamming and unable to endure rigorous front-line service. Most were then passed to the navy; Kiel dockyard still had nearly five hundred when the war ended.

Mondragon bolt-action rifle This interesting straight-pull design, developed in 1891–2, was successfully tested by the Mexican army in 1893–4. A sliding handle on the right side of the receiver operated a separate bolt (doubtless inspired by the Swiss ➔Schmidt-Rubin), but a unique selector system allowed the gun to be fired automatically, and in perfect safety, as the breech closed. This feature was intended to give 'fire on the march' as soldiers fired from the hip as they advanced towards the enemy. Rifles made prior to 1893 all chambered 6.5mm rimless cartridges, but the 1894 pattern fired unique high-pressure 5.2×68 ammunition loaded with 'piston bullets'. Excepting

a prototype or two, the guns were all made by ➔Schweizeische Industrie-Gesellschaft and had locking lugs in two widely separated rows.

Monitor A ➔Suicide Special revolver made by the ➔Whitney Arms Company of Whitneyville, Connecticut, U.S.A., in the late nineteenth century.

Monitor A brand name associated with shotguns made by the ➔Crescent Gun Company.

Monk Henry Monk was the successor to W.H. Monk (below), trading in Chester, England, until the 1950s. His marks have been found on shotgun cartridges supplied by ➔Eley-Kynoch.

Monk William Henry Monk or 'Monks'. Established by 1868 at 65 Foregate Street, Chester, Cheshire, this English gunmaking business handled sporting guns and, amongst other items, shotgun cartridges made by ➔Eley prior to 1914. Business had passed to W.H. Monk's son, Henry, by the early 1920s. Monk customarily used a trademark in the form of 'WHM' monogram and a rabbit disappearing into a corn-stook.

Monobloc: see 'Le Monobloc'.

Monocle ['The…']. A mark found on 12-bore shotgun ammunition made by ➔Eley-Kynoch for ➔Stanbury & Stevens of Exeter.

Monograms The penchant for these methods of marking dates back to the nineteenth century, the origins perhaps lying in the successful development of methods of moulding rubber. These were particularly popular fittings on pre-1914 revolvers, the first perhaps originating in the 1880s. Unfortunately, the mould-makers were keen to show their skills in handling the tinest design-detail, resulting in technically highly impressive but often almost totally illegible results. This is particularly true of concentric or superimposed lettering, though linear designs are often (but not always) significantly easier to read.

¶ There are three basic types of monogram: *superimposed*, with the letters on top of each other or intercutting; *concentric*, when they take a circle-within-circle form; and *linear*, where the letters, though conjoined, are in a sequence that can be read as a continuous string. However, the characteristics can be blurred by superimposing only a few of the letters. This makes it difficult to decipher monograms—letter forms may be too distorted, or the dominant letter difficult to determine—and they have been listed in the directory under each of the most obvious permutations.

¶ A mark that apparently reads 'ABC', therefore, could be listed under 'ACB', 'BAC', 'BCA', 'CAB' or 'CBA' and it may be necessary to try several possible sequences before an answer can be found. A monogram containing five differing letters of equal significance has 120 possible permutations, so attempts have been made—helped by the subordination of 'CO.' or 'Co.', for 'Company' to the name—to assess dominant letter(s) in each trademark in an effort to keep entries to a minimum.

Mono Trap *or* 'Daytona Mono Trap'. A single barrel 12-bore shotgun made by ➔Società Armi Bresciane on the basis of the standard over/under action.

It has a pistol-grip butt with a Monte Carlo comb, a beavertail fore-end, a ventilated top rib, and a single trigger. Barrels are customarily 81 or 86cm long.

Monotype Corporation Ltd ['The…']; Salfords, Redhill, Surrey. A major part of the ➛Monotype Scheme, this British typefounding business made a variety of components for the ➛Bren Gun during the Second World War. Often marked with the code 'S 81', they ranged from springs and pins to Mk III bodies and bipods. Assembly of guns was also undertaken in the Salfords factory.

Monotype Scheme ['The…']. Promoted enthusiastically by Monotype & May Ltd, this was a way of making ➛Bren Guns by combining 'syndicated' components, minimising disruption if any individual factory was disabled by an air raid. The principal participants were the ➛British Tabulating Machine Co. Ltd, ➛Climax Rock Drill & Engineering Ltd, the ➛Daimler Motor Co. Ltd, the ➛Hercules Cycle & Motor Co. Ltd, the ➛Monotype Corporation Ltd, F. ➛Tibbenham Ltd and ➛Sigmund Pumps Ltd. Individual components were then assembled in the Monotype factory in Salfords, 83438 guns being made in 1940–5.

Montagnon; rue Saint Jean Baptiste 6, Saint Étienne, France. Listed in 1892 as a gunmaker.

Montagny aîné; rue Saint Roch 20, Saint Étienne, France, in the 1890s. Listed in 1892 as a gunmaker. Still trading in 1933, and in 1951 at 48 rue Gambetta.

Montagny Régis Montagny; place Villeboeuf 9, Saint Étienne, France. Listed in 1892 as a gunmaker.

Montana Armory, Inc.; Big Timber, Montana, U.S.A. A maker of re-creations of the single-shot 1885-type Winchester dropping block rifle.

Montana Model Made only in 1882–3, the ➛Ballard No. 52 rifle usually had a ring tip breech lever and chambered the .45 Sharps cartridge.

Montcoudiol; Saint Étienne, France. Listed in 1933 as a gunmaker.

Montenegrin Model *or* 'Type Monténégrin'. A name used, often generically, to describe the largest of the ➛Gasser revolvers. Popular in the Balkans and South America, where physical size often had greater appeal than mechanical efficiency, ➛Montenegrin' revolvers customarily had open-top or solid frames; an ejector rod attached to the right side of the barrel (some later Belgian-made guns had ejectors on swing-out cranes) could be used in conjunction with a pivoting loading gate on the right side of the frame behind the cylinder.

Monteremart; Saint Étienne, France. Listed in 1933 as a gunmaker.

Montgomery Ward & Company: see 'Montgomery Ward & Co.'

Montigny Joseph Montigny, a Paris-trained gunmaker, began trading from the Passage des Princes, Brussels, in 1848; his guns were made in factory in the Fontaine-l'Évêque district of Liége. Montigny made ➛Bastin-system shotguns, but is best known for his participation in the design and production of the ➛*Mitrailleuse*, a primitive European machine gun. He also

made a quantity of sporting rifles and shotguns embodying a variation of the breech mechanism pioneered by the Swiss-born gunmaker Samuel ➔Pauly. The breech cap, pivoted laterally on the chamber, could be lifted upward when a catch inside the operating-lever ring had been released from the upper tang. As the cap was lifted upward, it released a flap-like toggle lock, rotated the striker or hammer to half-cock (depending on individual construction), and withdrew the breech-bolt so that the chamber could receive a new cartridge. Closing the breech forced the toggle joint below the axis of the breech and re-locked the action. Cocking was completed by pressing the lever projecting vertically ahead of the trigger guard. (Note: John Henry Walsh ['Stonehenge'], writing in the 1880s, credited this needle gun to the Comte de Châteauvillier.)

