

ALEMBIC COLLECTION: CASE LAYOUTS

Caxton's case layout is that reconstructed by William Blades in *The Biography and Typography of William Caxton* (1877) as being a possible scheme of Caxton's typecase (c. 1480). Blades shows all the characters as italic. Note that the lay has a considerable number of ligatures. Many of the accents and characters are not easily displayed. Thus the boxes with *n*₃ and similar represent the terminal versions of *n* etc. and the *r*₃ is a double terminal flourish. The boxes with | are long *s*. The *ye* etc should have *e* as a superscript. The *d*¹ is a *d* with a swash ascender. The *qp* should be joined as one letter. The *b*~ etc should have the tilde above the letter. The *b*+ etc should have a straight cross stroke similar to a strikethrough. The *ƒ* should be a swash *J*.

The Roman Single case configuration matches that of Wolffger: *Neu-auffgesetztes Format-Büchlein* (1673). This pattern of one single case for both "upper" and "lower" types continued as the norm in Germany, e.g., Bauer, until 1920. However, in the U.K. and the U.S., the norm became the separate Upper and Lower cases, e.g., Moxon Upper and Moxon Lower of 1683, etc. Note that boxes with | are with long *s*. *V*/ is Versicle, and

R/ is Response. The A B are small caps. ¥ should be an acorn. q- should be the abbreviated que and q; should also have an acute accent and -p should be the abbreviated pro. The |t should really be a double width box, with all the boxes to the left being slightly narrower. Also, the § and ¶ boxes should not be quite so wide, and v to z should be slightly wider boxes. The ° ‘ and [! boxes should really be divided diagonally and not vertically. Also the à row should be the same height as the three cap rows. The typecase is (probably) partitioned horizontally into two bays, i.e., caps and accents in the top bay, lower case, etc., in the bottom bay, but the partition is not as wide as the vertical partition of U.S. and U.K. cases. The empty case is Roman Single.

This German Fraktur case lay is that of Wolffger: *Neu-auffgesetztes Format-Büchlein* (1673) as shown in the reprinted book by Technische Universität Darmstadt, Darmstadt, 1987. Note that the lay is for Fraktur type, not the Roman. This pattern of one single case for Fraktur (both “upper” and “lower”) types continued as the norm in Germany, e.g., Genzmer, in 1961.

The German Latin (Roman) case configuration matches the Latin case lay of Vietor & Redinger: *Format-Büchlein* (1679). The case has 151 boxes. The empty case construction is Roman Single. Wolffger in 1673 shows a somewhat similar Roman Single case, but with 161 boxes, as he shows more accented letters. The following characters are conjectured and may not be correct: § (it is on a slant in the original), ck might be et (i.e. &), ¶ is an acorn in the original (cf. Granjon leaf?), 9 is the con. contraction, ɔ may be a comma.

The Moxon Lower case remarks that the letters are not disposed alike in every printer’s house. The box above the z has been amended to contain ; not , as this was an error previously in *The Universal Magazine* of June 1747 which also shows the case lay with ; here, as does Savage: *A Dictionary of the Art of Printing* (1841). The lay is also shown by Lockwood: *American Dictionary of Printing and Bookmaking* (1894) and *Legros & Grant: Typographical Printing-Surfaces* (1916). The companion upper case lay is Moxon Upper. Note that | represents the long s. The typecase overall dimensions are 2’ 9” x 1’ 4½”. The empty configuration is Moxon Lower. Note also that at this

