

GUNS DICTIONARY

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

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THE DIRECTORY: A-AZUL

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- a Found on components for the Kar. 98k made during the Second World War by Nähmatag-Nähmaschinenteile AG of Dresden, Germany.
- A** A headstamp found on rimfire and possibly other cartridges made by the →American Cartridge Company for sale in North America by →Gamble Stores. It may be accompanied by 'Airway'.
- A** *in a seven point star*. A mark applied by an inspector working in the →Lithgow small arms factory in New South Wales, Australia. Superseded by 'MA'; →"British military inspectors' marks".
- A** *often cursive, beneath a crown*. Found on Belgian weapons: the mark of King Albert (1909-34). →'Cyphers, imperial and royal'.
- A** *in a cross*. A trademark found on →Gem-type airguns sold in Britain by Adolph →Arbenz of Birmingham.
- A** *apparently above an inverted '2' forming the crossbar of the letter*. An Arabic mark applied by the Iraqi Republican Guard.
- A** *sometimes with an owl trademark*. Found on small Browning type autoloading pistols made by Gaspar →Arizaga of Eibar, Spain.
- A** *often encircled*. A headstamp identifier associated with the →American Metallic Cartridge Company.
- AA** Found in imperial-era German unit markings, applied by the field artillery regiments or *Feldartillerie-Regimenter* under the regulations of 1877 and 1909. A typical mark reads '5.A.5.25.', for the 25th weapon issued to the 5th battery of Feldartillerie-Regiment Nr. 5. The following units existed in 1914: Prussian regiments 1-11, 14-27, 30, 31, 33-47, 50-63, 66, 67, 69-76 and 79-84; Saxon regiments 12, 28, 32, 48, 64, 68, 77 and 78; Württemberg regiments 13, 29, 49 and 5.
- AA** *beneath a crown*. This mark will be found in the headstamps of Danish military ammunition made by the Ammunitionsarsenalet in Copenhagen in 1950-2. See also 'AMA'.
- AA** *monogram*. A trademark found on automatic pistols made by →Azanza y Arrizabalaga of Eibar, Spain.
- AA** *monogram, 'S'-shape*. Found on guns made by Fábrica de Armas SA →Alkartasuna of Guernica, Spain.
- AA** Applied to U.S. military stores—including .30 Springfield rifles and .45 M1911A1 →Government Model pistols—refurbished by Augusta Arsenal, Georgia.
- AAA** *monogram*. A trademark associated with handguns made by →Azanza y Arrizabalaga of Eibar, Spain.
- AAA** *usually accompanied by a knight's helm*. A trademark found on guns made by A. →Aldazabal of Eibar, Spain.

- AAA** Found on a Spanish Browning-type automatic pistol made by A. →Aldazabal of Eibar, Guipuzcoa, in several patterns: (1) 6.35mm; six rounds, hammer fired. Some guns may be marked 'Model 1919'. (2) 7.65mm; seven rounds, hammer fired. Often marked 'Model 1916'.
- AA Auto Pistol** Found on the Browning-pattern 6.35mm and 7.65mm semi-automatic pistols made by →Azanza y Arrizabalaga of Eibar, Guipuzcoa, Spain.
- AAC** Found on guns made in Eibar, Spain, by →Azanza y Arrizabalaga.
- AAC monogram.** A trademark associated with the products of the →American Arms Company of Boston, Massachusetts.
- AACO or A.A.Co.** Found in the headstamps of the products of the →American Ammunition Co. of Oak Park, Chicago and Muscatine, U.S.A.
- AACO or A.A.Co.** Associated with a →Suicide Special revolver made by the T.J. →Ryan Pistol Mfg. Co. of Springfield, Massachusetts, U.S.A., in the late nineteenth century.
- AACO.** *superimposition monogram, with 'A', 'A' and 'C' of near-equal dominance.* A mark found on the grips of revolvers made by the →American Arms Company.
- AAI Corporation** →'ArmaLite'.
- A-Airway** →'Airway'.
- aak** Found on pistols, rifles, machine guns and components made during the German occupation of Czechoslovakia by →Waffenwerke Brünn AG of Prague. They date from the Second World War.
- AAW** Applied to U.S. rifles and small-arms, including rifles and carbines, inspected by A.A. →White.
- AB** Applied under the 1909 regulations, was used by the German field-artillery brigades (*Feldartillerie-Brigaden*); '10.A.B.25.' signified the 25th weapon issued to 10. Feldartillerie-Brigade.
- AB** Used by U.S. arms inspector A. →Buckminster.
- AB monogram.** A trademark associated with the products of →Bersaluce Arieto Aurtena y Cia of Eibar, Spain (actually 'BA').
- aba** A trademark found on barrel insert components made for →Erma by →Alig & Baumgärtel of Aschaffenburg, Germany.
- ABA** *sometimes as a monogram with 'B' dominant.* Used prior to c. 1920 by August →Blatt of Suhl in Thüringen. [Should this be 'ABS'?]
- Abadie** A gunmaker, possibly an employee of the →Nagant brothers. His 1874 patent loading gate is found on some Nagant revolvers made in the period 1878–90. Opening the gate allows the trigger to rotate the cylinder without needing to overcome the pressure of the mainspring, the hammer being disconnected. This facilitates ejecting spent cases or reloading the gun. (Note: Abadie is often mistakenly identified as a Portuguese army officer, as the 'Système à Abadie' is found on Serbian guns in addition to Portuguese issue.)
- Abakan** A codename applied to a competition held in the USSR (subsequently in Russia) to find a replacement for the venerable →Kalashnikov assault rifle. The trails apparently began in the late 1980s and continued to 1995 or later.

The name has often been (mistakenly) applied specifically to the 5.45mm
→Nikonov or NSM rifle.

Abas and Abas Major These names were applied to a .177 calibre spring-air pistol designed in 1944–5 by A.A., A.H. and S.C. Brown, protected by British Patent 604,411, and made in Birmingham by A.A. →Brown & Sons from 1947 until the early 1950s. The Abas Major was cocked by pulling down on the trigger guard and loaded through a tap at the rear of the spring cylinder.

Abawerke →‘Alig & Baumgärtel’.

ABB A mark used by U.S. arms inspector A.B. →Blackington.

Abbey, usually as “The Abbey”. Found on shotgun cartridges marketed by C.H. →Smith & Sons of Birmingham. They seem to have been borne headstamps identifying →Nobel Industries or →Eley-Kynoch.

Abbey English gunmaker Edmund Abbey of Newport Pagnell, Buckinghamshire, was listed in High Street in 1852 and in nearby John Street from 1862 until about 1870. His marks have been reported on self cocking pepperboxes and cap lock revolvers.

Abbey F.J. Abbey & Company was a partnership of Frederick J. Abbey and Thomas H. Foster, who made cap lock sporting guns (including rifles, shotguns and pistols) plus break-action cartridge shotguns from 43 South Clark Street, Chicago, Illinois, U.S.A. The shotgun patented by Frederick J. Abbey (see below) seems to have been made until the late 1870s, when the company was sold to E. →Thomas, Jr.

Abbey Frederick J. Abbey, a gunmaker/inventor of 43 South Clark Street, Chicago, Illinois, was active in 1853–79. He received U.S. Patent 114081 on 25th April 1871 to protect a shotgun style breech locked by two lateral pins entering a recess in the barrel block. Frederick Abbey made cap lock target rifles before becoming a founding partner of F.J. Abbey & Company (see above).

Abbey George T. Abbey, working in 1858–74 in Chicago, Illinois, U.S.A., designed a breech loading shotgun in the late 1860s, receiving U.S. patent 87814 on 16th March 1869. A vertical post lock in the rear of the action was operated either by an underlever or by a catch ahead of the trigger guard. The underlever lock comprised lugs on the bolt head, while the catch relied on a pin pushed up into the barrel block. There were also two lugs beneath the barrel. George Abbey is believed to have been the son of Frederick J. Abbey.

Abbey Gun & Ammunition Company [“The...”]: Goring upon Thames and Wallingford, Oxfordshire; and Reading, Berkshire, England. This was a trading style of what later became the Abbey Supply Company, adopted in 1974. The company specialised in gun lubricants, but also imported Chinese-made airguns and Danish ‘Pallet’ airgun ammunition into Britain. The move to Mill Lane, Wallingford took place in 1976, and to Great Knollys Street in Reading in 1981. Operations ceased in the early 1990s.

Abbey Improved Chilled Shot Co. Ltd [“The...”]; Newcastle-upon-Tyne, Northumberland, England. This business advertised itself as manufacturer

of 'Improved Chilled Shot' and 'Hard and Patent Shot' as well as the loader of 'Abbeyrite' shotgun cartridges. An advertisement in the 1910 edition of W.W. →Greener's book *The Gun and Its Development* noted that Abbey was then supplying more than twenty sizes of shot, ranging from 'LC' to 'D'—respectively six and 2600 to the ounce. It is suspected that Greener had something to do with the Abbey company (the book notes that 'Exporters [should] apply to W.W. Greener' [for prices]), but the operations were acquired by →Eley Brothers shortly before the First World War began.

Abbeyrite A name associated with shotgun cartridges supplied to the Gun Trade prior to 1913 or 1914 ('wholesale only') by the →Abbey Improved Shot Co. Ltd.

A.B.C. Found in the headstamps of cartridges made in West Haven, Connecticut, U.S.A., by the →American Buckle & Cartridge Company.

Abegg The essence of this breechloading system, patented in Switzerland in 1851 and often erroneously listed as 'Abezz' or "d'Abezz", was a chamber which could be swung out to the right of the frame as the underlever was moved to the left. The lever was usually bent to follow the contours of the trigger guard. Guns of this pattern were often converted from Swiss Federal 10.4mm cap-lock short rifles; sporting guns had special butts, set triggers, and greater attention to detail, but the lack of a positive breech-locking system limited the life of the Abegg system to less than a decade.

Abercrombie & Fitch The Abercrombie & Fitch Company was founded in 1892 by Ezra H. Fitch (1865–1930) and David T. Abercrombie (1867–1931) to handle equipment for explorers, huntsmen, fishermen and sportsmen, including guns and ammunition. Trading was undertaken from 53–57 West 36th Street, New York, until the Abercrombie & Fitch Building was erected in 1916–17 on the corner of Madison Avenue and 45th Street. Prior to the emergence of →Stoeger as the sole agency, Abercrombie & Fitch distributed refurbished 7.65mm Swiss style Lugers; these were apparently assembled in Germany, but exported to the U.S.A. by →Hämmerli. Most had Hämmerli-made barrels. The quantities involved remain in dispute, estimates ranging from an implausibly small '49' to an undoubtedly optimistic '1500'. Abercrombie & Fitch purchased →Von Lengerke & Detmold of New York in 1928, and Von Lengerke & Antoine of Chicago a year later. Retail outlets were subsequently established throughout the U.S.A., in Oakbrook, Illinois; Short Hills, New Jersey; Palm Beach and Bal Harbor in Florida; Troy, Michigan; Colorado Springs; and San Francisco. The business traded profitably until the early 1970s, but filed a bankruptcy petition in August 1975 and effectively ceased to exist at the end of a close down sale on 20th November 1977. Most of the guns and accessories sold by Abercrombie & Fitch can be identified by the distinctive cursive 'AFCo.' trademarks. See also Roger J. Bender, *Luger Holsters and Accessories of the 20th Century*.

Abergavenny Ace ['The...'] Found on shotgun cartridges sold in Wales by →Bevan & Evans and then Bevan & Pritchard of Abergavenny.

Abesser Paul Abesser; Suhl in Thüringen, Germany. Listed in the directories as a

sales agency, 1920.

Abesser & Merkel Trading as gunsmiths in Suhl in Thüringen, Germany, in 1920–30, owned by Paul Abesser & Ernst Merkel.

Abingdon Works Company [‘The...’]. This business was much less important than the →Abingdon Works Co. Ltd, the relationship being in name only. It was operated by members of the Cartland family from c. 1891 until the beginning of the twentieth century.

Abingdon Works Co. Ltd [‘The’], trading from 94–97 Bath Street and Shadwell Street in Birmingham, Warwickshire, England, was incorporated in 1875. The principal shareholders were William M. →Scott and Thomas Mabbutt, together with the partners of the earlier ‘Abingdon Works’ trade association (founded 1872): Thomas →Bentley, William Bourne, Charles →Cooper, John Dent →Goodman, Charles →Playfair, Charles →Pryse, Richard Redman, Joseph Smith, John Field →Swinburn, Joseph →Wilson and F. & H. →Woodward. Advertisements placed in the Birmingham directories in 1876 claimed that the business was “Manufacturers of Snider, Chassepot, Martini, and (Sole Manufacturers) of The ‘Swinburn’ Breech Actions”, as well as military and sporting gun nipples, roller skates, nipple wrenches, turn screws, cleaning rods and lock vices. The Abingdon Works Co. Ltd went into voluntary liquidation in 1889.

ABL *Often accompanied by a date* (e.g., ‘1953’). This property mark was applied to Belgian service weapons: *Armée Belge–Belge Leger* (i.e., ‘Belgian Army’ in French and Flemish). It has often been mistakenly listed as the designation of the →SAFN rifle, but may be encountered on stores ranging from clothing to machine-guns.

ac Found on submachine-guns, pistols, rifles, signal pistols and parts made during the Second World War for the German army, by Carl →Walther Waffenfabrik AG of Zella Mehlis.

A C or **A.C.** A designation mark found on British →Snider and →Martini pattern artillery carbines.

AC Used as an U.S. arms inspector’s mark by Alexander →Cameron.

ACAO *superimposition-type monogram with ‘A’, ‘C’ and ‘A’ of near-equal dominance.* Correctly ‘AACo.’ (q.v.); used by the →American Arms Company.

A.C.C. [‘The’] Found on 12 bore shotgun cartridges retailed by →Armstrong of Newcastle upon Tyne, England. The mark is believed to represent an ‘Armstrong & Co. Cartridge’.

A.C.C. or **A.C.Co.** Found in the headstamps of ammunition made by the →Austin Cartridge Co. of Cleveland, Ohio, U.S.A.

Accelerating Firearms Company An unsuccessful—and short lived—promotional agency for a breech-loading gun designed by Azel →Lyman. Its activities were confined to 1861–9.

Accelerator A mechanism, usually consisting of a lever, which increases the rearward velocity of the recoiling bolt to separate it more effectually from a recoiling barrel. Accelerators are often found in machine guns, where the goal

is generally to increase the rate of fire. They may also be encountered in auto loading rifles, often simply to increase the power of the operating stroke and enhance reliability.

Accles James George Accles was born of Irish stock in 1850 in Bendigo, then in the Australian state of Victoria (now in New South Wales). His parents moved to the U.S.A. in 1861, where James Accles was educated. After an engineering apprenticeship with →Colt's Patent Fire Arms Mfg. Co., Accles moved to Britain in 1872. By 1874 he was employed as an engineer by Richard Jordan →Gatling, helping to create fifteen ammunition and machine gun factories for the company prior to 1887. Accles left Gatling in 1888 to take part in an ill fated venture, The →Gatling Arms & Ammunition Co. Ltd, which sought to develop markets for the distinctive machine guns in Europe. When this project collapsed, Accles became a partner in →Grenfell & Accles, to which much of the business and stock of The Gatling Arms & Ammunition Company had passed. Grenfell & Accles made machine guns, revolvers and similar items. When the company also failed, about 1894, Accles formed 'Accles Arms & Ammunition Manufacturing Co. Ltd.' (sometimes known simply as 'Accles, Ltd') to make bicycles and ammunition. Accles' business failed again in 1899 and, after a brief association with Accles & Pollock Ltd (1901–3), he worked for the →Birmingham Small Arms Company Ltd on a freelance basis, securing several patents in collusion with BSA and George →Norman. He then moved on to Accles & Shelvoke, described below. Accles is best known for his work with machine guns. British Patent 5436/81 was granted in 1881 to protect a rotary magazine feeder and a Gatling-type machine gun. Accles was then living at 41 Craven Street, Strand, London, and in Hartford, Connecticut, U.S.A. A comparable U.S. Patent, 290622 of 18th December 1883, was sought from Hartford, Connecticut, and assigned to the Gatling Gun Company. U.S. Patent 348180, protecting a machine gun carriage, was sought from an address in Hartford, Connecticut, and granted on 31st August 1886. Patents granted to protect the Accles Gun are listed in the next entry. British Patent 17993/81 was granted jointly with H.H. →Grenfell to protect a double action simultaneous extraction revolver, whereas 18858/99 was granted on 3rd September 1899 to protect a method of cooling machine gun barrels.

Accles Arms & Ammunition Manufacturing Co. Ltd ['The...'], of Perry Barr, Birmingham, Warwickshire, England, traded c. 1894–9. Formed by the inventor James George Accles, this company succeeded to the business of →Grenfell & Accles, to which much of the business and stock of The Gatling Arms & Ammunition Company had passed. Grenfell & Accles had made machine guns, revolvers, shotgun cartridges, and similar items until it failed. About 1894, Accles formed a business of his own (sometimes known simply as 'Accles, Ltd') to make bicycles and ammunition in the Holford Works, which had been passed down through the various companies in the series. Trading ceased in 1899.

Accles Gun or '*Accles-Gatling Gun*' British Patent 9455/88 was granted on 28th

June 1888 to protect the Accles crank operated rotating barrel machine gun (a modification of the Gatling). Its U.S. equivalent, 426356 of 22nd April 1890, was sought from London. U.S. Patent 487238 of 6th December 1892 (protecting a feed mechanism for machine-guns) was sought from Birmingham, England. The U.S. Navy bought about a hundred of these, adapted from the →Gatling design by the latter's one-time employee James G. Accles. They were made in Britain by *Grenfell & Accles, and purchased from the Driggs Ordnance Company of Washington DC.

Accles & Pollock Trading in Oldbury, England, this tube-making and general engineering company made a vast number of parts for British small-arms, including →Lee-Enfield rifles. For example, 100,000 'Barrels, .303 rifle, Mk 3' were supplied in 1944 to the Royal Ordnance Factory, *Maltby, for assembly into Lee-Enfield No. 4 rifles. The rifling was formed by compressing the blanks onto a mandrel, the chamber being formed separately. Accles & Pollock often used the code 'M 1'. →"British military manufacturers' marks".

Accles Positive Feed Patented in 1882 and subsequently fitted to some *Gatling Guns, this held large quantities of ammunition (e.g., 104 .45–70 rounds) in a large vertical ring magazine. A propeller plate, connected with the gun feed mechanism, drove the cartridges down through the body under the guidance of helical grooves on the end plates. Unfortunately this magazine was cumbersome, complex and easily damaged. Its problems were only partly solved by the advent of a quick loader in 1886, and success was short-lived. Side mounted Accles Positive Feeds were made for Danish fortress Gatlings, but, as far as the U.S. Army was concerned, the improved →Bruce Feed was preferable.

Accles & Shelvoke Trading from Talford Street Engineering Works, Birmingham, Warwickshire, England, Accles & Shelvoke Ltd was founded in 1913 by James →Accles and George Shelvoke to make humane cattle killers in accordance with the patents of Accles and Charles Cash. However, links were also forged with Frank →Clarke, and it is suspected that Accles & Shelvoke made the prototypes of his →Titan. The *Warrior—patented by Clarke in association with Edwin →Anson—was made in quantity in the early 1930s, and the →Acvoke, designed by John →Arrowsmith, followed in postwar days. The business was still being listed as late as 1960 as 'humane killer manufacturers'.

A.C. County ["The"]. A mark found on shotgun cartridges handled in southern England by A. →Chamberlain of Salisbury.

Accuracy International Based in Portsmouth, Hampshire, England, Accuracy International Ltd was best known as an importer of Walther firearms and airguns (succeeding →Milbro). It was formed in the 1970s by Malcolm →Cooper and his wife Sarah. After making front sight inserts and accessories under an 'AI' trademark, the company developed the purpose built PM sniper rifle, adopted by the British Army as the L96A1 after trials lasting several years. The PM featured a bolt with a fully enclosed head and a sixty degree throw. The two stage trigger was adjustable. Two 'stock sides', made of olive

drab plastic, bolted onto the aluminium chassis supporting the action to overcome warping in woodwork. Four basic weapons were available.

Accuratus ['The']. A name associated with shotgun cartridges marketed by W.P. →Jones of Birmingham prior to the First World War.

Accu Tek, Inc., of Chino, California, U.S.A., made AT 32 and AT 380 pocket pistols in 7.65mm Auto and 9mm Short respectively.

ACD monogram. Found on pistols made in Spain by Domingo →Acha y Compañía of Ermua. It should actually be read as 'DAC'.

ACDW concentric monogram, usually with all four letters of equal significance. This should be read as 'WDAC' (q.v.); it was used by the →Warner-Davis Arms Corporation.

Ace Found on →Langenhan →'Millita'-type airguns imported into Britain. Possibly used by Frank →Dyke & Co. Ltd of London, as it can be accompanied by a shamrock of the type registered by Dyke prior to 1914.

Ace ['The']. Found on shotgun ammunition made by the →Mullerite Cartridge Works of Birmingham as 'The Ace' or 'The Ace Long Range'.

Ace About 11,000 of these simplified →Government Model Colt semi-automatic pistols were made in 1931–41 and 1946–7. The use of .22 rimfire ammunition allowed recoil operation to be eschewed in favour of simple blowback. Colt also offered a '.45/.22' kit enabling a standard M1911A1 to be converted to fire rimfire ammunition. Made from 1938 to 1954, with a break during the Second World War, the unit had Stevens sights prior to 1947 and Colt Master patterns thereafter; it included a slide, a barrel and bushing, a return spring, a magazine, an ejector and a slide-stop. There were also a few '.22/.45' kits, little more than a hundred being made in 1938–42. See also 'Service Ace'.

ACF monogram on a shield. Found with 'A' and 'F' crossed diagonally, with 'C' (and sometimes also a concentric 'o') superimposed, this should be read as 'AFC'. It was used by Auguste →Francotte et Cie.

ACG concentric monogram. Usually found with 'G' and 'A' prominent, correctly interpreted as 'GAC' (q.v.): the mark of →Garate, Anitua y Cia.

Acha Hermanos y Compañía of Ermua, Guipuzcoa, Spain, were active from 1916 until 1927. They made the →'Atlas', →'Ermua Model 1924' and →'Looking Glass' pistols. Some of the products may also bear the marks of Fabrique d'Armes de →Grande Précision.

Acha Domingo Acha y Compañía, also trading from Ermua, succeeded →Acha Hermanos c. 1927 and continued to market the →'Atlas' and →'Looking Glass' pistols until the end of the Spanish Civil War in 1939.

Acha Domingo Acha y Compañía of Vizcaya, Spain, has been identified as a maker of →Ruby-pattern semi-automatic pistols for the French army during the First World War. [Same as previous entry? To check.]

Achilles ['The...'] A shotgun cartridge made in Britain by →Eley Bros. prior to the acquisition of the company by Explosives Trades Ltd in 1918.

Acier Comprimé French for 'compressed steel', commonly found on revolvers made in France and Belgium during the last quarter of the nineteenth century.

- Also misleadingly used on revolvers made in Spain by →Apaolozo Hermanos of Zumorra.
- Ackermann** Jasper L. Ackermann, a gun designer resident in Monon, Indiana, U.S.A., received U.S. Patents 633939 of 26th September 1899 (protecting a safety interlock for breech-loading guns) and 667051 of 29th January 1901 for a break-action gun lock.
- Acland** Francis E.D. Acland, an inventor residing in London, was the co-grantee of U.S. Patent 472244 of 5th April 1892 (sought jointly with Carl →Holmstrom), protecting a gun lock, and U.S. Patent 536591 of 2nd April 1895 (sought jointly with Louis →Silverman and B. Orman) for a cartridge-belt loading machine. The latter was subsequently assigned to the →Maxim Nordenfelt Guns & Ammunition Co. Ltd.
- ACM** A mark used by U.S. arms inspector Alfred C. →Manning.
- Acme** ['The']. A shotgun cartridge made in Britain by →Eley Bros. prior to the acquisition of the company by Explosives Trades Ltd in 1918 and thereafter by →Eley Kynoch Ltd.
- Acme** A ribbed airgun slug made by →Cox & Sons of Aston juxta Birmingham, Warwickshire, England, from 1909 until the beginning of the First World War in 1914, though work may have been continued elsewhere as late as 1935.
- Acme** Found on a knife pistol. → 'Joseph *Rodgers'.
- Acme** Associated with revolvers made in the 1890s by →Hopkins & Allen of Norwich, Connecticut, U.S.A., for →Hulbert Bros. & Company. They were essentially similar to the enclosed hammer →Forehand Model.
- ACP or A.C.P.** An abbreviation of 'Automatic Colt Pistol', first applied in the early twentieth century, now customarily used to distinguish the proprietary Colt Browning cartridges—.25 (6.35mm Auto), .32 (7.65mm Auto), .38 (9mm Short), .38 Super and .45.
- ACP** A mark used on U.S. small-arms by inspector A.C. →Perrin.
- AC** *above P in a shield*. Applied by inspectors working in the →Lithgow small arms factory in New South Wales, Australia. → "British military inspectors' marks".
- Acra** A brand name associated with →Mauser pattern bolt action rifles made in the U.S.A. by Reinhart →Fajen. 'Acraglas' was applied by Fajen and other gunsmiths to identify an early form of synthetic wood used in rifle stocks.
- ACT** Found on U.S. small-arms inspected by A.C. →Treago.
- Action** A general term for the portion of a gun (of practically any type) containing the principal operating parts, particularly the locking mechanism and/or the trigger unit. Popularly associated with rifles and shotguns, it is sometimes synonymous with 'frame'.
- Action** A compact Spanish Browning type pistol, made in Eibar, Guipuzcoa, by Modesto →Santos; 6.35mm, six rounds, striker fired.
- Acvoke** A spring-air pistol designed in Britain in the mid 1940s by John →Arrowsmith and made by →Accles & Shelvoke, 1948–54. An unwieldy gun with a concentric barrel and air cylinder, it was cocked by a butt-strap lever. As many as twenty thousand may have been made, though the serial numbers

seem to begin at something other than no. 1.

ACW *concentric monogram, with all three letters equally dominant.* Correctly read as 'WAC' (q.v.). The mark was used by the *Warner Arms Company.

ACWD *concentric monogram, with all four letters of equal significance.* Correctly 'WDAC' (q.v.), registered by the *Warner-Davis Arms Corporation.

A.C. Wiltshire ['The'] Found on a few shotgun cartridges handled by A.
→Chamberlain of Salisbury, Wiltshire, England.

ad Associated with German military small arms and ammunition components made during the Second World War by →Patronen , Zündhütchen und Metallwarenfabrik of Schönebeck an der Elbe. →'German military codes'.