Montigny & Fusnot This Belgian gunmaking partnership, active in Brussels from *c*. 1850–61, exhibited military rifles at the Great Exhibition in London in 1851.

Montigny & Mangeot; Gallerie de la Reine, Brussels. Successor to Montigny & Fusnot, above, this business traded from 1861 until Montigny died *c*. 1868. His widow subsequently married Henri ➔Christophe. See also 'Mitrailleuse'.

Mont Storm William Mont Storm: see 'William Mont Storm'.

Mont Storm Gun Works Company This business was formed in Birmingham in 1863 by Charles ➔Phelps, trading from 33 Constitution Hill. The goal was to promote the breechloading conversion system patented by William Mont ➔Storm in 1857–60, with improvements made by the Mont Storm Gun Works' manager Francis ➔Braendlin in 1863–5. However, large-scale orders failed to materialise and the separate listing of the business in Birmingham ceased after 1865. However, Phelps continued to represent Mont Storm from 3 Rood Lane, London EC, until 1871.

Monvill ['The…']. A mark associated with English shotgun ammunition, sold by Charles ➔Rosson of Derby.

Moody Gunmaker Charles Moody of Church Street, Romsey, Hampshire, England, is only listed in local directories for 1854–9, but is believed to have worked until the end of the nineteenth century before being superseded by his son William Moody (below).

Moody William Frederick Moody. The name of this cutler and gunmaker, trading from 13 Church Street, Romsey, Hampshire, has been recorded on shotgun ammunition made by Kynoch prior to the First World War and ➔Eley-Kynoch thereafter. He was the son of Charles Moody (above).

Moon 'A. Moon': a possible misinterpretation of A. ➔Mock.

Moonraker ['The…']. A mark associated with shotgun cartridges assembled by ➔Nightingale & Son of Salisbury from components originating outside Britain. The cases are customarily marked FOREIGN-MADE CASE and (appreciably larger) BRITISH HAND LOADED.

Moor Thomas H. Moor, an ironmonger trading in South Street, South Molton, Devon, sold shotgun ammunition under brand names such as 'The Molton' and 'Special Rabbit. Moor may have succeeded William Huxtable, a gun-

dealer and watchmaker listed in South Street in 1869; he also also maintained a shop in the Somerset village of Exford for some years.

Moore Daniel Moore & Company; Brooklyn, New York, made .32-, .38- and .44-calibre rimfire revolvers based on a patent granted on 18th September 1860 ('revolving firearms', U.S. no. 30079). The open-frame guns had a spring-loaded eector rod and a barrel/cylinder group which rotated laterally to facilitate loading, but their bored-through chambers transgressed the Rollin ➛White patent. A single-shot knuckle-duster derringer with a laterally swinging barrel was patented on 19th February 1861 ('firearms', 31473), and followed in 1863 by a .32 six-chamber teat-fire cartridge revolver. This had a hinged loading gate ahead of the cylinder, but, as Moore had not claimed novelty in the ammunition, he was subsequently forced to pay royalties to David ➛Williamson. Most of the revolvers acknowledge patents granted to Williamson in 1864 to protect the combination extractor/cartridge retainer. Guns of this type were also briefly marked under the ➛National brand in 1866–8. An 1866-patent Williamson sliding barrel single-shot derringer was made in 1866–7, capable of handling rimfire cartridges or powder and ball. The adaptor was an iron tube, not unlike an empty cartridge case, with a nipple to accept a conventional percussion cap. In December 1874, Moore was granted U.S. Patent 157860 to protect improvements in revolver design. The patent was assigned to ➛Merwin, Hulbert & Co.

Moore Robert Moore. Patentee of a silencer prior to the First World War, made in small numbers by the Moore Silencer Company; a hundred were purchased by the U.S. Army in 1914.

Moore Stillman Moore, acting on behalf of the U.S. Army in 1846–52, accepted single-shot cap-lock and other firearms. They bore the identifier 'SM', making them difficult to distinguish from guns accepted for the navy prior to the American Civil War by Samuel ➛Marcy. See also "U.S. arms inspectors' marks".

Moore The gunmaking business of William Moore & Company succeeded ➛William Moore & William Grey' in 1854, working from 43 Old Bond Street in London. The trading style became 'William Moore & Grey' in 1873. Moore & Grey marks have been reported on a wide variety of sporting guns and ammunition, including pinfire shotgun cartridges.

Moore William Moore & Company. A name found on shotguns handled by the H. & D. ➛Folsom Arms Co., possibly imported from Europe. They may have been made in Britain (see 'William Moore & Co., London', above).

Moore William Moore & Grey. This was a successor to William Moore & Co., trading from 43 Old Bond Street, London, from 1873 onward. The trading style became 'William Moore & Grey Ltd' in 1879, and a move to 165 Piccadilly was made in 1896. (Note: this gunmaking business must not be confused with 'William Moore & William Grey', trading from Edgware Road, London, in 1848–53.)

Moore's Patent Fire Arms Company; Brooklyn, New York, U.S.A. Maker of

the ➛Moore and ➛Williamson cartridge derringers. Succeeded by the ➛National Arms Company in 1868?

Moore & Woodward: see 'James Woodward & Sons'.

Moorey, **Moorey's**. This distributor of ironmongery and sporting guns, trading in Holmes Chapel, Cheshire, England, offered shotgun cartridges of unknown (European?) origins marked "Moorey's Special".

Moray [The]. Found on shotgun cartridges handled by Francis ➛Davie of Elgin, Morayshire, Scotland.

Mordant Gustave Mordant, a Belgian gunmaker trading in Liége, was one of many to take part in the late 1860s in the manufacture of French ➛Chassepot needle-rifles under sub-contract from ➛Cahen-Lyon & Cie. Double-barrelled sporting guns have also been reported with Mordant's markings. He was also involved in the 1870s with le ➛Grand Syndicat.

More Light Distinguished by a contrasting line on the back edge of the front-sight blade and an additional aperture in the back-sight leaf beneath the notch, this was the subject of U.S. Patent 189721 of 17th April 1877, granted to Frank W. ➛Freud, and improved by U.S. Patent 229245 granted to Frank and George ➛Freund on 29th June 1880. See also 'Wyoming Saddle Gun'.

Morgan William Morgan & Co. An English gunmaking business listed at 30 Budge Row, London E.C., Morgan's activities seem to have been confined to 1868–9.