time, k is still in the upper case. Also, thicks, mids, and thins are all in one box. Davis & Carter note that Johnson was the first to show these spaces being split up. Note that the | box in the Moxon Upper case represents a single dagger. The |t box represents the long s with t ligature, etc. Of the astronomical etc. signs, n1 should be Conjunction n2 Trine n3 Opposition n4 Quadrature n5 Ascending s1 Aries s2 Taurus s3 Gemini s4 Cancer s5 Leo s6 Virgo s7 Libra s8 Scorpio s9 Sagittarius s10 Capricornus s11 Aquarius s12 Pisces p1 Saturn p2 Jupiter p3 Mars p4 Sun p5 Venus p6 Mercury p7 Moon n6 Recipe n7 Sextile (or possibly Earth). Also, Moxon shows |i (i.e., double long s plus i) twice, in the Dover reprint, but Savage shows ffl and this has been substituted in the lay. Note, however, that there is no OE, and Davis & Carter comment that this was also so for the French, though a few of Plantin's types had one. The empty case configuration is Moxon, and this pattern of two bays of 49 boxes each remained in use until the present day and is used by, for example, Diderot (1751), Smith (1755), Luckombe (1771), Stower (1808), Van Winkle (1818), Johnson (1824), Savage (1841), Adams (1844), Harpel (1870), Miller & Richard (1873), Plantin (1876), Lefevre (1880), Southward (1882), Mackellar (1885), Palmer & Rey (1892), Barnhart Bros & Spindler (1890s), ATF (1893), Caslon (1897), De Vinne (1904), Stephenson Blake & Co (1922), Caslon (1925), Cefmor (1955), Harrild (1970), Horsfall (1978), Stephenson Blake (1989), etc.

The Caxa Alta y Baxa Spanish lay is from de Paredes: *Institución y Origen del Arte de la Imprenta* (c. 1680). Some clarification is needed as to whether it is one large case, or, as with Moxon, two separate cases. The difference between the two upper case alphabets also needs to be clarified. Whilst there is K there is no k, and whilst there is j there is no J. There is u but no U. There is neither w nor W. Note, however, that Moxon in 1683 shows all these characters, e.g., Upper and Lower. The box with | represents a single dagger. The | represents the long s. The q̄ represents q with long accent. The e, should be e with cedilla.

The Casseau Inferieau de Longues et de Breves French Lower case lay is given by Fertel: *La Science Pratique de l'Imprimerie* (1723). Most of the long and short accents are

in the Upper case, but some are fitted in the Lower, and, thus, the case needs more divided boxes than Fertel's Casseau Inferieau des Caracteres Vulgaires, and it has a total of 61 boxes. Characters with $\bar{\quad}$ represent long accents (longues), and with $\grave{\quad}$ short accents (brèves). The \sim represents doubtful (douteuses). Characters in italics, e.g., *y* are Roman but shown by Fertel with a subscript cr. The | represents a long s. The dem and cad are demi-cadratins and cadratins. The empty configuration is Fertel.

The Casse Superieure de Longues et de Breves French Upper case lay is given by Fertel: *La Science Pratique de l'Imprimerie*, 1723. The case needs extra boxes for the accents, unlike Fertel's ordinary Upper case, which has only 6 rows. The | represents a long s and the A B are small caps. The † represents a single dagger. The \bar{A} represents A with a long accent (longue), \grave{A} an A with short accent (brève), and $\sim a$ an a with a doubtful accent (douteaux) (the translation has not yet been determined). Similarly, A represents A with subscript cr (meaning as yet undetermined). The empty case configuration is the Upper of Moxon, et al., and the companion Lower lay is Fertel.

The Casseau Inferieau des Caracteres Vulgaires French lay is given by Fertel: *La Science Pratique de l'Imprimerie* (1723). Note that j is in the Upper, but the figures are in the Lower. Fertel shows a different Lower, for Longues et Breves, which thus has a few more divided boxes. However, Diderot's case of 1751 has the same number of boxes (54), but the y and x box become one, for x, and the w box becomes divided, for - and ' (which Fertel has in the Upper). The box with e, is for e hook. The | is a long s. The dem are demi-cadratins and cad are cadratins. The empty case configuration is Fertel.

The Casse Superieure des Caracteres Vulgaires French lay is given by Fertel: *La Science Pratique de l'Imprimerie* (1723). Note that the case only has six rows of boxes, unlike the more normal 7 rows of e.g. Moxon's Upper, Fertel's own Casse Superieure de Longues, and Diderot's Haut de Casse. Fertel has the figures and some ligatures in the Lower case. The | represents a long s and the A, B, are small caps. The empty case configuration is Casse Superieure, and the companion Lower lay is Fertel.