Adams Arthur Adams was a British gun-barrel maker. →'Adams & Tait'.

Adams F.W. Adams inspected U.S. military rifles in 1904, using an 'FWA' mark.
→"U.S. arms inspectors' marks".

Adams Henry Adams was a London gunmaker occupying premises successively at 18, 51 and 54 Gray's Inn Lane (1858–78), Adams was granted British Patent 1827/73 of 1873 to protect an automatic hammer safety system that locked the mechanism unless the butt was gripped tightly. →'Adams & Co.', perhaps his successor.

Adams Henry W. Adams was the designer of the breech loading firearm protected by U.S. Patent 11685, granted on 19th September 1854 while he was domiciled in New York. When a crank handle was turned, the disc breech rotated until a hole bored through it gave access to the chamber; when the handle was returned, the chamber was effectively sealed by the forward disc wall.

Adams James S. Adams was an inspector of U.S. military rifles and handguns from 1894 until 1904, using a 'JSA' mark. He held the position of Assistant Foreman of the Assembling Room in →Springfield Armory for much of this period. →"U.S. arms inspectors' marks".

Adams John Adams was the younger brother of Robert Adams, with whom he appears to have been in partnership from c. 1845 until the formation of →Deane, Adams & Deane in 1851. His breech-loading cartridge revolver was subsequently adopted by the British government, whereupon Adams left the →London Armoury Company to form the →Adams Patent Small Arms Company. Protection granted to John Adams for his revolvers included British Patent 2824/57 of 7th November 1857, for a rammer and lock details. The patent records his domicile as Queen's Road, Dalston, Middlesex. British Patent 1758/61, granted on 12th July 1861, protected a gun with a one piece barrel/frame forging and an optional pinfire cylinder. Adams was then living at 14 St Paul's Road, Camden Square, London. U.S. Patent 30602, similar to British Patent 1758/61, was granted on 6th November 1860 and assigned to Thomas *Poultney of Baltimore, Maryland. British Patent 1959/66 of 28th July 1866 protected an improvement of the 1861 type revolver frame and a method of loading metal case centre fire cartridges from the front of the cylinder. British Patent 2961/67 was granted on 22nd October 1867, for an improved loading gate and rod ejector; and U.S. Patent 85350 followed on 28th

December 1868 to protect many of the features originally included in British 1959/66 and 2961/67. British Patent 2258/72 of 1872 was granted to protect an improved rod ejector with a swivel mount attached to the revolver frame.

Adams John S. Adams, a gun designer in Taunton, Massachusetts, U.S.A., was granted several U.S. Patents in the 1860s. They included no. 39455, granted on 11th August 1863 to protect a firearm in which the barrel pivoted downward around 'false trunnions' (the major point of claim) and a 'packing piece' was added to combat wear. U.S. Patent 44377 of 27th September 1864 covered a gun with a tip-up chamber operated by the trigger guard 'tongued and grooved' to the breech-block so that it could be slid backward to operate the extractor. U.S. Patent 45010, granted on 30th May 1865, protected a method of compressing a cartridge around a ball.

Adams P. Adams was the joint patentee, with S. Adams and John Simmons, of a magazine rifle: U.S. Patent 275085 of 3rd April 1883, sought from Antioch, California.

Adams Robert Adams, born in 1809, traded in London from about 1830 until 1845, then became the manager of the business of George & John →Deane. Robert Adams participated in →Deane, Adams & Deane from 1851 until selling his gunmaking interests in 1856 to the →London Armoury Company (which he subsequently managed). However, he returned to independent trading in 1858 and occupied a warehouse in Henry Street, Bermondsey from 1858; retail premises were maintained at 76 King William Street, London, in 1859–65. The business was then bankrupted, but reappeared in a differing form at 40 Pall Mall in 1866 and continued virtually until Adams died in 1870. Robert Adams, like many others of his family, was a prolific inventor, obtaining many patents and registered designs. He is known to have made airguns and air canes in addition to firearms, but is best known for his distinctive self cocking cap lock revolver (see below), patented in 1851. British Patents 1954/1854 and 285/60 protected breech loading rifles, whilst British Patents 2725/1867 and 3216/1867 were granted for extractor designs. Among Adams' ammunition designs were British Registered Designs 3033/1851 and 3277/1852 for projectiles, and British Patent 1/1852 for a cartridge. British Patent 2000/1854 was granted to protect barrel boring and rifling machinery.

Adams S. Adams was the joint patentee, with his brother P. Adams and John Simmons, of a magazine gun protected by U.S. Patent 275085 of 3rd April 1883.

Adams Samuel Adams, a U.S. arms inspector active immediately before the American Civil War began, accepted rifle muskets and cap lock revolvers distinguished with his 'SA' mark. →"U.S. arms inspectors' marks".

Adams Walter Adams the Younger was the son of gunsmith Walter Adams the Elder, who had traded in Birmingham, England, from 1805. He became an integral part of his father's company in 1865, but, after trading as part of 'Adams & Son', reverted to his own name in 1869. Operations seem to have moved from Upper Priory, Birmingham, to 47 Whittall Street (1867–72) and latterly 28½ Newton Street (1873–8). Sporting guns, including breech loaders,

have been found with his marks.

Adams & Burnley Adams Bros. & Burnley Ltd of Harrow Street Metal Works, Harrow, Middlesex, England, made British rifle-type 'Dischargers, Grenade, 2½-inch, No. 2 Mk 1' in 1943. The partnership also supplied six experimental all-metal →Lee-Enfield No. 4 rifles in the same year. Adams Bros. & Burnley used the code 'S 3'. →"British military manufacturers' marks".

Adams & Company, the well known London gunmaking business, owned by Henry Adams, traded at 9 Finsbury Place South, EC, in 1870–80. A move to 32 Finsbury Pavement occurred in 1881 and thence to 22 Denmark Street, Soho, between 1894 and 1897. Trading ceased in 1899. Henry Adams patented an automatic hammer safety system in 1873, and his company is known to have made pin and centre fire revolvers—probably including many of those that bore the name of John Adams (see above). Shotgun cartridges were also among his products.

Adams Patent Small Arms Co. Ltd ['The...']. This gunmaking business was established at 391 Strand, London, England, on 15th August 1864, with John Adams as its managing director and (in addition to Adams) F. Mortimore, J.W. & J.S. Rooth, P. Browne, E.M. Ricketts and J.F. Shattock holding the shares. The original company was dissolved in July 1881, but immediately reconstituted under the aegis of William Watts Locke & Company and traded as "Adams's Patent Small Arms Manufacturing Co., W. Watts Locke & Co., Proprietors" until April 1894. Flare pistols were made in addition to revolvers. Towards the end of this period a move occurred to 40–42 Crampton Street, London. The suffix 'Ltd.' was dropped in 1892.

Adams Revolver This double-action design was successfully exhibited at the Great Exhibition in London as a product of →Deane, Adams & Deane. The 'master protection' was English Patent no. 13527 (rifles, locks, breech loaders and revolvers), granted on 24th February 1851, but comparable protection was sought elsewhere—e.g., U.S. Patent 9694 of 3rd May 1853, Belgian Patent 5061/794 and French Patent 12247. British Patent 2712/53 was granted on 22nd November 1853 to protect the 'Hesitating Revolver Lock'; British Patent 2645/54 of 15th December 1854 protected a rammer system and additional lock details. These improvements were also embodied in U.S. Patents of 3rd June 1856 and 7th April 1857. British Patent 50/64 of 8th January 1864 was intended to protect a cartridge revolver with an exchangeable cap lock cylinder, but provisional protection was refused. The guns were made by a variety of contractors: a licence was granted in the U.S.A. to the →Massachusetts Arms Company. They were also made in Belgium, and by a handful of British gunmakers. The rammer was originally carried separately, but was later replaced by pivoting levers mounted on the gun; these were patented by (amongst others) John →Rigby, Robert Adams, John →Kerr and Joseph →Brazier. The Kerr rammer, patented in July 1855, was commonly found on military-issue guns; Brazier's rammer of April 1855 was probably the most efficient, but was confined only to the products of a few individual

gunsmiths. Adams revolvers were popular in British circles, but the absence of a single-action feature soon led to the introduction of the →Beaumont-Adams.

Adams Revolving Arms Company [“The...’] was formed in New York City during the American Civil War, to promote the revolvers designed in Britain by Robert →Adams, Frederick →Beaumont and John →Kerr. The .31 Pocket and .36 calibre Navy guns were made under licence by the →Massachusetts Arms Company, but only the smaller pattern bears Adams’ marks.

Adams & Tait A partnership between Arthur Adams and Joseph Henry Tait, this made barrels for, amongst others, Alexander →Henry’s rifles and the →Hill & Williams airgun. The workshop was sited at 46 Price Street, Birmingham, England, in 1862–4, whereafter it moved to 1 Price Street. City directories list it at 1 New Buildings, Price Street, between 1865 and 1899, where operations are believed to have continued until 1929.

Adams & Westlake Founded in 1847 in Chicago, Illinois, U.S.A., this business was best known for its ‘Adlake’-brand oil lamps. The partnership has been linked with the production of simple .22 rimfire rifles and the →Columbia push-barrel BB Gun in the early 1900s, but it seems much more likely that these were given away to encourage young, enthusiastic and gullible ‘sales agents’.

Adamy Gebrüder Adamy, trading in 1941 from Windeweg 2, in Suhl in Thüringen, was a maker of ‘hunting weapons’ (*Jagdwaaffen*) known to have included sporting rifles and, particularly, three-barrel guns (→*Drillinge*). The partnership of Franz and Albert Adamy ceased operations at the end of the Second World War.

Adasa → ‘Armamento de Aviación SA’.

Adcock G.T. Adcock, an English gunsmith, maintained a sales office in London: 3 Gray’s Inn Lane, W.C. (1861–3), and later 22 Gray’s Inn Road (1864–78).

ADCW *concentric monogram*. Generally encountered with all four letters of equal significance, this is correctly ‘WDAC’ (q.v.); it was used by the *Warner-Davis Arms Corporation.

Adgey Willam Adgey, an Irish gunmaker trading in Belfast prior to the First World War, marked sporting guns and ammunition. These included shotgun cartridges sold under the name →Favourite.

Adirondack Fire Arms Company [“The...’] of Plattsburgh, New York State, made →Robinson-patent breech-loading magazine rifles in succession to A.S. →Babbitt. The business may have been purchased by the →Winchester Repeating Fire Arms Company in 1874, or, alternatively, may simply have ceased trading when Winchester bought rights to the Robinson patents.

Adjustable Ranging Telescope [‘ART’]. One of the first military-issue sights with graduations allowing the firer to improve accuracy by using an internal man height/distance correlation grid, this telescope pattern was the work of the Leatherwood Optical Company. →‘Sights, optical’.

ADK The mark of U.S. arms inspector A.D. →King.

Adkin Gunsmith Henry Adkin established his gunmaking business in Offa Street,

Bedford, England, in 1849 and traded there for at least twenty years. Marks applied by his successor 'Henry Adkin & Sons' have been recorded on sporting guns, airgun ammunition, and a selection of shotgun cartridges sold under brand names such as →'Ajax', →'Demon' and →'Reliance'. Usually confined to 12-bore, these usually prove to have been made by →Eley or the Eley Division of IMI. Trading is believed to have ceased in 1937.

Adkin Henry Adkin was listed in London directories in 1850–9 and possibly later as a gunsmith and 'agent for John →Smith & Son', at 4 Thavie's Inn, Holborn, W.C. Possibly the same as the preceding entry.

ADL A designation applied to sporting rifles made by the →Remington Arms Company ('Model A, De Luxe'), distinguishing guns that had stocks with chequering and high combs. The 'ADL' stock subsequently became the standard pattern, though the term has never been dropped. →'BDL'.

Adler A brand name found on shotgun ammunition made by W. →Güttler of Reichenstein, Germany.

Adler GmbH, Waffen- und Maschinenfabrik, listed in Germany in the period between the wars, may have been a successor to 'Adlerwaffenwerke' (below) (q.v.).

Adler pistol This gun remains something of an enigma. Its interesting dismantling system and enclosed reciprocation of the breech-block were patented in 1905–6. German patent 176909 (Kl. 72h, Gr. 5) was granted on 22nd August 1905; the essentially similar British patent 14023/06 followed on 25th October 1906. Both record the name of the patentee as Max →Hermsdorff. The British papers go farther, describing him as 'trading as Adlerwaffenwerk Zella St. Bl., of 12 Hammerweg, Zella St. Bl., Germany, manufacturer.' The major novelty claimed in the 'Complete Specification' accompanying the British Patent, filed on 1st July 1906 by Chartered Patent Agents Cruikshank & Fairbrother, of London and Glasgow, read: 'In an automatic breech-loading gun, the improved arrangement of the movable cover *e* with extension *e1* hinged between the walls of the breech casing, made in one piece, and held in position by means of a cross bolt *f* passing through the walls of the casing and the cover, and held by means of a blade spring, as described with reference to the drawing.'

¶ References in the markings on the guns to the participation of →Haeussler and →Engelbrecht & Wolff give no clue to their significance. Hermsdorff has been connected with patents assigned in the pre-1914 era to Krupp, but who was Haeussler? A search of the patent records, especially in German Klasse 72h, revealed no relevant specifications filed in this name. the partnership of Engelbrecht & Wolff is also shadowy; did it succeed Hermsdorff, or were the Adler pistols simply made under sub-contract? Unless information is found in Suhl, the answers may never be known.

¶ It has been suggested that there may be links between the Adler and the Swiss →Häussler-Roch pistol, particularly as 'Haeussler' is an acceptable alternative spelling to 'Häussler' avoiding the use of an umlaut. However,

though the Adler and the Häussler-Roch pistol operate on blowback and locked-breech principles respectively, there are distinct similarities in their construction. The origins of the 7mm Adler cartridge apparently lie in the 7mm →Charola y Anitua, an early auto-loader designed in Spain in the last years of the nineteenth century. Ultimately made in Belgium for its promoters, the Charola y Anitua had been comparatively widely distributed in western Europe by 1905; indeed, the smaller 5mm cartridge had become better known as the '5mm Clément'. Adler cartridges were made exclusively by →Rheinische Metallwaaren- und Maschinenfabrik of Sömmerda, and were appropriately headstamped 'R*M*S*'.

¶ Only a small quantity of guns, perhaps no more than a few hundred, were made prior to about 1908 and the rapid emergence of more efficient designs. J. Howard Mathews mentions no. 1231 and no. 1245 in his *Firearms Identification*, and other survivors have been reported with four-digit numbers suggesting that the sequence began at 1000 or 1001. Perhaps the Adler would have enjoyed greater success if it had chambered a more popular cartridge such as 7.65mm ACP (.32 Browning).

¶ The gun bears some external resemblance to the Luger, owing to its slender barrel, raked grip and pronounced backward overhang. The barrel, which screws into the receiver, is forged integrally with the front-sight base. Although a blowback, the only visible motion on firing is the cocking spur, which reciprocates on top of the receiver. The patented dismantling system was controlled by unlocking the uppermost pin in the rear of the frame and then rotating the frame-closing link around the lower pivot. The breech-block, the main-spring, and the spring-guide can then be removed; the drawings accompanying the patent specifications show this feature clearly.

¶ The trigger, with its necessary longitudinal movement, had to operate a lateral sear: a feature clearly inspired by the Luger. But instead of using a bell-crank lever, the designer of the Adler used a trigger bar with a diagonal cam surface bearing on the sear-piece.

¶ The action is interesting, but not robust enough and too complicated to function efficiently. The trigger and the sear were too delicate, and there were far too many springs. The pistol was cocked by retracting the cocking spur on top of the action, against the pressure of the return spring, until the striker mechanism was engaged. Releasing the cocking piece at the end of the backward stroke allowed the breech-block to run forward, chambering a new round as it did so. The radial safety lever, on the left side of the receiver, was pushed upward to render the pistol safe or down to the firing position. A small hole was cut through the left receiver wall to act as a loaded-chamber indicator. No variations have been recorded, excepting that machining differences are often evident—the guns were largely hand-made—and some apparently have chequered wood grips. These are suspected to have replacements for the original rubber type.

¶ The right side of the receiver is marked PATENT HAEU.S.SLER above

ADLERWAFFENWERKE above ENGELBRECHT & WOLFF, together with a distinctive trademark. This consists of a displayed eagle, clasping a ribbon in its talons, over an encircled 'MHZ' mark owned by Max Hermsdorff of Zella St. Blasii. The trademark is also moulded into the chequered rubber grips with the addition of FABRIKZEICHEN ('factory mark').

¶ Very little information is available concerning the Adler. It is not mentioned by Smith, Pollard, Wilson, Johnson & Haven and many others, though J. Howard Mathews, in *Firearms Identification*, pictures both sides of pistol no. 1231 and gives additional details of no. 1245 in the rifling data. Erlmeier & Brandt, I, state that it was 'developed in 1905', while Lugs, II 76, makes an oblique reference. The best source of additional details is 'Die "Adler-Pistole", eine interessante Konstruktion', in Karl Pawlas's *Waffen-Revue* no. 9 (June 1973, pp. 1339-55).

Adlerwaffenwerk(e) This gunmaking establishment was formed in Zella St Blasii, Germany, about 1905-6 to exploit patents granted to Max →Hermsdorff, making 7mm *Adler pistols prior to 1910-11. The original company may have failed very quickly: surviving guns all bear Hermsdorff's trademark (an eagle and an encircled 'MHZ'), but are invariably marked as the products of 'Adlerwaffenwerke, Engelbrecht & Wolff'.

Admiral ['The']. Found on shotgun ammunition loaded by William →Powell & Son of Birmingham, using →Eley-Kynoch components. →'General'.

Adolph Gunsmith-engineer Fred Adolph of Genoa, New York State, and New York City, active from the early 1900s, was a champion of high-velocity rifle ammunition. Catalogues produced in the early 1920s showed cartridges ranging from '.22 Long Range Pistol' to '.40 Newton Express', but Adolph (who designed an automatic rifle in 1913-14) then lost interest in guns and retired in 1924 to concentrate on music.

A & D PATENT Found on shotguns, acknowledging use of the patents granted to →Anson & Deeley.

Adrianson John Adrianson, an inventor domiciled in Chicago, Illinois, U.S.A., patented a 'revolver attachment for guns' on 1st January 1907 (U.S. no. 839978) and an 'extensible jacket for revolvers' on 4th June 1907 (855439).

Adsett Thomas Adsett & Son operated a gunmaking business, trading from 101 High Street, Guildford, Surrey, England. The premises subsequently moved to 90 High Street, where work continued until the beginning of the Second World War.

ADWC *concentric monogram*. Found with all four letters of equal significance, this should be read 'WDAC' (q.v.); it was used by the →Warner-Davis Arms Corporation.

AE A trademark found on automatic pistols made by →Echave y Arizmendi of Eibar, Spain, which should be read as 'EA'.

AE *superimposition monogram*. Sometimes encircled, with neither letter prominent, this will be found on Colt- and Smith & Wesson-type swinging-cylinder revolvers made in Spain by Antonio →Errasti of Eibar.

- A.E.** A property mark applied by the supplementary batteries (*Ersatz-Batterien*) of the German field-artillery regiments or *Feldartillerie-Regimenter* under the 1909 regulations. A typical example reads '5.A.E.1.25.', showing that the weapon was issued to the 1st supplementary battery of the 5th field artillery regiment.
- Aegir** A brand name registered on 11th June 1927 (no. 370176) by Louis →Bader, Valt. Sohn, of Zella Mehlis, Germany, specifically for use on airguns.
- æk** Found on pistols and small-arms components made by F. →Dušek of Opocno, working in German-occupied Czechoslovakia during the Second World War. →'German military codes'.
- AEP** or **A.E.P.** *often encircled, cursive, or in the form of a monogram.* A trademark associated with the products of Anciens Établissements →Pieper of Herstal lèz Liège, Belgium. It will be encountered on a variety of military and sporting rifles, shotguns, pistols, revolvers and ammunition.
- A.E.r.** This combination of code letters showed that the weapon on which it appeared had been issued to a supplementary mounted battery of a German field-artillery regiment (*reitende Ersatz Batterie des Feldartillerie-Regiments*). A typical example reads '5.A.E.r.1.25.'.
- Aerosport** A brand name encountered on spring-airguns made by Maschinen- und Apparätau →'Wagria' GmbH & Co., of Ascheberg/Holstein, Germany. The 'Aerosport 58' was a simple 4.5mm calibre barrel-cocker, whereas the 'Aerosport 59' was a 5.5mm version intended for export. Production had ceased by 1960.
- Aerostyle** The British military authorities acquired eighty '.180 Air Gun Sets' from 'Aerostyle Ltd' in 1944. These are believed to have been used for gunnery training, but details are lacking.
- Aeschbacher** Jacob G. Aeschbacher, or 'Aeschbacher', an inventor living in Rosario, Santa Fé, Argentina, was granted U.S. Patent 640070 on 26th December 1899 to protect a firearm.
- Aetna** A small Suicide Special revolver made by →Harrington & Richardson of Worcester, Massachusetts, U.S.A., in the 1880s.
- Aetna Arms Company** A spurious manufacturer's name used by →Harrington & Richardson to disguise a selection of inexpensive pre-1917 revolvers.
- AF** *monogram, often floriated.* This trademark was used by August →Francotte & Compagnie of Liège, Belgium.
- A.F.** Applied by the German foot-artillery regiments (*Fussartillerie-Regimenter*). A typical specimen reads '15.A.F.3.45.' for the 45th weapon issued to the 3rd battery of the 15th foot artillery unit. Twenty regiments had been created when the First World War began in the summer of 1914, numbered from 1; all were Prussian except no. 12 and no. 19, which had been raised in Saxony.
- Afanasev** Nikolai Mikhailovich Afanasev, born in 1916 in Petrograd, Russia, was best known for a double-barrel aircraft machine-gun designed while he was serving with the Red Army during the Second World War. Afanasev subsequently became regarded as a leading expert in the design of aircraft

weapons, particularly the gas-operated 'A-12.7' machine-gun.

AFAP → 'Ateliers de Fabrication des Armes Portatives'.

AFC monogram on a shield. Usually consisting of 'A' and 'F' crossed diagonally, with 'C' (and sometimes also a concentric 'o') superimposed, this was used by Auguste → Francotte & Co., notably on the grips of vest-pocket pistols made c. 1912–14.

AFC A mark used by U.S. arms inspector A.F. → Cameron.

AFC superimposition-type monogram with 'A' and 'F' of equal prominence. Also found as 'AF&CO.' on the grips of double-action safety revolvers made by (or possibly for) Andrew → Fyrberg & Company of Hopkinton, Massachusetts, U.S.A.

AFC Also encountered as 'AFCo' or 'A.F.Co.', this mark was used by the → Abercrombie & Fitch Company of New York on a range of sporting goods, including holsters and accessories. It is rarely found on guns.

A.F.E. This combination of letters was granted to the supplementary battalions of the pre-1918 German foot-artillery regiments (*Ersatz-Bataillone des Fussartillerie-Regimenter*) by the 1909 regulations. It takes the form '15.A.F.E.1.25.' for the 25th weapon issued to the first battery of the supplementary battalion of Fussartillerie-Regiment Nr.15.

A.F.H. or A.F...H. These three letters appeared in marks applied in the post-1909 period by insignificant German foot-artillery units, munitions columns carrying supplies for *Haubitzen* (howitzers). They may usually be found stamped as '5.A.F.II.2.H.25.', the 25th weapon issued to the 2nd (howitzer) munitions column attached to II. Bataillon of Fussartillerie-Regiment Nr. 5.

A.F.M. or A.F...M. Used by support detachments of German foot-artillery units, signifying an ammunition column carrying supplies for the mortars (*Mörser*). → 'AFH' for further details.

AFM Associated with the → America Firearms Mfg Co. of San Antonio, Texas.

A.F.R. Applied by the recruiting depots of German foot-artillery regiments (*Rekrutendepots des Fussartillerie-Regiments*) under the 1909 marking regulations, but rarely encountered. A typical specimen would read '5.A.F.R.45.'

African or 'M81 African'. A → Parker Hale Mauser sporting rifle in .300 H&H Magnum, .308 Normag, .375 H&H Magnum or 9.3×62, with a folding-leaf → Express back sights on a quarter rib, and an additional recoil lug.

African or Africain Found on guns made by Manufacture Française d'Armes et Cycles of Saint Étienne, France. → 'Manufrance'.

African A Mauser action sporting rifle made by Paul → Jaeger of the U.S.A. Chambered for .375 H&H, .416 Taylor or .458 Winchester Magnum cartridges, it had a distinctive graphite reinforced synthetic stock.

African Magnum Chambered only for .375 H&H Magnum, .404 Jeffrey and .458 Winchester Magnum ammunition, these → Parker Hale Mausers (also known as '1100M African Magnum') had a heavy barrel and a stock containing an additional recoil bolt.

African Plains Rifle Also known as the 'Model 700 APR', this bolt-action

- Remington sprttr was introduced in 1995 in chamberings ranging from 7mm Remington to .375 H&H Magnum. The stock is a wood-laminate pattern with a black rubber shoulder pad.
- AG** *superimposition monogram*. Used by Fabrique d'Armes de Guerre de Haute Précision Armand →Gavage of Liège on semi-automatic pistols.
- AG** *monogram*. Associated with →Garate, Anitua y Compañía of Eibar, Spain. Correctly 'GA'.
- AG** *accompanied by a crown and a crescent*. A trademark used by →Arizmendi y Goenaga of Eibar, Spain.
- AG** ['The']. On shotgun cartridges loaded by, or perhaps for E.J. →Churchill of London. The abbreviation is said to represent 'Accuracy Guaranteed'.
- Aga** or **AGA** A mark said to have been applied to a sub-calibre training system marketed by the Swedish (?) manufacturer, Autogen-Gas-Akumulatoren (sic). →Stephens, Smith & Co.
- AGB** →'American Gun Barrel Company'.
- AGB** A mark used by U.S. small-arms inspector A.G. →Bennett.
- AGC** *concentric monogram, with 'G' and 'A' prominent*. Found on handguns, rifles, shotguns and accessories made by or sometimes for →Garate, Anitua y Compañía of Eibar, Spain; is correctly read as 'GAC'.
- AGE** ['The']. Found on shotgun cartridges, made by →Eley-Kynoch, sold by Alex. →Martin of Glasgow. Widely used as a trademark, it said to represent 'Aberdeen–Glasgow–Edinburgh': Martin's three workshops in this particular period.
- Agency for Foreign Patent Solicitors** ['AFPS']. See "Theodor →Hornhauer'.
- Agent** Derived from the →Cobra, this .38 Special revolver was made by the Firearms Division of →Colt Industries in 1955–73. It had a 2-inch barrel and a short rounded butt; most guns were sold with hammer shrouds to prevent snagging clothing during a 'quick draw'. An alloy-frame version with a shrouded ejector rod, made in 1973–86, was often advertised as the 'Agent Lightweight'.
- Agent** *correctly "l'Agent"*: a .25-calibre pistol made by *Manufacture Française d'Armes et Cycles of Saint Étienne, France. →'Manufrance'.
- Ager** Wilson Ager, a patentee of agricultural machinery and an 'Agricultural Implement Supplier', is remembered for his involvement with the →Billingshurst Requa 'Battery Gun' of the American Civil War period. Representation was being maintained in London in 1868 at 4 Railway Place, E.C. Trading was undertaken as 'Wilson Ager & Company'.
- Agnel** Adolphe Agnel of Liège (1901–3) and Herstal-lèz-Liège (1903–6), Belgium, was granted a variety of patents—including one jointly with G. →Bertrand—protecting sporting guns, often either hammerless or with their hammers concealed within the mechanism. They were marketed under names such as 'Gladiateur', 'La Sublim', 'Le Liégeois' and 'Vénus', but may have been made elsewhere in the Liege area. [QEQL2005]
- Agnew & Son**, a gunsmithing and sporting goods business, traded from 79 South

Street, Exeter, Devon, England, in the twentieth century. Appropriate marks have been found on sporting guns and shotguns cartridges known as 'The →Devonia'.