Morgan & Clapp Makers of a sheath trigger .32-calibre cartridge derringer with a laterally swinging barrel, not unlike the ➛Southerner. Location unknown: U.S.A.

Morgenstern Wenzel Morgenstern, one of the leading gunmakers established in ➛Weipert (Bohemia, then part of Austria-Hungary), was one of the principal members of a co-operative formed in 1887 to produce components for the straight-pull ➛Mannlicher service rifle that had been adopted for the Austro-Hungarian army.

Morgenstern William Morgenstern of Philadelphia was a prolific, if unsuccessful patentee. Beginning with 40572 of November 1863, granted jointly with E. Morwitz to protect a needle rifle, Morgenstern submitted a variety of sliding-bolt and lifting-block designs. U.S. patent no. 48133, dating from June 1865, protected a sliding bolt which was retracted by the hammer after being lifted out of engagement with the locking shoulder in the rear of the receiver. A tripping lever allowed the breech to be closed without lowering the hammer. A gun of this type may have been submitted to the U.S. Army trials of 1865, but was not among those that were selected for photography. Most of Morgenstern's subsequent efforts—from U.S. patent 72526 (November 1867) to 93330 of August 1869—were aimed at perfecting a lifting block, which was released by pulling back on a small locking-bolt handle and then pivoted upward around a transverse pivot at the front of the receiver. One exception was the mechanism protected by U.S. patent 74712 of February 1868, which protected a breech-block swinging on a longitudinal pin once the internal

hammer had been set with an external cocking lever.

Moritz Heinrich Moritz; Zella St Blasii and Zella Mehlis in Thüringen, Germany. Listed in 1914 as a wholesaler, Moritz was granted the trademark 'Hei Mo' on 8th January 1917 (no. 214981) when airguns, sporting guns, ammunition and accessories were being handled. Work continued after the First World War, when a range of sporting rifles and shotguns were made alongside airguns and the ➔He-Mo semi-automatic pistol. Moritz was listed in the *Deutsches Reichs-Adressbuch* as a 'wholesaler' (1920) and a 'gunmaker' (1930). Operations are believed to have ceased in 1945, though directory listings dating later than 1939 have proved difficult to find.

Moritz Max W. Moritz; Zella-Mehlis in Thüringen. A gunsmith active in Germany in 1941.

Moritz Wilhelm Moritz; Zella St Blasii and Zella Mehlis, Thüringen. Founded in 1869, this gunmaking business was advertising itself in 1925 as a manufacturer of precision weapons and gun components. Some of these bore a trademark of a cartouche containing 'W', 'M' and a bishop above a shield bearing crossed hammers. Wilhelm Moritz himself was listed separately in 1920 as a gunmaker and in 1930 as a master gunsmith.

Moritz & Gerstenberger; Zella Mehlis in Thüringen. This German gunmaking partnership is believed to have been founded in 1922 or 1923, and was granted a patent protecting a signal pistol in June 1926; the patentees were Franz ➔Möller and Martin Moritz of Zella Mehlis and Albin Gerstenberger of Chemnitz. The business was listed in 1930 as a maker and wholesaler of guns and weapons, when owned by Albin Emanuel Gerstenberger, Hermann Martin Moritz and Franz Möller. Listed in 1939 as a weapon maker. An assortment of air pistols and rifle was made prior to 1940, including the ➔Herkules, ➔Krone and ➔Zenit pistols and several ➔Em Ge rifles. The company was allocated the code letters 'ghk' in 1941, but its wartime products have not yet been identified. Trading ceased in 1945, but ➔Gertensberger & Eberwein was re-established in Gussenstadt in *c.* 1950 and use of 'Em Ge' continued.

Morley M.W. Morley, acting on behalf of the Federal army, accepted 'bought-in' firearms and accessories during the Civil War; they were marked 'MWM'.

Morley W.H. Morley, sometimes wrongly listed as 'Morely', accepted firearms and accessories destined for the U.S. Army in 1899–1905. They were marked 'WHM'. See also "U.S. arms inspectors' marks".

Morris P. Morris & Son, trading in Hereford, was an English ironmongery and gunsmithing business which sold sporting guns and a range of ➔Kynoch-made shotgun ammunition. Cartridges were often marked 'The Hereford'.

Morris Richard Morris is best remembered as the inventor of the first British sub-calibre barrel insert system, though his earliest patents protected conventional box magazines. A patent granted in 1886 protected a 'conveyor' or carrier mechanism, and 5786/87 of 20th April 1887 allowed a claim for a box magazine with an external depressor. Morris continued to improve

his designs, including a 'magazines for rifles' protected by British Patents 2306/90 and 4522/90 of 1890. See also ➛Morris's Aiming & Sighting Apparatus Co., The ➛Morris Tube Ammunition & Safety Range Co. Ltd, and ➛Sub-calibre insert.

Morris Samuel Morris: see 'Louis Rodier'.

Morris William H. Morris; New York City. Co-patentee with Charles L. ➛Brown of a distinctive repeating rifle.

Morris & Brown of New York City made multi-chamber cone-throat 'Conical Repeater' rifles patented in 1860 by Charles L. ➛Brown and William H. Morris. However, the business failed in the early days of the American Civil War.

Morris Motors Ltd; Cowley Works, Oxford. A maker of magazines for the British 9mm ➛Sten Gun during the Second World War. The code 'M 292' may have been used instead of the company name, though it has been suggested that the magazines were actually made by Caberton Works, the Radiators Branch factory in Oxford, which was allotted 'S 82'. See also "British military manufacturers' marks".

Morris's Aiming & Sighting Apparatus Company ['The...']. Formed in 1883 to exploit the patents granted to Richard ➛Morris, this initially traded from 63 Haymarket. By 1887, the style had become '& Co. Ltd' and a move had been made to 7 & 9 St Bride's Street. In 1888, however, the company was reorganised as the ➛Morris Tube Ammunition & Safety Range Co. Ltd.

Morris Tube This was the first successful sub-calibre training system to be used by the British Army, approved for the ➛Lee-Metford rifle in 1891 in conjunction with a .297/230 centrefire cartridge. Morris Tubes had the advantage of allowing the rifle to revert to .303 ammunition if necessary, but were not particularly accurate and were replaced after 1908—first by the permanently emplaced .22 rimfire Aiming Tube (which required a modified bolt) and eventually by purpose-built .22 rifles. See also 'Richard Morris' and ➛Sub-calibre insert.

Morris Tube Ammunition & Safety Range Co. Ltd ['The...']. Formed in 1888 by reorganising ➛Morris's Aiming & Sighting Apparatus Co. Ltd, this business traded from 7 & 9 St Bride's Street, London, until a move to 11 Haymarket occurred in 1889.

