



Scottish
Transport &
Industry
Collections
Knowledge
network

Master Catalogue for Scotland

Typewriters



STICK Group Purpose

The Scottish Transport & Industry Collections and Knowledge Network aims to promote care and enjoyment of these collections. Through research, stewardship and advocacy, STICK will encourage wider engagement with transport and industrial collections across Scotland.

Objectives - STICK will:

- Develop opportunities to advance acquisition, care, development, research and interpretation of transport and industry collections in Scotland
- Identify key issues facing the long-term stewardship and development of transport and industry collections and work together to tackle these
- Promote, encourage and advance access to Scottish transport and industrial collections through a variety of mechanisms
- Support informed, efficient and confident decision making in the acquisition and long-term care of transport and industrial heritage across Scotland

For more information and to join the network visit www.stickssn.org

The **Master Catalogue for Scotland** is a STICK initiative and definable product of the 'Old Tools, New Uses' Project 2010-2011. It has been compiled and enhanced by David Woodcock, NMS\STICK's independent Subject Specialist Advisor for the Project, based upon data supplied to the Project from participating institutions. The contents of the catalogue is believed to be current to the end of 2010. Individual entries should always be checked first with the holding institution to confirm their existence, validity and authenticity, as the contents of the catalogue cannot be guaranteed.

Master Catalogue for Scotland ©STICK 2011

Background

The Master Catalogue for Scotland is a recognised outcome from the research stage of NMS\STICK's innovative project 'Old Tools, New Uses', a key component of the Museum Association's flagship Effective Collections programme, supported by the Esmée Fairbairn Foundation.

Five discrete technology collections were identified by the Project as being those believed to be most frequently occurring in museums large and small across the whole of Scotland. These are: sewing machines, typewriters, woodworking tools, cobbler's tools and blacksmith's tools.

It is generally accepted that there must be heavy duplication of many objects within all of these collections in museums throughout Scotland. 'Old Tools, New Uses' set in motion a programme of support for all museums to identify their relevant material through the provision of free expert advice and advocacy, a series of drop-in surgeries for curators to gain a better understanding of their items, and encouragement to consider ethical disposal of unwanted examples through the project's charitable partner, Tools for Self Reliance, who would refurbish items and distribute them to artisans in Africa. The philosophy driving the project was to make collections activity more efficient and sustainable, focusing on the long-term stewardship and development of these collections through better informed decisions on acquisition and disposal, maximising available valuable storage and display space, and reducing running costs by avoiding wasteful duplication and disposing of unwanted material.

The idea of the Master Catalogue is to provide the knowledge to make this process work, now and into the future. Museums need to know what is in their own collections, but equally, what is in other museums' collections too. For the first time in Scotland, this catalogue will tell you what the nineteen participating institutions hold in areas of interest to you and your own museum, in these five targeted collections. You will be able to see how your collection rates against others; identify which museums hold identical items to you and potential collaboration to rationalise holdings; get an idea of what's rare or abundant, and obtain knowledge about a vast array of makes and models of sewing machines, typewriters and a host of craft tools.

In addition, the catalogue contains useful glossaries for tool terms at the end of each of the sections for blacksmith's, cobbler's and woodworking tools, to assist museum practitioners and curators with identification of objects. These explain some of the more mysterious tools, what they are and how they were used in the processes of the trade to which they belong. Planes feature strongly in the woodworking tool collections of many museums. Consequently, a checklist of planemakers of planes found in Scotland has also been included as a handy reference, preceding the planes listing on page 219. At the very end, a colloquial glossary gives terms unique to Scotland used for particular tools, at least at a national level, and sometimes at a regional level. There will sometimes be further name variants for the same tool at the local level too, which curator's may be aware of.

All this will give you confidence in making often difficult decisions about whether you acquire or dispose of something. In the current economic climate of cutbacks and restraints, such decisions have never been of greater consequence. Using this catalogue to make informed acquisitions and responsible disposals will enable you to increase the quality of your collections, without necessarily increasing the 'footprint', and therefore the costs, of your total collection.

The data gathering process

The Project decided to target registered museums across Scotland, known to hold material of relevance. This meant there would be potential for disposals as well as inviting them to submit their documented lists of objects for inclusion in the catalogue.

In order to identify these museums, two key documents from the sector were examined. The Scottish Museum Council's National Audit, published as 'A Collective Insight' in 2002, platformed a

national assessment by survey of process and practice in museums and heritage institutions, measured against accepted 'best practice'. Although collections were obviously involved, with object totals given for each venue, the presented data tended to focus more on 'collection importance', expressed as a geographic factor of 'cultural significance', in terms of local, regional, national, UK and international impact. This in itself was interesting, but what the 'Old Tools, New Uses' Project needed was more extensive data on collection details that drilled down to the object level. The closest we could get to this was the Industrial Heritage Survey (IHS) for Scotland, undertaken in 1990, and subsequently published as 'Scotland's Industrial Past'. From this survey the Project identified about 75 museums to be targeted out of a total of about 440 registered bodies. However, the survey was dated and in the twenty years since it was conducted, some of the venues had changed name, merged with other bodies or simply disappeared. We ended up with about 50 identifiable bodies which were subsequently contacted and invited to join the Project.

Lists of relevant objects were received from 19 bodies. Some of these were just a handful of items, whilst larger museums could furnish several thousand. The bulk of this information has gone into making up the catalogue. Many more museums were interested in participating, but either could not respond to the request within the timescale of the Project, or lacked the data we were asking for.

If you are a registered museum in Scotland, with collections of relevance to this catalogue and would like to have your material included in the future, please contact Megan Combe, National Partnerships Officer, National Museums Scotland, Chambers Street, Edinburgh EH1 1JF (M.Combe@nms.ac.uk), or David Woodcock, NMS\STICK Subject Specialist Advisor (david@researchpod.co.uk). For more information about STICK's 'Old Tools, New Uses' Project please visit the website at <http://www.stickssn.org/site/pages/projects.php>

The STICK Steering Group is aware that the concept of a Master Catalogue for Scotland holds enormous potential to be substantially expanded in the future, to include many new collections and subjects. Two areas that stand out as particularly beneficial to Scottish museums of all sizes are domestic technology and machine tools. If you have views on this, or other collections you would like to see in the Master Catalogue, please pass them on to Megan or David, on the contact details above.

Institutions contributing to the Master Catalogue for Scotland

Aberdeen Art Gallery & Museums. Jenny Brown, Curator (Industry), Aberdeen Maritime Museum, Shiprow, Aberdeen AB11 5BY . Tel: 01224 337719 Email: jenbrown@aberdeencity.gov.uk

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Veronica Hartwich, Collections Development Officer, Tel: 01771 622807. Fax: 01771 623558. Email: Veronica.Hartwich@aberdeenshire.gov.uk

Almond Valley Heritage Centre, Millfield, Livingston, West Lothian EH54 7AR.
Karen Bell, Collections Development Manager. Tel: 01506 414957 Email: Karen@almondvalley.co.uk
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The Museum of Ayrshire Life at Dalgarn Mill, Kilwinning, KA13 6PL.
Moira Gaw (Volunteer Collections Management Assistant)
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Clydebank - Singer Sewing Machine Collection, West Dunbartonshire, 16 Poplar Road, Dunbarton G82 2RJ.
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Sewing machines and Typewriters

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Woodworking Tools, Blacksmith's Tools, Cobbler's Tools.

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Geographical distribution of the 19
participating institutions



In terms of the geographical distribution of participating institutions, the survey tends to be skewed towards the substantial and important collections from major centres in Edinburgh, Glasgow, Aberdeen, Falkirk and Lanarkshire. In general, the central lowlands and the eastern side of the country are fairly well represented. Not so for two large swathes of Scotland which remain unrepresented. In the southern uplands, a band extending from west to east, through the most southerly counties of Wigtownshire, Kirkcudbrightshire, Dumfriesshire, Roxburghshire and Berwickshire is not represented; and in the west of Scotland and the Highlands and Islands, a large area from south to north comprising Argyllshire and Buteshire, Ross-shire and Cromartyshire, Sutherland and Caithness, is equally wanting.

Accession number prefix code key:

A – National Museums Scotland
ABDMS – Aberdeen Art Gallery & Museums
AMS – Aberdeenshire Museums Service
COTSL – North Lanarkshire Council Museums & Heritage
CUKDM – North Lanarkshire Council Museums & Heritage
CUPMS – Fife Council Libraries & Museums
DB – Fife Council Libraries and Museums
DTEMP – Fife Council Libraries & Museums
DUFDM – Fife Council Libraries & Museums
DUNUC – University of Dundee Museums Service
E – Glasgow Museums
EF – Almond Valley Heritage Centre
ELCMS – East Lothian Council Museums Service
ELGNM – Elgin Museum, The Moray Society
FCLM – Fife Council Libraries and Museums
FIFE NN – Fife Council Libraries & Museums
FALKM – Falkirk Museums
GLA – Glasgow Museums
GTM – Grampian Transport Museum
H – National Museums Scotland
HC – Glasgow Museums
HH – Edinburgh Council Museums and Galleries
IMAG – Inverness Museum and Art Gallery
KIRMG – Fife Council Libraries & Museums
LVSAV – Almond Valley Heritage Centre
M – National Museums Scotland
MACLC – Museum of Ayrshire Country Life and Costume
ME – Glasgow Museums
MLC – North Lanarkshire Council Museums & Heritage
NH – Edinburgh Council Museums and Galleries
NLC – North Lanarkshire Council Museums & Heritage
NLCMH – North Lanarkshire Council Museums & Heritage
NMS – National Museums Scotland
PP – Glasgow Museums
SAC – South Ayrshire Museums and Galleries Service
SH – National Museums Scotland
SL – South Lanarkshire Leisure and Culture
SMM – National Mining Museum Scotland
T – National Museums Scotland
TEMP – Glasgow Museums
W – National Museums Scotland
WDBCS – West Dunbartonshire, Singer Sewing Machine Collection

NMS\STICK Master Catalogue

SECTION 2 - TYPEWRITERS

SUMMARY

81 manufacturers – 190 models – 333 typewriters

Approximately two-thirds of all the typewriters are concentrated within two museums – the National Museum of Scotland in Edinburgh and Glasgow Museums. Overall the coverage is good, with American, German and British models well represented, along with some other European makes.

Glasgow Museums has a very rare and early type-wheel machine with index plate, made around 1857 by Peter Hood of Kirriemuir in Angus. Hood is thought to have built two machines in 1857, one of which was dispatched to the USA, the other is in the London Science Museum, though in a damaged condition. This now discovered third machine by Hood, in Glasgow's collections, does not appear to be recorded in the literature, and thus constitutes a great find.