Agniel et Cie of Place Chavanelle 16, Saint Étienne, France, were listed in 1892 as a gunmaker.

AGP Used by U.S. small-arms inspector Anson G. →Perkins.

Aguirre y Aranzabal were founded in Eibar in 1927 and owned in 2001 by the Aguirre brothers ('Aguirre Hermanos y Cia'). The company had by then become pre-eminent among Spanish shotgun makers, making about 25,000 'AYA' shotguns ranging from plain box-lock patterns to the finest side locks.

Aguirre y Compañía, trading in Ermua, Spain, in 1928–37, specialised in Smith & Wesson-type revolvers. The company was a casualty of the Spanish Civil War.

Aguirre, Zamacolas y Compañía of Eibar, Guipuzcoa, Spain, made the →'Basculant' and →'Le Dragon' pistols.

Aguro A brand name used on firearms made by →Erquiaga, Muguruзу y Compañía of Eibar, Spain.

AH Found on U.S. military small-arms inspected by Asabel →Hubbard.

AH monogram. Found on products of →Hispano Argentino Fábrica de Automoviles SA of Buenos Aires, Argentina (actually 'HA').

AH monogram. Found on pistols made by →Apaolozo Hermanos of Zumorraга, Spain.

AH monogram. Associated with the products of →Acha Hermanos of Ermua, Spain.

A & H *superimposition monogram with 'A' and 'H' of equal dominance.* Correctly 'H & A' (q.v.), used by →Hopkins & Allen.

AHC Found on military firearms and equipment inspected by Archibald H. →Ceiley or Albert H. →Clark. →"U.S. arms inspectors' marks".

AHF A mark used by arms inspector A.H. →Forsythe. →"U.S. arms inspectors' marks".

AHGL Used on military firearms and equipment inspected by A.H.G. →Lewis. →"U.S. arms inspectors' marks".

AHK Found on arms and equipment inspected by Albert H. Kirkham. →"U.S. arms inspectors' marks".

AHN A mark used by military arms inspector A.H. →North. →"U.S. arms inspectors' marks".

AHT Found on firearms and equipment inspected by Albert H. →Thompson. →"U.S. arms inspectors' marks".

AI or **A.I.** A mark associated with sight inserts and other articles marketed in Britain by →Accuracy International Ltd.

AI A designation applied to the Romanian Cugir-made copy of the Soviet →Kalashnikov assault rifle.

AI *superimposition monogram, customarily on a shield.* See 'IA'; found on Spanish break-open Smith & Wesson-style revolvers.

AID or **A.I.D.** Found on rifle and other small arms components inspected by the

Armaments Inspection Department, Enfield Lock.

Ailsa Craig Found on airguns made by F. →Langenhan or →Mayer & Grammelspacher, and sold by →Clyde's Game & Gun Mart of Glasgow.

AIM Made by the Romanian arms factory in Cugir, this is a copy of the Soviet AKM (→Kalashnikov) distinguished by an auxiliary pistol grip made integrally with the fore-end.

Aiming Tube →'sub-calibre adaptor'.

Ainsworth O.W. Ainsworth, often listed as 'Aimsworth', was the U.S. government arms inspector who accepted weapons ranging from cap-lock and .44 centrefire Smith & Wesson revolvers to →Gatling Guns. Active from 1831 into the 1870s, he used an 'OWA' mark. →"U.S. arms inspectors' marks".

Air Arms Ltd, trading from Hailsham in East Sussex, England, made the →Jackal series of airguns after the demise of →Sussex Armoury. The company—part of the engineering group NSP—went on to make derivatives of the basic sidelever cocking design (e.g., 'Combat', 'Rapide', 'Shamal', 'Supra') before introducing pre-charged pneumatics.

Air Ducts Ltd of Great West Road, Brentford, Middlesex, England, made 3750 'Mountings, Twin, Vickers .303 Machine-Gun, with Anti-Aircraft Sights' during the Second World War. The company may have used the code 'S 135' instead of its name. →"British military manufacturers' marks".

Aircraft The Aircraft & General Engineering Co. Ltd of Albion Works, Park Way, Edgware, Middlesex, England, made .303 →Vickers machine-gun tripods during the Second World War, possibly marked with the code 'S 136' instead of the company name. →"British military manufacturers' marks".

Aircrewman A name applied to a version of the →Smith & Wesson Model 12 →Military & Police →Airweight swing-cylinder revolver, acquired by the U.S.A.F in 1953-4.

Aircrewman Special Made by →Colt's Patent Fire Arms Mfg Co. for the U.S.A.F in 1951, in .38 Special only, this double-action revolver had a 2-inch barrel, fixed sights, and chequered walnut grips.

Airgun By the 1850s, the traditional 'externally-charged' designs—with reservoirs filled with separate pumps—had lost favour for all applications except walking-stick and cane guns. Filling ball-, butt- or barrel reservoirs with air had proved to be protracted, arduous, and often dangerous. Their replacements, in central Europe at least, took several forms.

¶ Some of the earliest relied on a pair of spring-loaded bellows in the butt, betraying seventeenth-century origins, but the perfected guns contained a piston that was driven forward by a volute spring when released by the sear. Some guns were cocked by a combination of a crank handle and a toothed rack (→*Kurbelspanner*); others used cocking levers combined with trigger guards (→*Bügelspanner*); attempts were even made to use rubber bands (see 'John →Shaw', 'Lightning' and 'Henry M. →Quackenbush').

¶ Though power was low, restricting them largely to shooting-gallery or indoor use, they were easy to operate and could be surprisingly accurate.

Most examples fired darts from smooth-bored barrels, but a few were capable of firing larger-calibre lead balls. A growing use of double volute springs, customarily counter-wound and separated by a spacer, increased utility.

¶ The traditional →Gallery Gun, taken to North America by German and Bohemian gunmakers in the 1860s, laid the basis for designs pioneered in the U.S.A. in the 1870s by →Havilland & Gunn and →Quackenbush, the best of them offering not only good construction but also appreciable power. Some of the largest, indeed, were ‘convertibles’ patented in the U.S.A. in 1872 by John Hannah, which could also fire .22 rimfire ammunition when required.

¶ The unsuccessful prototype of what has now become known generically as a →Gem, customarily credited to Asa →Pettengill, was a classical receiver-cylinder design; the successful Haviland & Gunn pattern combined the air cylinder with the butt, reducing overall length whilst simultaneously providing greater air capacity. The Gallery Gun also inspired the →BB Gun, an inexpensive ball-firer originating in the U.S.A. in the 1880s. However, it eventually evolved into the perfected barrel-cocking spring-piston airgun, which, after briefly taking the form of the *push-lever design, reverted to the original *Pettengill layout with the barrel formed as a lineal extension of the cylinder or ‘piston chamber’.

¶ Guns of this type were made in great numbers from 1900 onwards, particularly in Germany prior to 1914, and are still being offered in profusion. They were joined after 1907 by sturdier fixed-barrel guns, developed in Britain by Lincoln →Jeffries, which relied on a separate under-type cocking lever and a rotary tap to receive a pellet or ball. Jeffries-type rifles were popular in the period between the world wars, when most of the developmental strides concerned pistols such as the →Webley, designed by →Fearn & Johnstone, with its barrel (doubling as the cocking lever) along the top of the air cylinder. The →Parker pistol was cocked with a crank; the *Haenel was a barrel cocker; and the →Tell and the →Zenit relied on separate top-levers.

¶ The earliest post-1945 developments centred on pre-war prototypes. However, the BSA →Airsporter was a notable attempt to improve balance and style; guns such as the →Weihrauch HW35 began a quest for the additional power that would allow the airgun to become a hunting weapon; and the introduction of truly recoilless spring-air designs—begun in the late 1950s by the →Giss-patent →‘Diana’ guns made by Mayer & Grammelspacher—has made airguns fit for competitive international shooting.

¶ Underlever-cocking designs have gradually given way to sidelever patterns, much greater use has been made of synthetic components, and sights have been refined. The target-shooting market is currently dominated by the products of →Anschütz, →Feinwerkbau, →Hämmerli and others, though pre-charged pneumatics and *gas-guns have steadily gained favour. The advent of readily-available supplies of compressed air has enabled the reservoir airgun, out of favour since the nineteenth century, to return to popularity. Guns of this type, though lacking the ‘self-contained’ advantages of spring-piston

rivals, are entirely free from vibration and can be fired continuously until the pressure of air in the reservoir eventually declines far enough to affect power.

¶ It is difficult to do the history of the airgun justice in a few paragraphs.

Unfortunately, though much detail has been published in article form, few books provide other than a sketchy overview. W.H.B. Smith's *Gas, Air & Spring Guns of the World* (1958, reprinted many times) and the introduction to the third (1984) edition of *The Airgun Book* by John Walter give populist views; *Air Guns and other Pneumatic Arms* by Arne Hoff (1971) presents an academic approach. →'Gas gun'.

Airgunaid Founded by Eddie →Barber in 1977, this small business traded from Springfield Road, Chelmsford, Essex, until the premises were destroyed by fire in 1981. The marks will be found on airguns based, for the most part, on →Milbro Diana components.

Airis This brand name will be found on a small break-barrel 4.5mm air rifle made in the early 1960s by →Valmet of Finland.

Airline A brand name used on ammunition made by the →Federal Cartridge Company of Minneapolis.

Airlite A mark associated with cartridge revolvers made by →Gabilondo y Compañía of Eibar, Spain.

Air Logic Ltd was formed to promote the 'Whisperer' silencer, designed by J.R. →Spencer, and subsequently progressed to the →Genesis pneumatic rifle before being absorbed into →Scalemead.

Air Match Srl, founded by Giacomo →Cagnoni in 1978, was responsible for the Air Match CU400, CU600 and CU900 pneumatic pistols in addition to cartridge-firing target pistols. Until the early 1980s, the guns were exported by the IGI marketing organisation and the manufacturer's name was all but unknown. →'Italguns'.

Airship [or 'Airship Brand']. Found on packaging distinguished with an airship logo, usually containing airgun pellets made by W.H. →Darlow Ltd of Bradford, Yorkshire, England.

Airsporter This underlever-cocking spring-air rifle was the first post-war →BSA design to develop any real power. Its design is usually credited to Josef →Veselý, Claude →Perry and Roger →Wackrow. The Airsporter was descended from the pre-war →Jeffries Pattern BSAs, but considerable thought had been given to the layout of the pivots and the cocking mechanism was contained entirely in the half length fore end.

¶ The system has sometimes erroneously been credited to →Föhrenbach, makers of the *Falke brand guns, but the BSA was introduced some time before Föhrenbach had even begun trading. The unique conical piston head of the Airsporter was patented by Claude →Perry in 1946. The .22 calibre rifle reached the commercial market in 1948, accompanied by a short action .177 derivative known as the *Club.

¶ The Mark 1 rifle, with serial numbers prefixed 'G', 'GA', 'GB' or 'GC', was made from 1948 until 1958. It was followed by the Mark 2, made from 1959

until 1967 in .177 ('EE', 'EF', 'EG' numbers) and .22 ('GD', 'GE', 'GF', 'GG'); the Mark 4 of 1967–71 ('EK' and 'GI'); the Mark 5 of 1971–7 ('EL' and 'EN', 'GJ' and 'GL'); and the Mark 6 of 1977 onward ('EN' and 'GL'). The Airsporter S ('EP', 'GM') was introduced in 1981, followed by a 'Mark 2' in 1984. There has also been a carbine and a →Stutzen, made until the remnants of BSA were acquired by →El Gamo.

Air Trol A brand name associated with pneumatic guns made by the →Crosman Arms Company, referring specifically to a patented air valve.

Airway [or 'A–Airway'] A headstamp applied to ammunition sold throughout the U.S.A. by →Gamble Stores. The source usually proves to have been the →American Cartridge Company.

Airweight A name applied by →Smith & Wesson to a variety of swing-cylinder revolvers with aluminium-alloy frames, though the original alloy cylinders proved to be too weak and were substituted by steel. The Model 12 →Military & Police Airweight (1952–86) had a 2in barrel and a round-heel butt. A few were purchased by the U.S.A.F as the 'Model 13 Aircrewman', and a variant known as the 'Model 45' was developed for the U.S. Postal Service. The →Chiefs Special Airweight, 'Model 37' from 1957, was introduced on the basis of an aluminium-alloy 'J'-frame in 1952. A square-butt option was added a year later, and a steel cylinder replaced the alloy version from the beginning of 1954. The Model 637 Chiefs' Special Airweight—confined to 1990—had a steel cylinder, a steel barrel and an alloy frame. The .38 *Bodyguard Airweight, known as the 'Model 38' after 1957 and built on the 'J'-frame, was essentially a →Chiefs Special with a shrouded hammer-enveloping frame designed to prevent the hammer spur snagging clothing; the Model 638 Bodyguard Airweight, made in small numbers in 1990, amalgamated a stainless-steel cylinder and barrel with an alloy frame. The →Centennial Airweight revolver of 1952–74, known as the 'Model 42' from 1957 onward, had an enclosed hammer and a safety let into the backstrap. The earliest guns had alloy cylinders as well as alloy frames, but a steel cylinder was adopted in May 1954.

AIS A variant of the Romanian AI or →Kalashnikov rifle with a folding butt.

AIS *superimposition monogram without dominant letters*. Correctly 'SIA' (q.v.); found on revolvers distributed by →Security Industries of America, Inc.

Aisthorpe English gun-barrel maker John Aisthorpe (active 1850–65) was born in 1827 and apprenticed to Henry →Godsall before trading on his own account. He received British Patent 409/1864 for polygonal rifling while trading from 1 Grosvenor Mews, Marylebone, London.

AJ *monogram*. Used by José →Aldazabal of Eibar. The mark is correctly read as 'JA'.

A.J. Aubrey A brand name used on guns and shooting accessories sold in the early-twentieth century by the U.S. wholesaling business of →Sears, Roebuck & Company. The name was apparently that of the manager of Sears' manufacturing interests in Norwich, Connecticut. See also 'Albert J. →Aubrey' and 'Ted →Williams'.

- Ajax** ['The']. A brand name associated with shotgun cartridges made by →Nobel Explosives Ltd of Glasgow prior to 1918 and the purchase by Explosives Trades Ltd.
- AJB** Used on U.S. military small-arms by inspectors Aldige J. →Bessette and A.J. →Bristol.
- ajf** On submachine guns and small arms components made by →Junker & Ruh AG of Karlsruhe in Baden, Germany, during the Second World War. →“German manufacturers’ codes”.
- AJG monogram.** A mark used by J.G. →Anschütz of Zella St Blasii and Zella Mehlis, Germany, to be read as ‘JGA’.
- AJH** Used on U.S. military firearms and accessories by inspector A.J. →Hall. →“U.S. arms inspectors’ marks”.
- AJM** Found on arms and equipment inspected in the U.S.A. by Andrew J. →Harwood or Albert J. →Meyers. →“U.S. arms inspectors’ marks”.
- ak** A mark found on some small arms ammunition and components made in the German-occupied Vlasim (Czechoslovakia) factory of Munitionsfabriken vormalis →Sellier & Bellot during the Second World War. →“German manufacturers’ codes”.
- AK** An abbreviated form of *Avtomat Kalashnikova* (‘Kalashnikov assault rifle’), originating in the USSR and now specifically applied to the AK-47 (7.62mm) and AK-74 (5.45mm). →‘AKM’, ‘AKMS’, ‘AKMSU’ and ‘AKS’.
- Akah** or **AKAH** A brand name/trademark used by Albrecht →Kind of Berlin, Nürnberg and Hunstig bei Dieringshausen.
- AKB** A modified version of the →Kalashnikov in bullpup configuration, credited to Bulgarian engineer Georgiy Balakov. It was exhibited for the first time in 1997.
- AKD** →‘Kalashnikov’.
- AKK, AKKS** The indigenous designations for the fixed- and folding-butt versions of the ‘Modernised Kalashnikov’ or AKM, made by the →Arsenal small-arms factory in Bulgaria.
- AKM, AKMS, AKMSU** Applied to a modernised version of the 7.62mm Soviet →Kalashnikov assault rifle or ‘AK’. The ‘AKMS’ was a folding-butt version, whereas the ‘AKMSU’ was the short-barrelled submachine-gun derivative.
- AKR** Also known as the ‘Krinkov’, apparently after its designer, this is a short-barrelled derivative of the Soviet AKMSU-type →Kalashnikov.
- Akrill** Esau Akrill (active 1833–58 and later) maintained premises in Market Place, Beverley, Yorkshire, England, and also apparently had a branch at 25 Blackfriar Gate, Hull, in 1847–52. Among other guns, he made breech-loading self-priming rifles of the type patented by John →Gilby. Exhibited without conspicuous success in Paris in 1855 and London in 1862, the Gilby Self Priming System could also be fitted to cannon.
- Akrill** Gunsmith Henry Esau Akrill, son of Esau Akrill, traded from 18 Market Place in the Yorkshire (England) town of Beverley until 1914 or later. Akrill marked sporting guns and a wide variety of shotgun ammunition. Cartridges

have been recorded bearing marks such as →‘Collector’, →‘County’ and →‘Holderness’.

AKS Applied to the folding-butt version of the original *Kalashnikov assault rifle.

AL A mark found on arms and equipment inspected in the U.S.A. by A. →Lavigne. →“U.S. arms inspectors’ marks”.

AL A headstamp associated with ammunition made by the →Federal Cartridge Company.

Alamo Ranger An unidentified trade name found on a Spanish-made revolver.

Alard H. Alard fils & Compagnie, a Belgian gunmaking business based in Liège, had offices in Rotterdam and Maastricht, the Netherlands (1892–1937), and also, briefly, in London at 61 Great Tower Street, E.C., in 1896–1900.

Alaska A sheath-trigger →Suicide Special revolver made in the U.S.A. by the →Hood Firearms Company of Norwich, Connecticut, in the late nineteenth century.

Alaskan →‘Mark X’.

Alaskan A Mauser action sporting rifle made by Paul →Jaeger of the U.S.A. Chambered for 7mm Remington, .300 Winchester or .338 Winchester magnum rounds, it had a walnut stock and a Douglas Premium barrel.

Alaskan Model A version of the →Colt →Double Action Army & Frontier revolver ordered by the U.S. Army in 1902, with extended trigger guards to admit a thickly gloved finger.

Alaskan Wilderness Rifle [or ‘Model 700 AWR’]. Made by →Remington, this bolt-action sporting rifle dates from 1994. Its matt-grey composite stock is made of fiberglass, graphite and Kevlar, the barrel is stainless steel, and the action is satin-blue. Chamberings range from 7mm Remington to .375 H&H.

Albee George E. Albee, from New Haven, Connecticut, U.S.A., patented a magazine firearm on 14th December 1886 (U.S. no. 354371) and a firearm sight on 30th April 1907 (no. 852152). Both patents were assigned to the →Winchester Repeating Arms Company.

Albemarle [“The”]. A brand name associated with shotgun cartridges sold by →Harrison & Hussey of London.

Alben S. Alben’s Sons (active in 1908) were listed in the *U.S. Commercial Directory* as ‘Arms makers’ in Greenfield, Massachusetts.

Albini-Braendlin rifle Chambered for a 11.4×50mm rimmed cartridge, this system was designed by Augusto Albini, an Italian naval officer (eventually rising to the rank of admiral), but perfected with the assistance of Francis Augustus →Braendlin—associated with Albini in British patents obtained in 1866–7.

¶ The breech embodied a locking bolt attached to the hammer body. Rotating the hammer to half cock withdrew the bolt and allowed the breech block handle to be lifted, extracting a spent case to be tipped from the feed way. Once the gun had been reloaded, the breech block was closed and the hammer thumbed back to full cock. Pressing the trigger allowed the hammer to fly forward, whereupon the locking bolt entered the back of the breech-block and

struck the firing pin.

¶ After testing the Remington and a variety of other designs, the Belgians selected the Albini-Braendlin breech owing to the ease with which existing rifle muskets could be converted. Most *Fusils d'Infanterie Mle 1867* were converted from obsolete guns, though a few thousand were made in Liège by →Dresse-Laloux & Cie. The new barrel was copied from the →Chassepot, with French-style rifling, held in the stock by two sprung barrel bands and a large nose cap. Issue of the Albini-Braendlin was extended in 1869 to the Garde Civique, but no guns had been delivered when the →Comblain was substituted in 1871

¶ The M1873 was simply a version of the M1867 with an improved extractor adapted from the →Terssen conversions. Most of the guns were made in Liège by the government-owned →Fabrique d'Armes de l'État, and possibly also by Henri →Pieper & Cie. From 1880 onward, newly-made rifles were re-sighted for the M1880 cartridge, gaining a notch on the extended slider of the new 1400-metre back-sight leaf and a sighting stud on the middle band. A few 1873-type rifles were converted to serve rural gendarmerie after 1901, but had been discarded by 1914.

¶ Conversions included the 'M1777/1867', French 1777-pattern flintlock muskets, acquired in the 1840s, which had already been converted to bac-action cap-lock form. These guns were issued only to fortress artillerymen and reservists. The 'M1841/67' was converted from the 1841-pattern cap lock rifle-musket, and the 'M1853/67' had originally been a 1853-pattern rifle-musket issued with Minié expanding ball ammunition.

¶ Many surviving rifles were adapted for rural gendarmerie after 1901, as the 'M1867/1901', when distinctions between the conversions were finally abandoned. Barrels and stocks were shortened, the nose cap was discarded, and barrel was smooth-bored to fire for shot cartridges.

¶ The *Mousqueton M1777/1873* or 'gendarmerie rifle' was another Dresse-Laloux conversion. Converted from an ex-French flintlock musket, it shared the action of the M1867 rifle but chambered a short-case 11.4mm-calibre cartridge. Gendarmerie bayonets were basically diminutives of the M1867, with shortened elbows and flattened blades. The M1873 musketoon had a cheek-piece on the left side of the butt and iron fittings instead of brass. Newly-made in Liège by →Dresse-Laloux & Cie (and perhaps also by Henri →Pieper & Cie), had a ramp-and-leaf rear sight graduated to 600 metres.

¶ Francis →Braendlin had originally made lifting-block guns in accordance with patents granted in 1863–5 for improvements to the Mont →Storm system. Albini-type rifles were subsequently made by the Braendlin Armory in Birmingham, England; some were purchased by the French during the Franco-Prussian War, though the quantities involved certainly did not exceed five thousand. In addition, five hundred .577-calibre P/1853 rifle-muskets with an Albini-type breech were acquired by the Government of South Australia in the early 1870s. Bought by agents from →Holland & Holland, they were made

in Birmingham and accompanied by P/1853 socket bayonets adapted by the William →Tranter. Sporting rifles were also made in Britain on the Albini-Braendlin action, but their period in vogue was short.

Albion ['The']. A shotgun cartridge loaded by the →Schultze Gunpowder Co. Ltd prior to 1914. The name celebrates an alternative name for England.

Albion Motors Ltd of Glasgow, Scotland, made about 42,500 British .38 →Enfield 'Pistols, Revolver, No. 2' in 1940–3. The company was allocated the code 'N 1' during the Second World War. →“British military manufacturers' marks”.

Albrecht Fritz Albrecht was a sporting gunmaker of Suhl, Thüringen, Germany, active prior to 1919, when he seems to have been succeeded by Rudolf Albrecht.

Albrecht Fritz Albrecht, Rud. Sohn of Albrechts bei Suhl in Thüringen was listed in 1940–1 as a maker of weapons and metalware (*Fabrik für Waffen- u. Metallwaren*).

Albrecht Rud. Albrecht, also trading in Albrechts bei Suhl in Thüringen, was listed in 1941 as a maker of gun parts. Possibly also the proprietor of 'Fritz Albrecht, Rud. Sohn' (see preceding entry).

Albright Louis Albright (active 1859–63), a gunmaker of Ottawa, Putnam County, Ohio, U.S.A., received U.S. Patent 38366 on 5th May 1863 to protect a breech-loading firearm.

Aldasoro Gunsmith Juan Aldasoro of Eibar, Spain, made firearms in the mid-nineteenth century. They included cap-lock rifle-muskets, short rifles and carbines for the Spanish army. Revolvers were also made in the 1860s. →'Berdan'.

Alday y Gabilondo made cheap, low-grade Smith & Wesson-pattern revolvers in Placencia, Spain, in 1920–32. The business may have been superseded by Alday y Compañía (c. 1932–7).

Aldazabal A. Aldazabal of Eibar, Guipuzcoa, Spain, made the →'AAA' automatic pistol.

Aldabazal Hijos de José Aldazabal, also of Eibar, Guipuzcoa, Spain, were responsible for the →Imperial pistols, often misleadingly marked “Fabrique d'Armes de Précision”.

Alden J.W. Alden, an inspector of U.S. military firearms in 1905–6, used a 'JWA' mark. →“U.S. arms inspectors' marks”.

Alderman Edward M. Alderman, an inventor of Sharon, Pennsylvania, U.S.A., patented an electro magnetic gun on 4th May 1908 (U.S. Patent no. 920709).