Morrison Charles C. Morrison, a lieutenant in the U.S. Army, accepted firearms made in 1878–92 by ➛Colt's Patent Fire Arms Mfg Co.; they were marked 'CCM'.

Morrison George F. Morrison, a lieutenant in the U.S. Navy, accepted ➛Starr cap-lock revolvers during the American Civil War. Identified by their 'GFM' marks, the .44-calibre guns were all apparently made in 1864. See also "U.S. arms inspectors' marks".

Morrone Joseph A. Morrone of Providence, Rhode Island, invented the Morrone hammerless over/under shotgun, U.S. Patent 2,568,556 of 18th September 1951 being granted to protect the single-trigger mechanism and a tapered

locking bolt to automatically compensate for wear. The guns were made by the ➛Rhode Island Arms Company.

Morrow & Company: see 'Marrow & Company'.

Morse Writing in his book *Air Guns* in 1958, Eldon Wolff notes that boxes for Quackenbush darts list a 'Morse pistol' among the suitable guns. It has not been identified, though the inventor may have been George W. ➛Morse.

Morse Charles Morse: see 'Remington'.

Morse George S. Morse. The name of this inspector, said to have been active in 1862 during the American Civil War, has been linked with the acceptance of ➛Starr cap-lock revolvers marked 'GSM'. See also 'George W. Morse', below, and "U.S. arms inspectors' marks".

Morse George W. Morse. One of the first steps towards the modern military weapon was taken by this gunmaker, who presented a breech-loading carbine to the U.S. Army in 1857. Morse's cartridge developed no real power, but it had an internal primer and was genuinely self-contained. The conversion of two thousand muskets to the Morse system (q.v.) was authorised in September 1858, but only sixty had been completed by the end of 1859 and work was still underway when Confederate forces seized Harper's Ferry Armory in April 1861. The few existing Morse system conversions spent their time in the Federal stores, apparently without seeing service. Ten thousand Morse conversions of .69-calibre Model 1842 cap-lock muskets were ordered in 1860 from the ➛Muzzy Rifle & Gun Manufacturing Company of Worcester, Massachusetts, but few (if any) were completed. George W. Morse may have been responsible for inspecting guns made in accordance with his patents, perhaps applying a 'GWM' identifier though this has also been linked with George W. McKee. See also ➛George S. ➛Morse', above, and "U.S. arms inspectors' marks".

Morse Kelley S. Morse, possibly a grandson of George W. Morse, accepted a variety of military firearms for service with the U.S. Army. They included ➛Gatling Guns, M1892 revolvers and M1911 pistols made by ➛Colt's Patent Fire Arms Mfg Co.; M1899 revolvers made by ➛Smith & Wesson; and ➛Winchester M1895 rifles. Morse's activities, dating from 1893 to *c*. 1916, were identified by 'KSW'. See also "U.S. arms inspectors' marks".

Mortimer & Son; Edinburgh, Midlothian. Claiming origins dating back to 1720, this Scottish gunmaking business began life at 78 Princes Street in 1835—originally as a branch of the Mortimers of Ludgate Hill, London. Thomas Edward Mortimer then traded from 97 George Street (1839–54) and then 86 George Street from 1854 until the business was acquired in 1938 by John ➛Dickson & Son. It had become became 'Mortimer & Son' in 1861 and had taken over Joseph ➛Harkom & Son in 1922. Mortimer's name has been reported on many types of sporting guns and ammunition.

Morton Kenneth Morton, a major in the U.S. Army Ordnance Department, accepted .45 ➛Colt semi-automatic pistols in 1907–8. They bore the identifier 'KM'. See also "U.S. arms inspectors' marks".

Morton Gunsmith William Morton was listed in 1876–87 at 8 Railway Approach, London Bridge, and at 2 Railway Approach in 1888.

Mosalsalasi arms factory: see 'Mauser', 'Kalashnikov' and 'Heckler & Koch'.

Mosin Sergey Ivanovich Mosin, the son of a clerk, was born near the Russian town of Voronezh in 1849. Entering a military elementary school in 1861, he eventually graduated from the Mikhailovskoye artillery academy in 1875 with the rank of lieunenant. After working in the Tula ordnance factory for nearly twenty years, he was appointed director of the ➛Sestroretsk factory when production of the Mosin-Nagant rifle began there in 1894. Mosin died unexpectedly in 1902, his great contribution to Russian small-arms design acknowledged only after the 1917 revolution and in the eventual creation of the ➛S.I. Mosin Prize'.

Mosin-Nagant The first Russian small-bore rifle trials, undertaken in 1888, resolved in favour of single-shot submissions from Nikolay Lutkovskiy and Sergey Mosin. However, a five-shot .30 Mosin rifle and a .35 Nagant appeared in 1890 and, as neither design was ideal, the testing commission amalgamated them. The Mosin bolt, somewhat like the French Lebel, was matched with the magazine system and feed-interruptor mechanism of the Nagant, allowing the 'Obr. 1891g' or 'Three Line Rifle' to be adopted in April 1891. This had a distinctive protruding magazine case, curving up into the stock; it was loaded from a charger, and could accept a socket bayonet which the Russians were apt to carry in its fixed position.

¶ The ➛Tula factory was equipped with machines purchased from Greenwood & Batley of Leeds, which were then copied to enable ➛Izhevsk and ➛Sestroretsk to begin work. Though production began in Tula in 1892, only 1439 rifles had been made by the end of the year and even these were classed as trainers. Half a million rifles were ordered from the French government early in 1892, 503539 being delivered from Châtellerault by the end of 1895. By the Spring of 1893, Tula was ready to begin series production and tooling in Izhevsk and Sestroretsk was well under way. During the first phase of rearmament (1892–6), the Russian arsenals made 1.47 million combat rifles and more than 30,000 trainers.

¶ Dragoon and cossack rifles were also made, each a few inches shorter than the infantry rifle; cossack rifles, which elongated handguards and spring-retained bands, had 'KA3' serial-number suffixes. Mosin-Nagant cavalry carbines were made in comparatively small nmbers in 1907–14. Rifle sights were altered after 1908 for ammunition loaded with new lightweight spitzer-type 'L' bullets, which increased the muzzle velocity; the original flat sight leaf was replaced with a larger curved pattern, which prevented the sight-bases being changed. The Mosin Nagant rifle performed reasonably well during the Russo–Japanese War of 1904–5, but were found to be poorly sighted and very inaccurate when fired with the socket bayonet in place.

¶ Rifles were in such short supply in December 1914 that the virtually any weapon could be pressed into service. Large numbers of 6.5mm Japanese

Arisakas and a collection of obsolescent French guns were purchased, while large quantities of Mosin-Nagants were ordered in the U.S.A. The supply of rifles immediately after the October Revolution was problematical, owing to the destruction of some facilities and the loss of many key workers, though a minimum of 1,272,751 new guns were completed in 1918–20 and about a million assorted rifles had been refurbished. In October 1922, the Revolutionary Military Council proposed the standardisation of the obr. 1891g dragoon rifle, several inches shorter than the infantry pattern, and that no full length obr.1891g rifles should be made once existing stocks of components had been exhausted. Production of the new dragoon pattern infantry rifles did not begin at Izhevsk until mid way through 1923.