The National Museum of Scotland has several rare typewriters in its collection, largely down to inheriting the core typewriter collection assembled by the former Royal Scottish Museum. Part of this collection was already an earlier collection put together by Sculthorps Ltd, a Glasgow office furniture supplier, from whom the RSM purchased 50 iconic typewriters for the grand sum of £50 in 1934. Gems in this collection include several British rarities: Maskelyne 'Victoria'(1897); Gardner (c.1893); English (c.1890); North's (c.1892), and equally desirable American models by Fitch (c.1893); McLoughlin (1884); Crandall (c.1881); Ford (c.1895) and Granville (1896).

Makers and Models – Quick View

A ‘quick-view’ alphabetical listing of typewriter makes and models in Scotland:

Adler – 131D
Archo
Armstrong
Baby Empire
Bar-Let – 2
Bar-Lock – 5, 6, 18
Bennett
Blick
Blick Universal
Blickensderfer – 5, 8, 9,
Book
Braille
Brother – 210, EP-44, TC600
Burroughs
Byron – 54
Caligraph – 3
Carmen
Casiowriter – CW-20
Champion
Chicago
Columbia – 2
Columbia Bar-Lock
Continental Standard
Continental Silenta
Corona – 3, Special
Crandall
Dual Unit 50
Editor – 4
Electric Executive
Electromatic
Elliott-Fisher
Elliott-Hatch
Empire – 1, 2
Empire Aristocrat
English
Erika – 2
Erika Bijou
Featherweight
Fitch
Flexowriter
Ford
Fox
Gardner
Globe

Olympia – 8, S.G.E. 10/40, SG3 N/L
Oriental
Paillard
Personal Writing Machine

Good Companion – 7
Good Companion T
Granville
Halda
Hall
Hammond – 1, 2
Hartford
Hermes Ambassador
Hermes Baby
Home
Hood
IBM
Ideal
Imperial – B, D, 50, 55, 58, 60, 65, 66, 70, 80,
90, 200, 770, 790
Jewett
Junior
Keystone
Lambert
Lettera – 22
Lexicon – 80
Lilliput
Linea – 88, 98
Lumar
Lyon
McLoughlin
Magic Margin
Maskelyne
Memory
Merritt
Mignon – 1, 2, 3, D4 Pica
Molle
Monarch Pioneer
Monarch Visible – 2, 3
Moya – 2
Multiplex
National
New Century
New Yöst
Noiseless – 4, 6
North’s
Odell – 1, 2
Oliver – 1, 3, 6, 9, 10, 11
Olivetti – M40, M40/3, ET221

Postal
Protos
Quiet Riter Miracle Tab
Remington – 1, 2, 5, 7, 8, 10, 12

Rex
Royal – 5, 10, H, FP
Royal Bar-Lock
Salter – 7, 10
Secor
Seidel & Naumann
Selectric
Silver-Reed – 2600
Silver Seiko
Simplex A
Singer-Friden
Smith – 10
Smith-Corona – 7
Smith-Premier – 2, 3, 4, 10, 10b, 60
Special
Stearns
Stoewer
Studio – 44, 82

Swift Visible
Triumph
Tropical
Underwood – 3, 5, 6, 6 Master
Universal
Valentine
Vari-Typer
Victor T
Wanderer-Werke
Williams – 1, 2, 6
Winterling & Pfahl
Woodstock – 5
World Service
Wyckoff, Seamans & Benedict
Xerox – 645
Yöst – 1, 4, 10, 11, 20
Zimmer, Zinke

TYPEWRITERS (333)

Adlerwerke, later Triumph Adler Vertrieb (Germany)

Adler Universal, manual, 1951. MACLCpic66

Adler Special, manual, 1951-1960. SAC 04

Adler 131D, electric, with grey vinyl dust cover, previously used in Glasgow Museum of Transport office, c.1970. GLA TEMP.8578

A.E.G. Co. (Berlin)

Mignon, square index, cylindrical type sleeve, a very popular machine, invented in 1903 by Dr. Friedrich von Hefner-Alteneck. The type and index could easily be changed, but the speed of typing was slow. Good condition, with wooden case and box of accessories: 4 spare type sleeves and 2 spare index plates. Possibly made, but probably supplied by a British factor. c.1904. GLA T.1958.37

Mignon model 2, square index, cylindrical type-sleeve, 1905. T.1932.82

Mignon model 3, square index, with a stylus pointer on a pad and type-sleeve wheel to strike the paper. Supplied by The Electrical Company Ltd. of London. c.1913. T.1970.45

Mignon model D4 Pica, square index, cylindrical type-sleeve (broken), in metal case, c.1923. GLA T.1960.11

Mignon, in wooden case. No further details. FIFE NN2

American Typewriter Co. (New York, USA)

Armstrong, one of the smallest up-strike machines of its time, 1899. T.1934.202

Globe, swinging sector class with index selector pointer and semi-circular keyboard. 72 characters including capitals. 1895-1896. Globe was the English equivalent of the 'American', which had been produced by the company since 1893. T.1934.177. T.1958.102. T.1952.X.4 (Serial no. 4066)

American Writing Machine Co. (New York, USA)

Caligraph No. 3, up-strike, c.1883. T.1934.60. T.1934.188

New Century, up-strike design, double keyboard, regarded as a new form of 'Caligraph'. c. 1900. T.1934.208

Barlock (1925) Ltd. (Nottingham, England) – See also Columbia Typewriter Manufacturing Company (Newport & New York, USA)

Bar-Lock Model 18, black, complete with dust cover, manufactured by J. Jardine Ltd, Nottingham. Serial no. 669060, c.1930-c.1946. GLA T.1987.10

Bar-Let Model 2, portable, 3-row front-strike, 'By appointment to King George V', made by The Bar-Lock Typewriter Co, Nottingham. In carrying case. c.1935. GLA T.1976.6

Bar-Let, portable, 3-row front-strike, bearing royal coat of arms by appointment to King George V. In a metal carrying case. c.1928. Very good condition. T.1977.130

Bar-Let, portable, British-made, c.1930s. CUKDM:1983/055. GLA T.1985.36

Bennett Typewriter Co. (New York, USA)

Bennett, portable, type-wheel design, ribbon inked, with rectangular imitation leather cover which clipped over the machine for portability. c.1910. T.1962.62

Blickensderfer Manufacturing Co. (Stamford, Connecticut, USA)

Blick, type-wheel, the first cheap keyboard machine, 1893. T.1934.184

No. 5, portable, fitted with a Greek alphabet type-wheel; one key top missing. In brown leather case. 1893. Leather needs treating. T.1963.69

Featherweight portable, type-wheel, serial no. 163,325 with scientific keyboard, c.1896. T.1934.13

The Home Blickensderfer, portable, marked 9 & 10 Cheapside, London. In a hinged oak carrying case. 1890s. T.1974.124

Blickensderfer portable, type-wheel, 3-row splayed keyboard, in lockable leather case with two keys, with accessories including ink, cleaning kit, instruction booklet and carbon paper, c.1900. GLA T.1962.18

Oriental, portable, type-wheel, 3-row keyboard with keys having both English and Arabic characters on them. The 'Oriental' was a bilingual machine, but designed for typing languages which read from right to left as well as conventional western tongues. Its carriage is fitted with reverse escapement, with a selector lever at the rear. With only part of its wooden case. c.1900 GLA T.1968.27

No. 8, portable, type-wheel, with veneered wooden carrying case. c.1907. T.1987.296

No. 9, portable, contained in a leather carrying case, with instruction book, 1917. T.1971.67

Blick Universal, portable, 8 inch carriage, 30 keys with double shift, serial no. 210131. 1893-1921. GLA T.1980.33

Braille

Braille typewriter on a folding wooden baseboard, c.1900. T.1934.156

British Typewriters Ltd. (West Bromwich, England)

Baby Empire, portable, c.1938. The British version of the Hermes Baby produced by E. Paillard & Cie, of Yverdon, Switzerland. T.1984.107

Empire Aristocrat, portable, complete with case and booklet. Manufactured by British Typewriters Ltd, West Bromwich (under licence from E. Paillard of Switzerland) and supplied by T.C. McFarlane, Stationer and Printer, 189 High Street, Elgin. c.1948. ELGNM 2001.6.2

Brother (Japan)

Model 210, electric, portable, probably 1970s. GLA TEMP.13865

EP-44 electronic personal word processor and printer, with pack of thermal paper. Purchased c.1986 by donor to send minutes etc. home to computer – performance unsatisfactory. Made c.1984. [Two years earlier, in 1982, Brother had launched the EP-20, the world's smallest battery-drive electronic typewriter. By combining thermal transfer technology and high technology, its compact body, advanced functions and high performance was achieved. Other companies followed this innovative product and the trend for miniaturization of typewriters greatly progressed.] SL DB1605/4

TC600, electronic, word processor, battery-operated, c.1995. SH.2003.283

Burroughs Machines Ltd (Ontario, Canada)

Burroughs electric, a large office-type 4-bank upright. c.1932. T.1987.297

Byron Business Machines Limited (Nottingham, England)

Byron Model 54, standard manual, made by the former Barlock Company which changed its name to Byron in 1955, in grey metal casing, c.1957. GLA T.1984.44

Carmen Werk A.G. (Stuttgart, Germany)

Carmen, small German front-strike portable with 3-row keyboard and double shift. Originated by Carl Pistorius of Heidelberg. 1920. T.1934.224

Casio Computer Co. Ltd (Japan)

Casiowriter CW-20, portable electronic, an early ribbon cassette word processor, with battery power option, c.1985. T.1997.57

Chicago Writing Machine Co. (Chicago, Illinois, USA)

The Chicago, type sleeve, invented by Samuel John Siegfried and James Eugene Munson, 1898. T.1934.183

Columbia Typewriter Manufacturing Company (Newport & New York, USA) – See also Barlock (1925) Ltd. (Nottingham, England)

Columbia, type-wheel design with differential spacing, in a mahogany case, invented by Charles Spiro of New York. c.1886. T.1949.3

Columbia No. 2, type-wheel, with both upper and lower case letters on the periphery of the type-wheel. Serial no. 757, c. 1888. GLA TEMP.8582

Bar-Lock, front down-strike, double keyboard, invented by New York watchmaker, Charles Spiro. c.1889. T.1934.190

Bar-Lock No. 5, front down-strike, double keyboard, short carriage, c.1889. T.1959.41

Bar-Lock No. 6, front down-strike action, double keyboard, heavily embellished copper type-bar shield, in wooden box, c.1890. KIRMG:1978.0008

Columbia Bar-Lock, front down-strike, double keyboard, 1906. T.1934.217

Royal Bar-Lock, mounted on wooden base, cover missing. Formerly the property of the late Ernest Dutton, noted musician of Springburn, Glasgow. Model number not recorded, but made around 1900-1905. GLA TEMP.19802

Royal Bar-Lock, a down-strike machine with a distinctive vertical wall of key-bars in front of the platen. First machine to use an automatic ribbon-reverse mechanism. Model number not recorded, but made around 1905. Later models (from 1914) were made by the Bar-Lock Company in Nottingham. Serial no. 207822. In curved wooden case. GLA TEMP.8592