Diderot's Upper Case French layout is the haut de casse shown in Diderot's *Encyclopedia* (1751-80). It is also shown in Bertrand-Quinquet: *Traite de l'imprimerie* (1798). A somewhat similar casseau superieur is shown by Momoro: *Traité élémentaire de l'imprimerie ou le manuel de l'imprimeur* (1793), but with k in the upper case and not ct (which is in his lower case) and without ¶. Diderot's equivalent bas de casse is Diderot Lower. The boxes with A, B, etc. are small caps, and those with | are the long s ligature. The | box is a single dagger. Note the location of W, and that é is in the Lower case. Perhaps by mistake, ç is shown in both the upper and lower case, and lower case w is omitted from both. It should perhaps replace the ç in the upper, being adjacent to W. Alternatively, it replaces (or shares) the small cap w. The empty configuration is that of Moxon, and Mackellar (1885), Southward (1887), Barnhart Bros & Spindler's News (1890s), Stephenson Blake & Co (1922), Miller & Richard (same period), Caslon (1925) etc.

Diderot's Lower Case French lay is that given in Diderot's *Encyclopedia* (1751-80) as the bas de casse. It is also shown in Bertrand-Quinquet: *Traite de l'imprimerie* (1798), in Momoro: *Traité élémentaire de l'imprimerie ou le manuel de l'imprimeur* (1793), and Audin: *Histoire de l'imprimerie par l'image* (1929). Momoro shows the case without ae and oe and ´ and - and also has ct instead of ° and ; instead of k (which is put in the upper case). Audin shows one version as Diderot, and another as Momoro, but the latter also omits & and the illustration in his book has blotted out ct and the long s. The equivalent haut de casse is Diderot Upper or Momoro Upper. Note that j is in the Upper, and é in the Lower. As the lower case w appears to be missing from both upper and lower cases, it could perhaps be put in the one empty box (where é would be if it were not in the lower case), or perhaps be combined with the small cap letter W. The box |i is the long s with i ligature, etc. The en box is really labelled demi quadrats and the em box quadrats. French lays position i where English lays put h, and Oxford University Press continued this tradition. Like Moxon, Diderot has | f g (but then Moxon has |h and, of course, the h is in the English position). The empty case configuration is Diderot and is not quite the same as English/US cases, e.g., the position of the ffi and k boxes and also the é box.

The Smith Lower Case No.1 English lay is the No.1 Lower shown by Smith, *The Printer's Grammar* (1755). It is followed by Luckombe (1771) and (as being upon the old plan) by Johnson (1824), apart from the ‘ replacing ç and j replacing ‘ and ffi replacing ffl and fli replacing j and ffl replacing hair spaces and q and , swapping positions. The Smith Upper is the companion Upper lay. The empty case configuration is Lower and is the same as Moxon apart from the en and em boxes which are now larger. Note that | represents the long s.

The Smith Upper Case No.1 English layout is the No.1 lay shown by Smith, *The Printer's Grammar* (1755), reprinted Gregg (1965), in their series of English Bibliographical Sources. The companion lower is Smith No.1. Smith also shows an Upper No.2 and Upper No.3 lay, which differ in the arrangement of accents, reference signs, J and U, hair spaces, and ligatures. Luckombe in 1771 (and then Johnson in 1824) show a lay very similar to the Smith No.2. Smith remarks on the advantages to be gained if everyone followed the same lay and comments (in 1755) that type bought by the case at auction often had to be redistributed into a different lay, if it was to be usable. Note that the boxes with A, B, etc, are small caps. The † box represents a single dagger, and †† a double dagger. The |b box represents the long s with b ligature, etc. Note that the capitals are still in the top rows, like Moxon, but the numerals have moved up a row. Small capitals have replaced the accents in the top right rows, and the accents have moved to the bottom rows. The astronomical, etc. signs are omitted. The |t and k are still where Moxon had them. OE is now in the lay. The empty case configuration is that of Moxon, Luckombe (1771), Stower (1808), Johnson (1824), Miller & Richard (1873), Southward (1882), Mackellar (1885), Barnhart Bros & Spindler's News (1890s), Stephenson Blake & Co (1922), Caslon (1925), etc.