¶ Experiments to simplify the basic design continued until the 'obr. 1891/30g.' rifle was accepted on 28th April 1930. It had a plain cylindrical receiver and a tangent-pattern back sight. The advent of war accelerated production so greatly that about 17.5 million Mosin Nagants of all types were made in 1930–45. Sniper rifles were issued with PU, PE, VT or PT telescope sights.

¶ A carbine was adopted in 1939, as the 'obr. 1938g.', and an 'obr 1944g.' carbine, with an integral folding bayonet, was duly approved on 17th January 1944. Mosin-Nagants were also popular in Finland, where much-modified rifles built (and in many cases rebuilt) on original pre-1917 actions served until the introduction of Kalashnikov-type assault rifles in the 1960s. The Finnish guns are shorter than their Russian prototypes and (excepting the army m/24 and m/27) can usually be identified by pistol-grip stocks; all but the m/24 accept knife bayonets. The m/27 was a short-barreled army rifle, the m/28 and m/28-30 were issued to the Protective Corps (*Suojeluskunta Ylieskunnen* or 'Sk.Y'), and the m/39 was a universal-issue version with a two-piece stock and a two-piece interruptor copied from the Soviet 1930 pattern. Long-barrelled sniper rifles will also be encountered in small numbers.

¶ Mosin-Nagants have served in many Soviet satellite states; have been made in quantity in Hungary (44.M carbines and 48.M sniper rifles), Czechoslovakia (vz. 54 sniper rifle) and the People's Republic of China (Type 53 carbine copied rom the Soviet obr. 1944g.); and have formed the basis for a variety of sporting and target rifles. However, there is no particularly good guide to their history, excepting parts of Ed Ezell's *The AK47 Story* (Stackpole Books, 1986) and an article or two in gun magazines. Russian/Soviet guns have been made by the small-arms factories in Izhevsk, Sestroretsk and Tula; by the French government factory in Chatellerault (1893–6 only); by the New England Westinghouse Company (1915–17) and by the Remington Arms–Union Metallic Cartridge Company (1915–17).

Mosman Dexter F. Mosman accepted firearms and accessories on behalf of the Federal army. Dating from 1862, the early stages of the American Civil War, they were marked 'DFM'. See also "U.S. arms inspectors' marks".

Mossberg Oscar Mossberg of Chicopee Falls, Massachusetts, invented the

➛Shatuck Unique pistol patented on 4th December 1906 (U.S. no. 837867).

Mossberg O.F. Mossberg & Sons of North Haven, Connecticut, U.S.A., arose from the workshop opened in 1892 in Hatfield, Massachusett by Oskar F. Mossberg (*c*. 1870–1937), remaining there until a move first to Chicopee Falls and then to Fitchburg occurred in 1902/3. A factory was opened in New Haven, Connecticut, on the formation of O.F. Mossberg & Sons in 1919 and—finally—the business re-located to nearby North Haven in 1966.

¶ Mossberg's first products included simple rifles, small pistols, and gun sights. He was granted a number of patents, but the assignment of many to well-known gunmakers suggests that his own manufacturing capacity was small. For example, U.S. Patent 754080 of 8th March 1904 ('Hinge-pin for Break-down Guns') and 818461 of 24th April 1906 ('Breech-loading Firearm') were both assigned to Marie Johnson, executrix of Iver ➛Johnson, whereas two breech-loading firearms patents—765039 of 29th March 1904 and 840507 of 8th January 1907—went to the J. Stevens Arms & Tool Company.

¶ In 1915, Mossberg began to market a four-shot palm pistol which he called 'Novelty', but the project was sold to Charles S. ➛Shatuck after no more than 600 had been made; Shatuck, who was probably already making the guns for Mossberg, renamed them ➛Unique.

¶ Mossberg is now best known as a maker of shotguns, but has also been responsible for a variety of rifles. Beginning in 1922 with the *Model K* hammerless tube-magazine design, these included the *Model 26B* (1938), which was the first Mossberg with the bolt handle at the extreme rear of the receiver. Made during the Seond World War, the *Model 42MB* was a bolt-action trainer purchased in quantity by the U.S. and British armies; fifty thousand were made in 1942–3 before the design was superseded by the *Model 44 U.S.* (53,000, 1943–5).

¶ Modified designs appeared after the end of the the Second World War, often signified by adding 100 to the pre-war designations. The *Model 340B* (195x) was the first to feature a new action with the bolt handle placed well forward of the trigger. Among other notable rimfire rifle, the auto-loading *Model 377 Plinkster* (1977–9) had a distinctive thumbhole stock.

¶ Mossberg has also made a variety of centre-fire sporters, including the lever-action *Model 472* (introduced in 1972) and *Model 479* (1985), mostly chambered for .30–30 WCF ammunition. Designers Louis Seecamp and Carl Benson began work on what became the *Model 800* in 1963, to provide Montgomery ➛Ward & Company with a suitable bolt-action rifle to sell under the 'Western Field' banner. Production lasted from 1967 until 1978, encompassing a variety of differing patterns—800V ('Varmint'), 800M ('Mannlicher' [stock]) and 800D ('Deluxe'). Chamberings ranged from .222 Remington to .308 Winchester. The Model 800 was replaced by the refined *Model 810* (1972–8), another multi-lug bolt pattern handling cartridges from .270 Winchester to .338 Winchester Magnum. The *RM-7* (1978–84) was the last of the range, with squared contours instead of the rounded shapes that

had characterised its predecessors. Efforts were then made to sell ➛Howa-made Model 1500, 1550 and 1700 rifles acquired from ➛Smith & Wesson, but the last of these had gone by 1987 and Mossberg thereafter concentrated on shotguns.

¶ The first 12-bore shotguns dated from 1940, but work was almost immediately interrupted by the Second World War. The best-known of the post-war slide-action guns are the *Model 200* (1955–9) and the *Model 500*, which has been made since 1962 in a huge variety of variations. These have included guns with names such as 'Bantam', 'Camper', 'Mariner', 'Persuader' and 'Slugster'. Current products also include the semi-automatic Models 5500 and 9200. Mossberg has also made plain-finish guns under the 'New Haven' name, as well as a few deluxe 'Pedersen'-series rifles and shotguns dating from 1973-5.