Aldis Brothers Ltd of Birmingham, Warwickshire, England, made optical equipment prior to 1918—including signal lamps, and telescope sights used on Mk III →Lee Enfield and P/14 sniper rifles. A typical 2.5× sight had a range drum calibrated '1' to '6' (100–600yd).

Aldrich James T. Aldrich, domiciled in Norwich, Connecticut, U.S.A., received a patent to protect a revolving firearm (U.S. no. 283185 of 14th August 1883) and assigned rights to himself and W.H. Babcock. James Aldrich was also responsible for the revolving firearm protected by U.S. Patent 308231 of 18th

November 1884.

Aldrich Waley Aldrich, or 'Wales Aldrich', patented a breech-loading firearm on 12th May 1863 (U.S. no. 38455). The specification records his residence as Cleveland, Ohio, U.S.A.

Aldridge Edward Aldridge, a gunmaker trading from Hyde Park Corner, Ipswich, Suffolk, England, sold his own shotgun cartridges under brandnames such as →'Crown', →'Hyde Park' and →'Anglian'.

Alekhin A gunsmith of St Petersburg, Russia, operating prior to the 1917 Revolution.

Alert A cheap →Suicide Special revolver made by the →Hood Firearms Company of Norwich, Connecticut, in the late nineteenth century.

Alessi Federico Alessi of New York City invented the machine-gun protected by U.S. Patents 672690 of 23rd April 1901 and 683240 of 24th September 1901.

Alex Another of the many sheath trigger →Suicide Special revolvers made by the →Hopkins & Allen Arms Company of Norwich, Connecticut, in the late nineteenth century.

Alexander Charles W. Alexander, domiciled in Moorfield, Virginia, U.S.A., patented a breech-loading rifle on 25th May 1858 (U.S. no. 20315). He subsequently sought Confederate Patent no. 163 on 18th April 1863; however, though a pattern gun was made at the Confederate States Armory (Richmond, Virginia) in 1862, series production was never undertaken.

Alexander & Duncan of Leominster, Herefordshire, an English provincial gunmaking business, marked sporting guns and shotgun cartridges.

Alexanders The marks of this English gunmaking business, trading in Fordingbridge, Hampshire, have been reported on shotgun cartridges marketed under the brand name 'Fordingbridge'.

Alexia A typically inexpensive →Suicide Special revolver made by the →Hood Firearms Company of Norwich, Connecticut, in the late nineteenth century.

Alexis Another of the many →Suicide Special revolvers, this was made by the →Hood Firearms Company of Norwich, Connecticut, in the late nineteenth century.

Alfa or **ALFA** A brand name used on guns and accessories by A.L. →Frank of Hamburg. Sometimes encountered in the form of a monogram trademark, it was superseded in the 1920s by the 'WUM' of Georg →Frank.

Alfa A break-open three barrel 6.35mm repeating pistol, locked by a top lever and fired by a sequencing striker, marketed prior to 1914 by A.L. →Frank of Hamburg.

ALFA linear monogram, often encircled, with 'A' and 'F' dominant. Found on handguns, including Smith & Wesson-type break-open revolvers, made by Armero Especialistas Reunidas 'Alfa' of Eibar, Spain.

Alfson Andrew Alfson of Chicago, Illinois, U.S.A., was the patentee of a magazine gun protected by U.S. Patent no. 638677 of 5th December 1899.

A.L.H. Found in the headstamps of cartridges made by A.L. →Howard & Co. of New Haven.

ALH Found on arms and equipment inspected in the U.S.A. by A.L. →Hallstrom.

Alig & Baumgärtel, Abawerke GmbH (Germany, 1933–84), was trading from Müllerstrasse 27/31 in Aschaffenburg when the code →‘fqx’ was allocated in June 1941. The business is believed to have made parts for the →Erma sub-calibre barrel inserts (*Einsteckläufe*) in c. 1938–41. Sometimes mistakenly claimed to have been ‘a subsidiary of →Simson & Co.’, Alig & Baumgärtel entered the local commercial register in June 1933 as a maker of ‘precision machines and precision measuring equipment’. The business was succeeded by Schließ- und Maschinenfabrik ‘aba’ GmbH at the end of 1984.

Alkar Found on revolvers made by →Manufactura de Armas de Fuego and (or?) Sociedad →Alkartasuna Fábrica de Armas of Guernica.

Alkar A small Browning-inspired automatic pistol made in Eibar by Fábrica de Armas →Alkartasuna SA: (a) 6.35mm; six or seven rounds, hammer fired, (b) 7.65mm; seven or nine rounds, hammer fired. Some guns may be marked ‘Armas de Fuego’.

Alkartasuna SA, Fábrica de Armas, of Guernica (Eibar?) was formed in 1915 by ex-employees of →Experanza y Unceta. In addition to guns of its own, the company supplied →Ruby pistol components during the First World War to →Gabilondo y Urresti. The proprietary →Alkar pistol will sometimes be encountered with ‘Armas de Fuego’ marks.

al Khardj The principal Saudi Arabian ordnance factory; →‘Heckler & Koch’ and ‘Steyr’.

All-American [or ‘All-American Model 2000’]. A double-action semi-automatic pistol with a roller-bearing trigger, designed by C. Reed →Knight and introduced by →Colt’s Manufacturing Co., Inc., in 1991, this features a recoil operated rotating-bolt lock and a fifteen-round magazine. The slide is made of steel, but the frame may be aluminium-alloy or polymer.

All Round Usually found as ‘The All Round’ on shotgun cartridges sold in Britain by J. →Collis.

All British [‘The’]. Found on 12-bore shotgun cartridges loaded by T. →Stensby & Company, Manchester, from components supplied by Eley-Kynoch.

All-British Extra Special [‘The’]. Associated with shotgun ammunition loaded by Charles →Smith & Sons of Newark.

All Metal Products Company Trading in Wyandotte, Michigan, U.S.A., this metalworking business received the *Upton airgun making machinery from →Sears, Roebuck & Co. in 1927, and continued to make the ‘Upton M40’ BB Gun—a simplified →Sterling—until 1929. The tools and fixtures were then sold to the →King Rifle Company for \$1, but were dumped in the Detroit River shortly afterward. →‘Ranger’ and ‘Wyandotte’.

Allan Scottish gunmaker Arthur Allan, trading from 3 West Nile Street, Glasgow, is known to have marked shotgun cartridges with the ‘Super A.A.’ and →‘Three Star’ names.

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

Allen [usually as 'Allen 22']. A small revolver made by →Forehand & Wadsworth of Worcester, Massachusetts.

Allen Cyrus B. Allen (active 1836–41), a gunmaker-metalsmith of Springfield, Massachusetts, U.S.A., made the Cutlass Pistols patented by George →Elgin, Allen also made the 'Monitor' revolvers patented by John W. →Cochran. The business was succeeded by →Allen & Falls.

Allen Enos G. Allen, a native of Boston, Massachusetts, U.S.A. (at least according to patent applications) and also, perhaps, a cousin of Ethan Allen, was best known as a designer of ammunition. His U.S. patents included no. 39024 of 30th June 1863, for progressive or gain-twist rifling; 41590 of 16th February 1864 for metal-case cartridges; and 45306 of 6th December 1864 for a 'Bullet for Small Arms'.

Allen Ethan Allen, born in Bellington, Massachusetts, U.S.A., on 2nd September 1806, had established his workshop in Grafton, Massachusetts, by 1835. Here he patented his double action pepperbox in 1837. Ethan Allen and his brother in law, Charles Thurber, initially made pepperboxes in Grafton under the trading style 'Allen & Thurber'. In 1842, however, the partnership left for Norwich, Connecticut, where it traded for five years before settling in the small Massachusetts town of Worcester as 'Allen, Thurber & Company'. Charles Thurber resigned in 1855 in favour of another of Ethan Allen's brothers in law, Thomas P. →Wheelock. The company was re named 'Allen & Wheelock', but the junior partner died in 1863. Allen's sons in law, Sullivan →Forehand and Henry C. →Wadsworth, became associated with the firm in 1865. During the American Civil War, in December 1861, the Federal government had purchased 198 Allen revolvers from a dealer—William *Read & Son of Boston—though no large-scale purchases were made directly from the maker. Ethan Allen died in 1871. Allen & Wheelock became *Forehand & Wadsworth in 1872 and operated, latterly as the 'Forehand Arms Company', until 1902. See also 'Edward A. →Prescott'.

¶ Among Ethan Allen's many U.S. Patents for long arms were 30033 of 18th September 1860, granted for 'breech loading firearms'. Double-barrelled hammer shotguns were made in accordance with U.S. Patent 49491 of 22nd August 1865. The hinged breech-block was locked by a pivoting latch set into the right side. The patent also showed a ratchet extractor operated by a finger ring, but a sliding trigger guard was used on guns made in 1868–71. U.S. Patents 49491 of 22nd August 1865 and 84929 of 15th December 1868 both protected breech-loading guns, but the most important of all Ethan Allen's many designs was the double-action pepperbox protected by a U.S. Patent granted on 11th August 1837. The patent was reissued in January 1840 (no. 60) and again in August 1844 (no. 64). U.S. Patent 3998 was granted on 16th April 1845 for an improved pistol (pepperbox), and among the many patents granted to Ethan Allen for 'revolving firearms' were two protecting the revolver widely associated with →Allen & Wheelock—16637 of 13th January 1857 and 18836 of 15th December 1857. U.S. Patent 21400 added a method of

reducing the effects of fouling by using a projection on the cylinder to deflect propellant gases away from the cylinder axis pin. Other relevant U.S. patents were 22005 of 9th November 1858, 28951 of 3rd July 1860 and 33328 of 24th September 1861. Patent 33509 of 22nd October 1861 was granted to protect improvements in revolver design, embodied in the →Bull Dog and others introduced in the late 1870s by →Forehand & Wadsworth. U.S. Patent 35067 of 29th April 1862 was another granted for improvements in revolver design. ¶ U.S. Patent 15454 of 29th July 1856 protected 'Moulds for hollow projectiles'; 30109 of 25th September 1860 was granted for metallic cartridge designs; and 47688 of 16th May 1865 allowed claims to be made for improvements in metallic cartridges. Ethan Allen also made contributions to manufacturing techniques, as his U.S. Patent 2919 of 1843 protected a 'Mode of engraving on flat, round, or cylindrical surfaces'. U.S. Patent 27415 of 13th March 1860 was granted for a method of constructing firearms. U.S. Patent 36760 of 28th October 1862 protected a back sight, while 46617 of 7th March 1865 featured a 'cartridge retractor for breech loading firearms'. U.S. Patent 48249 of 20th June 1865 was granted for 'construction of gun barrels', and 55596 (19th June 1866) protected a method of heating and soldering gun barrels.

Allen Frank H. Allen of Norwich, Connecticut, U.S.A., received U.S. Patents 239634 of 5th April 1881 and 273335 of 6th March 1883 to protect 'Revolving Fire Arms'. The patents were exploited by the →Minneapolis Fire Arms Company.

Allen Frederick Allen: →'Allen, Brown & Luther'

Allen G.B. Allen, an inspector of U.S. martial arms in 1894–1902, was identified by a 'GBA' mark. →"U.S. arms inspectors' marks".

Allen G.T. Allen, an inspector of military firearms in 1898, used a 'GTA' mark. →"U.S. arms inspectors' marks".

Allen Hiram J. Allen, an inventor domiciled in Arkadelphia, Arkansas, U.S.A., was the grantee of U.S. Patent 113963 of 25th April 1871 to protect a breech-loading rifle. Two 'Allen' carbines were submitted to the U.S. Army trials of 1865, to be tested as 'Gun No. 1' and 'Gun No. 2'. They were operated by pulling up on a back-hinged lever on top of the butt wrist. This system—perfected by the 1871 patent—allowed the entire breech-block and hammer mechanism to slide back down a track.

Allen Lucius C. Allen, a government arms inspector, applied a cursive 'LCA' to →Beaumont Adams revolvers purchased by the Federal government in 1861.

Allen Martin van Buren Allen, a gunmaker-inventor of New York City, received U.S. Patents 741754 of 20th October 1903 for a 'firearm safety lock'; 793382 of 13th June 1905 for a 'hammer lock for firearm'; 793381 of 13th June 1905 for a 'gunlocking device'; and 849825 of 9th April 1907 for an improved hammer lock firearm.

Allen Richard Allen of Birmingham Warwickshire, was an English gunsmith specialising in 'revolving pistols', occupying premises successively at 1 New Sumner Street (from 1853 to c. 1855) and 17 Steelhouse Lane (to 1866 or later).

Allen S. Allen's Sons, a gunsmithing business trading from Greenfield, Massachusetts, U.S.A., in 1860–8, may have succeeded 'S. Allen'—active in the same area in much the same era.

Allen & Company of Worcester, Massachusetts, succeeded Allen & Wheelock, working from 1863 onward in a factory adjoining South Worcester railway station, Allen continued to market the .32 and .44 *lip fire revolvers until they could be replaced with .22 and .32 rimfire side hammer patterns. The .22 rimfire single shot 'Allen' target pistols were also made in this period.

Allen, Brown & Luther of Worcester, Massachusetts, U.S.A., was a partnership of Frederick Allen, Andrew J. Brown and John Luther. Trading only in 1848–52, the business made musket and rifle barrels, employing, amongst others, Horace →Smith and Daniel →Wesson.

Allen Patent Fire Arms Manufacturing Company ['The...']: →'Charles E. Bailey'.

Allen, Thurber & Company traded in Worcester, Massachusetts, from 1847 until c. 1856. The principal stakeholder was Ethan Allen.

Allen & Wheelock of Worcester, Massachusetts, U.S.A., made a variety of longarms, including about five hundred sporting rifles with a 'faucet' or plug breech protected by U.S. Patent 13154 of 3rd July 1855. These appear to date immediately prior to the Civil War, offered in calibers ranging from .36 to .50. The iron receiver contained a back-action cap lock with an external hammer; the butt has a crescent-shaped shoulder plate, with the circular iron lid of a patch box, set in a decorative mounting plate, let into the right side. The rear sight is a spring-leaf design with an elevator plate sliding in a groove in the top of the barrel.

¶ A block-action rifle protected by a patent granted to Ethan Allen on 18th September 1860 was also made. Releasing the blade-type latch in a pillar forming the rear web of the trigger guard, then pulling down on the breech lever lowered the block in its deeply-recessed frame. An extractor slid in the barrel block immediately below the chamber. Available in .22, .32, .38 and .44 rimfire chamberings (and also in .44 centrefire in 'Allen & Co.' days), the guns usually had blued quarter-octagon barrels, held in place by a 'take down' screw; they also have a detachable plate on the left side of the frame, and may be found with the pivoting-pointer rear sight that was a feature of the 1860 patent. Total production has been estimated as about 2000–2500. Those few that remained in stock after 1872 may have been sold with the marks of →Forehand & Wadsworth, successors to Allen & Co.

¶ Allen & Wheelock have also been identified with unmarked revolver-rifles made at the start of the Civil War. It is assumed that little more than a hundred of them were made for a special .44-calibre lipfire cartridge, requiring a port to be cut in the rear of each of the six cylinder chambers to allow the central hammer to reach the priming.

¶ The solid-frame revolvers patented by Ethan Allen in 1857 were made in substantial numbers, ranging from .28, .31 and .34 five-shot double action bar-hammer guns to a .44 six-shot 'army' pattern. They all had cranked

side hammers and a rammer which formed the major part of the trigger guard. Six-shot .36 'navy' and .44 'army' centre-hammer guns were made in 1861, and a .36 calibre sheath-trigger single action gun was also developed in the early 1860s for the police department in Providence, Rhode Island. A few of the centre-hammer Allen & Wheelock revolvers were chambered for rimfire cartridges in the early 1860s, but these infringed the Rollin →White patent and →Smith & Wesson soon forced production to cease. Allen & Wheelock also made .32 and .44 lip fire infringements of Smith & Wesson's rights—based on the company's cap locks—with bored-through chambers, central hammers and a cylinder axis pin entering from the front of the frame. Production continued until the business became 'Allen & Co.' (q.v.) in 1863.

Allendorf A.W. Allendorf of Schönebeck an der Elbe, Germany, is said to have used 'AWA' headstamps on rimfire cartridges made prior to 1900. Confirmation is lacking.

Alleley Richard Alleley, described in the local directories as a 'Maker of Air Guns and Air Canes', traded first from 86½ (1855–61) and later from 15 Weaman Street (1862–9), Birmingham, Warwickshire, England.

Allgemeine Elektrizitäts-Gesellschaft ['AEG']. Now the world-renowned AEG Telefunken engineering group, this business has become associated with small-arms largely through the manufacture in 1917–18 of drum magazines (*Trommelmagazine* 08, 'TM. 08') for the →Parabellum pistol and the →Bergmann Maschinenpistole ('TM. 18'). Research in archives in Stuttgart has been used to support a claim that the drums were made in the Ackerstrasse factory in Berlin, but this was the company's head office and it seems more likely that the work was undertaken in Nürnberg. A trademark comprising three hexagons within a fourth distinguished AEG-made magazines from those made by Gebr. →Bing and →Vereinigte Automaten Fabrik.

Allies A Browning type automatic pistol made by →Bersaluce Arietio Aurtena y Compañía of Eibar, Guipuzcoa, Spain, in at least two patterns: (a) 6.35mm, six rounds, hammer fired, (b) 7.65mm, six rounds, hammer fired. The 7.65mm guns may also be marked 'Model 1924'.

Allies A small semi-automatic pistol made by Domingo →Acha y Compañía of Ermua, Spain.

Allin Erskine S. Allin, an inspector of U.S. martial arms c. 1850–65, using an 'ESA' mark, was approached in 1864 by the U.S. Chief of Ordnance (General Alexander Dyer) in an attempt to find an efficient means of converting existing rifle muskets. Allin, then a Master Armorer at the National Armory in →Springfield, was asked to develop a gun on behalf of the Federal government.

Allin Government arms inspector Lucius C. Allin, possibly the brother of Edward S. Allin (above), accepted a variety of cap lock revolvers from →Colt, the →Massachusetts Arms Co. and the →Starr Arms Co. shortly before the American Civil War began. His mark was 'LCA'. →"U.S. arms inspectors'

marks”.

Allington [“The’]. A mark found on the cases of 12-bore shotgun ammunition sold by →Sanders of Maidstone. It is believed that the cartridges, or at least their constituents, were supplied by →Eley Brothers. The name was apparently that of a local Hunt.

Alloni Listed in 1951 as a gunmaker, trading from 12 boulevard Valbenoîte, Saint Étienne, France.

Allport The marks of gunmaker Henry Allport of Cork, Ireland, have been reported on self-cocking →pepperboxes dating from the middle of the nineteenth century.

Allport Herbert J. Allport, active 1896–1914 and possibly later, is believed to have been the gunmaking son of Thomas F. Allport (below), succeeding to the Paddington premises in 1896.

Allport Samuel Blackmore Allport, a maker of guns, pistols, barrels, furniture and accessories, worked in Birmingham, Warwickshire, England. Premises were occupied at 3 Weaman Row until c. 1838, when Allport moved to 50 Whittall Street. Master of the Birmingham Proof House from 1892 onward, he died on 23rd October 1899.

Allport Thomas F. Allport, a gunmaker (and possibly brother of Henry S. Allport), traded from 3 Ashland Place, Paddington, London W., in 1889–95. He was then succeeded by his son (?) Herbert.

Alltham & Son English gunsmiths and ironmongers trading in the small Cumbrian town of Penrith early in the twentieth century, this business is known to have marked Eley →Pegamoid shotgun ammunition.

ALM *often in a triangle*. This trademark is associated with L. →Ancion-Marx of Liège, Belgium, but should be read as ‘LAM’.

Alma [“The...”]. Found on shotgun ammunition loaded for H. →Clarke & Sons of Leicester.

Almac [“The...”]. A shotgun cartridge made by →Eley Kynoch.

Alpha Alaskan Introduced in 1985, this bolt action rifle by *Alpha Arms of Dallas had a stainless steel barrelled action, other metal parts being coated with a durable synthetic varnish called Nitex. The stock was usually a laminated pattern.

Alpha Arms Based in Dallas, Texas, U.S.A., this company made a limited range of sporting rifles designed by Homer →Koon under the names →Alpha Alaskan, →Alpha Custom, →Alpha Grand Slam and Alpha Model 1. They were all based on a three-lug bolt mechanism with a 60 degree throw, but production was confined to 1982–9. The Model 1 was offered in 1982 9 in .243 Winchester, 7mm-08 or .308 Winchester only.

Alpha Custom A bolt-action rifle made by →Alpha Arms of Dallas in 1985–9, in chamberings ranging from .243 Winchester to .308 Winchester.

Alpha Grand Slam This rifle duplicated the Alpha Custom pattern, but had a stock of ‘AlphaWood’—a composite of fibreglass and wood pulp.

Alphamax [“The...”]. A mark found on cartridges made by →Eley Kynoch Ltd and

by →Irish Metal Industries Ltd.

Alpine A brand name associated with Mauser-action sporting rifles made in Britain by →Firearms Co. Ltd from the early 1960s until 1991 or later in 'Standard', 'Custom' and 'Supreme' grades. Chamberings have ranged from .22–250 to 8mm Remington Magnum.

Alpine A bolt-action rifle made in the U.S.A. by →Dakota Arms.

Al Quds A name associated with an Iraqi copy of the Yugoslavian M72B1 →Kalashnikov-type light machine-gun. See also 'Tabuk'.

Alsop Charles Alsop of Middletown, Connecticut, U.S.A., designed the shoulder stock sometimes found with the →Savage cap-lock revolver, protected by U.S. Patent 28433 of May 1860.

Alsop Gunsmith Charles H. Alsop of Middletown, Connecticut, U.S.A., apparently the son of Charles R. Alsop (above), sought protection for movable revolver cylinder chambers to facilitate a gas seal. This resulted in U.S. Patent 33770 of 26th November 1861.

Alsop Charles R. Alsop, also of Middletown, Connecticut, U.S.A., was granted protection for a cap-lock revolver, including U.S. Patents 29213 of 17th July 1860 and 34226 of 21st January 1862. A rotary cam pressed the cylinder forward over the breech as the elongated hammer spur was thumbed back.

Alsop Repeating Firearms Company ['The...'], trading from Middletown, Connecticut, made a few .31- and .36-calibre revolvers to the designs of Charles H. and Charles R. Alsop in 1862–3, even though members of the Alsop family held a stake in the →Savage Repeating Fire Arms Company. They embodied the gas seal features which had been patented in 1860–1.

Altenburger Ernst Altenburger: see 'Mauser' and 'Heckler & Koch'.

Altendorf & Wright, trading from 20 & 24 Russell Street, Birmingham, Warwickshire, England, acted as agent for revolvers incorporating a spring safety patented by A. →Fagnus et Cie of Liège in 1874 (British Patent 3353/74). Their activities were apparently confined to 1873–98.

ALW → 'A.L. Woodworth'.

A.M. Applied prior to 1918 by the equipment of German *Artillerie-Munitionskolonnen* (artillery ammunition columns). A typical example reads 'A.M.VI.3.25', the 25th weapon issued to the 3rd ammunition column attached to VI. Armeekorps.

AM *often as a monogram.* Used by →Manufacture Française d'Armes et Cycles of Saint-Étienne, France (correctly read as 'MAF').

am Found on small-arms ammunition and components made in 1940–5 by →Gustloff Werke, in what had formerly been the factory of Otto Eberhardt Patronenfabrik in Hirtenberg (in German-annexed Austria).

AM Comprising an angular 'A' above an equally angular 'M', usually encircled, this mark was associated with August →Menz of Suhl. It will be found on the grips of →Liliput pistols.

AM *superimposition monogram with both letters equally prominent.* Found on the pistols made by August →Menz of Suhl, Germany.

- AM** *superimposition-type monogram*, usually encircled. Usually found with 'M' played to accommodate 'A', and often with a small ring-target set between its feet: used by August →Menz of Suhl on sporting guns and accessories.
- AM** *superimposition-type monogram*, usually enwreathed, with neither letter prominent. Used by August →Menz of Suhl on sporting guns and accessories.
- AMA** *beneath a crown*. This mark will be found in the headstamps of Danish military ammunition made by the Ammunitionsarsenalet in Copenhagen in 1953–8. See also 'AA'.
- AMAC** → American Military Arms Corporation.
- Amateurs** ['The...']. Found on shotgun cartridges loaded by the →Chamberlain Cartridge Company of Cleveland, Ohio, U.S.A.
- AMB** *monogram*. This mark will be found on pistols made in Spain by Martin A. →Bascaran of Eibar (see 'MAB').
- Ambassadeur** Offered by Société Anonyme Continentale pour la Fabrication des Armes à Feu →Lebeau Courally in 9.3×74R, with additional 20-bore shotgun barrels, this over/under Double Rifle has a distinctive three piece fore-end with the fillets alongside the barrels. The side locks, breech, trigger guard and top lever are engraved with gold-inlaid oak leaves and high-relief game scenes on a blackened steel ground. Double triggers are standard fittings, and the butt generally has a straight wrist.
- Ambassador Executive** A side-lock shotgun made by →Società Armi Bresciane to the designs of Renato →Gamba, with two 70cm 12-bore barrels, a →Purdey-style action and →Holland & Holland lockwork adapted by Gamba. Most guns have straight-wrist English butts, slender detachable fore-ends, and engraving which can range from 'Ambassador Black & Gold' to finest English-style bordered-bouquet and floral scrollwork.
- Amberg**, *Königlich bayerische Gewehrfabrik* ('Royal Bavarian small arms manufactory'). This was founded in 1801 to make muskets and rifles for the state army of Bavaria. The 'crown over AMBERG' marks will be found on many firearms dating prior to 1871, including the →Lindner breech-loading transformation of →Podewils type rifle muskets. Some of the →Werder rifles were also made in the Amberg factory in the 1870s, largely from subcontracted components; apart from a few experimental rifles and carbines, however, the later Mausers were made elsewhere. The Amberg factory has also been linked with the →Parabellum pistol, but undertook nothing other than repairs to Pistolen 1908. Operations ceased at the end of the First World War, when the factory was demilitarised. The Allied occupation authorities subsequently distributed much of the gunmaking machinery as war reparations, but sufficient remained of the facilities to allow the formation of DEPRAG–Deutsche Präzisions Werkzeuge AG.
- Amberite** A smokeless propellant used by →Eley and others in shotgun ammunition prior to 1914.
- AMC** →'A.M. Cooley'.
- AMD** A prefix applied to Mauser bolt-action sporting rifles made by →Masquelier

of Liège, Belgium.