Bar-Lock, c.1918. GLA T.1991.62

Corona Typewriter Company (Groton, New York, USA)

Corona Personal Writing Machine, folding portable, front-strike with double shift and 3-row keyboard. Based on the Standard Typewriter Company's 'Standard Folding' model. With accessories and black leatherette carrying case. c.1918. T.1972.X.8

Corona Special, portable folding, in metal box, fair condition, 1912-1939. KIRMG:1990.0309

Corona No. 3 folding portable, in fitted case with cleaning brush, c.1917. GLA T.1977.10

Corona No. 3 folding portable, serial no. 125478, in a fitted case, c.1924. Based on the Standard Folding and launched in 1912, it was very successful and continued in production until 1941. About 750,000 were made. The entire carriage folded forward and came to rest above the keyboard, squaring the machine off for compactness. T.1956.1

Corona No. 3 folding portable. A small typewriter in a black carrying case, including a new IMPERITYPE ribbon and box of 2 spools, and leaflet of instructions. c.1920-1941 ELCMS 1994.601

Corona No. 3 folding portable, case missing, with original instruction leaflet, c.1925. COTSL:92:138:02

Portable, in black imitation leather covered case, c.1950. T.1985.X.19

Corona, with case IMAG 1983.052

Coxhead, Ralph, C. Corporation (New Jersey, USA)

Vari-Typer, electric. The world's first 'cold type' composing and duplicating machine, used in the print and graphic arts industry. It was developed from the Hammond typewriter. A variety of type sectors could be rapidly mounted in the machine and the resulting use in printing machines. c.1933-c.1956. T.1987.308

Crandall Typewriter Co. (Syracuse, New York, USA) & Crandall Machine Co. (Groton, New York, USA)

Crandall, the first production typewriter to use a type-sleeve, c.1881. T.1934.181

Elliott-Fisher Company (New York, USA)

Book writing typewriter, a frame design with rails to allow movement over a bound book or separate sheets, in both planes. Down-strike, 4-row keyboard. 1903-1906. T.1952.52

Elliott-Hatch Book Typewriter Company (New York, USA)

Book writing typewriter, down-strike, in a roll-top desk, used for typing books, ledgers etc., c.1897-1903. T.1987.25

English Typewriter Co. Ltd (UK)

English, front down-strike, 29 keys in two rows with double shift, invented by Michael Hearn and Morgan Donne, c.1890. Rare. T.1934.195

Fickurfabriks A. B., later Facit-Halda Aktiebolag (Sweden)

Halda, standard manual, front strike, green, serial no. 6-201561, c.1950s. GLA TEMP.8579

Fitch Typewriter Company Ltd (London, England)

Fitch, down-strike from rear, an early visible writer, invented by Eugene Fitch of Des Moines, Iowa, USA. Very rare. c.1893. T.1934.189

Ford Typewriter Company (New York, USA)

Ford, radial strike thrust action, visible, c.1895. Not common. T.1934.206

Fox Typewriter Co. (Grand Rapids, Michigan, USA)

Fox, up-strike, non-visible, 1899. Invented by William R. Fox and Glenn J. Barrett. T.1934.211

Friden (Rochester, New York, USA) See also Singer-Friden

Typewriter, with base unit, no further details. GLA TEMP.20499

Gardner British Typewriter Co. (Manchester, UK)

Gardner type-sleeve, 14 type keys and two shift keys printed 84 characters. 1893-1895. T.1931.264

Garvin Machine Co. (New York, USA)

Champion, type-wheel index machine with conventional ribbon, 1893-1898. Supplied by E. C. Sculthorp & Co., George Street, Glasgow. T.1934.225

Granville Manufacturing Co. (Providence, Rhode Island, USA)

Granville, radial strike thrust action, invented by Bernard Granville, 1896. Rare. T.1934.207

Hall Type-Writer Co. (Salem, Massachusetts, & New York, USA)

Hall index, portable, the first commercially successful index machine. 1881-1890. T.1918.3

Hall index, portable, serial no. 3178, in a mahogany case, c.1885. T.1940.2

Hall index, portable, serial no. 7125, patented 1 March, 1881, and made by Messrs Witherby and Company, London, in wooden case GLA T.1948.1

Hall index, improved model, metal type bonded to the rubber index plate, thereby allowing copies to be made. In contrast to the earlier models the carriage moved on this model, while the index remained stationary. Serial no. 9547. Manufactured for National Typewriter Co, Boston, Massachusetts. c.1889. T.2002.59

Hammond Typewriter Co. (New York, USA)

Hammond Ideal, swinging sector mechanism, serial no. 86164, 1884-1890. T.1934.9

Hammond Ideal, swinging sector mechanism, c.1884-1890. T.1934.182, T.1967.50.

Hammond Ideal, with two swinging type sectors and a circular keyboard, serial no. 22933, c.1884-c.1891. T.1956.79

Hammond Ideal, later type, c.1900. DUFDM:1971.0284.0001-31

Hammond Multiplex, an early machine with swinging sector mechanism, 2-row circular sector keyboard in ZQJBPF format, in wooden case with instructions pasted to inside of lid. c.1884-1890. GLA T.1941.12. GLA T.1970.28 (serial no. 107394)

Hammond No. 2, swinging sector design, with a two-row circular keyboard, 1893. SAC 09. GLA TEMP. 21668, 21669

Multiplex, 3-row straight keyboard, on oak base with oak shaped dust cover, c.1915. T.1964.6

Hartford (Hartford, Connecticut, and later Cleveland, Ohio, USA)

Hartford, up-strike, double keyboard, an invisible writer with spring-loaded platen to facilitate raising. Invented by John M. Fairfield. c.1894. T.1934.204

Hood, Peter (Kirriemuir, Angus, Scotland)

Hood, type-wheel with circular index plate, geared together at right angles, 1857. **Exceedingly rare.** GLA TEMP.8575

This is an early use of these two components, which would appear a quarter of a century later on the successful Columbia typewriter. Invented by Peter Hood, a blacksmith's son from Kirriemuir, Angus, he followed his father's occupation, but ill-health forced him to give it up and he became a watch and clockmaker. He carried out this trade in the attic of a little cottage, where he lived in semi-seclusion with his two unmarried sisters. Here, in addition to watches and clocks he built many original and highly ingenious mechanisms.

One of his patrons was a Mr. Arrol, a relative of Sir William Arrol. This man was blind and Peter Hood was commissioned to build a typewriter for him, which Hood did with some success. It is not thought this machine was necessarily for the blind Mr. Arrol, but without any previous knowledge of typewriters Hood is believed to have built two machines in 1857, one of which is known to have been sent to America, and the other is in the London Science Museum, though in a damaged condition. This third machine by Hood, in Glasgow's collections, does not appear to have been recorded in the subject literature, and is therefore a great find.

The machine consists of a vertical type-wheel geared at right angles to a horizontal index-wheel on which letters appeared in alphabetical order. A knob and indicator selected the desired character on the horizontal wheel which turned the vertical one until the corresponding letter was above the printing point, whereupon it was brought down into contact with the paper by depression of the

knob. A spring returned the type-wheel to its original position. Locking holes were provided in the index for correct alignment, and an escapement automatically advanced the carriage for letter spacing. Inking was by means of a pad.

Peter Hood died in 1873, the year recognized as the commencement of typewriter production.

IBM (International Business Machines Corporation, Rochester, New York, USA)

Electromatic, the first commercially successful electric to be marketed in the United States, and the forerunner of the IBM electric. It employed a powered roller system for driving both the type-bars and carriage. c.1935. T.1962.112

Electric Executive, a later development of the IBM Standard electric, semi-front strike mechanism; with revived differential spacing between letters and proper justification. Bold-face type and dull grey crackle finish, 1957. T.1966.13

Selectric, electric, commonly called the IBM Golf Ball typewriter, an influential model line of electric typewriters, outwardly designed by Eliot Noyes and introduced in 1961. Instead of a "basket" of typebars it had a pivoting type element, or 'typeball' that could be changed so as to display different fonts in the same document, an idea originally devised in the type-wheel of the Blickensderfer of nearly seventy years before. The Selectric also replaced the traditional typewriter's moving carriage with the paper roller (platen) that stayed stationary, while the typeball and ribbon cassette moved from side to side. Made in Canada c.1964. T.1991.77.1. T.2001.260

IBM Memory, electronic, golf ball, 1970s. ABDMS022108

Electric, black, with vinyl dust cover. Formerly used in the office of Glasgow's Museum of Transport, c.mid-1970s. GLA TEMP.8590

Imperial Typewriter Company (Leicester & Hull, England). [Founded in Leicester in 1902 by Hidalgo Moya. Acquired by Litton Industries in 1966. Production at Leicester ceased in 1974, with manufacture moving to a number of countries, including Germany, Japan and Portugal.]

Imperial Model "B", down-strike from the front, semi-portable. The typebars strike down into a type guide and on to the vertical centre line of the platen giving visible writing. The keyboard has 28 keys giving 84 characters by double shift and is arranged as a sector of a circle. Serial no. 28878, 1915-1920. From Drumry Primary School, Clydebank, Dunbartonshire. ME.1985.516

Imperial Model "B", front down-strike, semi-portable, with 3-row curved keyboard and double shift, c.1920. T.1967.7

Imperial Model "D", front down-strike, straight keyboard, 1919-1925. T.1962.44

Good Companion Model T, portable, 1942. MACLCpic55.

Good Companion Model T, portable, semi-front-strike, serial no. 2H015, c.1942. ABDMS027341

Model 50, standard manual front-strike 4-bank machine, which set the pattern for most later Imperials. With easily interchangeable platens, carriages and type units, it opened up big markets and the ease with which foreign keyboards could be fitted boosted sales further. 1927-1956. T.1988.88. GLA T.1987.19. COTSL:91:045:1

Model 50, serial no. N6787, with red dust cover, c.1936. TEMP.16470

Model 50, standard manual, universal four-row QWERTY keyboard, front action type bars. From Lodge Canongate, Kilwinning. Serial no. ZC 1263. Made 1941. HH5342/90

Model 50 Imperial Standard Dual Unit typewriter, with two physically separate keyboards mounted side-by-side; one universal standard qwerty; the other bearing mathematical symbols. The keyboards on these units were interchangeable. c.1955 - c.1960. DUNUC 3068

Model 58, manual, with 5 rows of keys rather than the usual 4, 1948-1959. MACLCpic49

Model 58, with dust cover, made by Shannon Systems, c.1948-1955. GLA T.1988.45.b

Model 60, manual, 1949-1956. MACLCpic52. COTSL:92:130.

Model 65, standard manual front-strike 4-bank machine, similar to but more streamlined and compact than the Model 50. 1952-1955. T.1988.89. MACLCpic53.