The Smith Lower Case No.2 English lay is the No.2 lay shown by Smith: *The Printer's Grammar* (1755). This lay is followed by Luckombe (1771), Stower (No.1) (1808), and Johnson (1824) - on the old plan, except that they all reverse , and q. It differs from Smith's No.1 lay in not having hair spaces or ç, having j in a different position, and also in having f|i and ffi ligatures in the lower case. The Smith No.2 is the companion Upper lay. The empty case configuration is Smith Lower. Note that

| represents the long s. Also, thicks, mids, and thins are still in one box. Davis & Carter note that Johnson was the first to show the spacing split up, e.g., see Johnson New Lower case lay.

The Smith Upper Case No.2 English layout is the No.2 lay of Smith: *The Printer's Grammar* (1755). The lay is repeated by Stower (1808), called a No.1 lay. It is followed by Luckombe (1771) and (being on the old plan) by Johnson (1824), apart from them having § and ¶ reversed. The Upper No.1 lay of Smith (1755) differs in having the reference signs in a different order, J and OE swapped, as is a row of accents, and hairs and ç are in the Lower case being replaced in the Upper by | i and ffi. Note that the boxes with A, B, etc. are small caps. The | box represents a single dagger, and || a double dagger. The |b box represents the long s with b ligature, etc. The companion Lower is Smith No.2. The empty case configuration is that of Moxon, Luckombe (1771), Stower (1808), Johnson (1824), Miller & Richard (1873), Southward (1882), Mackellar (1885), Barnhart Bros & Spindler's News (1890s), Stephenson Blake & Co (1922), Caslon (1925), etc.

The Smith Proposed Fount Lower Case English lay is given by Smith, *The Printer's Grammar* (1755). It is intended for larger quantities of type, and so has deeper boxes. However, Stower and Johnson comment on the difficulty of getting type out of the narrower boxes, because the depth made it difficult to reach to the bottom. The ffi z [] ç ? ! ff | | : are all stored in a separate basket, as they have no boxes in the case. Note that | represents the long s.

The Castillon Lower Case French lay is shown in Castillon: *L'Art de l'imprimerie dans sa véritable intelligence* (1783). The equivalent upper is the Castillon case. The | represents the long s. The en box has demi quadrats and the em box quadrats. Note that the j is in the Upper and that, like Diderot and OUP, the i is where US/UK normally put h.

The Castillon Upper Case French lay is shown by Castillon: *L'Art de l'imprimerie dans sa véritable intelligence* (1783). The two bays have 8 boxes in each row, unlike Diderot's and normal Upper cases, which have only 7 boxes. The equivalent lower case is Castillon Lower, and the empty case is Castillon Upper.

The boxes with A, B, etc. are for small caps, and those with | have the long s ligature. The † represents a single dagger, V/ is Versicle, and R/ is Response. ¹ should be superscript c, ² is superscript r and ³ is superscript s. The five accented letters ã etc. may be incorrect, and the È & È etc. are assumed, as the source illustration is indistinct.

The Momoro's Upper Case (Casseau Superieur) French layout is the casse superieur shown in Momoro: *Traité élémentaire de l'imprimerie ou le manuel de l'imprimeur* (1793). Momoro's equivalent bas de casse is almost the same as Diderot Lower, apart from Diderot including ° ´ - ae oe and k and Momoro including ; and ct. The boxes with A, B, etc. are small caps, and those with | are the long s ligature. The † box is a single dagger. Note the location of W and that ç is in the Lower case. Perhaps by mistake, é is shown in both the upper and lower case, and lower case w is omitted from both. Possibly it replaces (or shares) the small cap w. The empty configuration is that of Moxon (1683), Diderot (1751), Mackellar (1885), Southward (1887), Stephenson Blake & Co (1922), etc.

The Stower Improved Fount Lower Case lay is given by Stower, *The Printer's Grammar* (1808). It is intended for larger quantities of type (and has deeper boxes than a normal case). The ligatures (fi ff etc) being less often used were in small enough quantity to be stored in the normal Lower case. The spacing is stored in drawers. The lay (and case design) discard the boxes needed for long s characters that were shown by Smith (1755) in his Fount case, and thus x j k s w q and punctuation are rearranged. The empty case configuration is Stower Fount.