America A revolver made by the →Norwich Falls Pistol Company of Norwich, Connecticut, U.S.A. Often found with the marks of →Merwin, Hulbert & Co.

American, generally as ‘The American’. Found on a selection of ‘Suicide Special’ revolvers. Some were apparently made by →Ely & Wray of Springfield, Massachusetts; others were sheath-trigger guns made by →Harrington & Richardson of Worcester, Massachusetts. They date from the 1880s.

American, generally as ‘The American’: a solid framed double action revolver, made by →Harrington & Richardson from the mid 1880s onward. It was offered as a six-shot .32, a five-shot .38 or a five-shot .44.

American, generally as ‘The American’. A revolver made in Springfield, Massachusetts, by →Smith & Wesson.

American A single-barrel box lock shotgun, with an exposed central hammer, made from 1876 until 1908 by →Hyde & Shatuck and then C.S. →Shatuck & Company.

American or ‘American 38’. Found on revolvers made by →Ely & Wray of Worcester, Massachusetts, U.S.A., in the 1880s. Despite their marks, the guns may have been the work of →Harrington & Richardson.

American Ace A mark associated with ammunition made by the American Cartridge Company (below) of Kansas City.

American Ammunition Company Trading in Oak Park, Illinois, and Muscatine, Iowa, U.S.A., backed by Frederick Biffar & Co. of Oak Park and Chicago, this business distributed shotgun cartridges under the headstamp ‘A.A.Co.’ and brand names such as →Jack Rabbit and →Red Devil.

American Arms Company [‘The...’]. Based in Chicopee Falls, Massachusetts, U.S.A., this promotional business was formed by →Poultney & Trimble and the →American Machine Works. Work concentrated initially on the →Smith carbine after production had been withdrawn from the →Massachusetts Arms Company. The American Arms Company subsequently made the cartridge derringers patented by Henry F. →Wheeler, which had relied on a rotating two-barrel monoblock to give access to the breech. They were made in chamberings ranging from .22 to .45 in 1865–6.

American Arms Company [‘The...’]; Boston, Massachusetts (1872–93), and Milwaukee, Wisconsin (1893–1901). This gunmaking partnership of George →Fox and Henry →Wheeler is said to have been founded as early as 1874, exhibiting shotguns at the Centennial Exposition of 1876. Products included Wheeler derringers, Fox & Wheeler revolvers, and ‘Fox’ semi-hammerless shotguns in 12-, 16- and 20-bore. The patented shotgun mechanism was cocked by a thumb lever on the right side of the breech; the revolvers, made in accordance with a patent granted in 1890 to Fox and Wheeler, had a hammer which could be rotated to full cock and then released by a second pull on the trigger—though a selector on the side of the frame enabled conventional double-action to be used at will. Trading was being undertaken from 103 Milk Street, Boston, in 1890, but a move to Milwaukee was made in 1893. George

- Fox died in 1900 and the assets of the business were purchased a year later by the →Marlin Firearms Company.
- American Automatic Arms Company**, Saco, Maine, U.S.A. This short-lived business was formed to promote the guns designed by Franklin →Young and J.E. →Sheriff.
- American Automatic Pistol** Used misleadingly on a pistol made in Eibar, Spain, by Gregorio →Bolumburu.
- American Ball Company** Trading in Providence, Rhode Island, U.S.A., this metalworking business was granted British Patent 20479/1905 for airgun slug and pellet making machinery. A factory in Providence, on the corner of Eagle Street and Kinsley Avenue, was occupied until the assets of the company were acquired by →Daisy in 1939.
- American Boy** Used by →Bliss & Goodyear of New Haven, Connecticut, U.S.A., on revolvers made in the 1880s.
- American Buckle & Cartridge Company**, West Haven, Connecticut, U.S.A. A maker of ammunition, including shotgun cartridges.
- American Bulldock** ['The...']. Encountered on compact six-shot double-action .380 revolvers, derived from the Webley →Bulldog. Made in Belgium prior to 1914, few are signed; they have short bird's-head butts.
- American Bull Dog** Found on an 1882 vintage five shot double-action .32 or .38 revolver made by →Johnson & Bye. The barrel was octagonal.
- American Cartridge & Ammunition Company**; Hartford, Connecticut, U.S.A. This ammunition making business, which flourished briefly in 1901–6, marked its products with 'A.M.C. & Co.'
- American Cartridge Company**; Kansas City, Missouri. This ammunition-making business is said to have been founded c. 1924. Many of its products were marked simply 'A', though tradenames such as 'American Ace' and 'Hiawatha Ace' have been associated with it.
- American Classic** Introduced in 1975, this .177-calibre multi-stroke pneumatic rifle was made by the →Crosman Arms Company. Modelled on a →Remington auto-loading rifle of the 1960s, the Model 766 was charged by swinging the fore end, and loaded either with pellets directly through the bolt channel or from a BB magazine in the butt.
- American Clay Bird** ['The...']. A mark found on shotgun cartridges loaded by the →Chamberlain Cartridge Company of Cleveland, Ohio.
- American Dart Rifle** This was a version of the lever-action →Sterling BB Gun, with a cover beneath the barrel through which darts could be inserted in the breech. It was made by the →Upton Machine Company only in 1912–15, though 'new' guns were apparently assembled from parts as late as the 1920s.
- American Derringer Corporation**; Waco, Texas, U.S.A. Makers of the .25-calibre Derringer Auto.
- American Eagle** A generic term applied to any →Luger pistol which displays the appropriate mark—the obverse (front) of the Great Seal of the Presidency—above its chamber. The mark usually signifies nothing other than commercial

sale.

American Eagle Associated with 'Suicide Special' revolvers made by the
→Hopkins & Allen Arms Company of Norwich, Connecticut, in the late
nineteenth century.

American Electric Arms & Ammunition Company This promotional agency was
formed in New York City, according to the *New York Times* of 21st August 1884,
to exploit the patents granted to Samuel →Russell. The newspaper names the
promoters as George B. Satterlee, William H. Barbour and James S. Merriam.
One relevant British Patent, 6305/86 of 1886, was subsequently granted in
the company name through the intermediacy of the London-based patent
agent J.C. →Mewburn. However, trading continued for less than a decade; a
subsidiary, the →Electric Arms & Ammunition Syndicate Ltd of London, failed
in 1891 and the concept of an electric-ignition gun made no impression on the
North American commercial market.

American Firearms Mfg. Co. Inc.; San Antonio, Texas, U.S.A. Maker of the
.25-calibre AFM Mark X automatic pistol.

American Flask & Cap Company; Watertown, Connecticut. Founded in 1857 to
make percussion caps, this business made self contained cartridges from the
1870s onward. Business apparently ceased in or shortly after 1891.

American Gun Company A trading style used on firearms (notably shotguns, but
possibly also on 'bought in' revolvers) handled by the H. & D. →Folsom Arms
Company.

American Gun Barrel Company A specialist maker of shotgun barrels, working
from 1914 until the early 1920s. The barrels may be marked 'AGB'.

American Luger Applied generically to any →Parabellum ('Luger') pistol
which displays the so-called →American Eagle mark above the chamber.
Alternatively, applied specifically to the German-made Parabellum or Luger
pistols distributed by →Stoeger in the period between the two world wars.

American Luger Applied to the →Schimel pistol made in the 1950s by the
→American Weapons Corporation. AWC was subsequently sued by Stoeger,
proprietor of the 'Luger' tradename in North America since 1929, and the gas-
operated Schimel became the 'Carbo Jet'.

American Machine & Foundry Company ['The...']; York, Pennsylvania, U.S.A.
This metalworking business converted M1 Garand rifles to fire 7.62mm NATO
cartridges, simply by firing two eight-round clips to expand a liner into the
chamber wall. The first of these M1E14 rifles, later known by the U.S. Navy as
the 'Mk 2 Model o', dated from 1964.

American Machine Works; Springfield, Massachusetts, U.S.A. Operated from
1843 until 1871 by Philos Tyler, this engineering business made →Smith cap-
lock carbines in 1863–5: firstly for the →Massachusetts Arms Company and
then under contract to →Poultney & Trimble.

American Metallic Cartridge Company; South Coventry, Connecticut. The U.S.
ammunition-making business was founded c. 1865, but did not survive for
long after the end of the American Civil War. It used a headstamp consisting

- simply of 'A', often encircled, on rimfire cartridges ranging from .22 to .44.
- American Military Arms Corporation** ('AMAC'); Jacksonville, Arkansas, U.S.A. This succeeded to the business of Iver →Johnson in the early 1980s but continued to use the earlier tradename. The company made a copy of the .30 M1 Carbine as well as a series of Long Range Rifles ('LRRS') in .338/416 Barrett or .50 Browning. These guns were introduced in 1987. Among other AMAC products are the .22 rimfire L'il Champ, a simple single-shot bolt-action rifle intended for juniors. German →Erma rimfire rifles have also been handled in the U.S.A., under names such as 'U.S. Carbine 22', 'Wagonmaster Lever Action' and 'Targetmaster Pump Action'.
- American Model** A term applied the introduction of the →Russian Model to distinguish the original pattern of the .44 No. 3 →Smith & Wesson revolver.
- American Model Extra** A name found on a 7.65mm-calibre double-action revolver originating in Belgium prior to 1914. Manufacturer unknown.
- American Novelty Company** This metalworking business, trading in Chicago, Illinois, made (or perhaps simply promoted) the .22 Short →Defender and →Huntsman penknife-guns, three inches and four inches long respectively. Dating from c. 1921–8, they were similar to the →Rogers patterns but relied on a radial firing lever set into the upper strap of the grip instead of a pivoting trigger latch.
- American Nut & Arms Company**, alternatively known as the 'American Nut & Tool Co.' Established in 1867 in Boston, Massachusetts, U.S.A., with premises at 47 Kingston Street, this engineering business made breech-loading pistols in accordance with the patents granted to Henry F. →Wheeler. Business may have ceased in the early 1870s.
- American Pellet**, 'Am Pell'. Brand names found on airguns and ammunition marketed by →Playtime Products, Inc., during the early 1970s. The guns were made in Canada and the U.S.A., but most of the ammunition was imported from Europe.
- American Repeating Rifle Company**; Boston, Massachusetts, U.S.A. This gunmaking business was formed in 1867 out of the →Fogerty Repeating Rifle Co., continuing to make the lever-action rifles designed by Valentine Fogerty. Trading was brief; the assets and liabilities of the company were purchased by →Winchester in 1869, and operations ceased.
- American Settler** A revolver sold in Belgium prior to c. 1910 by Charles →Clément.
- American Standard Tool Company**; Newark, New Jersey, U.S.A. This metalworking business was responsible for the →Hero pill-lock revolver, made from about 1865 until 1872.
- American Tool Works**; Chicago, Illinois, U.S.A. Founded in the 1880s, this company made BB Guns from 1891 until declining sales led to near-insolvency in 1912. The business was sold to the →Upton Machine Works and production of the principal gun model, the →Sterling, continued for a few more years.
- American Trading Company**; Springfield, Massachusetts? This business was

the assignee of patents granted in 1868 to James →Cranston to protect improvements in cartridge design, but it is not known if ammunition of this type was ever made.

American Weapons Corporation; Burbank, California, U.S.A. Also known as →Hy Hunter, this business—which vanished in the 1970s—is best known for promoting the gas operated →Schimel pistol (also known as the ‘American Luger’ or ‘Carbo Jet’). The guns were actually made by the A.C. →Swanson Company.

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

Ames Nathan Peabody Ames, born in September 1803 in Chelmsford, Massachusetts, U.S.A., succeeded to his father’s gunmaking and metalsmithing business in 1829. Operations moved to Chicopee Falls in 1829, where the Ames Manufacturing Company (below) was duly registered in 1834. Nathan died in 1847 without leaving an heir, his interests in the business passing to his brother, James Taylor Ames (1810–83).

Ames Manufacturing Company or ‘Ames Sword Company’; Chicopee Falls, Massachusetts, U.S.A. Founded by Nathan P. and James T. Ames, this business prospered when orders for cannon and edged weapons were granted by the U.S. Army from 1836 onward. Among the firearms made in the factory were a selection of 1842- and 1844-model cap-lock pistols, a thousand →Jenks rifles and 4200 carbines in 1841–5, and →Lowell machine-guns in the 1870s. Ames also made →Protector turret pistols c. 1889–95, and produced huge quantities of bayonets, swords and sabres; business continues today. The trading styles were interchangeable in the mid-nineteenth, the marks being judged by the product, but the ‘Sword Company’ pattern has predominated since the 1880s.

Amberite [‘The...’]. This mark—the name of the propellant—will be found on shotgun cartridges loaded prior to 1918 by or for →Curtiss & Harvey of London.

amf or **Amf** A mark found in the headstamps of Swedish military cartridges. It signifies *Arméförvaltningen* or ‘army administration service’.

Amiel Tested in Spain in the 1860s, this was a 15mm-calibre →Snider-like conversion of a Carabina de Cazadores Mo. 57/59 (a cap-lock short rifle), with the breech-block axis pin on the left side of the breech block. A cranked lever pinned to the hammer body opened the breech, drawing the extractor bar backward as the external hammer was retracted, and an ‘L’-shape striking bar was let into the top of the breech-block.

amn Found on small arms components made by the Neuwied factory of →Mauser Werke KG during the Second World War.

amo A mark found on small arms components made in Germany in 1940–5 by the Waldeck Bezirk Kassel factory of →Mauser Werke KG.

Amoskeag Manufacturing Company [‘The...’]. This gunmaking business, trading in Amoskeag and Manchester, New Hampshire, U.S.A., supplied the Federal

government with sizeable quantities of rifle muskets during the American Civil War, but was also responsible for some of the carbines and muskets produced in accordance with the designs of Edward →Lindner.

AmPell, Am Pell →American Pellet.

Amthor Arthur Amthor of Suhl in Thüringen, Germany, was listed as a gunsmith in the DRAB for 1939.

Amthor Franz Amthor, a barrel-blank maker trading in Suhl in Thüringen, Germany, was also listed in the 1939 edition of the DRAB.

Amsler Rudolf Amsler was a Swiss ballistician and gun-designer, associated during the twentieth century with →Schweizerische Industrie-Gesellschaft of Neuhausen.

Anaconda Introduced in 1990 by →Colt's Mfg Co., Inc., this .44-calibre revolver is made from satin-finish stainless steel. It is similar to the →King Cobra, with a transfer-bar safety system, a ventilated-rib barrel, a full-length ejector-rod shroud, and wraparound Neoprene grips. The Anaconda Hunter (1991) was essentially similar, but had an eight-inch barrel and a 2× Leupold telescope sight; it was sold in a fitted aluminium case.

Anciens Établissements →Pieper.

Ancion Dieudonné Ancion succeeded his father Jean-Jacques Ancion (1789–1832) as proprietor of what had become Ancion et fils (1832–42). The business subsequently became Ancion et Cie (1842–67) and then Dieudonné Ancion et fils (1867–73). The businesses of Simonis-Ancion (1864–6/7) and Dresse, Ancion et Laloux, which had traded independently from 1862 until 1866/7, were both incorporated into Dieudonné Ancion et fils at this time. Dieudonné was a prolific inventor, credited by Gadisseur & Druart with more than thirty Belgian patents.

Ancion The Belgian Jules Ancion (1837–90) founded his gunmaking business in Liège in 1859, amalgamating his operations with those of his brother Alfred by 1866. Jules Ancion had been a member of Le →Syndicat Anglais in the mid 1850s; of the →Petit Syndicat, formed in Herstal in 1870; and then of the Grand Syndicat. A founder member of les →Fabricants d'armes réunis, 1886, and a founding shareholder in →Fabrique Nationale d'Armes de Guerre in 1889, Ancion made →Comblain and other rifles. His business, renamed 'Jules Ancion et fils', survived until absorbed by →Fabrique d'Armes de Liège in 1900.

Ancion-Marx Manufacture d'Armes Léopold Ancion-Marx began trading in Liège, Belgium, c. 1890. Large quantities of handguns and sporting guns were made until 1935, when the trading style became 'Ancion-Marx Fabrique d'Armes SA' (altered in 1940 to 'Ancion-Marx Fabrique d'Armes SPRL'). Output included revolvers chambered for 5.5mm →Velo-Dog cartridges and others, following similar patterns (but advertised as 'Auto-Dog'), for the far more effectual 7.65mm Auto round. Ancion-Marx registered several trademarks prior to 1935, including 'LAM' or 'L.A.M.' in a triangle (1897?), in addition to brand names such as 'La Mignonne' and 'La Victoire'. An advertisement dating from the

1930s, when trading was being undertaken from '28 & 30, Rue Grandgagnage', claimed that Ancion-Marx specialised in, among other things, *Armes et Matériel de Guerre* ('military arms and equipment') and *Armes de Réforme transformées en Fusils de chasse* ('surplus military rifles altered into sporting guns'). The accompanying illustration showed a German →Parabellum light machine-gun!

Ancion, Renkin, Pirlot & Frésart The Belgian gunmaking co-operative was formed in Liège in 1853. It was absorbed by →Simonis-Ancion in 1864.

A. & N.C.S.L. Found in the headstamps of cartridges made for the →Army & Navy Co Operative Society Ltd prior to the First World War.

Anderson John Anderson & Son, a gunsmithing and sporting-goods business with premises in the Yorkshire town of Malton, possibly descended from William Anderson (Market Place, Malton, 1840–67), is known to have sold 12-bore shotgun cartridges under the brand names 'Derwent' and 'Eclipse' before the First World War. At least some of these were imported by James R. →Watson & Company of London, apparently from Belgium.

Anderson Brothers & Company of Plymouth, Michigan, U.S.A., was assigned a half share in a patent granted to Merritt →Stanley in 1891 and is believed to have made the prototype →Globe BB Guns. See also 'Dubuar & Co.', manufacturer of the series-made Globe guns and a possible successor to Anderson Brothers.

André et Cie of 14 place Tardy, Saint-Étienne, France, was listed in 1951 as a gunmaker.

Andreas Hugo Andreas of Gotha was a retailer of sporting guns and ammunition, active in Germany in 1941.

Andrews Charles E. Andrews, listed in directories as a gunmaker trading in 1900 from 15 Swallow Street, Piccadilly, London, England, may have been the son of C.W. Andrews (below).

Andrews Charles W. Andrews was a London-based gunmaker, listed at 6 Great Winchester Street, E.C., in 1892–1900. Trading was undertaken as 'C.W. Andrews Ltd' from 1894 onward.

Andrs Surviving examples of this experimental breechloading rifle usually prove to have been built on the →Werndl, or at least incorporate a substantial number of its parts. Developed for trials in Austria-Hungary, the Andrs system relied on a primitive bolt-action. The hammer of the back-action lock was retracted to half cock; the bolt handle was then pushed forward to release it from a retaining shoulder on the receiver, and raised to allow the bolt to be pulled back.

Angler ['The...']. This was the telegraphic codename of John →MacPherson of Inverness, possibly used on shotgun cartridges made by Kynoch prior to 1914.

Anglia →'H. & R. Sneezum'.

Anglian ['The...']. Found on 12-bore shotgun cartridges sold in eastern England by Edward →Aldridge of Ipswich. They were apparently made by →Rheinisch-Westfälische Sprengstoff of Nürnberg, Germany.

Anglo Sure-Shot 'Anglo Sure-Shot Mark 1' marks may be encountered on a →Britannia-pattern air rifle retailed by →Ramsbottom & Co. of Manchester in the early 1900s. Similar marks will also be encountered on →Millita-type Langenhans.

ANGL. ZAKAZ. A mark in Cyrillic ('АНГЛ. ЗАКАЗ') distinguishing .455-calibre Colt-Browning M1911 pistols delivered during the First World War for the Russian government. They were apparently ordered through an intermediary, perhaps taking over a contract originally placed by Britain. It is an abbreviated form of *Angliskii Zakaz*, 'English order'.

Anitua The Spanish gunmaker Gregorio Anitua of Eibar, Guipuzcoa, in partnership with Ignacio →Charola, was responsible for the →Charola y Anitua pistol of the 1890s.

Anschütz A. Anschütz of Zella Mehlis in Thüringen, Germany, was listed as a master gunsmith in 1930.

Anschütz Bruno Anschütz of Mehlis and Zella Mehlis in Thüringen, Germany, was listed in the 1914–20 editions of the DRAB as a gunmaker and in 1930 as a gun- and weapon-maker.

Anschütz C.O. Anschütz, trading in Zella Mehlis in Thüringen, Germany, was listed in the *Deutsches Reichs-Adressbuch* for 1920 as a 'weapons maker'.

Anschütz Curt Anschütz of Zella Mehlis in Thüringen, Germany, was working in 1930–45 as a gunmaker.

Anschütz Erdmann Anschütz was listed in 1920 as a gunmaker working in Zella Mehlis in Thüringen, Germany.

Anschütz Fridolin Anschütz of Mehlis in Thüringen, Germany, was listed in the 1900 edition of the DRAB as a gunmaker.

Anschütz Listed in 1900–20 as a master gunsmith, H. Anschütz was another member of the family trading in Zella St Blasii and Zella Mehlis in Thüringen, Germany.

Anschütz The gunsmithing business of J.G. Anschütz, Germania Waffenwerk AG, of Mehlis and Zella Mehlis in Thüringen, Germany, was founded by Johann Gottfried Anschütz in 1856. It soon attained a reputation for good quality sporting guns, and by 1896 was employing a work force of 75. Anschütz was listed in the 1900 edition of the *Deutsches Reichs Adressbuch* as a gunmaker, specialising in 'Flobert pistols, muzzle loaders, Lefauchaux [pinfires], centre fire guns, pocket pistols, revolvers. All sorts of small calibre rifles, rifles and shotguns including first class three barrel rifles. Production in 1900: 75,000 items'.

¶ More than two hundred people were employed in 1914 and, in March 1915, a mark of a double-encircled 'JGA' was granted to 'J.G. Anschütz Germania Waffenwerk' (no. 202536) to supplement the head of →Germania which had been used from the late 1890s. The owners in 1920 were noted as Fritz August and Otto Veit Anschütz; in 1930 they were Richard and Frau Alma Anschütz.

¶ The 1925 edition of the *Deutsches Reichs Adressbuch* lists the company's products as 'weapons of all types, including Flobert, target and other pistols,

revolvers of all types, air guns, all sorts of →Tesching, stalking and target rifles, double barrel shotguns and →Drillinge'. Production of the →JGA air pistol began in this era, and perhaps also of the →Dolla; however, catalogues published in the early 1930s suggest that this was a period of distribution rather than manufacture. Trading ceased at the end of the Second World War.

¶ In the 1950s, on the basis of a new bolt-action rimfire rifle (the Model 54), operations were rebuilt by Max and Rudolf Anschütz in Ulm am Donau. Shooting galleries were made for amusement arcades in this period, and the first post-war airgun, the bolt-action LG. 275, was introduced in 1958. This was followed in 1959 by the first of the suppressed recoil designs (the LG. 220) and by several thousand training rifles modelled on the Egyptian →Hakim auto-loader. The introduction of the improved 'Model 64' .22 rimfire bolt action then allowed the company to make the great success of its firearms making business that Anschütz still enjoys.

¶ Rifles have been made in huge numbers, most of them bearing numerical designations. A comprehensive list will be found in John Walter, *Rifles of the World* (third edition, Krause Publications, 2006), pp. 18–30. Patents granted to the company, particularly to protect its target guns (air and cartridge alike) are listed under their inventors' names. See 'Helmut Liebmann', 'Arthur Rauh', 'Dieter Straube', 'August Weisser', 'Hermann Wild' and 'Karl Zimmermann'.

Anschütz Otto Anschütz of Zella Mehlis in Thüringen, Germany, was listed as a specialist gun-stock maker in 1939–42.

Anschütz Reinhard Anschütz; Mehlis in Thüringen, Germany. Listed in 1914 as a master gunsmith.

Anschütz Richard Anschütz; Mehlis and Zella Mehlis in Thüringen, Germany. Listed in 1900–30 as a master gunsmith and gunmaker, specialising in 'target and hunting rifles, and saloon rifles of all types'. The owner in 1920–30 was Robert A. Anschütz.

Anschütz Udo Anschütz of Zella St Blasii and Zella Mehlis in Thüringen, Germany, was listed as a gun and weapon maker in 1900–30. Target pistols and sporting rifles were made under the brand name →Rekord. The business was apparently acquired in the 1930s by Franz →Merkel, but traded under its own name until the end of the Second World War.

Anschütz & Jehsert of Mehlis and Zella Mehlis in Thüringen, Germany, were listed in 1914 as weapons makers and in 1920 as wholesalers. The business was owned in 1920 by Hugo and Emil Anschütz.

Anson The gunsmithing business of E. Anson & Company of Birmingham, Warwickshire, England, was run by Edwin Anson (q.v.). Trading was maintained from 1890 until the end of the Second World War, when Anson's descendants (executors?) allegedly sold the assets to →Curry & Keen. Premises were occupied at 77 Slaney Street until 1895, but a move to Steelhouse Lane then took place. Birmingham city directories list the workshop successively at 14 (1913), 5 & 6 (1915) and 128 Steelhouse Lane (1921–8), perhaps indicating postal renumbering rather than constant moves.

Anson is known to have distributed →Millita-type Langenhan rifles in the early 1900s. Prior to 1914 the company also marketed a distinctive air rifle of a design usually credited to Jacob →Mayer. This gun was known as the 'Ansonia'. Small numbers of →Firefly and underlever-cocking →Star air pistols were made in 1922–40, and a few were even assembled first by Curry & Keen and secondly by A. & A. →Brown & Sons immediately after the Second World War had ended.

Anson Edwin Anson was the son of (and successor to) the renowned shotgun designer William Anson (below). He was also proprietor of E. Anson & Company. British Patent 24837/1907 was granted to 'Edwin Anson, Gun & Rifle Manufacturer' to protect the →Highest Possible air pistol, manufacture of which, however, was entrusted to Westley →Richards.

Anson Gunsmith Edwin George Anson, believed to have been the son of Edwin Anson (above), was granted British Patent 178048 in 1921, protecting improvements to the →Highest Possible air pistol with a concentric barrel/air cylinder system. The patent records Anson's home as '968 Warwick Road, Acocks Green, Birmingham, in the County of Warwickshire'.