¶ The best source of information is *Mossberg: More Gun for the Money* by V. & C. Havlin (Investment Rarities, 1995), though a list of the rifles will be found in John Walter, *Rifles of the World* (Krause Publications, third edition, 2006). Oscar Mossberg was the son of a Swedish immigrant, and the company continues to reflect this heritage in its logo: a yellow cross on a yellow-edged oval blue ground, with the *Tre Kronor* (three crowns) of the Swedish Arms. See National Markings.

Moston J. Moston. Supplier of 12-bore shotguns to the British authorities, 1942.

Moulin aîné; rue Villeboeuf 34, Saint Étienne, France. Listed in 1879 as a maker of gun parts and accessories.

Moulin Jean-Baptiste Moulin [veuve]; rue de la Charité 7, Saint Étienne, France. Listed in 1879 as a maker of gun parts and accessories.

Moulton M. Moulton, acting on behalf of the Federal army during the American Civil War, accepted cap-lock revolvers made by ➛Savage and ➛Colt, in addition to some of the ➛Palmer breech-loading carbines. Dating from 1861–5, the guns bear an 'MM' identifier. See also "U.S. arms inspectors' marks".

Mountain Eagle A ➛Suicide Special revolver made by the ➛Hopkins & Allen Arms Company of Norwich, Connecticut, U.S.A., in the late nineteenth century.

Mountain Rifle Also known as the M700 MTR or 'BLR Mountain Rifle', this ➛Remington bolt-action sporter was offered from 1986 until 1995. It compbined a tapered lightweight barrel with a straight comb half-stock with an ebony fore-end tip. Offered initially only in .270 Winchester or .30–06, the range was broadened to include .243 Winchester, 7mm–08 and .308 Winchester options (all from 1988), 7×57 (1990), .257 Roberts (1991) and .25–06 (1992). Variants have included the 'M700 MTR Custom KS', made from 1986 in right- and left-hand actions with a Kevlar reinforced stock with plain or (from 1992) wood grain finish. Chamberings were initially .270 Winchester, .280 Remington, 7mm Remington Magnum, .300 Winchester Magnum, .30–06 and .375 H&H Magnum, but 8mm Remington Magnum and .338 Winchester Magnum options were added in 1988, followed by

.300 Weatherby Magnum and .35 Whelen in 1989. The 'M700 MTR DM' (introduced in 1995) is distinguished by its detachable four-round magazine and a half-stock with an oil-rubbed finish. Chamberings were initially .243 Winchester, .25–06, .270 Winchester, 7mm–08, .280 Remington and .30–06. The 'M700 MTR SS', announced in 1993, has a lightweight tapered stainless-steel barrel in a textured synthetic half-stock. Chamberings were initially confined to four ranging from .25–06 to .30–06.

Mount Vernon Arms Company A name found on shotguns handled in the U.S.A. by the H. & D. ➔Folsom Arms Co., possibly imported from Europe.

Mousetrap: see 'Theophilus Murcott'.

mow A code-mark found on German telescope sights and associated components said to have been made in 1944–5 (possibly on doubtful authority) by Seidenweberei ➔Berga C.W. Crous & Co. of Berga in Elster.

Mowry. James D. Mowry; Norwich, Connecticut. A gunmaker active in the U.S.A. during the American Civil War.

MP An abbreviation for *Militärisches Pistole* or *Militär-Pistole* (‚military pistol'), found as 'Mod. HP' on the slides of the 9×19 adaptation of the ➔Walther ➔Polizei-Pistole and also on a prototype of the Walther P. 38.

MPB On U.S. military firearms and accessories: see 'M.P. Benjamin'.

MPi-K. An abbreviation of *Maschinenpistole Kalashnikow*, the indigenous designation for the ➔Kalashnikov assault rifle made by VEB Fahrzeug- u. Gerätewerke ➔Ernst Thalmann' in Suhl. These were offered in differing forms: 'M'-suffix versions (e.g., ➔MPi-KM') are based on the AKM instead of the AK, and 'S' patterns (➔MPi-KMS') have folding butts.

MPL *monogram with with 'P' dominant*. Associated with Martin ➔Pulvermann Ltd of London.

MPL On U.S. military firearms and accessories: see 'M.P. Lomax'.

mpu A code associated with German cartridge clips and chargers made by the Wlaschim factory of ➔Wlaschimer Maschinenfabrik GmbH in 1944–5.

MR *linear monogram with the tail of the black-letter 'M' forming the vertical of 'R'*. Used in recent times by ➔Manurhin, particularly on post-1973 revolvers.

MRF *part-linear part-superimposition monogram, with 'M' dominant*. Correctly 'RMF', used by Rheinische Metallwaaren- u. Maschinenfabrik of Sömmerda.

MRM On U.S. military firearms and accessories: see 'M.R. Marsh'.

MS *often found as a monogram*. Associated with the pre-1918 products of ➔Munitionswerke Schönebeck.

M.S. A small Spanish 6.35mm-calibre Browning-type pocket pistol made in Eibar by Modesto ➔Santos; six rounds, hammer fired.

MS, **M.S.** On U.S. military firearms and accessories: see 'Maurice Sherman'.

MSB, **M.S.B.** [The]. Brand names used by ➔Milburn & Son of Brampton on sporting guns and ammunition. Shotgun cartridges of this type were made from ➔Eley-Kynoch components.

MSTR: see 'Martz Safe Toggle Release'.

M.T. Found on British rifles (usually ➔Lee-Enfields) chambered for .22 rimfire

➛Morris Tube ammunition.

MT: see 'Maxim-Tokarev'.

MTK On U.S. military firearms and accessories: see 'Marian T. Kreps'.

MTN For 'Mountain': sometimes applied mistakenly to the Remington M700 MTR bolt-action rifle. See 'Mountain Rifle'.

MTR, **MTR DM**: see 'Mountain Rifle'.

Mugica José-Cruz Mugica of Eibar, made shotguns and sporting rifles and also distributed handguns made elsewhere in Spain—not only in Europe, but as far afield as China and Siam. The pistols were invariably the work of ➛Gabilondo y Cia; they included the Llama models III, III-A, VII, VIII, X, X-A and XI. Sometimes listed as 'Mugica Sucesor, José Cruz'.

Muir William Muir & Company of Windsor Locks, Connecticut, active in the U.S.A. in 1861–3. Muir has been associated with the manufacture of guns, type unknown, during the Civil War.

Mukden arsenal in Manchuria made 7.9mm ➛Mauser-type rifles in *c*. 1933–9, in the period of the Japanese-inspired Manchukuo state, but then concentrated on ➛Arisaka rifles and carbines until 1944 or later.

Mule Ear A nickname associated with the ➛Jenks carbine.

Mulholland James Mulholland of Reading, Pennsylvania, U.S.A., best known as an engineering workshop, made a few guns for the Federal Army in 1861–3.