The Stower Improved Fount Upper Case English lay is given by Stower, *The Printer's Grammar* (1808). It is intended for larger quantities of type (and has deeper boxes). The companion lower case is Stower Lower. The small caps, accents, etc. were in small enough quantity to be held in the normal Upper case. The empty case configuration is Stower Fount.

The Hazard Lower Case English typeset lay is that of Mr Hazard of Bath, given in Stower, *The Printer's Grammar* (1808). Note the unusual location of the spacing and the slightly different box configuration as compared with a normal lower

case such as Johnson's of 1824. This is the first time the spacing has been shown split. There is a somewhat similar new arrangement of the case proposed by MacKellar from 1866 to 1889, again separating out the spacing. The companion Upper case is Hazard Upper and the empty box configuration is Lower Case.

The Stower Hazard Upper Case English layout is that of Mr Hazard of Bath, shown by Stower: *The Printer's Grammar* (1808). It differs from Stower No.1 and Stower No.2 in having the capitals and small capitals in the bottom rows and in moving the accents from the right to left bay. Also, the numerals are in the Lower case. Note that the boxes with A, B, etc. are small caps. The † box represents a single dagger and †† a double dagger. The empty case configuration is that of Moxon, Luckombe (1771), Johnson (1824), Southward (1882), Mackellar (1885), Barnhart Bros & Spindler's News (1890s), Stephenson Blake & Co (1922), Miller & Richard (1920s), Caslon (1925), etc.

The Stower Lower Case No.2 English lay is the No.2 Lower, following Lord Stanhope, as given in Stower, *The Printer's Grammar* (1808). This case construction has 40 boxes, but Johnson (1824) gives a very different version of Stanhope's case, with 43 boxes and the extra ligatures. Note that a normal Lower, e.g., Johnson New, has 53 boxes. The companion Upper case is Stower Upper No.2.

The Stower Upper Case No.2 English layout is the No.2 lay of Stower: *The Printer's Grammar* (1808). Stower also shows a No.1 lay, which is the same as Smith's Upper No.2 of 1755, and also shows an improved Hazard lay. This No.2 lay differs from No.1 in having the numerals in the bottom left rows, and the accents in a different order of row. It also omits the long s ligatures, replacing them with [(' and it also no longer has k in the upper case. Note that the boxes with A, B, etc. are small caps. The † box represents a single dagger, and †† a double dagger. The empty case configuration is that of Moxon (1683), Smith (1755), Luckombe (1771), Johnson (1824), Miller & Richard (1873), Southward (1882), Mackellar (1885), Barnhart Bros & Spindler's News (1890s), Stephenson Blake & Co (1922), Caslon (1925), etc.

The Stower Lower Case No.3 English lay is the No.3 shown by Stower: *The Printer's Grammar* (1808). It has discarded the long s, and enlarged the s box accordingly by combining it with the adjacent box. It also discards the long s ligatures. It thus differs from his No.1 lay (which is the same as Luckombe's). It also differs by omitting ct, and adding thins, em rules, and braces. The { boxes are really top, middle, and bottom of a three-part brace. The empty case configuration is as Smith Lower, apart from the one tall em box in the 2nd row from the top, rather than the more normal two short boxes. It thus has only 52 boxes in total, rather than the normal 53.

The Spanish Caxa Alta Spanish lay is by Juan Joseph Sigüenza y Vera: *Mecanismo del arte de la Imprenta* (1811). The companion lower case is Caxa Baxa. Note that R- is Response, and V- is Versicle. # represents a cross. Putting 6 and 9 in the same box possibly indicates that the same character is being used for both, simply by rotating the type. The empty case is Caxa Alta. There are six rows of eight boxes in each bay, i.e., 2 x 48 boxes, whereas the U.K. and U.S. normal Upper case has 2 x 49 boxes.