Anson William Anson of Birmingham, Warwickshire, England, was originally employed as foreman of Westley →Richards' gun-action workshop, until starting out on his own account in 1877. Premises were occupied at 77 Slaney Street. The trading style became 'E. Anson & Company' in 1891, and a move to Steelhouse Lane took place in 1896. Operations ceased in the 1940s. Among William Anson's British Patents were 3791/72 of 1872, protecting the fore-end catch that is still generally associated with his name. Patent 1756/75 of 1875 was obtained jointly with John →Deeley to protect the first commercially successful hammerless box-lock shotgun. This particular specification was filed while Anson was still working as foreman of the Westley →Richards gun-action room. Shotguns and double rifles of this pattern are now known generically as 'Anson & Deeley'. British Patents 4513/76 of 1876, 907/79 of 1879 and 4089/82 of 1882 were all granted for safety mechanisms; 1833/83 of 1883 (obtained jointly with Deeley) protected modifications to the Anson & Deeley action; 15299/84 of 1884 and 16138/86 of 1886 were obtained for extractor or ejector designs; and 7274/88 of 1888 was granted for a 'drop barrel gun'.

Anson & Deeley This name is given to a distinctive shotgun action patented in Britain in 1875 by William →Anson and John →Deeley. The first barrel-cocking hammerless design to be commercially successful, it had the lock mechanism mounted directly on the action instead of separate side plates. Anson & Deeley's design was originally known as the 'Body Action', but subsequently became better known as a box-lock (cf., 'side lock'). A safety lever mounted on the side of the action of the earliest guns was soon replaced by a sliding catch on the tang behind the top lever. The first guns were made by Westley →Richards of Birmingham, but the patent was subsequently licensed to several leading gunmakers and eventually—usually

(but not always) after protection had lapsed—was simply copied far and wide. Shotguns made in accordance with the licensing agreements usually display A. & D. PATENT somewhere on the action.

Ansonia ['The...']. A brand name found on a barrel-cocking air rifle made in Birmingham by Edwin →Anson & Company prior to 1914. As the gun seems to embody parts of Jacob →Mayer's British Patent 20559 of 1901, the chronology of the Ansonia remains uncertain. Theories that it was imported from Germany, a pirated copy, or made after the expiry of the Mayer patent all have their champions. There was also an 'Improved Ansonia' with a Mayer & Grammelspacher-type barrel latch, which is usually marked as Anson's own product.

Ansorg A. Ansorg of Mehlis in Thüringen, Germany, was listed in 1914 as a gun-barrel maker.

Ansorg August H. Ansorg, Zella Mehlis in Thüringen, Germany, was listed in the 1939 edition of the *Deutsches Reichs-Adressbuch* as a gun-barrel drawer.

Ansorg C.K. Ansorg of Zella Mehlis in Thüringen, Germany, was listed in 1920 as a master gunsmith.

Ansorg Hermann Ansorg of Zella Mehlis in Thüringen, Germany, was listed in 1920 as a 'weapon maker', in 1930 as a 'gunmaker', and in 1939 as a 'maker of guns and wholesaler of gun stocks'. Trading ceased in 1945.

Anstey & Wilson, trading from Kenyon Street in Birmingham, Warwickshire, England, made 420,000 British No. 4 (Lee-Enfield) rifle magazines in 1942–3. The code 'M 8' may have been used instead of the company name. See "British military manufacturers' marks".

Anti-Recoil Cartridge ['The...']. Applied to shotgun cartridges loaded by T. →Page-Wood of Bristol from components supplied by →Eley-Kynoch. There was also an 'Anti-Recoil Economic Cartridge', with a simpler crimp and possibly also a lighter load.

Antley John Antley, an English gunmaker, was listed in directories at 37 Turner Street, Commercial Road, London E., 1864 and possibly later.

Antrim ['The...']. A shotgun cartridge sold in Ireland by →Cambridge & Co. of Carrickfergus.

AO or **A O** Found on M1 Carbine receivers made for →International Business Machines by the →Auto Ordnance Corporation.

AP An abbreviation for →Armee-Pistole ('army pistol'), found as 'Mod. AP' on the slides of the enclosed-hammer predecessor of the →Walther P. 38.

Apache This Belgian knuckleduster revolver was developed in the early 1870s by a gunmaker named Louis →Dolne[-Bar]. Named after the Parisian street gangs of the period, the barrelless pinfire revolver had a spurless hammer, a folding trigger, a swivelling knife blade on the lower edge of the frame, and a four-ring knuckleduster doubling as a handgrip. The knuckle bow folded upward beneath the frame to provide a compact weapon. Guns were made in Belgium or France, usually for 6mm pinfire cartridges though other chamberings are known. Genuine articles are marked 'L. DOLNE INVR.' on the frame, but others

- are marked with a crowned 'ML' of →Manufacture Liégeoise d'Armes à Feu.
- Apache** A Browning-type automatic pistol made by →Ojanguren y Vidosa of Eibar, Guipuzcoa, Spain; 6.35mm, seven rounds, hammer fired.
- Apache** A dual calibre BB/6.35mm pump-up pneumatic rifle made by the →National Cart Company of Pasadena, California, U.S.A. It apparently dates from the late 1950s, but could not compete with Crosman or Sheridan designs and rapidly disappeared.
- Apache** or 'Nylon 77 Apache'. This was a version of the Nylon 66 rimfire auto-loading rifle, made in 1987 by the →Remington Arms Company specifically to rid the company of unwanted parts. They were sold exclusively by the K-Mart retail chain, distinguished by their bright green stocks and fore-ends.
- Apache Black** A name applied to a version of the →Remington Nylon 66 auto-loading rifle with black synthetic butts and fore-ends complemented by chrome-plated metalwork. See also 'Mohawk Brown' and 'Seneca Green'.
- Apaolozo Hermanos** were gunmakers trading in Eibar (and/or Zumarraga?), Guipuzcoa, Spain. They made the →Paramount and →Triomphe pistols.
- APB** Applied to a silenced version of the Soviet 9mm →Stechkin pistol. See also 'APS'.
- APC** →'A.P. Casey' or 'A.P. Cobb'.
- Apex** A brand name associated with a proprietary .240 sporting rifle cartridge introduced c. 1923 by →Holland & Holland of London, originally as the '.240 Belted Rimless Nitro Express'. It has also been associated with appropriately chambered Mauser-action rifles.
- APP** A carbon-dioxide powered semi-automatic pistol made in Czechoslovakia in the 1960s by Zavody Jan →Sverma. A modern-looking design with a seven shot magazine and a gas cartridge in the butt, the APP achieved little success and rapidly disappeared.
- Appleton** Gunmaker Henry M. Appleton traded from 51 London Wall, London E.C., England, in 1869–72.
- APR**, or 'Model 700APR' →'African Plains Rifle'.
- APS** The abbreviated form of the designation of the Soviet 9mm →Stechkin pistol. See also 'APB'.
- APS** Mistakenly applied to the Soviet/Russian underwater submachine-gun designed by Vladimir →Simonov.
- APX** An abbreviated form of Ateliers de →Puteaux. See also 'CTV'.
- Aquoid** ['The...']. A shotgun cartridge made by →Eley Bros. prior to the acquisition of the company by Explosives Trades Ltd in 1918.
- aqx** Found on small arms components made by the Berlin-Tegel (Germany) factory of →Rheinmetall Borsig AG, 1940–5.
- A.R.** This mark signified the recruiting depot of a German field-artillery regiment (*Rekrutendepot des Feldartillerie-Regiments*), appearing as 'S.A.R.45'.
- A.r.** Used by the *reitende Batterien* ('mounted batteries') of the German field-artillery regiments, taking the form '10.A.r.2.25'.
- AR** *cursive, beneath a crown*. Found on the weapons of Saxony: the mark of King

Albert (1873–1902). See also ‘Cyphers, imperial and royal’.

ar Associated with machine guns, rifles and parts made in the Berlin-Borsigwalde factory of →Mauser Werke AG during the Second World War.

AR A designation applied to the Israeli 5.56mm or 7.62mm →Galil ‘Assault Rifle’.

AR *beneath a crown*. A mark associated with King Amadeo I of Spain, usually found above ‘O’ for Fábrica de Armas de →Oviedo. See also ‘Royal cyphers and markings’.

AR Found on U.S. military firearms: see ‘Alexander Reuben’ and ‘Adam Ruhlman’.

Arbeitsgemeinschaft Haenel →C.G. Haenel.

Arbenz Adolph(e) Arbenz and his successors, often listed as gunmakers, were merchants and wholesalers. However, as Arbenz was the communicant of British Patent 4413/86 of 1886, granted to Flurschein & Bergmann (→Eisenwerke Gaggenau), it is clear that Arbenz’s business had attained some importance. The patent notes the trading address in 1887 as 107 & 108 Great Charles Street, Birmingham, but a move had been made by 1914 to 33 Ludgate Hill, Birmingham. Arbenz survived into the post-1945 period, wholesaling ironmongery, but ceased trading c. 1959. The links with airguns had long since been severed.

Arbuthnot Henry T. Arbuthnot of the Royal Artillery was the Assistant Superintendent of the →Royal Small Arms Factory, Enfield, in 1862–6 and Superintendent—ranking as colonel—from 1880 onward. He is best known for standing firm against the adoption of the Owen →Jones rifle, favouring the Lee. This brought him into conflict with his superiors, and an allegation that he had accepted favours from the →Nordenfelt Arms & Ammunition Company (often in open competition with the Enfield factory) led to his resignation in October 1886.

Arbuthnot Stock Introduced to accompany the →Enfield-Martini rifle, this was distinguished by a cutaway fore-end intended to prevent the underside of the barrel rusting.

ARCO *superimposition monogram with ‘A’ and ‘R’ equally dominant*. Correctly ‘RACO’ (q.v.); used by the →Remington Arms Company.

Arcos →‘José Artes de Arcos SA’.

Ardennes Made by Société Anonyme Continentale pour la Fabrication des Armes à Feu →Lebeau Courally, this →Anson & Deeley type side-by-side box lock rifle (in 9.3×74R) has a distinctively scalloped rear edge to the frame. Fine English scroll engraving appears on the action and fences, and the action flats end in tear-drop finials. The gun has a double-trigger mechanism, a chequered pistol-grip butt, and a folding back-sight set into the tip of the double rib.

Ardit [‘The...’]. A corrupted form of ‘Hard Hit’, this mark will be found on shotgun cartridges handled by →Cogswell & Harrison.

Arendt Maurice Arendt of Liège (and possibly also his son Henri) made pinfire revolvers, pistols and sporting guns. The proof-house registers record Arendt as active between 1857 and 1889, trading from rue Trappé 8. During this period, he was granted ten Belgian patents to protect improvements in

Lefauchaux and similar revolvers.

Argles Alice Argles, the wife of a partner in the →Arms & Ammunition

Manufacturing Co. Ltd, was granted British Patent 4168/95 of 1895 to protect an airgun. The patent papers record her home address as 61 Alexander Road, Wimbledon, Surrey, and her profession as 'Gentlewoman'. Whether she was genuinely responsible for the patent (which would make one of the few female inventors in this field) is not known; she may simply have been operating as a cover for her husband and his associates.

Argaud (sometimes listed as 'Argoud') of Saint-Étienne, France, was listed as a gunmaker ("fabricant d'armes") trading from 11 rue Villeboeuf in 1931 and 30 rue Paul du Vivier in 1970.

Argyll ['The...']. A mark found on shotgun ammunition made by →Eley-Kynoch for Alex. →MacKay & Sons of Tarbert, Scotland.

Arisaka rifle This sturdy turning-bolt design was developed by a committee chaired by Colonel Nariake Arisaka to replace the →Murata. The perfected Meiji 38th Year Type rifle (adopted in 1906) was a modified version of the Mauser, exceptionally strong and durable.

¶ The earliest 6.5mm 'trials' or Meiji 29th Year Type rifle (1896) was followed by the refined Meiji 30th Year Type ('M1897'), which was actually adopted in February 1899, and then c. 1901 by a short-barrelled cavalry carbine of the same year-designation. Then came the Meiji 35th year Type Rifle of 1902, an unsuccessful improvement on its predecessors fitted with a separate sliding bolt cover; once the perfected 6.5mm calibre Meiji 38th Year Type ('M1905') rifles had been issued from 1907 onward, with a tubular cover reciprocating with the bolt, surviving 35th Year guns were reissued to the navy. The Meiji 44th Year Type cavalry carbine of 1911 was essentially similar to the 1905 pattern, but had a folding bayonet beneath the barrel.

¶ Adopted in 1937, the Type 97 sniper rifle had a monopod beneath the fore-end and the bolt handle was bent downward. About twenty thousand guns of this type were made in the Kokura and Nagoya factories in 1938–41. When war with China began in 1937, the Japanese discovered that the 6.5mm cartridge was not powerful enough. The result was the 7.7mm semi-rimless Type 99 pattern, accompanied by a suitable Arisaka. Though a full-length rifle was made in small numbers and issued for trials, a shortened 'universal' pattern was preferred by 1940.

¶ The Type 99 sniper rifle (1942) retained the basic features of the preceding Type 97, including the turned-down bolt and the monopod. The earliest Kokura-assembled guns featured 2.5× sights, but the ten thousand Nagoya-made guns used the improved 4× Type 2. The Type 0 paratroop rifle was a standard Type 99 with the barrel and receiver joined by an interrupted thread, whereas the Type 1 (1941) was nothing more than a 38th Year Type carbine with a folding butt. The perfected Type 2 paratroop rifle, adopted in 1943, embodied a sliding wedge to lock the barrel and receiver together.

¶ Attempts to conserve raw material led in 1943 to the Substitute Type 99

rifle (also known as ‘Type 99 Model 2’ or ‘Type 3’), made of materials which steadily deteriorated as the war ran its course, until the last guns made in 1945 were truly awful.

¶ Arisaka rifles were used in Britain, Burma, China, Indonesia, Korea, Russia and Siam. Finland used some guns taken from the Russian, who had acquired many from Britain during the First World War. As the British guns had been purchased in Japan in 1914, it is possible to find a 38th Year Type rifle marked by four different countries. Among the best sources of detailed information about the Japanese rifles is *Japanese Military Rifles* by Fred Honeycutt and J. Patt Anthony (Julin Books, 1983), though *Rifles of the World* by John Walter (third edition, Krause Publications, 2006) provides a useful summary. See also ‘Heijo’, ‘Japanese small arms designations’, ‘Koishikawa’, ‘Kokura’, ‘Mukden’, ‘Nagoya’, ‘Nanking’, ‘Simple Rifles’, ‘Special Navy Rifle’, ‘Tientsin’, ‘Tokyo Juki’ and ‘Toyo Juki’.

Aristocrat A ‘Suicide Special’ revolver made by the →Hopkins & Allen Arms Company of Norwich, Connecticut, in the late nineteenth century.

Arizaga Gunmaker Gaspar Arizaga of Eibar, Guipuzcoa, Spain, made the →Pinkerton pistols (which are sometimes marked simply “Société d’Armes”). Arizaga also made the 6.35mm-calibre automatic pistols sold under the name →Mondial.

Arizmendi Francisco Arizmendi of Eibar made pistols under the brand names →Boltun, →Kaba Spezial, →Le Pistolet Automatique, →Roland, →Singer, →Victor and →Ydeal. The Kaba Spezial was made specifically for Karl Bauer of Berlin, and the Singer may have been supplied to →Arizmendi y Goenaga though often marked only as a product of “Fabrique d’Armes de Précision”.

Arizmendi Norberto Arizmendi SA, founded in Eibar in 1917 and owned in the 1980s by José Ignacio Arizmendi, grandson of the founder, made automotive components and metal goods. The business also made air rifles, shotguns and sporting guns. The workforce numbered 140 in 1980 and annual production capacity was some sixty thousand guns. Arizmendi products were sold under the brandname ‘Norica’ and trademark ‘NAC’.

Arizmendi F. Arizmendi y Goenaga of Eibar, Guipuzcoa, Spain, made →Ruby-pattern semi-automatic pistols for the French army during the First World War. The →Teuf Teuf, →Waldman and →Walman patterns dated from the 1920s.

ARM A term distinguishing the ‘Assault Rifle/Machine-gun’ variant of the Israeli →Galil, with a bipod and a folding carrying handle.

Armada A Spanish-language term signifying naval service—e.g., ‘ARMADA ARGENTINA’, found on Colt revolvers acquired by the Argentine navy in the early twentieth century.

Armaf SA, Fabrique d’Armes. Trading from 54 rue du Vertbois in Liège from 1929 until 1972, this business was formed by amalgamating →Manufacture Liégeoise d’Armes à Feu and J.B. →Ronge fils Réunies, founded in 1866 and 1789 respectively. Hammer, hammerless and round-action sporting guns

were made, often with barrels of Cockerill steel (marked with a cockerel) and latterly incorporating ejection systems patented in 1946–54. [QEQL2005]

ArmaLite Corporation; Costa Mesa, California, U.S.A. The manufacturer and distributor of the ArmaLite AR 18 rifle, 1969–82. See also ‘Chartered Industries of Singapore’ and ‘Daewoo’.

ArmaLite Division of the Fairchild Engine & Airplane Corporation was formed in 1954 to promote guns embodying aluminium alloy parts and foam filled synthetic furniture. The first gun, the .308 AR 3 designed by Eugene →Stoner, relied on a variation of the rotating-bolt locking system pioneered by Melvin →Johnson. The AR 3 was not particularly successful, but encouraged development of the AR 10.

ArmaLite, Inc. →ArmaLite Division of Fairchild Engine & Airplane Corporation.

ArmaLite rifle Successfully tested in 1955, the AR 10A was followed in 1956 by fifty semi-production AR 10B rifles. Modified by James Sullivan, they had a new gas tube above the barrel, an improved bolt carrier, and a rifled steel liner inside an alloy barrel casing. ArmaLite had granted a licence to the Dutch state owned →Artillerie Inrichtingen, but retained the North American sales agency for itself; →Sidem International SA of Brussels was granted Europe and North Africa; →Cooper Macdonald, Inc., of Baltimore took charge of Australasia and the Far East; and →Interarms of Alexandria, Virginia, assumed responsibility for southern Africa and Central and South America.

¶ AR 10 rifles were optimistically touted worldwide in 1959, but the best they could manage was to finish second to the FAL in South African trials of 1960. When the Dutch also rejected the ArmaLite in favour of the FAL, Artillerie Inrichtingen lost interest and all work in Zaandam stopped after only a few thousand had been made.

¶ In 1957, to comply with a U.S. Army specification for a lightweight small calibre selective fire rifle, ArmaLite engineers Robert Fremont and James Sullivan altered the AR 10 to fire a modified .222 Remington round. About twenty of the first-pattern rifles were made, weighing just 6.12lb with a loaded 25 round magazine. Meanwhile, however, the U.S. Army had increased the performance-at-range requirements, which ArmaLite answered simply by substituting the .222 Remington Special (known as .223 Remington from 1959) for the original .222 round.

¶ Tests undertaken in 1958 showed that the small calibre AR 15 and the rival →WLAR both performed better than the 7.62mm T44E4. Improvements were made to the AR 15, but the small-calibre high-velocity concept was encountering opposition from the Ordnance; though trials recommenced in December 1958, it had been decided that the T44 (later the M14) was the only rifle suitable for military use. Fairchild then lost interest in the ArmaLite and licensed it to Colt.

¶ The first Colt-made rifles (‘AR 15 Model 01’, Colt Model 601) were completed in December 1959. ArmaLite, Inc., was formed in 1961 under the presidency of Charles Dorchester, but Fairchild had withdrawn and Eugene Stoner and his

design team had joined the →Cadillac Gage Company. U.S.A.F trials of the AR 15 were encouraging, and, in January 1962, the 5.56mm Rifle AR 15 (later XM16, then M16) was classified as U.S.A.F standard.

¶ In 1963, the Secretary of the Army recommended large scale purchases of AR 15 rifles for army airborne units and special forces; on 4th November 1963, Colt received the first substantial government contract. A plunger designed by Foster →Sturtevant was subsequently added to the rear right side of the receiver, above the pistol grip, to allow the breech to be closed manually, and the improved XM16E1 became the *M16A1* on 28th February 1967. On 30th June 1967, the U.S. government bought manufacturing rights from Colt. In April 1968, therefore, contracts were agreed with the →Hydra Matic Division of General Motors and →Harrington & Richardson.

¶ In 1981, the U.S. Marine Corps persuaded the managers of the Joint Services Small Arms Program to acquire fifty improved Colt made rifles. Known as 'M16A1E1', these demonstrated such superiority that the *M16A2* rifle was officially adopted in November 1983 with a new back sight, a heavy barrel and a three-shot burst mechanism.

¶ Other ArmaLite rifles included the unsuccessful AR 16, designed by Eugene Stoner in 1961 specifically for tank- and armoured-vehicle crewmen. In 1963, after Stoner had joined the Cadillac Gage Corporation, the AR 16 was scaled down for the 5.56mm cartridge by Arthur Miller to create the AR 18. Made largely of pressings, the gun was operated by a tappet-type piston system in a tube above the barrel and had a seven-lug rotating bolt. Though tests undertaken in 1964–5 by the U.S. Army were unsuccessful, a licence was granted to →Howa in Japan in 1969 and another to →Sterling Engineering of Dagenham, Essex, England, in the mid 1970s.

¶ The best source of information about the ArmaLite rifles is unquestionably *The Black Rifle*, by the late Edward C. Ezell (Collector Grade Publications, 1987). *Rifles of the World* by John Walter (Krause Publications, third edition, 2006) provides a useful checklist.

Armas El Corzo →El Corzo.

Armas Juaristi →Juaristi.

Armbruster Charles Armbruster was listed in London directories of 1864–5 as a 'gunmaker', trading from 8 Vernon Place, Bloomsbury.

Armee-Pistole (AP, 'Army Pistol'). An enlargement of the →Polizei-Pistole, made in the early 1930s by Carl →Walther Waffenfabrik of Zella-Mehlis, for German army trials. The testers were sceptical of the value of blowback pistols chambered for the 9mm Parabellum cartridge, and the original AP was abandoned in favour of the locked-breech design described below.

Armee-Pistole An enclosed-hammer fore-runner of the Walther P. 38, made only in small numbers. See also 'Heeres-Pistole'.

Armee- und Marinehaus, Inh. Deutscher Offizier Verein ('DOV'); Berlin Charlottenburg, Hardenbergstrasse, Germany (1941). This business succeeded the →Warenhaus für Armee und Marine c. 1911, trading until the end of

the Second World War. Rifles, shotguns, accessories and ammunition have been reported with appropriate marks, which included the letter code 'jme' allocated in September 1941.

Armee Universal Gewehr A 5.56×45 autoloading rifle made by →Steyr Mannlicher GmbH. See 'AUG'.

Armeria →Fábrica de Armas de Republica Dominicana.

Armero Especialistas of Eibar, Guipuzcoa, Spain, made the →Omega pistol.

Armes Automatiques Lewis →Lewis Gun.

Armes et Matériels Militaires SA, also known as 'Armat', made machine-guns, hand grenades, trench mortars, ammunition and shells. Trading was undertaken from Meir 24 in Antwerp, Belgium, in 1934–9.

Armigas, or 'Armigas Comega'. A name associated with Atillio →Zanoletti, a maker of gas powered guns in the 1960s.

Armi Jager →Jager Armi di Armando Piscetta.

Armistead American gunmaker Thomas E. Armistead, of Mazomanie, Wisconsin, patented a gun sight on 5th September 1893 (U.S. no. 504696).

Armit Robert H. Armit, a patentee domiciled in London, England, was granted protection for a machine gun on 17th February 1891 (U.S. no. 446807). A half-interest was assigned to T. McCulloch of London.

Armoury Found on →Mayer & Grammelspacher Diana airguns and airgun ammunition (probably made by →Lane Bros.) sold in the 1920s by Bertram →Webster & Co., The Southern Armoury, Newington Butts, London.

Arms & Ammunition Manufacturing Co. Ltd Formed in London in 1891 and trading as a limited-liability company from 1895, this business was initially registered at 143 Queen Victoria Street, E.C. Representation was also apparently maintained in Birmingham. It was sold to John R. →Watson in 1904, who may have been one of the original partners with William →Argles. The subsequent fate of the company is unknown, but it is presumed to have succumbed prior to 1914. Airguns and sporting rifles have been reported with its marks.

Arms Corporation of South Africa Pty Ltd, or 'Arm Scor'. The principal state-owned arms manufacturer in the Republic of South Africa subsequently became the privately-owned 'Denel Pty', whose →Vektor subsidiary made small-arms. Arm Scor has made Saive- and Galil-type assault rifles alongside Browning machine-guns, artillery and armoured vehicles.

Arms Corporation of the Philippines, Inc. Successor to →Squires, Bingham, retaining the 'Squibman' brandname.

Armsby & Harrington of Worcester, Massachusetts, U.S.A., made rimfire cartridge rifles in accordance with Cyrus →Holden's patents of 1st April 1862 (no. 34859) and 29th March 1864 (no. 42139).

Arm Scor →Arms Corporation of South Africa.

Arm Scor Corp →Arms Corporation of the Philippines.

Armstrong The marks of this Irish gunmaker, trading in Clonmel, have been reported on self-cocking pepperboxes dating from the middle of the

nineteenth century.

- Armstrong** James W. Armstrong of Augusta, Kentucky, U.S.A., was the joint patentee, with John Taylor of a breech-loading firearm: U.S. Patent no. 37025 of 25th November 1862. →Armstrong & Taylor.
- Armstrong** Gunmaker John Armstrong of Terre Haute, Indiana, U.S.A., trading in 1882–5, made single-shot sporting rifles.
- Armstrong** William Shaw Armstrong, an 'Agent for the sale of Wire Ropes, Boilers and Machinery', living at 75 Leopold Street in Leeds, Yorkshire, England, patented an airgun in 1906 (British Patent 262/06).
- Armstrong & Company**, listed at 5 Newman Street, Oxford Street, London W., in 1897, is believed to have made sporting guns.
- Armstrong & Company** Trading in Newcastle upon Tyne, this English gunsmithing and sporting-goods business offered shotgun cartridges marked 'Sporting Gun Depot' or 'A.C.C.'
- Armstrong & Taylor** of Augusta, Kentucky, U.S.A., was a partnership of James W. Armstrong (above) and John Taylor, co-patentees of a firearm protected by U.S. Patent 37025 of November 1862. One gun was submitted to the U.S. Army trials of 1865. However, it was not among those that were selected for photography and may have been rejected in the examination stages. The barrel rotated on a longitudinal pin to expose the chamber; a cam track cut in the barrel pin operated the extractor automatically as the breech was opened. Small numbers of sporting guns were made for Armstrong & Taylor in the 1860s by the →Norwich Arms Company.
- Armstrongs (Gunmakers) Ltd** sold guns and sporting goods from premises on Carlton Hill, Nottingham, England. They included shotgun cartridges offered under a →Sherwood brand name.
- Army & Navy Co-Operative Society Ltd**; London, England. Established in 1871, this business retailed a vast range of military equipment, including uniforms, guns, edged weapons and ammunition. It was subsequently renamed 'Army & Navy Stores' (below). Rifle and shotgun cartridges generally included 'A. & N.C.S.L.' in the headstamps or packaging, but were made elsewhere by companies such as →Eley Bros. or →Kynoch.
- Army & Navy Stores Ltd**; London. A post 1913 (?) successor to the Army & Navy Co-Operative Society Ltd, this traded until recent times. Latterly part of the House of Fraser Group, the business specialised prior to 1945 in uniforms, firearms, edged weapons, ammunition, and ancillary goods required by military personnel. These included shotgun cartridges marked 'Coronation', 'Every Day', 'Eureka', 'Reliable' and 'Victoria'. The firearms and accessories were all made elsewhere.
- Army Special Model** This replaced the Colt →New Model Army revolver in 1908. Renamed 'Official Police Model' in 1928, it was offered in several chamberings from .32–20 WCF to .41 Colt. The cylinder rotated clockwise and the →Positive Lock safety system was fitted.
- Arnaiz** →Lopez de Arnaiz.