Model 65, most of base frame and chassis missing; with a mixture of Greek, Latin and engineering\mathematical symbols. 1952-1955. DUNUC 3102

Standard manual typewriter. No further details. DUFDM:1972.0546

Standard manual typewriter, in wooden case. No further details. CUPMS:1998.0139

Standard manual typewriter, 1950. T.1987.307

Portable, green frame, Qwerty keyboard, grey and green keys, beige crackle finish metal case, previously owned by John A. Stevenson. c.1957. SH.2004.253.1

Good Companion Model No. 7, portable, in leatherette travel case. Complete with original instructions, duster and carbon paper. c.1961. GTM 1996:0018:09

Model 66, manual, front-strike, 1954-1967. MACLCpic51. ABDMS022020. GLA TEMP.8589

Model 66, manual, oblique front-strike action, universal 4-row QWERTY keyboard. Fair to poor condition, carriage jammed. L87 x W54 x H28 cm. Made in Leicester, 1954-1967. SMM 1998.1739

Model 66, green, with 133 model continuous stationery attachment connected as a framework at the rear of the machine. Possibly formerly used in the Glasgow Transport Museum office, c.1962. GLA T.1996.5.1

Model 70, manual, blue, very dirty, 1962-1968. GLA TEMP.8586

Model 70, manual, with extra length carriage, 1962-1968. MACLCpic48. MACLCpic54.

Model 80, with cover, from computer in Hillerup Jorgensen's Danish Tableware Warehouse at Sheilinghill, Hamilton, now demolished. Used at the museum from the 1960s. Made 1968-1971. SL DB856

Model 90, manual, oblique front-strike action, universal 4-row QWERTY keyboard, 24-inch carriage. A few dirt marks but generally good condition. L63 x W46 X H21 cm. Made in West Germany, c.1974. SMM 1987.0553

Imperial 200, portable, serial no. MC 1694588, turquoise, made in Japan, 1969. T.1997.56

Model 770, electric, c.1970. T.1998.222

Model 790, electric, white, serial no. 1239270. Formerly used in the office of Glasgow Museum of Transport, c.1972. GLA TEMP.8587

Model 790, electric, grey, by Imperial Litton (Litton Industries Corporation of America became Imperial's parent company during the 1960s, securing its future), serial no. 790-17-1413122. Formerly used in the office of Glasgow Museum of Transport, c.1972. GLA TEMP.8588

Imperial, serial no. 5240, used at Inverness Head Post Office. IMAG 1981.338

Imperial, from Elgin telephone exchange which closed down in 1987 and was demolished in September 1990. Used by the Union of National Telecommunications Staff Association (TSA). ELGNM 1987.1

Imperial typewriter, no further details SL DB868

Jewett Typewriter Co. (Des Moines, Iowa, USA)

Jewett, up-strike, double keyboard, invisible writer, invented by George A. Jewett. 1892. T.1934.201

Junior (Germany)

Junior, a cheap tinplate toy circular index type-wheel machine, with miniature carriage and a dummy keyboard. Selection of the characters is made by rotating the knob on the index. Roller inking. Ribbon on later models. Made in Germany c.1920-1930. ABDMS021759

Keystone Typewriter Company (Newport and Harrisburg, Pennsylvania, USA)

Keystone, swinging sector, 1899. T.1934.210

Lambert Typewriter Co. (New York, USA)

Lambert, circular index with radial plunger action. Eighty-four characters with double shift mechanism, in an oak box, of the type made by the Gramophone & Typewriter Co. in England 1900-1904. About 1900. T.1965.14

Lilliput (UK)

Lilliput, toy machine, front-strike, 1950s. ABDMS021760

Lumar

Lumar junior, toy, metal body painted grey, blue and red, carriage and keys blue. Mechanism similar to a 'golfball' machine. In original card packaging. c. 1950-c.1970. HC.1981.37

Lyon Manufacturing Co. (New York, USA) see 'Merrit'

McLoughlin Bros. (New York, USA)

McLoughlin, circular index, 1884. Rare. T.1934.180

Maskelyne (London, England)

Maskelyne Victoria Model 3, down-strike grasshopper action, invented in 1889 by John Nevil Maskelyne and his son, the first machine to have differential spacing. Very rare. c.1897. T.1934.193

Merritt Manufacturing Co. (Springfield, Massachusetts, USA) & Lyon Manufacturing Co. (New York, USA)

Merritt, linear plunger index, double shift, metal type, marked '1234' and '9616', the latter probably the serial number. c.1892. T.1934.179

Molle Typewriter Co. (Oshkosh, Wisconsin, USA)

Molle portable, black metal, in carrying case, yellow characters, serial no. 7292, probably c.1920, by the Molle Typewriter Co., Oshkosh, Wisconsin, USA. [Molle production finally got under way in 1918 with their No. 3 model, but their machines were not a success and the company went bankrupt in 1922]. SL 84.068

Monarch Typewriter Company (Syracuse, New York, USA) & Union Typewriter Co. (USA)

Monarch Visible 2, front-strike, 4-row qwerty keyboard, c.1904. GLA T.1959.5

Monarch Visible 3, front-strike, upright machine, 4-row keyboard, made in Ilion, New York. c.1905. T.1975.X.43

Monarch Pioneer, portable, front-strike, 3-row keyboard, first built by John H. Barr in 1920. In black leatherette covered ply carrying case, c.1945. Later manufactured by Remington-Rand Ltd. T.1996.61

Moya Typewriter Co. (Leicester, England)

Moya No. 2, type-sleeve, improved visibility, 1905. T.1934.185

National Typewriter Co. (Fond du Lac, Wisconsin, USA) see 'Rex Typewriter Co.'

Noiseless Typewriter Co. (Middletown, Connecticut, USA)

Noiseless model 4, by the inventors of noiseless typewriters, c.1917. T.1934.8

North' s Typewriter Manufacturing Co. Ltd (London, England)

North's, down-strike-from-rear, invented by Morgan Donne and George B. Cooper, a successor to the 'English' (see English Typewriter Co. Ltd.) with which Donne was also connected. c.1892. Not a common machine. T.1934.200

Odell Typewriter Company (Chicago, USA)

Odell No. 1, sliding linear index. Missing bell and type-bar, c.1889. Printing was effected by sliding the index till the desired character corresponded to a fixed pointer above the printing point, whereupon the index was depressed by means of the same finger-grip with which the character was selected. GLA TEMP.8583

Odell linear index, ink roller, indicator and 42 characters, 1895. T.1934.176

Odell Model 2, sliding linear index, supplied by Perry and Co. Ltd. Genl. European Agents, Holborn Viaduct, London and Birmingham. 1890s. NLC 2004/92

Oliver Typewriter Company (Chicago, Illinois, USA)

Oliver No. 1, down-strike-from-side, invented by the Rev. Thomas Oliver. c.1894. T.1934.203

Oliver (No. 3) Standard Visible Writer, lateral down-strike action, with metal dust cover, 1898-1907. T.1959.39. GLA T.1990.30.1

Oliver No. 6, lateral down-strike action, c.1911. KIRMG:1978.0520

Oliver No. 9, lateral down-strike action, fair condition, c.1915. KIRMG:1978.0010

Oliver No. 9, with 14 inch platen and 28 keys with double shift. 1916. T.1972.62

Oliver No.9, with canvas cover (not seen with it), supplied by the Oliver Typewriter Company, London. c.1916. T.1969.X.50

Oliver No.9, down-strike, immaculate condition, 1915-1922. ABDMS022336

Oliver No.9, down-strike from the side, standard visible writer, with dust cover, c.1916
GLA T.1973.35. FIFE NN5.

Oliver No. 10, lateral down-strike action, poor condition, c.1920. DUFDM:1973.0720

Oliver No.11, down-strike from the side, 3-row keyboard, 1922-1928. FALKM 1977-020-001

Oliver IMAG 1982.084. ME.1982.510

Olivetti

Model M40, manual, with long 22 inch carriage, on wooden carrying base with metal handles. Made by Ing. C. Olivetti & C.S.p.A. Ivrea, Italy, and supplied by Watson's Typewriter Ltd. c.1935.
GLA T.1970.31

Model M40, very dirty, front case panel missing, c.1938. GLA TEMP.8577

Model M40/3, front and top body panels missing, c.1946. CUKDM 1984/021

Lexicon 80, manual, 1953-1959. T.1991.63. MACLCpic56.

Lexicon 80, manual, grey cast metal body, by British Olivetti Ltd, Glasgow. c.1955. T.1992.14

Lettera 22, portable, brown painted steel chassis and Qwerty keyboard, serial no. S630110. With dust cover and plastic and leather carrying case, by Olivetti, Glasgow. c.1955. SH.2001.68

Studio 44, portable, 1952-1967. ABDMS017692

Olivetti 82, manual, by British Olivetti Ltd. of Glasgow, c.1960. T.1990.49

Editor 4, electric, with two-tone crackle-finish casing, grey plastic square keys, and three-prong electric plug. Made in USA, c.1969-c.1975. T.2005.84

Valentine, portable, designed by Ettore Sottsass and Perry King. Plastic housing and carrying case. Made in Italy by Olivetti. 1969. E.1990.6.25

Valentine, portable, made in Spain, c.1970. Design classic by Ettore Sottsass, released on Valentine's Day 1969. T.1989.15

Linea 88, standard machine, 4-row qwerty keyboard, large typeface, light grey metal case with dark grey keys and roller, 1969-c.1971. ME.1984.105

Linea 98, standard typewriter, 4-row qwerty keyboard, silver-grey and grey-cream plastic chassis. By British Olivetti Ltd, c.1972. SH.2001.69

Tropical, portable manual, made in Brazil, 1980s. T.1998.15

ET221, electronic, daisy wheel, c.1985. ABDMS018208

Olivetti typewriter, no further details. SL DB869

Olympia (Wilhelmshaven, Germany)

Manual. SH.2003.182

Model 8, standard manual, with glass viewing panels on sides and rear. Supplied by Cosmos Typewriter Company, 1932-1950. GLA TEMP.16107

Model S.G.E. 10/40, electric. Cream coloured plastic machine, ribbon, with letter and number keys. Manufactured by Remington, 1959-1962. ELCMS 2007.4.1

Model SG3 N/L, manual, 1969-1976. MACLCpic60

Paillard, E. & Cie (Yverdon, Switzerland)

Hermes Ambassador, electric. 1959-1971. Paillard had introduced the manual 'Hermes Ambassador' in 1948, followed in 1959 by this 'Hermes Ambassador Electric', with a new system driving the type bars. Some versions had a dual ribbon (carbon and fabric) innovation, with a single selector knob to switch between carbon and single or twin-coloured fabric ribbon, depending on the work to be done. ELCMS NN02.