The Spanish Caxa Baxa Spanish lay is by Juan Joseph Sigüenza y Vera: *Mecanismo del arte de la Imprenta* (1811). The companion upper case is Caxa Alta. The empty case is Caxa Baxa. Note that there are effectively three rows of boxes, unlike U.K. and U.S. cases, which have three-and-a-half rows.

The Van Winkle Lower Case U.S. lay is from 1818. It is closely followed by subsequent lays such as MacKellar of 1866 onwards. However, MacKellar shows 5em spacing, not hairs, and reverses the position of w and , although ATF 1906 etc., restore the w , position. There is some minor variation in other later lays. Apart from the reversal of w , note also the boxes above the i box, which are divided and start the figures, whereas English cases have an undivided box for spacing. The companion upper case lay is Van Winkle and the empty lower case configuration is U.S. Lower, which remained unchanged thereafter, apart from the occasional variant such as Adams, or MacKellar New, or Hamilton Boss, or Rooker.

The Van Winkle Upper Case U.S. lay is from 1818. The later MacKellar, 1866 onwards, follows it, but includes the fractions, commercial signs, and hair spacing (Van Winkle puts hairs in the lower case). MacKellar also shows \$ and £ in a different row. The companion Lower is Van Winkle. Note that subsequent Upper Case lays show the caps moved to the right and small caps to the left, e.g., Lockwood of 1894. The empty case configuration is the traditional seven equal row pattern of Moxon (1683). The boxes with A, B, etc. are small caps. The box with † is really a single dagger and the box with †† a double dagger. The boxes «, «», » are really bottom, middle, top of a three-piece brace. The box with - is an em rule, -- a 2em rule, --- a 3em rule, and ---- a 4em rule. The box with { is a 3em brace, and the larger one a 4em brace.

The Nederduitsche Bovenkas No.1 Dutch lay is the No.1 Bovenkas of the Nederduitsche Letterkassen of Zweijgardt: *De Boekdrukkerij* (1822) edited by Janssen & Bouman. Van Cleef in 1844 shows a slight variation, for example making more space for accented E. The companion lower lay is Onderkas No.1. Note that | is the long s and † is a dagger. Hel is the hellbox for miscellaneous sorts. The gg £ and s, may be incorrect. The empty case is Bovenkas No.1. Note than unlike the UK/US Upper case, this case has only six rows of boxes. The construction is almost as Ronner, apart from several extra divided boxes in the bottom four rows.

The Nederduitsche Onderkas No.1 Dutch lay is the No.1 Onderkas of the Nederduitsche Letterkassen of Zweijgardt: *De Boekdrukkerij* (1822) edited by Janssen & Bouman. Note that | is the long s, V- is Versicle, and R- is Response. The companion upper case is Bovenkas No.1. There is a Onderkas No.2 lay, without the extra division in the top left-hand box, with ligatures in different boxes, and with ç in the upper case. The empty case configuration is Onderkas No.1.

The Nederduitsche Bovenkas No.2 Dutch lay is the No.2 Bovenkas of the Nederduitsche Letterkassen of Zweijgardt: *De Boekdrukkerij* (1822) edited by Janssen & Bouman. The companion lower lay is Onderkas No.2. There is also a Bovenkas No.1 with more ligatures. Note that | is the long

s, † is a dagger, and --- are em dashes. Hel is the hellbox for miscellaneous sorts. The empty case is Bovenkas No.2. Note that unlike the UK/US Upper case, this case has only six rows of boxes. The construction is almost as Ronner, apart from the extra divided boxes in the middle right rows.

The Nederduitsche Onderkas No.2 Dutch lay is the No.2 Onderkas of the Nederduitsche Letterkassen of Zweijgardt: *De Boekdrukkerij* (1822) edited by Janssen & Bouman. Note that | is the long s. £ and gg may be incorrect. There is a later variation shown by van Cleef in 1844, omitting some of the ligatures but including ij. The empty case configuration is Onderkas No.2. The companion upper case is Bovenkas No.2. Zweijgardt shows another Onderkas No.1 lay, with an extra division in the top left-hand box, with ligatures in different boxes, and with ç in the lower case.