- Arnaldi** Michele Arnaldi, then holding the rank of major in the Italian 31st infantry regiment, designed a breech-loading repeating action adaptable to the Swiss →Vetterli rifle. About three hundred M1870 Vetterli arms were converted in 1884, then issued for trials with the 7th Bersaglieri and 5th Alpini. The experiments were not successful enough to inspire additional development.
- Arnold** J. Arnold, Jr., an inspector of U.S. martial arms active c. 1868–71, used a ‘JA’ mark. See also “U.S. arms inspectors’ marks”.
- Arnold** Remick K. Arnold, active from 1862 to 1877 or later, applied an ‘RKA’ mark to U.S. martial arms. See also “U.S. arms inspectors’ marks”.
- Arnold** William H. Arnold, resident in Washington, D.C., U.S.A., in 1857–60, received U.S. Patent 23538 of 12th April 1859 to protect ‘projectiles for firearms’. He was also granted patent no. 26076 on 15th November 1859 for a ‘breech loading firearm’.
- AR** above **O**, *customarily beneath a crown*. Found on Spanish military weapons, this mark combines the ‘AR’ of the king—Amadeo I Rex—with the ‘O’ of the Fábrica de Armas de →Oviedo.
- Arostegui** →Arrostegui.
- Aronson** Joseph N. Aronson, patentee of a breech-loading firearm on 13th November 1866 (U.S. no. 59540), was then domiciled in New York City.
- Arquebusier** This name was given to a 6.35mm pocket pistol made by Ernest & François →Mayor. It was patented in 1919 by Ernst →Rochat of Noyon, Switzerland.
- Arrizabalaga** Gunmaker Calixto Arrizabalaga of Eibar, Guipuzcoa, Spain, was responsible for a range of sporting guns and semi-automatic pistols.
- Arrizabalaga** Hijos de José Arrizabalaga of Eibar, Guipuzcoa, Spain, traded from 1915 until 1937, when the business became a casualty of the Spanish Civil War. Makers of →Esmit revolvers and the →Terrible automatic pistol.
- Arrostegui** Spanish gun-distributor Eulogio Arrostegui of Eibar, Guipuzcoa, marked a variety of firearms made elsewhere in Eibar, their origins often camouflaged with the names ‘E.A.’, ‘Azul’ or ‘Super Azul’ (the latter being reserved for the Beistegui Hermanos →Royal MM31).
- Arrow** *impaled with an arrow*. Found on a →Langenhan ‘Millita’-type gun: significance unknown, but believed to have been applied by a British distributor.
- Arrow** A 4.5mm break-barrel spring-air rifle made by the State Industry Factory in Shanghai, People’s Republic of China, c. 1972–88, sold in Britain by the →Abbey Supply Company, David →Nickerson (Tathwell) Ltd and →Sussex Armoury.
- Arrow** Found on shotgun cartridges made in the Brimsdown (England) factory of the →Remington Arms–Union Metallic Cartridge Company.
- Arrow Machinery Company**; Philadelphia, Pennsylvania, U.S.A. Trading from 234 North 3rd Street, this company was formed in 1922 by William →Heilprin and others to succeed Heilprin’s Mfg. Co. It was liquidated in 1930.

Arrowsmith George A. Arrowsmith, owner of a gunsmithing and metalworking business trading in Gold Street, New York City, was the assignee of patents protecting a 'loaded ball' and a 'method of attaching a ball to a wooden cartridge'. These together comprised the cartridge of the →Volition Repeater, developed by Walter →Hunt, which was patented in England in December 1847 and in the U.S.A. in August 1849. Arrowsmith overreached himself financially, allowing the financier Courtlandt →Palmer to acquire rights to Hunt's patents for \$100,000. See also 'Lewis Jennings'.

Arrowsmith John Basil Arrowsmith was co-patentee with →Accles & Shelvoke of the →Acvoke air pistol: British Patent 619,108, sought in November 1946.

Arrowsmith Manufacturing Company A maker of ammunition, trading in Niagara Falls in the early 1920s.

Arroyo y Echernagucia (sic) This Spanish gunsmithing and sporting goods distribution business operated in Havana, Cuba, in the mid 1870s.

Artemis This was a twenty-shot 8mm gas powered rifle made by →Marocchi e Figli in the 1960s. The barrel was smooth-bored. The 'Artemis S' was a single shot derivative in 4.5mm or 5.5mm, but was rarely seen outside Italy and it is assumed that production was small. All work seems to have ceased by 1970.

Artes José Artes de Arcos SA of Madrid and Barcelona, Spain, made the →Setra AS2000 pneumatic rifles alongside sporting guns. Little else is currently known about its history.

Artex This state-run Hungarian export agency, situated at Via Hador 31, Budapest, in 1966, sold Hungarian-made sporting guns in the West. These include the Telly series of airguns, marketed by →Relum Ltd, and the FÉG pistols.

Artexim of Rambla Cataluna, Edificio Catalonia, Barcelona, Spain, was an export agency specialising in sporting guns and airguns.

Artillerie Inrichtingen The state-owned Dutch ordnance factory, →Hembrug. See 'ArmaLite'.

Artillery Model A term applied in the modern era to the long-barrelled →Parabellum or 'Luger' pistol, introduced in 1913 and correctly designated *lang Pistole* 1908.

Artillery Model Applied, without official status, to Colt-made M1873 Single Action Army Revolvers converted by →Springfield Armory by shortening the barrel from 7.5 inches to 5.5 inches. The alterations date from the 1890s, when the advent of the .38 M1892 allowed original full-length .45-calibre revolvers to be withdrawn from the U.S. Cavalry for reissue to artillerymen; parts-numbers rarely match.

Artistic Arms Company This engineering company made a few Sharps-Borchardt type rifles in Hoagland, Indiana, U.S.A., in the 1970s. Trading failed to prosper, and Artistic Arms foundered after a mere handful of guns had been completed.

Art Metal Construction Co. Ltd of Buckingham Palace Road, London SW1, made magazines for the British 9mm Sten Gun during the Second World War. The

- code 'S 311' may have been used instead of the company name. See also "British military manufacturers' marks".
- AS** *superimposition monogram*. Sometimes encircled, with neither letter prominent: correctly 'SA'; used by →Suinaga y Arampferri.
- Asahi** An underlever cocking spring-air rifle made in Japan by the →Kawaguchiya company c. 1948–55. Rarely seen outside the Far East, it was a copy of the pre war →Jeffries Pattern BSA. The manufacturer produced a small number of modified guns with a modernised half-stock, but had ceased work by 1960.
- asb** Found on cartridge clips, chargers, small-arms ammunition and components made in the Berlin-Borsigwalde factory of →Deutsche Waffen und Munitionsfabriken AG.
- ASG** →'Albert S. Granger'.
- Asgard Rifle** →Howth Rifle.
- Ashcroft** E.H. Ashcroft of Boston, Massachusetts, U.S.A., received a patent to protect a 'breech loading firearm' on 26th May 1863 (no. 38645). He was also the assignee of a patent for an adjustable front sight granted on 29th March 1864 to John B. →Learock (no. 42091). See also 'Richard S. →Lawrence' and 'James M. →Seymour'.
- Ashes** ['The...'] or 'The Ashes Works'. Marks associated with gun-locks made in Wolverhampton, England, by Joseph →Brazier & Sons.
- Ashley** Gunsmith George Ashley; Washingtonville, New York State, was trading in the U.S.A. in the early 1880s.
- Ashton** Dr Henry T. Ashton was the Superintendent of the →Royal Small Arms Factory, Enfield, from 1905 until 1909. He was also co-patentee with J.J. →Speed of the back sight used on the SMLE rifle, protected by British Patent 4776/06 of 27th February 1906.
- Ashton** Thomas Ashton was a gunsmith trading in London, England, in the middle of the nineteenth century.
- Ashton** Thomas R.R. Ashton of Deniliquin, New South Wales, 'in the Commonwealth of Australia', obtained several patents in 1895–1908. They included U.S. Patent 537858 of 23rd April 1895, sought jointly with E.J. Kelly to protect a 'magazine firearm', and U.S. Patent no. 537959 of 23rd April 1895 (also with Kelly) to protect a magazine. U.S. Patent 589684 of 7th September 1897 allowed claims for a 'magazine bolt gun', whilst U.S. Patents 597935 of 25th January 1898, 834354 of 30th October 1906 and 931983 of 24th August 1908 all protected 'magazine firearms'. The last two were sought from London, England.
- Ashton** J. Ashton & Company, an English gunmaking business, was listed at 1 Swallow's Gardens, Goodman's Fields, London E., in 1856–7. However, the directory entries for 1850–6 and 1858 all list the proprietor as 'Mrs Ashton'.
- Ashton** William Ashton of Middletown, Connecticut, U.S.A., was the patentee of a 'bullet mould with movable core, whereby hollow or Minié bullets are cast'. This was granted on 1st May 1855 (no. 12774).
- ASI** *superimposition monogram, without dominant letters*. Correctly 'SIA', used by

→Security Industries of America, Inc.

ASI Ltd of Snape, Saxmundham, Suffolk, England, was best known as an importer of shotguns, sporting rifles, airguns and accessories, including the products of →AYA, →El Gamo and →Feinwerkbau. The El Gamo airguns were marketed in Britain from 1969 onward under a range of distinctive names, including 'Commando', 'Paratrooper', 'Rangemaster' and 'Sniper' (qq.v).

Asiatic A Browning-inspired pocket pistol, made by an unidentified Spanish gunmaker, probably in the Eibar district; 6.35mm Auto or 7.65mm Auto.

Asiatic pistol This term was coined to categorise the all-but-unclassifiable pistols made in China, Cambodia and other Far East states in the first half of the twentieth century. It encompasses guns based, often loosely, on the Mauser C/96; others derived from the blowback FN-Brownings; many that bear no relationship to any known design, with superfluous tangent-leaf sights or ventilated slides; and a few, customarily produced after the end of the Second World War, following the lines of the Browning GP-35 or 'High Power'. Excepting pistols produced in Cambodia for the Cao-Dai rebels, which are surprisingly true to their .45 M911A1 Colt-Browning and GP-35 prototypes, quality is universally poor. Some guns bear spurious marks, particularly the well-known Mauser banner or FN monogram, though the engravers often made mistakes; working from right to left, for example, they regularly reversed letters (in particular, 'S') or misspelled words—e.g., 'PATDNT' instead of 'Patent', 'EEU' for 'Feu'. Very few attempts have been made to catalogue these guns, but a good sequence of drawings appears in A.B. Zhuk's *The Illustrated Encyclopedia of Handguns* (Greenhill Books, London, 1995).

Askins Charles Askins, U.S.A. →Hoffman Arms Co.

Asociación Armera An export agency with offices in Eibar, Guipuzcoa, Spain. Its marks may be encountered on the guns themselves.

A Square Co., Inc., of Bedford, Kentucky, U.S.A., has been making sporting rifles on the basis of a modified Mauser bolt action from 1983 to date. They have been marketed under the names →Caesar and →Hannibal.

ASS A mark, perhaps still to be encountered as a monogram, used by August Schüler of Suhl, Germany.

ASS An abbreviated form of the designation of the Soviet/Russian silenced assault rifle or 'Avtomat' designed by Serdyukov and Kraskov.

Assmuss Inventor Albert Assmus of Chicago, Illinois, U.S.A., was granted protection for a magazine firearm on 16th December 1873 (U.S. Patent no. 145748). A half share was assigned to C. Assmus of Chicago.

Assonet The Assonet Gun Factory, trading in Assonet, Massachusetts, U.S.A., was a short-lived gunmaking business that apparently have made break-open single barrel shotguns in 1893/94.

Aston This brand name is associated with a diabolo pellet with a distinctive low-set waist, introduced by →Cox & Son of Aston juxta Birmingham, England, some time prior to 1909 and made until the beginning of the First World War.

Aston Gunmaker Henry Aston of Middletown, Connecticut, traded in the U.S.A.

in 1843–55.

Aston James Aston of Hythe, Kent, England, was the Armourer to the British Army's School of Musketry from 1853 until 1870. He is regarded as having made important contributions to the design of the Pattern 1853 ('Enfield') cap-lock rifle musket, and sold .45 calibre cap-lock target rifles on his own account. These were made by →Hollis & Sheath or Isaac →Hollis & Sons of Birmingham. Aston also developed a falling-block breechloading action, patented in the U.S.A. on 13th May 1873 (no. 138837) and 12th March 1878 (no. 201216).

Aston R. & W. Aston ['& Company'], a well-established English gunmaking business based in Birmingham, was also listed at 38 Lime Street, London E.C., as 'Agents for G.S. Melland'. Richard & William Aston were subsequently listed at 26 Crosby Hill Chambers, London E.C., in 1869.

Astora A brand name applied to shotguns, sporting guns and air rifles made by →Simson & Co. of Suhl—subsequently part of →Berlin–Suhler Werke. The airguns included a military-style bolt action repeating airgun with a cam-slot cocking stroke.

Astra A brand name found on the products of →Esperanza y Unceta of Guernica. See below.

Astra Match A six-shot .38-calibre target revolver made in Spain by Astra–Unceta y Cia SA, introduced in 1976. Derived from the →Cadix, it has a single-action trigger, adjustable sights and a anatomical wooden hand-grips. The barrel is usually 15cm long.

Astra pistols Made in Spain by →Esperanza y Unceta, the first of these was simply a post-1914 →Victoria, offered in 6.35mm and 7.65mm. This 'Browning copy' acquired a grip safety in 1916, remained in production after the factory moved to Guernica in 1918, and was superseded in 1920 by the essentially similar *Astra 200*. When production ceased in 1967, nearly 160,000 of these 6.35mm-calibre blowbacks had been made.

¶ Much better known is the 'tube-slide' 9mm *Largo Astra 400* (or 'Modelo 1921'), developed from the →Campo-Giro, which provided the basis for a range of handguns made until recent times. The *Astra 300* was a small 400, chambered for the 7.65mm Auto or 9mm Short rounds; about 171,300 were made in 1923–47, including more than 85,000 delivered to Germany during the Second World War. Many of these were issued to Luftwaffe personnel and will bear appropriate inspectors' marks. The *Astra 600* was a special short-barrelled Model 400 chambering the 9mm Parabellum cartridge; ordered by the Germans in 1943, only a quarter of an output of about forty thousand guns could be delivered before the liberation of France in 1944 broke the direct route from Spain to Germany.

¶ The *Astra 900* and its derivatives were simplified adaptations of the Mauser C/96 (q.v.), with a detachable side-plate set into the frame. The *Astra 901* was a selective-fire variant of the 900, retaining the ten-round integral magazine; the *Astra 902* of 1928 was similar, but had a twenty-round magazine; the *Astra*

903—introduced contemporaneously with the Mauser →Schnellfeuerpistole—offered detachable magazines holding ten- or twenty cartridges. The *Modelo E* was an Astra 903 improved in minor respects, and the *Modelo F*, known during development as the ‘Astra 904’, embodied a flywheel mechanism in the grip to reduce the cyclic rate from 950 rds/min to 350 rds/min. Said to have been developed at the request of the Guardia Civil, the *Modelo F* was made only in small quantities.

¶ About 34,350 900-series guns were made before work ceased in 1937, during the Spanish Civil War; all but a few thousand had gone to China. A few thousand ‘900’ and ‘903’ examples were made for the Germans during the Second World War, and a last batch of *Model 900* pistols was completed in 1955.

¶ The .22LR or 6.35mm Auto *Astra 7000*, introduced in 1973, was an improved version of the *Cub* with neater external contours and a separate back sight, dovetailed into the frame, replacing a simple longitudinal groove. The 7.65mm or 9mm Short *Astra 50* (‘A-50’) was a simplified *Constable*, with the safety lever mounted on the frame instead of the slide and the slide-release catch on the left side of the frame omitted; the .22 *Astra TS-22* was similar, but had a long barrel within an extended slide, adjustable sights and an anatomical grip. The 9mm Short *Astra 60* (‘A-60’), introduced in 1987, was a derivative of the *Constable* with a thirteen-round staggered column magazine and an ambidexterous safety catch on the slide.

¶ The *Astra 80* (‘A-80’), the first of the modernised military-pattern semi-automatic pistols, incorporated a simplified Colt-Browning barrel depressor relying on a cam-finger instead of a pivoting link. The A-80 had a double-action trigger system embodying an external hammer and a de-cocking lever that could be mounted on the left or right side of the frame. Chambered for the 7.65mm Parabellum, 9mm Parabellum, .38 Super Auto or .45 ACP rounds, the A-80 had a staggered-column magazine with a capacity of fifteen rounds (nine only in .45). Introduced in 1985, the *Astra 90* was a variant of the A-80 with a Walther-type rotary safety in the slide and the magazine-release catch moved from the butt-heel to a new position in the frame behind the trigger.

¶ See also ‘Camper’, ‘Condor’, ‘Constable’, ‘Cub’ and ‘Falcon’.

Astra revolvers The earliest of these was the S&W-influenced →*Cadix*, introduced in 1958. The first new revolver to be introduced after the introduction of the U.S. Gun Control Act of 1968 was the *Astra 357* (1972), with its frame strengthened to withstand the .357 Magnum cartridge and barrel options ranging from 75mm to 215mm. The most important change, however, was the addition of a →transfer-bar safety system. Contemporaneously, the basic *Cadix* was altered to become the ‘New *Cadix*.’

¶ Other guns of this type include the *Astra 250* (1975–82), a snub-nose personal defence revolver offered with a 5cm barrel in .22LR, .22 Magnum rimfire, .32 S&W Long and .38 Special; the *Astra 357 Police*, dating from 1980, a short-barrelled personal-defence gun with rudimentary sights; the *Astra 680*

of 1981, which was basically an improved 250; and the heavy-frame *Astra* 960 (introduced in 1973), a compact double-action six-shot .38 offered with barrels of 75mm, 10cm or 15cm. Stainless-steel framed 'Inox' variants of the models 250, 357 and 680 have also been manufactured in small numbers.

¶ Three large-calibre revolvers—*Astra* 41, *Astra* 44 and *Astra* 45—have been made on the same basic transfer-bar action, chambered for the .41 Magnum, .44 Magnum and .45 Long Colt cartridges respectively. Their barrels measure 15cm or 21.5cm.

Astra–Unceta [y Cia] SA; Guernica, Spain. Once the Second World War had ended, →Unceta y Cia abandoned the guns based on the Mauser C/96 and restricted work on those derived from the →Campo-Giro. Attempts to diversify led to the production of pneumatic drills and textile machinery, and the first shotguns were made in 1954. The Astra name was officially incorporated in the company name in 1955, forming 'Astra–Unceta y Cia SA'. The first new gun to be introduced was the →Cub pistol, followed by the →Camper and →Falcon pistols (1956) and the →Cadix revolver (1958). Work continued on a variety of improved designs, including the Walther-like →Constable, though most recent designations have tended to be numerical. See also 'Astra pistols', above.

A.T. Found on British rifles, usually Lee Enfields, converted to chamber .23 centrefire →Aiming Tube ammunition.

A&T →Adams & Tait.

AT *superimposition monogram, with the letters equally dominant*. Used by Alois →Tomiška of Pilsen, Czechoslovakia, on 6.35mm and 7.65mm →Little Tom pistols.

Ateliers de Fabrication des Armes Portatives, 'A.F.A.P.'; Calais, France. A name given to the small-arms repair workshops set up in 1914 by the Belgian army fighting alongside British and French units on the Western Front. The facilities were closed at the end of the First World War.

Atherton Gunmaker William Atherton, of Northville in New York State, U.S.A., handled sporting guns and ammunition in the 1870s.

Atkin Henry Atkin. Among the best known of the gunmakers working in London in the late nineteenth century, Henry Atkin (1833–1906) was the son of Charles Atkin, who was employed by →Purdey when Henry was apprenticed to him in 1848. Henry Atkin then went to work for William →Moore & Grey in the early 1860s, but by 1875 had begun to make guns on his own account. Directories list him at 43 Upper Manor Street, Chelsea, S.W., in 1862–70; at 18 Oxenden Street, Haymarket, in 1877–90 (initially trading as "Henry Atkin from Purdey's", then 'Henry Atkin Ltd'); and at 2 Jermyn Street from 1890 until moving to 41 Jermyn Street in 1905. Finally, in 1917, C.F. and F.W. Hinton Atkin, who had succeeded their uncle, purchased the business of H.J. →Hussey and moved to 88 Jermyn Street, London SW1.

¶ The 'Henry Atkin' company had by this time become renowned for the quality of its sporting guns, which included many built on the 1909-pattern

spring opening side-lock ejector action, refined from a patent granted in 1880 to →Beesley & Purdey.

¶ The business moved in 1956 to 27 St James Street and was eventually amalgamated in 1960 to form Atkin, Grant & Lang (see below).

¶ In addition to sporting guns and rifles, Henry Atkin handled shotgun ammunition marked with the brandnames 'Covert', 'Ever Ready', 'Gem' and 'Raleigh' (qq.v.). Most of these were made by →Eley Bros. or →Eley Kynoch Ltd. An assortment of educational 'skeletonised' actions were made for the British War Office in 1938–42, including longarms and handguns that were often marked 'SKN'. Granted the code 'S 144' during the Second World War, Atkin also renovated more than nine thousand Mk IV and Mk V Lewis Guns in 1940–1. See also "British military manufacturers' marks".

Atkin The marks of gunsmith Ralph Atkin of Painesville, Ohio, U.S.A., have been reported on single-barrel shotguns dating from the 1880s. These may have been made elsewhere.

Atkin, Grant & Lang of St James's, London, England, was a 1960-vintage amalgamation of the businesses of Henry Atkin (see above), Stephen →Grant & Sons, and Joseph →Lang & Son. Sporting guns of all types, including drop barrel and bolt action patterns have been made in quantity. The 'Atkin' range currently includes the Henry Atkin 1909-type spring-opening side-lock ejector, and conventional side-lock guns in gauges from 12- to 28-bore. The 'Joseph Lang' double rifles have back-action side-locks or, from 2012, 'Colonial Quality' boxlocks. 'Stephen Grant' guns are now customarily over-and-unders, though limited numbers of hammer guns, based on an elegant nineteenth-century prototype, were made in 2011

Atkins Henry E. Atkins, a member of the English gunmaking fraternity, is recorded as trading in 1874–87 from 877 Old Kent Road, London.

Atkinson James W. Atkinson of Milpitas, California, U.S.A., patented a 'spring gun' on 28th June 1892 (no. 477982).

Atkinson Gunmaker Joel Atkinson of Parkesburg, Kentucky, U.S.A., active in 1877–83, built double barrel cap-lock sporting guns—with one rifled barrel and one smooth-bore—and may also have made cartridge-firing derivatives. He was the father of Wyatt Atkinson (below).

Atkinson Marks applied by the English gunsmithing business of T. Atkinson & Son, trading from 19a Stricklandgate in the Cumbrian town of Kendal, have been reported on shotgun cartridges with brandnames such as 'Kendal', 'Kendal Castle' or 'Kent'. These generally prove to have been made by →Eley Bros. or →Eley Kynoch Ltd.

Atkinson William B. Atkinson of Bowling Green, Kentucky, U.S.A., received a patent protecting a magazine firearm on 11th April 1905 (U.S. no. 787257), a half interest being assigned to E.R. Bagley.

Atkinson Wyatt Atkinson of Parkesburg, Kentucky, U.S.A., born in 1880, was the son of Joel (above). His marks have been reported on sporting guns.

Atkinson & Company, retailers of guns and sporting goods traded from 31 Oxford

- Street, Swansea, Glamorgan, Wales. Marks have been reported on sporting guns and shotgun cartridges with the brand name →Grand Finale.
- Atlas** A small 6.35mm Browning type automatic pistol made by →Acha Hermanos y Compañía of Ermua, Spain; six rounds, striker or hammer fired.
- Atlas** A brand name associated with a break-open repeating BB Gun designed by George P. →Gunn and made by the Atlas Gun Company (below) in 1891–9. Three rods running parallel to the barrel provided a gravity-feed raceway for the ball ammunition.
- Atlas** A lever-action repeating BB Gun designed by George W. →Weaver in 1890 and made by the Atlas Gun Company, in several variants, from 1900 until production ceased in 1906.
- Atlas** Associated with a pump-up pneumatic rifle made by the Atlas Air Rifle Mfg Co. in the 1950s.
- Atlas Air Rifle Manufacturing Company** Makers of the ‘Atlas’ pneumatic rifle, this business operated in Ilion, New York State, U.S.A. Production of the rifles seems to have begun in 1953, but ended in 1956; it was never large enough to assure the design a lasting place in airgun history, and the parent company had been liquidated by 1958.
- Atlas Gun Company** This U.S. airgun making company, like the later soundalike ‘Atlas Air Gun Mfg. Co.’, traded in the town of Ilion in New York State. It was founded in 1889 by Gilbert W. →Warren and subsequently exploited some of the patents associated with George →Gunn and George →Weaver. The ‘Atlas’, ‘Dandy’ and ‘Victor’ BB guns (qq.v), together with a few unsophisticated cartridge rifles, were produced before Warren sold out to →Daisy in 1906.
- Atlas Rifle Company;** Ilion, New York State, U.S.A. A maker of .22-calibre rifles in the 1890s. Possibly the same as the ‘Atlas Gun Company’.
- Atom** [‘The...’]. Found on shotgun cartridges sold prior to the First World War by →Freeney’s of Galway, Ireland.
- A True Fit** A mark found on shotgun ammunition sold in Britain by →Radcliffe of Colchester. It is customarily accompanied by a drawing of a ‘bowled over’ rabbit.
- Attila** A brand name associated with a small double-action semi-automatic pistol made in Hungary in the 1960s and 1970s by →FÉG. Chambered for the 7.65mm Auto or 9mm Short cartridges, it was based on the Walther →Polizei-Pistole, and was essentially a commercial variant of the Hungarian →Walam or 48.M service pistol.
- Atwater** John B. Atwater of Ripon, Wisconsin, U.S.A., received U.S. Patent 27342 on 6th March 1860 to protect a rifled firearm. On 30th September 1862, he was granted another patent on a ‘mode of rifling guns’ (no. 36592).
- Atwood** Frederick J. Atwood, a lieutenant-colonel in the U.S. Army, inspected .45 M11A1 Colt pistols made in 1943–5 by the →Ithaca Gun Co., →Remington Rand and →Union Switch & Signal. They were marked ‘FJA’. See also “U.S. arms inspectors’ marks”.
- Aubrey** A ‘Suicide Special’ revolver made in the 1880s by the →Meriden Arms

Company of Meriden, Connecticut.