Hermes Baby, portable, distributed by the American Bolex Co. of New York. 1939-1953. T.1987.9

Postal Typewriter Co. (New York, USA)

Postal, type wheel machine invented by William P. Quentell and Franklin Judge. Supplied by Clark W. Harrison & Co., 72 Fenchurch St. London. 1903. T.1934.213

Remington, E & Sons (Ilion, New York, USA) & Remington Standard Typewriter Co. (USA)

No.1, type-bar up-strike design, capital letters only, 1876. Known formerly as the Sholes and Glidden typewriter. T.1904.304. T.1934.186

No. 1, serial no. 3953, 1876. T.1939.21

No. 2, type-bar up-strike design, the first machine to write capitals and small letters, with a shift key. 1878. T.1934.187. T.1960.34

Standard, manual, by Wyckoff, Seamans & Benedict, post-1882. ABDMS009820

No. 5, type-bar up-strike design, specifically designed for the continental market, with 42 keys to print 84 characters and a longer platen owing to continental papers being generally wider than the standard quarto size. 1888. T.1936.9

No.7, type-bar up-strike design, 1896. T.1934.205

No. 7, type-bar up-strike design, manufactured by Wyckoff, Seamans and Benedict . Complete with metal carry case, c.1896. GLA T.1992.24

No.8, type-bar up-strike design, non-visible typing, qwerty keyboard, with steel case, c.1900. GLA T.1967.6

No. 10, the first of the Remington series to have front-strike visible typing. It was designed under O. Woodward's US patent no. 863,890. Fitted with a back-space key and introduced a decimal tabulator, or column selector, operated by five red keys situated at the top of the keyboard. 1907. GTM1988:0232. ABDMS009822. ABDMS009826. GLA TEMP.8573 (Serial no. RK03866).

No. 10, colour black, bearing the Remington slogan, 'To save time is to lengthen life'. Serial no. 176939, c.1908. GLA T.1986.35

No. 10, with metal carrying cover, serial no. RS 5.3800, c.1920. GLA T.1988.51

No.12, manual, first manufactured in 1922. EF0473. FIFE NN3 (1922-1930).

No.12, with brown cover. ELGNM 1970.1

Noiseless 6, front-strike, the first noiseless machine to have four rows of keys, serial no. 0C8082, c.1926. GLA TEMP.8576

World Service, portable, in carrying case, unoperational, with a Remington 'World Service' guarantee dated 1st September, 1925. SL 84.172

Portable, in black carrying case with leather stitched handle. Serial no. NV60361. Key to open case attached on a piece of string. Top of case detachable, small wooden cleaning brush inside the lid. Black and red ribbon. Typewriter attached to base. c.1920-c.1939. ELCMS 2004.611

Portable, with 4-row QWERTY keyboard, in black carrying case with leather handle, used by Dr. Murray Macgregor in the preparation of scientific and literary works, c.1926. T.1994.64

Standard Portable, folding, manual. The first four-row keyboard portable, a compact design in which the type-bars had to be raised for action using the lever on the side. In carrying case, 1920-1939. MACLCpic62. GLA TEMP.16125 (Serial No. V235081)

Standard, manual, front-strike, serial no. X-1044725, 1930s. ABDMS021211

Noiseless Portable. The type-bar linkage has an overthrow weight to slow down the speed of impact of the type. Serial no. N18542. Cased. About 1931. Excellent condition. T.1969.30

Victor T, portable, serial no. 801454, complete with wood and leatherette case, c.1930s.

GLA T.1992.23

Quiet-Riter Miracle Tab, portable, manual, c.1950. MACLCpic3

Standard manual typewriter, no date. T.1988.90.

Standard manual typewriter, by Remington-Rand, from Thomas Coates Ltd.(owner), plumbers, Motherwell. NLCMH 1988/54

Portable, front-strike ABDMS018332. FALKM 1987-002-001.

Portable, black metal and plastic, in cloth-covered wooden carrying-case. c.1950s. COTSL:91:300

Rex Typewriter Company (USA)

National, portable, compact modern design front-strike, 1916-1917, also known as the 'Portex' (a contraction of Portable Rex). T.1934.223

Royal Typewriter Company (New York, USA)

Royal, low profile front-strike, offering fully visible typing. Invented by E. B. Hess. 1906. T.1934.215

Standard Model 5, with locking lid and key. Lid locked and key missing. A mechanically improved machine from earlier models with 10 inch platen, a two-colour ribbon, and incorporated the first paper bail in any typewriter. 1911. GLA T.1973.45

Standard, manual, 1920. NLCMH 1989/64. COTSL:92:201

Standard Model 10, manual, c.1923. COTSL:90:302:1. SAC 07

Standard Model 10, manual, front-strike machine with segment bars, standard 4-bank keyboard, serial no. X566563, c.1923. GLA T.1977.20

Standard Model 10, universal four-row QWERTY keyboard, clear Perspex panels in each side. Serial no. X 907050. Made 1926-1927. HH5340/90

Standard Model 10, manual, front-strike machine with segment bars, standard 4-bank keyboard, COTSL:97:118

Model H, with glass panel in front casing, c.1935. GLA TEMP.17936

Portable, with rigid cover with carrying handle, serial no. 0-495084, c.1937. GLA TEMP.16093

Magic Margin, sporting a new style covered top, and improved touch control, c.1939. SAC 06. GLA T.1987.8

Model F.P., standard manual, grey metal, with coated fabric dust cover. 1957-1962. GLA TEMP.8591

Electric, made in Holland. Used by Sir Compton Mackenzie's secretary to type his novels. c.1950-c.1970. T.1979.X.16

Portable, cased ABDMS009885

Portable, front-strike ABDMS018331

Royal typewriter, no further details. SL DB850

Salter, George. & Co. (West Bromwich, England)

The Salter, semi-front-strike, with the type-bars set back at 45 degrees, c.1892. T.1934.198

Salter Standard No. 7, down-strike from the front, with metal cover, c.1907. GLA T.1958.32.a

Standard, front down-strike machine with double shift mechanism giving 84 characters from 24 keys, a back-spacer and metal dust cover. Probably around 1913. T.1962.8

Standard No. 10, down-strike with the type-bars in front of the platen. c.1910. T.1988.X.14

Secor Typewriter Co. (Derby, Connecticut, USA)

Secor, front-strike, full keyboard, invented by Jerome B. Secor, and manufactured in the premises of the Williams factory. 1906. Not a particularly rare machine, but only 7,000 are believed to have been built. T.1934.218

Seidel & Naumann A. G. (Dresden, Germany)

Erika No. 2, portable, front-strike folding portable in a carrying case. The platen and ribbon spools are mounted on arms, which fold down over the 3-row keyboard. Serial no. 62167, 1911-1923. T.1974.217

Erika Bijou, portable. Carriage return and platen fold down. Whole contained in a cloth-covered wooden carrying case. Supplied by Duncan and Co. 185 Hope Street, Glasgow. c.1920. COTSL:88:090:1

Ideal, semi-front-strike, type basket set back at 45 degrees, patented by Barney & Tanner, of Groton, New York, but manufactured in Germany. The first German typewriter to have a back-spacer. 1903. T.1934.214. T.1959.42

Ideal, fitted with a very long 24½ inch platen, c.1926-1929. T.1960.3

Silver Seiko Ltd. (Tokyo, Japan)

Silver-Reed 2600, model Sp-8700, electric, with cream and green plastic casing and Qwerty keyboard. In black plastic carrying case with handle. c.1985. SH.2001.131

Simplex Typewriter Co. Inc. (New York, USA)

Model A, circular index, special demonstration model with red painted steel platform and cardboard base, with original packaging. 1930. SH.2003.317

Singer-Friden (Rochester, New York, USA)

Flexowriter, electric, punched tape controlled machine on a table, c.1970. Used for automatic letter writing, or direct attachment to a computer input or output. A paper tape forerunner of modern word processing. T.1981.5. GLA TEMP.19820 (on a stand)

Smith, L. C. & Brothers Typewriter Company (Syracuse, USA)

No. 10, 1908. ABDMS009812

Office typewriter, c.1920. T.1979.105

Typewriter, with paper label stating, 'As used by Grace and Kigan Grant on behalf of the community of Easterhouse until 1987'. PP.1987.265.dup1

Smith-Corona (USA). Created by the merger of L. C. Smith and Corona Typewriter Company from 1926. In 1946 the company officially changed its name to 'Smith-Corona', changing it again in 1953 to 'Smith-Corona Inc.'

Model 7, c.1920-c.1930. GLA T.1987.21

Capital, manual, made in USA, c.1930 LVSAV1985.053

Portable, folding, in black painted metal carry case, by L. C. Smith & Corona Typewriters Ltd, Aldwych, London, no further details GLA T.2008.95

Manual, black and gold, no further details. FALKM 1989-005-001

Smith-Premier Typewriter Company (Syracuse, New York, USA)

Smith-Premier, up-strike, double keyboard, invented by Alexander Timothy Brown of New York. c.1889. T.1934.192

Smith-Premier No. 2, up-strike, with double keyboard which avoided the need for a shift mechanism but made touch-typing impossible. Serial no. 39614. 1895. T.1951.5

Smith-Premier No. 3, double keyboard, invisible writing, c.1896. T.1934.87

Smith-Premier No. 4, circular type-basket, up-strike action printing on the underside of the platen, which lifted to expose the line of type. c.1900. T.1957.65. GLA T.1977.24 (serial no. 66860).

Smith-Premier No. 4, with a double keyboard and up-strike type-bar action, serial no. 66504. c.1900. GLA T.1958.31. GLA T.1985.9 (serial no. 502).

Smith-Premier No. 10, a modernised front-strike design to give visible typing, yet retaining the popular double keyboard. 1908. T.1934.220. ABDMS009821.

Smith-Premier No. 10b, front-strike visible typing, double keyboard. The 'b' version of the Model 10 incorporated a ten-key tabulator. c.1908. Production ceased around 1921. GTM1988:0231

Model "60", fitted with segment bars and type guide. c.1928. By this time the Company was owned and controlled by the Remington Typewriter Company. T.1975.149

Stearns, E. C. & Co. (Syracuse, New York, USA)

Stearns, front-strike, universal keyboard, invented by J. E. Thomas. The first machine to possess a decimal tabulator. 1905-1908. T.1934.216

Stoewer, Bernhard A.G. (Stettin-Grunhof, Germany)

Swift Visible, type-bar machine made c.1909. T.1934.222

Triumph A.G. (Nuremburg, Germany)

Triumph, manual c.1950 MACLCpic61

TYPEWRITER

Typewriter, no further details GLA TEMP.13099, 13864

Typewriter. A small black portable in a black lockable carrying case. Four bank QWERTY keyboard, in good condition, with just faint signs of rust. Serial no. 0 – 742702. Supplied by 'Simpson Bell and Co.', c.1945. ELCMS 1999.135

Typewriter and cover, from Central Library, Hamilton? SL DB870

Typewriter with qwerty keyboard from Cuthbertson St. Primary School, Glasgow. ME.1981.862.a

Typewriter, used by Ian Pattison when he wrote the series of Rab C Nesbit at the BBC. PP.1996.20

Electronic, used by Falkirk Museum 1982-1986, when based at Orchard Street.
FALKM 2003-032-001

Underwood Typewriter Company (New York, and Bayonne, New Jersey, later Connecticut, USA) Founded in 1896, Underwood produced what is considered to be the first widely successful, modern typewriter. By 1939, Underwood had produced five million machines.