The Stanhope Upper Case English layout is shown in Johnson: *Typographia* (1824), discarding the old ligatures, and changing the position of capitals, etc. to speed up setting. However, Johnson considered it most unsuitable in practice and offered his own Johnson Proposed lay. Note that the boxes with A, B, etc are small caps. The † box represents a single dagger, and †† a double dagger. The -- is an em dash, and --- a 2em dash. The { is a 2em brace and { a 3em brace. The empty boxes are for accents, sorts, etc. as required. Note the three double boxes for Stanhope's new ligatures.

The Stanhope Lower Case was adopted by Earl Stanhope, discarding the old ligatures, adding new ones, and having sloping fronts to the boxes. The lay is also shown by Savage: *Dictionary of the Art of Printing* (1841). Johnson considers it most unsuitable in practice and offers his own Johnson Proposed lay.

The Johnson Proposed Lower Case lay configuration is almost the same as in MacKellar: *The American Printer* (15th ed 1885), except that in the top row, MacKellar has boxes 7 and 8 as part of the e box, and in the second row from bottom, MacKellar divides the v box horizontally into two. However, the actual layouts are different: punctuation, numerals, ligatures. The arrangement of mid, thin, and hair spaces is that of Hazard in 1808, apart from hair and thin swapping places. The large

box for u is the same as Hazard, but Hazard has en and em in the bottom row, and the : . - boxes above the quad box (and k and ; are elsewhere). The configuration of an empty case is shown as Johnson New.

The Johnson Proposed Upper Case lay is his proposed improvement on the old lays such as Luckombe or Johnson New Upper cases. The boxes with A, B, etc. are small caps. The box with † is really a single dagger, and the box with †† a double dagger. The boxes «, «», » are really bottom, middle, top of a three-piece brace. The box with -- is an em dash and --- 2em dash. The box with { is a 2em brace, { 3em { 4em brace. The empty configuration is broadly that of Moxon, Johnson (1824), Southward (1882), Mackellar (1885), Barnhart Bros & Spindler's News (1890s), Stephenson Blake & Co (1922), Caslon (1925), etc. However, Johnson has introduced subdivisions in the top three rows and part of the bottom row—see Johnson Proposed Upper for the empty case.

The Hansard New Lower Case English lay, the “new” lay after the long s, etc. had been discarded and the bar cut out of the old double box. It is also shown in the *Encyclopaedia Britannica* 9th edition (1888). There are some differences with Johnson's New Lower of 1824, especially as Johnson separates out the spacing. However, Hansard includes £ and a three-piece brace (shown here as » «« «), which are omitted by Johnson and also has k in the Lower case, unlike Johnson. The companion Upper is the Hansard New and the empty Lower case is the English Lower, the same as Johnson, and still current at the end of the twentieth century.

The Hansard's New Upper Case is the lay in use after the long s was discarded. It is also shown in the *Encyclopaedia Britannica* 9th edition (1888). Note that the boxes with A, B, etc. are small caps, and that all the caps are still in the top rows of the case. However, the *Encyclopaedia Britannica* also notes that the compositor picked out of the boxes seldom less than 1500 letters per hour, and distributed or replaced them at about 5000 per hour. The empty case configuration is that of Moxon, Smith (1755), Luckombe (1771), Stower (1808), Johnson (1824), Savage (1841), Tomlinson (1853), Mackellar (1870), Miller & Richard (1873), Southward (1882), Barnhart Bros & Spindler's

News (1890s), Stephenson Blake & Co (1922), Caslon (1925), etc. The companion Lower is the Hansard New case.

The Maori Upper Case type lay case was that of William Colenso in 1835, as described in McKenzie: *Oral culture, literacy & print in early New Zealand* (1985). Because the Maori language uses less characters than English, only 72 boxes are needed, rather than the normal 98, and the case can thus include Roman, small caps, and italic. The empty case configuration is Maori Upper, and the lower case lay is Maori Lower.

The Maori Lower Case lay was used by William Colenso in 1835, as described in McKenzie: *Oral culture, literacy & print in early New Zealand* (1985). Because the Maori language uses less characters than English, only 38 boxes are needed, rather than the normal 53 or 54, and thus the case manages to include both Roman and italic characters. The empty case configuration is Maori Lower and the companion upper case is Maori Upper.