Mullaney J.R.M. Mullaney, a lieutenant attached to the U.S. Navy Bureau of Ordnance, accepted .36-calibre ➛Colt revolvers marked 'JRMM' prior to the American Civil War. See also "U.S. arms inspectors' marks".

Muller Associated with British spring-and-piston airguns and sporting equipment. See 'Relum Ltd'.

Muller A. Müller, a German army officer, was responsible for "Major Müller's Fire Control" protected by British Patents 6358/07 of 23rd March 1907; 9252/08 of 25th April 1908; and 21340/10 of 6th October 1910. Tested by Germany, Britain and U.S.A., among many others, the fire-control mechanism in the rifle butt was intended to allow the gun to fire when a pre-set inclination was achieved. The idea was to simplify volley fire, but was much too complicated to gain favour and had been abandoned when the First World War began.

Muller Carl Müller & Sohn, also listed as 'Karl'; Benshausen bei Suhl in Thüringen. Listed in pre-1939 German trade directories as a maker of tools and gun parts. Still active in 1941.

Muller H. Müller; Zella Mehlis in Thüringen, Germany. Listed in 1930 as a master gunsmith.

Muller & Company was founded in England in about 1901, perhaps to replace the Clermont Explosives Company (q.v.). Trading was initially undertaken from Horsehoe Yard, Mount Street, London. German-made shotgun cartridges loaded with Clermonite and Mullerite propellant were sold in Britain for a few years. However, despite a move to Winchmore Hill in Middlesex in 1903, Muller & Company ceased trading in 1905. The cartridge agency then passed to Martin ➛Pulvermann, who may well have been one of the original

backers. Cartridges were distinguished by brand names such as 'Clermonite', 'Mullerite' and 'Negro'.

Müller & Greiss; München. This gunmaking business built ➔Mauser-action rifles in Germany prior to 1914, chambering a special 9.5×73 cartridge created by necking the British .404 Rimless Nitro Express.

Mullerite, *usually encountered as* 'The Mullerite'. A brand name associated with shotgun cartridges, generally loaded by ➔Eley Bros., referring specifically to their propellant loading. Mullerite was supplied by the ➔Clermonite Explosives Co. Ltd and ➔Muller & Company.

Mullerite Cartridge Works ['The…']. Established in Birmingham, Warwickshire, in 1922, trading from 59 Bath Street and St Mary's Row, this venture may have involved Martin ➔Pulvermann, whose 'MPL' monogram sometimes appears on the shotgun cartridges. Though loaded in Britain, the ammunition incorporated Clermonite and Mullerite propellant imported from Germany. Brand names included 'The Ace' and 'The Ace Long-Range', 'The British Champion', 'The Champion', 'Clay King', 'Fourtenner', 'General Service,' 'Green Seal', 'Grey Seal', 'Heyman[n] Smokeless', 'Red Seal', 'Silver Ray' and 'Yellow Seal'.

Mullins John Mullins of Fariston and London, Kentucky, U.S.A., received four patents: U.S. 349282 of 14th September 1886 for a 'magazine firearm', 373410 of 15th November 1887 for a 'repeating gun or firearm', 487423 of 6th December 1892 for a 'firearm', and 571840 of 24th November 1896 for a 'magazine firearm'. A .30-calibre bolt-action rifle was tested by the U.S. Army in 1891, which had a three-round magazine and weighed 8.31lb empty. It was not successful enough to survive the initial trials, and very little is known about its construction.

Munck C.H. Munck of Washington County, Ohio, U.S.A., made spring-and-piston ➔Gallery Guns in 1865–75. Sometimes wrongly listed in Washington DC.

Munitionswerke Schönebeck; Schönebeck an der Elbe. Owned at some point by ➔Sellier & Bellot, this cartridge making business was responsible for shotgun ammunition sold under 'MS' and 'MWS' monograms, and brand names 'Füllhorn' (possibly), 'Halali', 'Saxonia', 'Teutonia' and 'Waldheil'.

Munroe. G.H. Munroe ('Munro, 'Monroe') accepted the U.S. Army firearms and accessories identified by 'GHM'; they date from 1899–1902. See also "U.S. arms inspectors' marks".

Munts. Joh. Munts; Amsterdam. A distributor of guns and ammunition, working in 1932 and still in existence. Used a trademark of a white 'Dutch' lion, often holding a bayonetted rifle and superimposed on a ring target.

Murat Saint-Étienne, France. Listed in 1933 as a gunmaker.

Murat Louis Édouard Murat; rue des Creuses 4, Saint-Étienne, France. Listed in 1879 as a gunmaker.

Murata Tsuneyoshi Murata, a Japanese army officer, headed the commission entrusted with developing the first Japanese infantry weapons, a series of single shot and magazine guns being introduced in 1880–94 (see below).

Murata rifle A combination of features adapted from the French ➔Gras and German ➔Mauser, this Japanese rifle was developed immediately after the Satsuma rebellion of 1877 by a committee chaired by Tsuneyoshi Murata. It was made in three single-shot patterns—Meiji 13th Year type rifle, 16th Year carbine and 18th Year Type rifle—and then as a tube-magazine repeater known as the Meiji 22nd Year Type (1889). The Meiji 27th Year Type of 1894 was a short-barrelled cavalry carbine.

Murat Cizeron; rue Badouillère 40, Saint-Étienne, France. Listed in 1892 as a gunmaker.

Murcott Theophilus Murcott, a gunmaker trading in London from 68 Haymarket in 1861–78, is best remembered as the designer and sole manufacturer of the first hammerless shotgun to be marketed successfully in Britain. Patented in Britain in 1871 (no. 1003/71) and known universally as 'The Mousetrap', owing to its unfamiliar shape and somewhat complicated mechanism, the gun was made in substantial numbers. However, though serial numbers as high as 6400 have been reported, it is suspected that this particular 'order book' sequence included all guns made or sold by Murcott.

Murderer A revolver made in Belgium prior to 1914 by A. ➔Bertrand.

Murdock H. Murdock accepted firearms and accessories on behalf of the U.S. Army in 1875, using an 'HM' identifier. This can be difficult to distinguish from marks used contemporaneously by Henry Metcalfe (q.v.). See also "U.S. arms inspectors' marks".

Murgues fils; cours Saint André 23, Saint-Étienne, France. Listed in 1879 as a gunmaker.

Murigneux; grand rue Saint Roch 49, Saint-Étienne, France. Listed in 1892 as a gunmaker.

Murphy John Murphy of Norwich, Connecticut, U.S.A., designed the ➔Triple Action Safety Lock, protected by U.S. Patent 829082 of 21st August 1906 and used by the ➔Hopkins & Allen Arms Co. on its ➔Safety Police revolver.

Murphy John J. Murphy, an inspector working for the U.S. government, accepted military firearms and accessories in 1898. They were marked 'JJM'. It is possible that 'J.J. Murphy' and 'John Murphy' (above) were one and the same.