Underwood Standard, office typewriter, with a very long platen. Nice condition. c.1896-c.1940.
T.1973.53

Underwood Standard IMAG 1985.102

Underwood Standard, 1896-1920. FIFE NN1

Underwood Standard, possibly the Button Shift Model of 1906, serial no. 281432, cover missing.
c.1906-c.1909. GLA T.1981.45

Underwood Standard No. 3 [2], front-strike, visible machine, 14 inch carriage, c.1898-1931.
ELCMS NN01.

Underwood Standard No. 5, front-strike typebar, visible machine, invented by Franz X. Wagner.
c.1901. T.1934.212. SAC 05. GLA TEMP.8584

Underwood Standard No. 5, colour black, serial no. 873060, c.1915-c.1919. GLA T.1982.59

Underwood Standard No. 5, front-strike, visible machine, first produced in 1901 it remained in production for the next thirty years as a general office typewriter. In good working order, with dust cover, c.1926. GLA T.1973.18

Underwood Standard No. 5, serial no. 2334478-5, supplied by Sculthorps Ltd, 109 Nile Street, Glasgow, c.1928. GLA TEMP.16126

Underwood Standard No. 5, poor condition, c.1905-c.1930. No further details. FIFE NN4

Standard manual, 1920s-1930s. MLC:1996:1347 (from Stewart's and Lloyd's Clyde Works office).
GLA TEMP.23088 (supplied by Sculthorps Ltd, 109 Nile Street, Glasgow)

Standard Portable model, with 4-row keyboard, and shaped box cover, serial no. 446461, c.1931-1932. T.1970.76

Standard Portable model, in a carrying case, made for the German market before 1926. T.1972.100

Underwood Model 5 or Model 6, with extra-length 24 inch carriage, qwerty keyboard, serial no. 4497063-18, with fabric dust cover, c.1926-c.1935. GLA T.1985.43. GLA TEMP.8585

Underwood Model 5, oblique front-strike action, universal 4-row QWERTY keyboard, with ribbon, serial no. G15-7396824. Fair condition; a little dirty and worn. L55 x W35 x H25 cm. c.1940.
SMM 1998.1722

Underwood Standard Model 6, colour black, serial no. 4,492,828, made in Britain, 1934-1938.
GLA T.1983.8

No. 6 Master model, c. 1940. COTSL:87:082:1

Underwood Standard office typewriter, with extra-length carriage, c.1947. DUNUC 3486

Wanderer-Werke (Chemnitz, Germany)

Continental Standard, manual four-bank machine, 1927-1939. COTSL:90:274

Continental Silenta, an extremely successful noiseless 4-bank upright, c.1934-1939. T.1978.30

Williams Manufacturing Co. (Montreal, Canada)

Empire, radial thrust action, serial no. 104562, patented by Wellington Parker Kidder in 1892. c. 1900. T.1934.85

Empire, radial thrust action, 1892-1900. KIRMG:1978.0009

Empire No. 2, radial thrust action, colour black, c.1909. GLA T.1983.16

Empire, radial thrust machine in which the type-bars are thrust against the front of the platen, 3-row keyboard, ribbon inking, distinctive closed top cover, c.1909. GLA T.1973.33

Empire, c.1923. T.1961.35

Empire Aristocrat, portable, grey, complete with metal cover. Slightly grubby, c.1940s.
DTEMP:2006.0958

Empire Aristocrat, portable, formerly used to type reports by Ronald W. Clark, a war correspondent attached to British and Canadian forces, 1944-1945. M.2005.16.1

Williams Typewriter Company (Derby, Connecticut, USA)

Williams No. 1, down-strike grasshopper action type-bar, using direct inking of the type and offering full visibility, c.1892. T.1934.191

Williams No. 2, same action as the No. 1, double bank of type-bars in front and behind the platen impressing on the paper from the top, 3-row straight keyboard, in wooden box cover, c.1894. GLA T.1974.49

Williams portable, grasshopper action, serial no. 8804, c.1893. T.1934.86

Williams No.6, down-strike grasshopper action, characterised by its two segments of horizontal type-bars which radiated in fan shape from the printing point on both sides of the platen. The type rested on an ink pad, and depression of a key caused the bar to hop from the pad to the paper and back again when the key was released. Since there was nowhere for the paper to go in such a design, two open-framed cylindrical baskets were provided beneath the platen on both sides, so that the paper had to be rolled into one, passed over the platen, and unrolled into the other as typing progressed. Ultimately, faced with growing competition from conventional machines, the design was doomed and the company went into receivership in 1909. Serial no. 31510, made c.1906. SL 80.845

Winterling & Pfahl, later, Inh. Carl Winterling (Germany)

Archo, thrust action typebar, double shift. c.1920-1935. T.1962.X.10

Woodstock Typewriter Company (Woodstock, Illinois, USA)

Woodstock No. 5, front-stroke standard machine, 4-row keyboard, c.1937. GLA T.1987.20

Wyckoff, Seamans & Benedict (Ilion, New York, USA) [See also Remington]

Remington Standard, manual, up-strike machine, serial no. 18,038, with metal box lid, c.1900. GLA T.1974.19

Manual, black and gold, no further details. FALKM 1990-006-001

Xerox

645, electronic, made in France, c.1985. T.1991.61

Yöst Typewriter Co. (Springfield, Massachusetts and later Bridgeport, Connecticut, USA)

New Yöst No. 1, up-strike grasshopper action, ink pad, double keyboard, invented by George W. N. Yöst in 1887, and commercially introduced in 1890. T.1934.59, ELCMS NN03

Yöst No. 4, up-strike grasshopper action, allowing the type to move from rest on an ink-pad and strike through a square type-guide on to the paper. Double qwerty keyboard with upper-case keys banked above the lower-case set. Serial no. 7753, c.1894. GLA T.1945.79

Yöst No. 10, up-strike grasshopper action, produced specially for the European market. The double keyboard with 85 keys had larger key pads and lighter keys, serial no. 85501, c.1902. GLA T.1981.16.1, 2 (cover)

Yöst No. 11 (Light Running), double keyboard, c.1905. T.1988.91

Yöst No. 20, front strike, retaining direct inking from a pad as opposed to the usual method of printing through a ribbon. 1923. T.1934.221

Yöst No. 20 (Light Running), an upright compact desk model, 4-row QWERTY keyboard, front-strike visible machine. Made in Flushing, Long Island, New Jersey, USA. 1912-1925. SL DB400

Typewriter, with double keyboard. T.1988.X.15

Typewriter T.1965.X.5

Zimmer, Zinke & Co. (Frankfurt, Germany)

Protos, three-row double shift thrust action, a demountable machine invented by Franz Schuller, 1922-1925. T.1934.219

Glossary

Adze, Scotch: With a round-faced hammer-head poll, instead of the usual pin.

Adze, Shipwright's: The 9 inch blade of the shipwright's adze is longer by an inch or more, and is rather flatter than adzes used in other trades. It is usually provided with a peg poll and the handle is often given a double curve, so that its lower end is brought forward to a point almost in line with the cutting blade.

Anvil, Cooper's Hoop: Sometimes called a 'bick iron', this is a T-shaped anvil or stake, about 30 inches high overall, set upright in a block of wood. The shank is usually square in section, and the slightly rounded top has two or more holes to receive a punch when punching the rivet holes in hoops. It is also used for hammering over the rivets when joining the hoops.

Auger, Cooper's Bung Borer: Known as a scillop or skillop in Scotland, this hand-held tool had a shell-like shaft and wooden cross handle and was used to bore through the side or tops of casks to provide the bung hole.

Auger, Deck Dowelling: A shipwright's auger, made in sizes up to about 1½ inches, with a centre bit nose and plain or screwed plug. Used to countersink deck bolt holes to make room for the bolt head.

Auger, Scotch: A double twist auger, usually with a screw lead or point and a flat cutting edge, but without any side spurs or knickers. Used for boring hardwoods and for all kinds of rough constructional work.

Axe, Cooper's: A thin flat t-shaped blade, 10-12 inches measured along the cutting edge, without a poll and ground on one side only. The tapered socket springs from the middle of the back of the blade, and the handle is offset, to prevent the cooper grazing his knuckles. The blade is bent downwards at an angle of about 20° with the axis of the handle, instead of being parallel with it. Used for chopping off irregularities in staves and for general trimming work on the heads of casks before using a drawing or heading knife.

Axe, Scotch: The ordinary pattern weighs between 2 and 8 lbs, and has a straight-sided blade with rounded lugs above and below the eye.

Brace: A tool for boring, consisting of a chuck or pad for holding the bit at the foot, a head at the top for a hand-hold, and between the two a crank for rotating.

Bradawl: A round blade 1-3 inches long with a chisel point. The bolstered tang is usually fitted in a turned beech handle with a metal ferrule. Used for boring pilot holes for nails or screws. The tool is started with the chisel point, then by twisting back and forth through the wood, the grain is squeezed aside without producing any shavings.

Calliper: Sometimes called compasses or dividers by woodworkers, a measuring tool usually comprising a pair of legs connected by a joint. Used for transferring 'a to b' measurements either

from one part of a work piece to another, or to and from drawings. Woodworkers also use them for dividing or stepping out intervals, and for the process of scribing. There are many different types, to take inside and outside measurements, as well as double-ended varieties.

Chisel, Bruzz: A strong chisel with a V-shaped blade, 10 to 26 inches long overall, either socketed for a wooden handle, or made in steel throughout. Used for chopping out the waste from deep mortices, and for obtaining the finer angles in dovetail-shaped work.

Chisel, Firmer: A general purpose chisel with a flat blade and parallel sides, strong enough to be struck with a mallet, and used for general work. Often heavily bevelled along the edges to enable the user to reach right into the corners of mortice cuts etc.

Chisel, Lock Mortice: Commonly called a swan-necked chisel, it has a blade $\frac{3}{8}$ to $\frac{5}{8}$ inches wide, curving upwards at the sharpened end. Used for cutting the slots for mortice locks in doors and drawers, and other blind mortices.

Chisel, Paring: A lighter blade, long and thin, frequently bevel-edged. Used without a mallet by joiners, patternmakers, cabinet makers, and others, for fine paring and trimming.

Compass, Beam: See 'Trammel'

Cramp: Holding and tightening devices in both wood or metal, for holding work together during assembly or when being glued. Unlike some other members of the 'holding' family, such as the vice, cramps are portable and can be taken to the work in hand. Most of them have two jaws, one or both of which can be drawn together by a screw.

Cresset, Cooper's: A brazier made from three old hoop irons as bands, riveted to three vertical strips of metal, in which shavings and old bits of wood could be burnt. An open-ended cask is placed over the burning cresset to warm up the wood and so make it more pliable for bending into its final barrel-shape form by means of the truss hoops. During the process the cask is mopped over with water and the cresset sometimes splashed to produce steam. The cresset was believed by some coopers to be superior to the later steam-oven because after using the latter the staves tended to *stay bent*. The cresset was usually employed in any case to dry out the moisture from the cask and this was said to shrink the fibres on the inside of the cask which helped to set the staves in barrel form.