Aubrey Albert J. Aubrey of Meriden, Connecticut, and Hopkinton, Massachusetts, U.S.A., obtained patents for several gun-related items. They included a gun sight protected by U.S. Patent 835091 of 6th November 1906, which was assigned to →Sears, Roebuck & Company of Chicago. U.S. Patent 839535 (25th December 1906) also protected a gun sight, whereas 859477 of 9th July 1907, 908522 of 5th January 1908, 908553 of 5th January 1908 and 911362 of 2nd February 1908 all allowed claims for novelty in 'firearms'. Aubrey was the manager of Sears' manufacturing facilities, and his name was used as a Sears brand name. See also 'Ted →Williams'.

auc This mark was associated with components made in the Köln Ehrenfeld (Germany) factory of →Mauser-Werke KG in 1941–5.

Audax A 6.35mm six-shot Browning-type pocket pistol made in France prior to 1940 by →Manufacture d'Armes des Pyrénées. The guns are sometimes also marked 'UNIS', which has thus far defied interpretation.

Audax A 7.65mm French eight-shot personal-defence pistol, copied from the 1910-pattern FN-Browning by →Manufacture d'Armes des Pyrénées.

Audley Safety Holster This was patented in the U.S.A. by Francis H. Audley (1849–1916), a one-time New York City harness maker who had turned in 1905 to police-supply from his shop at 8 Center Market Place. U.S. Patent 1113530 was granted on 13th October 1914, though an application had been made on 20th April 1912. The holster body contained an internal metal safety-trigger lock, which had to be released before the gun could be withdrawn. Made in small numbers in 1914–16, it was sold by →Von Lengerke & Detmold and →Abercrombie, Fitch & Co in New York City; by E.K. →Tryon in Philadelphia; and by →Von Lengerke & Antoine in Chicago.

AUG, 'Armee-Universal-Gewehr'. Applied to a gas-operated 'bullpup' 5.56mm assault rifle developed by →Steyr-Mannlicher GmbH and adopted by the Austrian army in 1977. The AUG is distinguished by its futuristic stock, which envelops a 1.5× fixed-power optical sight in the carrying handle; the butt and trigger unit are moulded in a single piece. Modular construction allows four different barrels, three differing trigger mechanisms, and two receiver patterns to create a selection of weapons ranging from a short-barrel carbine to a light-support weapon with a bipod and an electro-optical sight; a conversion kit even allows a 5.56mm rifle to be transformed into a 9mm submachine-gun. Some guns are restricted to single-shots; others can fire multi-shot bursts in addition to conventional automatic fire.

Augezd Adolf Freiherr von Odkolek von Augezd: →'Adolf von Odkolek'.

Aughenbaugh Robert Martin Aughenbaugh, a gunsmith of Glenfield, Pennsylvania, U.S.A., was the co-patentee with G.E. Ruffley of magazine firearms protected by U.S. Patents no. 381821 of 24th April 1888 and 399464 of 12th March 1889.

Augusta Machine Works, based in Augusta, Georgia, Confederate States of America, during the American Civil War, made about a hundred copies of the

- .36 six shot 'Navy Model Colt' with octagonal barrels and six (rare) or twelve cylinder-stop notches.
- Aurora** A typical 6.35mm Browning-type Spanish pocket pistol, made by an unidentified gunmaker, probably in the district centred on Eibar (Spain); six rounds, hammer fired.
- Aury** Gunmaker Louis Aury of Saint-Étienne, apparently the son of Pierre-Louis Aury (below), began trading in 1820. He exhibited successfully at the Great Exhibition held in London in 1851, winning a prize medal, and again in 1862; his business was still listed at rue des Chambons 9 in 1879.
- Aury** Pierre-Louis Aury (c. 1775–1847), trained as an armourer, was appointed *Réviseur des garnitures* in the →Mutzig arms factory in 1808, rising to become *contrôleur* in 1814. He moved to the →Châtelleraut arms factory in 1831 and then to the →Saint-Étienne establishment in 1832, serving each as *premier contrôleur*. He retired in 1838.
- Austin** Edward B. Austin, an inspector of U.S. .45 M1911 Colt automatic pistols accepted in 1917, used an 'EBA' mark. See also "U.S. arms inspectors' marks".
- Austin** Thomas K. Austin of New York City designed an improvement in the cylinder-rotating mechanism of the →Pettengill revolver made by →Rogers & Spencer, protected by U.S. Patent no. 21730 in October 1858. See also 'E.A. Raymond' and 'Charles Robetaille'.
- Austin Cartridge Company** Trading in Cleveland, Ohio, U.S.A., this subsidiary of the Austin Powder Company was formed in 1890 to make shotshells on machinery purchased from →Chamberlain. The business was subsequently sold to the →Western Cartridge Company in 1908. Its products were generally distinguished by the headstamp 'A.C.C.' or 'A.C.Co.'.
- Austin Motor Co. Ltd** ["The..."] of Longbridge Works, Birmingham, England, made magazines for the British 9mm Sten Gun (box pattern) and the .303 Bren Gun (box and drum) during the Second World War. Some will be marked 'M 13'; see also "British military manufacturers' marks".
- Austro-Hungarian firearms** The principal manufacturing centre was the small town of Ferlach, where fifty thousand Lorenz rifle-muskets had been made for the Austrian army prior to 1866. However, Ferlach had never recovered from economic depression at the end of the Napoleonic wars and had survived only by making inexpensive 'Trade Guns' for export to Africa and the Far East. Work thereafter transferred to →Steyr and Vienna, the imperial capital, where some of the best-known makers were to be found—understandably specialising in high-class sporting guns. Greater inventiveness was to be found in the northern province of Bohemia, where a group of gunsmiths worked in Prague and another in Weipert. The rise of mass production initially favoured Waffenfabrik Steyr, founded by Leopold →Wernndl, which rose to become first →Österreichische Waffenfabriks-Gesellschaft and then a major component of →Steyr-Daimler-Puch. Other major gunmaking businesses included the →Gasser establishment in Ottakring, and →Wiener Waffenfabrik.

¶ Comparatively little information concerning the Austro-Hungarian firearms is available in English, though Konrad Edeler von Kromar's *Repetier- und 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 the Mannlicher section is basically a translation of Kromar's work. See also 'Fémaru Fegyver és Gépgyár', 'Ferlach', 'Fruwirth', 'Krnka', 'Kropatschek', 'Mannlicher', 'Škoda', 'Wänzl', 'Weipert' and 'Werndl'.

Austro-Hungarian manufacturers' markings Among the most distinctive identifiers on the Austro-Hungarian weapons were the marks applied by Fémaru Fegyver és Gépgyár of Budapest ('FGGY') and Österreichische Waffenfabriks-Gesellschaft of Steyr—often 'ÖEWG' or 'ÆWG', sometimes in one line, at other times in two. The guns generally lack the proliferation of inspectors' marks that characterise their German equivalents, though they do display large displayed-eagle proof marks and acceptance marks such as 'W-n' and 'BP' accompanied by a two-digit date (e.g., 'W-n 18' showed that a gun had been accepted in Vienna in 1918).

Austro-Hungarian military unit markings Individual marks used by the 'imperial and royal army' (*k.u.k. Armée*) relied on letters, not unlike the German patterns (*q.v.*). However, they were far less complicated and are usually much easier to interpret. Line infantry regiments were distinguished by 'R.', with the so-called *Grenz-Regimenter* ('Border regiments') using 'G.R.'; the *Kaiserjäger-Regiment* mark was 'J.R.' and the *Jäger-Bataillone* or riflemen used 'J.B.' Prefatory numbers distinguished the units from each other. The marks applied by the cavalry regiments were straightforward: 'D.R.' for the dragoons, 'H.R.' for the hussars, and 'U.R.' for the *Uhlanen* (lancers). Field-artillery regiments were distinguished by 'A.R.', and the garrison or fortress artillery battalions by 'F.B.'; the engineer units (*Genie Regiment*) used 'Ge. R.', the pioneers had 'P.R.', and [Militär-]*Fuhrwesen-Korps* equipment sported 'F.K.'

¶ The marks were applied in a most distinctive fashion, with the major component above a short horizontal line and the lesser information, usually in the form of numbers, underneath. A typical example could read '27. R. 2. B.' above '6. 134.', separated by the line; this identified the 134th gun issued to 6. Kompagnie, part of the second battalion of 27. Infanterie-Regiment. A typical cavalry mark would be '4. U. R.' above 'R. 36.', applied by the Reserve-Eskadron of 4. Uhlanen-Regiment; '36' was the individual gun number. Some marks will include additional letters, usually in the lower line. For example, '2. A. R.' stamped above '2. M. 34.' signified the 34th gun issued to the second munitions column (*Munitionskolonne*) of 2. Feld-Artillerie-Regiment.

¶ Landwehr marks will include 'L' in the top line, e.g., '3. L. U. R.' above '3. 9.'—the 9th gun issued to the third squadron of 3. Landwehr-Uhlanen-Regiment.

¶ Landsturm markings almost always included ‘LdSt.’, ‘Ld. St.’ or ‘LSt.’; ‘I. LstB.’ over ‘239’ signified the 239th weapon issued to I. Landsturm-Bataillon.
¶ Austro-Hungarian marks of this type do not seem to be subject to the individual interpretations that characterise their German equivalents, particularly those of First World War vintage. The only exception seems to be the omission of ‘R’ for ‘Regiment’, which can mean that the stampings of hussar units, for example, can appear simply as ‘H’ instead of ‘H.R.’ Too little research has been undertaken in Austrian archives to discover whether this had any official significance.

Autechaud–Bonnaivon, rue Villeboeuf 8, Saint-Étienne, France. Listed in 1892 as a gunmaker and in 1900 as a maker of firearms and edged weapons; possibly a partnership or co-operative concerning an armourer named ‘Autechaud’ (a gunsmith of this name was still trading in Saint-Étienne in 1925) and →Bonnaivon Frères.

Auto-22, BAR-22 or ‘Browning Auto-22’ →Carabine Automatique Browning.

Auto-Dog A name associated with a →Velo-Dog style double-action revolver made in Belgium by →Ancion-Marx of Liège prior to 1914. The guns had five-chamber cylinders and folding triggers.

Auto Engineering (Croydon) Ltd of London Road, West Croydon, England, made silencers for the Mk IIS *Sten Gun, together with →Braddick. The silencers may be marked ‘S 7’. See “British military manufacturers’ marks”.

Auto loading, also widely known as ‘self loading’ or ‘semi-automatic’. A mechanism which utilises the force generated on firing to unlock the breech (if appropriate), extract and eject the empty case, then re-cocks the firing mechanism and re-loads so that the gun will fire when the trigger is pressed again. Strictly, all semi- and fully-automatic weapons are ‘auto loaders’, though only guns in the latter group are auto-firing.

Auto Nine Corporation Based in Parma, Idaho, U.S.A., this metalworking business made the .22-calibre ‘Auto Nine’ pistol in the 1980s.

Auto Ordnance Corporation of New York [“The...”]. This entrepreneurial agency was formed in 1916 by John B. →Blish, George Harvey, Thomas F. Ryan and John T. →Thompson. Ryan was the financier; Thompson had the political influence befitting a one-time Assistant Chief of Ordnance of the U.S. Army. The administrative offices stood at 56 Pine Street in New York City, though most of the guns were made by →Colt’s Patent Fire Arms Mfg. Co. in Hartford, Connecticut. The object of attention was a series of weapons—in particular, a light automatic carbine or ‘Sub-Machine Gun’—embodying a delayed-blowback system patented by Blish. Still a subject of great debate, this relied on the friction supposedly generated by differing metals sliding across each other under pressure. Submachine-guns and automatic rifle, often improved in accordance with patents granted to Theodore →Eickhoff and Oscar →Payne, were made for Auto-Ordnance by →Warner & Swasey (prototypes) or Colt (series production), and are usually marked appropriately. Several differing ‘Tommy Guns’ were made, culminating in a simplified blowback design which

worked just as well as the complicated hesitation-lock pattern had done. Auto-Ordnance also promoted a gas operated 'T10' machine-gun designed by William B. →Ruger. The T10E2 would have been adopted by the U.S. Army in 1942, but a decision was taken to standardise only Browning-based guns to avoid disrupting production. The army resurrected the T10E2 in 1944, as the 'T23', but though the perfected T23E2 again showed merit, the Brownings were once again accorded priority. The original business failed in the aftermath of the Second World War, but the name survived as a subsidiary of the →Numrich Arms Corporation. It will be found on replica 'Tommy Guns' and M1911A1-pattern Colt-Browning pistols. See also 'John Taliaferro Thompson' and →Thompson submachine-gun.

Autocrat A mark found on smokeless-propellant shotgun ammunition made by the *Robin Hood Cartridge Company of Swanton, Vermont, prior to 1914.

Autokill ['The...']. Found on shotgun cartridges sold by →Gray of Inverness.

Auto-Mag This large and powerful recoil-operated semi-automatic pistol was created in the 1960s by Max Gera of Sandford Arms, Pasadena, California, to chamber the .44 Auto Magnum handgun cartridge. The gun was marketed from 1970 onward by the Auto-Mag Corporation of Pasadena, but this business was superseded within two years by the TDE Corporation, formed when the Thames Oil Company bought the patent rights. TDE also soon encountered problems, and control of the project passed to →High Standard before reverting in 1979 to Harry Sandford, one-time principal of the Sandford Arms Company! Before work stopped altogether, the AMT Corporation made a last batch with adjustable Behlert back sights. Owing to the custom-built qualities of the Auto-Mag, a variety of specially-marked 'models' existed. These included the .41-calibre 'JMP', made for gunsmith Lee Jurras, and names ranging from 'Alaskan' to 'Silhouette'.

Automatic A generic term for any firearm capable of firing continuously (pistol, rifle or machine-gun), this is often mistakenly used interchangeably with →semi-automatic, and may be confused with auto-loading see above).

Automatic Associated with a typical Spanish-made Browning-type pocket pistol, manufacturer unknown (but probably made in Eibar). Made in at least two patterns: 6.35mm; generally six rounds, hammer fired. Some are marked 'Model 1911'; others display 'Model 1916'.

Automatic A brand name found on an unidentifiable Spanish-made revolver, probably dating from the 1910–25 era.

Automatic Arms Company Trading in Buffalo, New York State, this business was the assignee of automatic-firearm patents granted to Samuel →McLean, in succession to the McLean Arms & Ordnance Company of Cleveland, Ohio, that had failed in 1909. Automatic Arms employed a retired U.S. Army officer, Isaac N. →Lewis, to adapt the ineffectual McLean designs into an efficient light machine-gun.

Automatic Ejecting Model Made in the U.S.A. by →Harrington & Richardson, this .32 six-shot or .38 five-shot break open revolver was introduced c. 1897.

- One version had a folding knife blade beneath the barrel.
- Automatic Ejector Model** A shotgun made by L.C. →Smith from about 1890 onward.
- Automatic Flareback Prevention Company** →W.D. Smith.
- Automatic Guns, Inc.**, was formed in Washington, D.C., in 1939, possibly to assist the supply of weapons to Britain. The President was Major William R. Baldwin. However, no other details of its history are currently known.
- Automatic Hammerless** A brand name associated with a double-barrel shotgun designed by Daniel →Lefever. Identified by a thumb catch on the tang, the double-trigger gun was made in seven grades ('F' to 'AA'), though an additional 'Optimus' pattern appeared in c. 1892.
- Automatic Hammerless Model** This revolver was made in the early 1890s by →Harrington & Richardson, as a small-frame five-shot .32, or a large-frame six-shot .32 or five-shot .38.
- Automatic Model** This name was associated with an inexpensive revolver made in the U.S.A. by →Hopkins & Allen in 1885–98 and the →Hopkins & Allen Arms Co. in 1898–1907, with a simultaneous-ejection mechanism actuated when the barrel was tipped downward.
- Automatic Rifle Syndicate Ltd.** This promotional agency had an office at 9 Queen Victoria Street, London S.W., England, from 1896 until 1900 or later.
- Automatic safety** →Mechanical safety.
- auu** Found on ammunition and components made in 1941 5 by →Patronenhülsen- und Metallwarenfabrik AG in its Rokycany bei Pilsen factory in German-occupied Czechoslovakia.
- aux** This code was used by the Magdeburg (Germany) factory of →Polte Werke, and will be found on cartridge clips and chargers, machine-gun belts and links, small-arms ammunition and associated components made during the Second World War.
- auy** See above. This mark was used by Polte's Grüneberg (Nordbahn) factory in 1941–5.
- auz** Used by the →Polte Werke factory in Arnstadt, Thüringen, on small-arms ammunition or components made during the Second World War.
- Avant Tout** ['The...']. A brand name found on shotgun ammunition handled by →Cogswell & Harrison.
- Avenger** A 'Suicide Special' revolver made in the 1880s by the →Hopkins & Allen Arms Company of Norwich, Connecticut.
- Avengeur** →l'Avengeur.
- Averill & Son**, a gunsmithing business trading in Evesham, Worcestershire, England, marked shotgun cartridges as "Averill's Express".
- Avery** James L. Avery of Madison Court House, Florida, U.S.A., was the patentee of a method of 'mounting and setting guns', granted on 11th August 1874 (no. 153924). The rights were assigned to Walter E. Avery.
- Avery** Gunmaker Stephen Avery of North Anson, Maine, U.S.A., was active in the 1870s.

- AVF** Applied to the Russian → Federov automatic rifle, or *Avtomaticheskaja Vintovka Fedorova*, of 1916. See also 'Avtomat'.
- Avion** A 6.35mm semi-automatic pistol, based on the FN-Browning, made by → Azpiri y Compañía of Eibar, Guipuzcoa, Spain; six rounds, striker or hammer fired.
- Avis Rifle Barrel Company**, Springfield, Massachusetts, U.S.A. A maker of barrels for the 1903 type U.S. .30 service rifle during the Second World War.
- avk** Found on parts for the Kar. 98k made in 1941–5.
- Avon** ['The...']. A mark associated with shotgun cartridges assembled, or perhaps simply bought-in by → Nightingale & Son of Salisbury. The components seem to have originated outside Britain, but their origin is unclear.
- Avramov** A Soviet/Russian weapons designer, now best known as the co-developer of the → RSA double-action revolver.
- AVS**, *Avtomaticheskaja Vintovka Simonova*. Associated with a rifle developed in the USSR in the 1930s by Sergei Simonov. Also known as 'AVS-36', after the year of adoption. → Simonov rifles.
- avt** Found on small arms ammunition and parts made by → Silva Metallwerke GmbH of Magdeburg, Germany, in 1941–5.
- AVT** An automatic rifle designed by F.V. → Tokarev and introduced in 1940. See also 'SVT' and 'SNT'.
- Avtomat** A Russian-language term ('automat[ic]' in English), customarily applied to selective-fire assault rifles—in particular, to those designed by Vladimir → Federov prior to 1916 and by Mikhail → Kalashnikov after the end of the Second World War.
- avu** Associated with the Genthin factory of → Silva Metallwerke GmbH. Found on ammunition components made in Germany during the Second World War. See also 'avt'.
- AW** or **A.W.** Found on components for the No. 4 Lee-Enfield rifle made during the Second World War by Austey & Wilson. This company was also allocated the area code 'M8', but often used its initials instead.
- AW** An unidentified inspector's mark found on U.S. Navy signal pistols dating from the 1900s.
- AW monogram**, with an angular 'A' superimposed on 'W'. Correctly 'WA'; on revolvers made in the U.S.A. by Dan → Wesson Arms.
- AWA** Found in the headstamps of rimfire cartridges, said to have been made by A.W. → Allendorff of Schönebeck an der Elbe.
- AWC**, 'A.W.C.', 'A.W.Corp.' Trademarks and brand names associated with the → American Weapons Corporation.
- AWC concentric monogram with the letters equally dominant**. Correctly 'WAC' (q.v.); used by the → Warner Arms Company.
- AWCD concentric monogram with the letters of equal significance**. Correctly 'WDAC' (q.v.), used by the → Warner-Davis Arms Corporation.
- AWE** see 'Arthur W. Evens'.
- AWG, A.W.G.** ['The...']. Found in the headstamps and on the packaging of rim-

and centrefire ammunition sold by A.W. →Gamage of London prior to 1914. The cartridges were made elsewhere.

AWH →‘A.W. Hatch’.

awj A code allocated to the →Yale & Towne Manufacturing & Company of Velbert, Rheinland (Germany), a maker of artillery components and small arms magazines in 1941–4.

AWR or ‘Model 700AWR’ →Alaskan Wilderness Rifle.

awt Found on small arms and associated components made during the Second World War by →Württembergische Metallwarenfabrik AG in Geislingen-Steige, Germany.

AWZ or **A.W.Z.**, *sometimes accompanied by one or more six-point stars*. Marks associated with Albin →Wahl of Zella Mehlis, Thüringen, Germany, found on 6.35mm automatic pistols and dropping-block target rifles. See also ‘Stern’.

awz Found on parts made for the Kar. 98k during the Second World War by Dietrich Sasse’s Söhne of Vienna.

ax Used by →Feinmechanische Werke GmbH of Erfurt, Germany, on rifles and small-arm components dating from 1940–5.

Aydt The German gunsmith Carl Wilhelm Aydt, born near Pforzheim in 1847, was apprenticed to a gunmaker in Karlsruhe. After serving in the Franco–Prussian War of 1870–1 as a battalion armourer, he worked in France and Switzerland until settling in Suhl in 1876 to make target rifles. He subsequently obtained a patent, DRP 31291 of 1885, to protect the design of a rifle incorporating a breech-block which moved radially around a horizontal pivot beneath the action (see below). Aydt—a prize-winning marksman with pistol and rifle—made his rifle in his own workshop for several years, until its success persuaded the well-established →Haenel business to participate. Aydt supervised construction and regulation of his rifles in a special department in the Haenel factory from 1887 until his death in 1923. An improved version was the subject of DRGM 712997 (1919), but Aydt-type rifles were made by many other manufacturers prior to 1939.

Aydt rifle This swinging-block action was patented by Carl Wilhelm Aydt (see above). A block, hollowed to contain the hammer, pivoted under the barrel to be locked in place by a shoulder on the operating lever. When the lever was depressed, the mechanism unlocked and the block rotated downward until its upper edge lay level with the base of the chamber. As the block reached the end of its travel, the extractor pulled the spent case from the chamber. Haenel-made guns usually had an external extractor lever on the left side of the receiver, but internal patterns will be found on other makes. The hammer was held on the sear and cocked as the action closed.

¶ Aydt-type guns often differ greatly in detail, as the actions were stocked and finished throughout Germany for fifty years or more. Set triggers and good-quality aperture sights were commonplace, the breech levers could be elaborately looped, and among the most popular style of butt was the Schützen patterns with a high comb and an adjustable butt-plates.

¶ The 'Original-Aydt' made by C.G. →Haenel of Suhl had an external extractor and—in most cases—a lever that locked the barrel in place; the entire action could be dismantled without tools. A looped breech-lever/trigger guard simply sprung into place over a stud integral with the lower tang. The lever was usually held in place by a small spring catch behind the retaining stud. Double set triggers were customary, barrels were usually octagonal, though round and specially fluted examples are known; the half-length forend, often with a schnabel tip, was keyed to the barrel. Some guns were extensively engraved, and an aperture sight on the tang often replaced the quadrant rear sight on the barrel.

¶ The 'Original Zentrum', often credited to a gunmaker named Neumann and claimed to have been a modified Aydt, was actually built on a →Martini-type action.

Aydt-Ideal rifle A simpler version of the Aydt-Reform, often simply known as the 'Ideal', may have been made by August →Schüler of Suhl.

Aydt-Reform rifle Made by August →Schüler of Suhl, c. 1910–35, this was an improved version of the Aydt with an internal extractor and a radial-lever locking catch on the lower tang behind the triggers. Apart from these changes, however, the modified Aydt was essentially similar to the 1885-patent pattern. Chambered for a variety of European sporting-rifle cartridge, most rifles were made for Schützen purposes and had elaborate operating levers, high-comb butts and sophisticated sights. Plainer sporting guns were also made.

aye A code-mark found on small-arms magazine made by →Olympia Büromaschinenwerke AG of Erfurt, Germany, during the Second World War.

ayf Found on submachine-guns, signal pistols and small-arms components made by →Erma Werke B. Geipel GmbH of Erfurt, Germany, in 1941–5.

Ay Jay Effe ['The...']. Found on shotgun cartridges sold in England by →Foster of Kidderminster, England.

Ayres U.S. arms inspector John C. Ayres accepted martial arms, including Colt-made Gatling Guns, in 1881–3. These bore a 'JCA' mark. See also "U.S. arms inspectors' marks".

Ayres William G. Ayres of Brooklyn, New York, U.S.A., was co-designer with G. →Whittaker of a revolving firearm, the relevant patent being granted on 13th February 1877 (U.S. no. 187244).

Azanza y Arrizabalaga of Eibar, Guipuzcoa, Spain, made →Ruby-pattern semi-automatic pistols for the French army during the First World War. Also commonly listed as the manufacturer of →Reims pistols.

Azimuth adjustment This is found on a back sight to move the point of impact vertically. Sometimes mistakenly confused with 'windage'.

Azpíri y Compañía of Eibar, Guipuzcoa, Spain, made the →Avion and →Colon pistols.

Azul This tradename was found on handguns and possibly also sporting rifles distributed in Spain by Eulogio →Arrostegui of Eibar prior to 1936. The basic Browning-type pistols were offered in two patterns: 6.35mm, six rounds,

hammer fired, and 7.65mm, seven rounds, hammer fired.

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