Murphy Justice Murphy, also listed as 'Justin Murphy', accepted a variety of U.S. military firearms from 1813 to 1841 and probably later. However, his 'JM' mark is easily confused with similar identifiers used by John Maggs, Julian McCallister and J. Mills (qq.v). See also "U.S. arms inspectors' marks" for entries 2 and 3.

Murray. T.W. Murray & Company (Britain prior to 1922, Eire thereafter). Trading in the southern Irish city of Cork, this gunsmithing and gun-dealing business handled a variety of sporting guns and ammunition. These included shotgun cartridges sold as 'The Speedwell' and 'The Wildfowler'. Some these appear to have been loaded by ➔Kynoch prior to the First World War; later examples often embody ➔Eley-Kynoch components.

Murry Michael W. Murry was a partner of the ➔Harts, father and two sons, in

➛Hart & Company in 1896–8 only.

Museum of Firearms: see 'George Gibson Bussey'.

Musketeer Used in 1963–72 to distinguish sporting rifles offered by ➛Firearms International Corp. on the basis of ➛FN Mauser actions, in chamberings ranging from .243 Winchester to .300 Winchester Magnum.

Musketoon A short-barrelled firearm, usually accepting a bayonet (cf., 'carbine').

Mustang A single-barrelled ➛Holland & Holland-type side lock rifle with a Purdey/Greener ➛Triple Lock' action, made by ➛Società Armi Bresciane to the designs of Renato ➛Gamba. The 62cm or 65cm barrel can be chambered for cartridges ranging from .243 Winchester to .30–06. A set-trigger mechanism is customary, and a standing back sight is let into the front of the quarter rib.

Mustang *or* '380 Mustang'. Announced in 1983 by the Firearms Division of ➛Colt Industries, but not made in quantity for several years, this was a compact ➛Government Model fitted with a 2.75-inch barrel chambering the .380 (9mm Short) cartridge. Finished in blue or nickel, or made of stainless steel (from 1990), guns of this pattern have magazines holding five rounds (six from 1992). The *Mustang Plus II* of 1988 mates the short Mustang-length slide with a full-grip frame, raising the magazine capacity to seven—the standard five 'plus two'. The *Mustang Pocketlite* (1987) has a blued aluminium-alloy frame, reducing weight to 12.5oz. A stainless Pocketlite variant appeared in 1991.

Mustow. R.J. Mustow, an English gunmaker listed in 1854 at 18 St Mary's Axe, London E.C., could be the same man as 'R. Muston', a gun-stock maker recorded in the 1841 census at Sugar Loaf Court, Goodman's Fields (see Howard L. Blackmore, *A Dictionary of London Gunmakers 1350–1850*).

Muzzle brake An attachment similar to a ➛compensator, intended to turn the emerging gases and drive them rearward. This counteracts the recoil sensation by thrusting the muzzle forward. The effectiveness of muzzle brakes varies, as utility has to be balanced against the unpleasant consequences of directing gas blast sideways.

Muzzy Rifle & Gun Mfg Co. ['The…']; Worcester, Massachusetts, U.S.A. This gunmaking business received a Federal government contract for ten thousand ➛Morse breech-loading transformations of .69-calibre M1842 muskets in 1860, but few if any were completed before the business failed almost as soon as the Civil War had begun.

MW *superimposition-type monogram with both letters equally prominent, usually on a shield*. Correctly 'WM' (q.v.), associated with ➛Waffenfabrik Mauser AG.

MW *monogram*. Said to have been associated with the products of ➛Patronen-Hülsen-Fabriken Bitschweiler. Its significance is still uncertain; possibly to be read 'WM'.

MW On U.S. military firearms and accessories: see 'M. Witkop'.

MW *encircled, superimposed or in monogram form*. A trademark associated with ➛Montgomery Ward & Company, found on sporting guns and ammunition.

MWH monogram. Correctly read as 'WHM', found on sporting guns and shotgun ammunition. See 'William H. Mark'.

MWM. Found on U.S. military firearms and accessories: see 'M.W. Morley'.

MWS, *often in the form of a monogram*. Associated with pre-1918 products of ➔Munitionswerke Schönebeck.

My Chick: see 'M.Y. Chick' and 'Theodore T.S. Laidley'.

My Companion A ➔Suicide Special revolver made by the ➔Hopkins & Allen Arms Company of Norwich, Connecticut, in the 1880s.

My Friend Patented in the U.S.A. in 1865 by James ➔Reid, this was basically a solid-frame barrelless revolver with an all-metal frame extended to contain a ring grip for the smallest or fourth finger of the firer's hand. The guns also had a sliding safety catch beneath the frame which could lock the cylinder when the hammer was mid-way between nipples. Consequently, My Friends always had an odd number of chambers. Reloading was simply a matter of releasing the axis pin and removing the cylinder. The guns were customarily seven-shot .22, five-shot .32 or five-shot .41 versions, usually chambered for rimfire ammunition. About twenty thousand Reid revolvers were made in 1866–80, when they were superseded by the ➔New Model My Friend, though only about five hundred .41-calibre guns had ever been made.

Myers: see 'Albert J. Meyers'.

Mylady Found on small .320-calibre double-action revolvers made in Belgium prior to 1914 by Manufacture Liégeoise d'Armes à Feu, whose crowned 'ML' will usually be found somewhere on the gun. A safety slider may lie on the left side of the frame.

Mylona[s] An unsuccessful dropping-block action rifle, unique to Greece. It was rapidly replaced in Greek service by the Gras (q.v.).

Myrddin Found on shotgun ammunition handled by ➔Bowen of Carmarthen, Wales.

Myška František Myška was born on 17th September 1899 in the provincial Bohemian town of Dvory (now in Czechoslovakia, then in Austria-Hungary). He began an apprenticeship with gunmaker Bedřich ➔Kopřiva in 1913. Completing his practical studies in 1917, he worked briefly for Škoda and others before the First World War ended. Myška subsequently attended the Prague technical college in 1919–21 and then joined the staff of Zbrojovka ➔Praga at the beginning of 1922. His responsibilities included work transforming the ➔Nickl pistol into the vz. 24 service pistol, and the subsequent transformation (in 1926–7) of this recoil-operated gun into the ➔blowback vz. 27. Patent no. 2814 of 1928 protected a double-action trigger system adapted in 1934 for what became the 6.53mm ČZ 36 pocket pistol; an alternative design, patented in 1936 (no. 65556) was embodied in the vz. 38 army pistol. Among Myška's other products were a signal pistol known as the vz. 30, the vz. 35 airgun (with a gravity-feed magazine protected by Czechoslovakian patent no. 72901 of 1937), the ČZ 241 auto-loading shotgun, and the vz. 38 submachine-gun.