Croze, Cooper's: A type of plough plane with a narrow cutter and distinctive heavy semi-circular fence. Used by the cooper to cut the croze groove round the inside of the staves of a cask, near each end, to take the heads.

Die Screw & Stock: A die stock is used to hold a die or cutter to make the spiral screw thread found on the body of metal nuts and bolts and even pipes, to allow them to screw into another piece of material. These metal working tools are sometimes found in woodworking shops because joiners might want to make their own screw fittings. In the past coach builders and wagon makers frequently used them. To cut a thread the bolt head is placed in a vice with the plain shaft sticking upright. With the little square cutting die located in the middle of the die stock securely in place, the tool is gripped by the handles on each end, placed over the end of the rod and turned slightly until it grips the rod. The thread can now be cut by gently turning the die stock around in a clockwise direction, one complete turn at a time, followed by a quarter turn back. When the required depth of thread is completed the die stock is gently turned in reverse to free it from the shaft. A special tool is then used to check the screw thread is level and evenly spaced.

Drill, Archimedean: Varying in length from about 6 to 15 inches, the drill consists of a head, usually of wood, a stem cut or twisted into the form of a slow spiral, a driving (or 'travelling') handle containing a nut cut internally to engage with the spiral, and a screw chuck or pad to take bits up to about $\frac{1}{8}$ of an inch in diameter. The rotating action is obtained by sliding the handle up and down the spiral stem so that the bit rotates alternately in opposite directions. For this reason the V-shaped

bits are ground on both sides. Used for boring small holes in thin wood and metal, and useful for working in confined spaces where a brace cannot be operated. The modern double-spiral version with a reversing device within the travelling handle produces continuous motion in one direction.

Drill, Bow: In its simplest form a cylindrical or bobbin-shaped stock, round which the bow-string is wound, mounted on a steel rod of which the lower end holds the bit, and the upper end carries a head by which the stock is held and pressed against the work. Sometimes a breast-plate is strapped around the body of the user for the same purpose. The stock is rotated by the back-and-forth movement of the bow which imparts a reciprocating motion to the bit which is consequently designed to cut equally well in both directions. The bow is normally made of wood. The cord is attached to one end, is given a single turn round the stock and is then secured to the other end of the bow. Bow or 'fiddle' drills, as they are called, are suitable for comparatively light work, such as boring small holes in wood, metal and stone.

Drill, Breast: A drilling tool larger and heavier than a hand drill, with the bevel gear carried on a steel pillar or cast-iron frame. Early forms had a saucer-shaped head, later developed into a breast-plate. The bits were held in by friction in a tapered square socket, or by means of a screw. Later versions were fitted with a Barber screwed chuck, had adjustable speeds, and a spirit level was often fitted to guide the operator.

File: A metal bar, usually of hardened steel, having one or more of its surfaces covered with a series of raised cutting edges or teeth, designed to cut by abrading. Files are used in woodworking shops for various smoothing or fitting operations. File cuts include float or single cut, double cut and rasp cut; and file forms commonly include half-round, round, flat, fusiform (cigar-shaped) and three-square (triangular-sectioned).

Gauge, Cutting: This tool is identical to the marking gauge, except that it is fitted with a small pointed knife or cutter instead of the spur. The knife is held in position by a wedge, so that it can be taken out for re-sharpening. It is used for deep scoring parallel to the edge of the timber, especially across the grain when marking the shoulders of joints. It can also be used for cutting thin wood, such as veneer, into strips, working from both sides. Factory-made examples are often beech wood and are sometimes referred to as 'slitting gauges'.

Gauge, Marking: Factory-made examples have a slender wooden stem with steel spur near the end. A large wooden head forms a fence to rest up against the side of the wood. A brass inset and wedge holds the head tight and the sharp point can then be used for marking lines parallel with the edge of the timber. Many marking gauges are evidently home-made, consisting of hardwood in two simple parts. A carved cylindrical stem, perhaps 9-10 inches long, with a pointed steel spur at the top end. The head (also known as the 'fence') is a rectangular block with rounded corners and has a hole in the middle. It can be moved up and down the stem and has a wedge or wooden thumb screw to tighten it at the correct distance for marking a work piece.

Gauge, Mortice: Very similar to a marking gauge but with two spurs instead of one, used for marking the double parallel lines showing the position of a tenon or mortice or similar joint, thus avoiding the need to scribe two lines separately.

Gimlet: A miniature auger with a spiral twist or shell body and a screw point. The wooden handle is usually in beech or boxwood and forms a 'T' with the shank. Used for boring small holes from $\frac{1}{8}$ to $\frac{3}{8}$ inch diameter, as pilot holes for nails, screws etc. Unlike the awl, which makes a hole by squeezing the material apart, the gimlet starts by squeezing, but finishes the hole to size by side-cutting.

Gouge: A hollow-bladed chisel. Normally made in widths from $\frac{1}{4}$ to 2 inches, and in eight standard radii ranging from 'flat' through 'middle' and 'scribing' to 'fluting'. The bevel may be ground outside, 'out-cannel', or inside, 'in-cannel'. Most carving work is done with out-cannel gouges whilst in-cannel ones are used for cutting in a straight line, e.g. scribing, or boxing a wheel hub.

Graver: One of a family of special chisels used by a wood engraver to produce the finer lines in engraving. (The broader incisions of a woodcut are cut with knives). A typical graver has a blade about 4-5 inches long which removes a sliver of wood when pushed with the hand. It is designed to cut across the grain and is held at a very low angle to the block being cut. The blade may be straight or slightly bowed (bellied). The handles are made in many patterns – balloon-shaped, peg-top, but more commonly mushroom-shaped, often with the lower side removed to enable the graver to be held at a low angle. The face is ground at an angle of about 45°.

Hammer, Claw: A general carpenter's hammer with a heavy head, of about 15 ounces, and a straight wooden handle, commonly hickory. The claw hammer has one flat round end for banging in nails, and at the other end the head is bent down and split into two forked prongs. This is the 'claw' and the slit is used for sliding under the head of nails and lifting them out of the wood. This is very handy if a nail is wonky and has not gone into the wood straight.

Hammer, Saw-Setting: Professional saw sharpeners sometimes use a hammer to 'set', i.e. bend over the teeth of the saw blade alternately, so that the cut is slightly larger than the saw blade and avoids getting the blade 'stuck' fast in the wood. The hammer has a symmetrical head, tapering to a flat cross pane on both sides of the eye. Head weight is 4 to 8 ounces, and the handle is wooden.

Hammer, Scotch: Design of general claw hammer which has a 'strapped' head. The straps are secured to the top part of the handle. There are subtle variations in shape, an Edinburgh shape and a Glasgow shape, but both have a distinctive bulbous handle near the base.

Hammer, Upholsterer's: A graceful lightweight strapped hammer with a small round slightly flared face for hammering in pins and tacks, and a small claw at the opposite end for lifting nails etc.

Hammer, Warrington: This is a classic joiner's hammer, made in a full range of sizes (5 – 33 oz) as well as in the lighter tack and pattern makers' sizes. It has a round face with a neck chamfered each side of the rounded cheeks. The cross pane is symmetrical and tapers down on both sides to a rounded tip for starting 'pins' and for riveting. Used as a general-purpose hammer by joiners, carpenters, cabinet makers and other tradesmen. In Scotland it is sometimes called a 'pin hammer'.

Hoop driver: A wedge-shaped steel shoe used by cooper's for driving hoops over the outside of a cask. Sometimes called a 'hose driver' in Scotland, where 'Scotch' and 'Glasgow' patterns are found. Grooved at the nose to prevent the driver slipping off the hoop. Wooden handle ringed with iron to prevent splitting under the heavy blows from the cooper's hammer. In the Scotch driver, the steel shoe is necked to make removal and replacement of the shoe or stock easier. Used in the manufacture of barrels.

Iron, Caulking: Family of all-steel chisel-like hand tools about 6 – 7 inches long, with mushroom heads and flared blades. Their edges are either sharp, blunt, or provided with grooves known as creases. They are struck with a caulking mallet by the shipwright when forcing strands of oakum into the seams between planks on the deck and ship sides to make the ship watertight. There are many different types for different parts of the process – bent, blunt, double-bent, single and double crease, fantail reaming, jerry, set, sharp, spike and trenail, to mention but a few.

Jumper: Heavy round-iron rod about 3 feet 6 inches long, curved round at one end to nearly a right-angle. Introduced through the bung hole of a cask, it is used by coopers to lever the circular cask head into position if it sticks below the level of the croze channel.

Knife, Crumming: Coopers draw knife with a blade combining both a straight and hollowing section in the same tool, Used to combine the function of backing and hollowing a stave without changing tools.

Knife, Heading: Coopers draw knife with a large flat blade up to 2¼ inches wide and 16 inches long. There are two types, 'straight' and 'circular' backed. Used for smoothing and finishing the bevel round the heads of casks.

Knife, Hollowing: Also called a 'belly knife' because the blade is bent in a shallow hollowing curve. Made in sizes up to about 12 inches long and 2¼ inches wide. Used to trim and give a slight concavity to the inside of the staves.

Knife, Round Shave: Coopers draw knife, sometimes called an 'inshave'. A round blade, curved into the form of a complete or part circle about 2 -6 inches diameter. Used by coopers for reaching down inside a cask to level the joints between staves, and for cleaning the inside of a cask if it becomes foul. Also used for erasing brands, marks and painted letters from the exterior of casks and boxes.

Mallet, Caulking: Long-handled wooden mallet, used by the shipwright for driving caulking irons. The head measures about 13 inches long and 1¾ inches across the faces, which are circled with thick iron rings, to prevent splitting. The head is hardwood (usually either beech, *lignum vitae* or 'live oak', *Quercus virens*, a very hard oak from the USA) with a central boss, enclosing the handle, held together by two large rivets. It is common for one end of the handle to be left protruding above the head.

Mandrel, Wheelwright's: Heavy iron or stone cone, up to 4 feet in height, used by the wheelwright for truing up the circular iron bonds which bind the wheel hubs. After the bond has been made on the anvil, it is placed on the mandrel and hammered down until perfectly round, and also splayed, to make it fit the slightly tapered face of the hub.

Maul, Chime: Cooper's beating tool in the form of a heavy steel bar, 2½ - 3 feet long, with flattened body and handle at one end, used for knocking on the chime hoops, i.e. the hoops surrounding the head of a cask.

Plane: All woodworker's would own one or more planes. There are endless varieties ranging from the common 'coffin-shaped' smoothing planes and moulding planes, to obscure specialist planes such as the violin plane. The largest planes, of 6 feet or more in length, are the cooper's jointer planes, used upturned, down which the stave is pushed, the jointer having two legs holding one end 18 inches from the floor. Descriptions of each type of plane and their use are given in the listing of planes, together with a check list of plane makers of planes found in Scotland.

Router, Boxing: Spokeshave-type tool. 'Boxing' and 'check' are coachbuilder's terms for a rebate. This has a single iron ¼ - ¾ inch, no fence, and is similar in construction and working to the router plane. Used for finishing rebates to the depth required, and for cleaning out grooves already made and testing them for depth.

Router, Grooving: Fenced router with a ⅛ , 3/16, or ¼ inch wide iron which has a hooked cutting edge, and is wedged in the stock sideways. Made in pairs for working on either hand, with a metal fence adjustable within 5 inch limits and fixed by various means including a screw engaging a nut which runs in a slide within the stock. There is a small round outlet for shavings, known as the 'eye hole'. Used mainly for working grooves for taking a panel or glass.

Router, Jigger: Sometimes called a side router. The cutters are parallel to the sole, and carried in a metal housing. The single-iron type has two hooked cutting edges fixed with two screws; the double iron (London pattern) has two separate plain cutters set at 45°, secured with thin metal wedges. Used for cutting glazing or panel grooves in frames and pillars. It began to replace the pistol router in the mid-nineteenth century.

Saw, Bettye: Large frame saw, typically with a four-sided frame with a centre blade, 30 inches long, tensioned by a wing nut. Another version has wooden cheeks and a centre stretcher, with a blade about 27 inches long, tensioned by a twisted cord or metal rod. This type resembles a large bow saw, but one cheek is extended below the level of the blade, with a cross-handle at the end. Operated by an up-and-down movement, and used for cutting all kinds of curved work. Wheelwrights used them for cutting felloes. Chairmakers used them for sawing out chair arms and other curved parts.

Saw, Compass: Hand saw with a narrow blade, about 10 – 18 inches long, tapered almost to a point, with teeth cut to 10 points to the inch, and fitted to a pistol-shaped handle. Used for cutting curved shapes in wood, particularly interior curves where it would be difficult to use the bow saw, for example in cutting a large hole in the centre of a board.

Saw, Flooring: Special hand saw with a blade 14 – 18 inches long. The lower edge is often convex, and the teeth are sometimes carried round the curved toe of the saw and along part of the back. Used by electricians, gas fitters, plumbers and other tradesmen for cutting out a section of floor board or partition. The curved end of the saw enables a particular board to be sawn across without damaging its neighbour. The convex edge and toe of the saw are used to make a concave kerf almost penetrating the board. The pointed end of the saw is then pushed through, and after penetrating, the saw, which cuts with both edges, completes the cut.

Saw, Skew Back: The modern form of hand saw that we know today was probably first developed in London from around 1700. The basic shape has hardly changed since. The long steel blade narrows gently to the toe. The bottom edge of the blade is lined with teeth for cutting through the log or piece of wood. A closed rosewood handle is screwed through the wide end of the blade. From 1874, saw maker Henry Disston in America made a very graceful blade that was curved or hollowed-out along the top edge. These attractive-looking saws are called 'skew back' saws and became very popular with wood workers in the late nineteenth and early twentieth centuries.

Saw, Tenon: The tenon saw is a back saw with a parallel blade, normally about 10 – 16 inches long with a comfortable closed wooden handle. The rectangular blade is reinforced with a brass strip folded tightly over the top edge. Joiners might use a small saw such as this for making the cuts in wood to produce the tenons to fit into mortice holes to form neat joints in the construction of the sides of drawers used in chests of drawers and other furniture. The back prevents the blade bending, which is important to the joiner who must make short straight cuts, otherwise the work piece would be ruined. The bottom edge of the blade has very sharp teeth to cut across the grain of the wood.

Screwdriver, Undertaker's: Otherwise known as a coffin screwdriver, it has a short steel blade, about 2 - 2½ inches long, and a flat oval handle. The slotted blade has a distinct flare to the tip and is used for screwing down the (normally 6) screws on the lid of a coffin.

Shave, Heading Swift: Cooper's large 'plane-type' shave, often having a heavy square-shaped stock. Many are home-made, but there are factory produced examples as well. The side handles are sometimes turned slightly upwards to prevent the hands from being grazed. The iron is 2½ - 5 inches across, usually straight but slightly convex for cross-grain use. Used for smoothing the heads of barrels and casks which, for this purpose, are held on a heading board. Planing across the grain is quicker, but in most cooperages this was only permitted for the undersides of the head because of the rougher finish.

Shave, Jarvis: A heavy shave with a concave sole about 12 inches long overall, with an oval section, and handles at each end. The double iron, 2 - 2¼ inches wide, is bedded and wedged like that of a plane. The top of the stock is sometimes strapped to prevent the short grain of the shoulders from splitting, and the sole is usually plated to resist wear. Used by wheelwrights and others for rounding spokes, poles etc.

Shave, Spokeshave: A spokeshave has a beech or boxwood body, called the 'stock'. This is shaped and cut away underneath to give the oval handles at either end an upturned or 'winged' appearance. A recess in the middle holds a wedge-shaped steel cutter, 1½ - 5 inches long, and ¼ - 1 inches wide. The blade was adjusted by a thumb turn screw at each end. To resist wear a brass plate is screwed behind the blade and is called a 'plated spokeshave'. In the second half of the nineteenth century, when the spokeshave appeared as a specialist tool for the wheelwright – the maker of wooden wheels for carts and wagons – it was used for shaving the spokes that connected the wheel to the axle hub. Over time, the spokeshave became a more generalised all-metal tool used by many

woodworker's and tradesmen. It was particularly good for shaving wood off curved surfaces, such as shaping a new handle for a hammer, an oar for a boat, or a spindle for a chair back.

Timber Scribe, Cooper's: Known also as a scieving iron, scribe, sciving knife, race knife, scorer, scribe hook, skiven iron, or raze knife. Wooden handle, steel forked shaft, one arm pointed, with a fixed drag-knife at one side, the other arm with the end bent round to form a sharp gouge-like cutter. This excavates a groove (or 'race') when pulled toward the user. It will make a circular groove, with the drag-knife used for scribing numbers and letters. Used for cutting numbers on the cask ends.

Trammel: Sometimes called a beam compass, the trammel comprises a wooden or metal bar of rectangular section, about 2- 5 feet long, and two heads, of wood or metal, which slide along the bar and can be fixed in any desired position by means of wedges or screws. The trammel heads are usually pointed, but one may carry a pencil holder instead. Used by millwrights, shipwrights, carpenters, and others to describe large sweeps or circles, or for marking out large work-pieces.

Web Strainer (Dwang): One of the most important tools in the equipment of the upholsterer, it is in frequently use to give tension to the webbing which forms the foundation in most types of upholstery. Known as a 'dwang' in Scotland, the most common form is a flat, bat-shaped piece of wood, about 10 inches long, with a rectangular aperture in the lower part. One end of the webbing is nailed in position; the other is looped through the slot in the strainer, with a peg put through the loop to secure it. The strainer is then levered over to stretch the webbing which, when taut, is nailed down to its point of attachment.

Glossary of Scottish terms

Alishin: Cobbler's awl

Back check plane: Sash fillister plane

Belly knife: Cooper's hollow knife

Bilfie: Heavy hammer used in a shipyard

Birse: Cobbler's bristle

Blunt adze: Cooper's nailing adze

Bobbin swarf or scillop: Bobbin bit (woodworking)

Brog: Bradawl

Bruiser: Cobbler's glazer and sleeking irons

Casement plane: Hollow and round moulding plane

Cashal: Cobbler's stirrup

Chaif: Cooper's chiv plane

Chequered adze: Cooper's nailing adze

Clooes: Cobbler's grip or clamp

Cordiner: Cordwainer

Crum knife: Cooper's jigger

Deevil: Cobbler's foot (last)

Devil: Cobbler's cast iron last

Devil's tail: Cooper's 'knocker-up' (a cask head lifter)

Dippin: Cobbler's dubbin (dubbing)

Divel: Cobbler's foot (last)

Doggie's hawk: Miner's deputy axe

Drawshave: Cooper's roundshave

Dumcraft: Lifting jack

Dwang: Upholsterer's web stretcher or strainer

Eatche: Adze

Eke: Lengthening bar or extension piece for a joiner's cramp

Elshin: Cobbler's awl

Elsin: Cobbler's awl

Etch: Cooper's adze

Filletster plane: Fillister plane

Fipple bit: Nose bit (woodworking)

Fit-fang: Cobbler's stirrup or footstrap

Flincher: Cooper's chiv or groper plane

Flit plow: Plough plane

Fore check plane: Moving fillister plane

Fore fillister plane: Moving fillister plane

Geelum: Rebate plane

Glaun: Woodworker's vice or cramp

Hack: Small adze

Hafflin: Trying plane

Halfin: Trying plane

Halflin: Trying plane

Half-long: Trying Plane

Hose driver: Cooper's hoop driver

Jock: Callipers (with straight legs)

Kist: Wooden tool chest

Klovie: Claw hammer

Langstick: Cobbler's polishing \ rubbing down bone or long stick

Lingel: Shoemaker's waxed thread

Luggie: Single-handled wooden bucket

Lummie: Cooper's cresset (brazier)

Mash: Framing hammer

Massie: Framing hammer

Mell: Joiner's mallet

Mundy: Heavy hammer used in a shipyard

Patie Bowie (Peter Bowie), an adaptation of 'Petty Boy' from the French 'petite-bois': Cobbler's polishing \ rubbing down bone or long stick

Peltie: Heavy hammer used in a shipyard

Pin hammer: Warrington hammer

Plucker: Cooper's shave, such as a 'downright' and 'swift'

Port saw: Compass saw

Pykin awl: Shoemaker's peg awl

Raglet plane: Dado grooving plane

Rivelins: Calfskin footgear

Roset end: End of a thread (used in sewing leather) which is stiffened with resin

Rosit end: End of a thread (used in sewing leather) which is stiffened with resin

Roundsil: Compass plane

Run (vb.): To make a profile with a moulding plane

Scillop: Auger, Cooper's bung borer

Screw nail: Wood screw

Scutching (vb.): Levelling the joints in the head of a cask by reducing the thickness of one of the pieces with an adze.

Skillop: Auger, Cooper's bung borer

Smiddy: Smithy

Snab's bench ('Snab' being the Scottish term for the obscure slang term 'Snob', for shoemaker or cobbler): Cobbler's bench

Souter: Shoemaker or cobbler

Steady: Cooper's anvil

Stob: Bradawl

Stowing adze: Cooper's trussing adze

Studdie: Cooper's anvil

Study: Cooper's anvil

Suter: Shoemaker or cobbler

Tackety Jock: Cobbler's last

Turkiss: Cobbler's lasting pincers

Whang (term for a thong or a narrow strip of leather): Cobbler's stirrup or footstrap

Whittie: Cobbler's sharpening bat

Wilk bit: Swiss gimlet

Yerkin: Side seam of a shoe

Yickie-yeckie: Cobbler's polishing \ rubbing down bone or long stick