Th. French Lower Case French typecase lay is taken from Lefèvre: *Recueil complet d'impositions, exécutées en caractères mobiles, suivi d'une nouvelle classification de la casse française* (1838). The position of e and i is reversed, the case replaces w and k with a single box for em dash, and has figures—not accents—in the case. Some ligatures are, therefore, moved into the upper case, along with j and ;. There are fewer small boxes, and hair spaces occupy the box where the present case has f (which moves along). Overall, this case has 57 boxes. The empty case is Lefèvre and the companion upper case lay is Lefèvre. The column of boxes coloured grey should be ignored—this is the central partition but displayed this way to allow html to represent the differing row heights (the box for i is slightly larger than the adjacent boxes for ‘ and à and the box for 1pt spaces is slightly smaller). 1pt spaces are hairs, demi-cadratins are ens, and cadratins are ems. Cadrats are quads.

This French Lefèvre's Upper Case lay differs from Lefèvre's Haut de Casse of 1880 as, for example, here Lefèvre has the capitals going from bottom to top, whereas in his other lay they start at the top and go down. Another difference is that here J and U are in alphabetic sequence, although W is still separated out. Lefèvre's (lower) bas de casse is Lefèvre, and the empty

Upper case is that of Moxon (1683), Diderot, et al. The boxes with A, B, etc are small caps, and with c etc. are superiors. The V/ and R/ represent Versicle and Response.

The Bookwork Lower Case English typecase lay is that of Southward: *Practical Printing* (1st ed. 1882 and 2nd ed. 1884). It is identical to Johnson's New of 1824, except that Southward has replaced mids with thins, inserted next to fl and omitted mids. Note that the letter k is still stored in the Upper case. There is no ç in either Lower or Upper, but there is an em dash in both. Southward gives a figure of 1500 types per hour when picking type from the case, and 5000 per hour when distributing, and also comments that a simple rearrangement of the present position of the spaces alone would reduce the distance travelled by a compositor's hand no less than half a mile in the space of an ordinary working day. The companion Upper is the Bookwork Upper lay and the empty configuration is the English Lower.

The Old Bookwork Upper Case English layout is shown by Timperley: *The Printers' Manual* (1838) as being on the Old Plan. In general, the lay is the same as Johnson's of 1824, apart from replacing Johnson's em dash with £, and the ç and hair spaces with fractions. Southward comments that many printers place the figures 1 to 7 in the fifth row of boxes in the left-hand division of the case, immediately under the capitals. The next row then has 8 9 0 £ $\frac{1}{4}$ $\frac{1}{2}$ $\frac{3}{4}$ and the last (bottom) row contains the five vowels with diaeresis marks, the ç and k. Southward shows a very different bookwork Old Upper and Improved Upper in the 3rd edition of *Practical Printing*, both lays having the capitals on the right and in the bottom rows. Note that the boxes with A, B, etc. are small caps. The companion Lower is Bookwork Lower, and the empty configuration is that of Moxon (1683), Smith (1755), Luckombe (1771), Stower (1808), Miller & Richard (1873), Southward (1882), Mackellar (1885), Barnhart Bros & Spindler's News (1890s), Stephenson Blake & Co (1922), Caslon (1925), etc.

The New Lower Case English typecase lay is that given in Timperley: *The Printers' Manual* (1838). It differs from Johnson's New Lower of 1824 in putting the figures in the top row, including k in the Lower rather than Upper, moving ae and oe

to the Upper, and omitting em dash and thin spacing. Hazard had earlier shown figures moved to the Lower, in Stower 1808, but he had also altered some of the box sizes. The empty configuration is shown as Lower case.

The New Upper Case English layout is given by Timperley: *The Printers' Manual* (1838). The main improvement on his Old Plan is moving the caps and small caps into the bottom rows, to be nearer the compositor's hand. Spurrell shows a somewhat similar Improved lay, with signs and ligatures in different positions. The boxes with A, B, etc. are small caps. The box | is really a single dagger, and || a double dagger. The boxes with | } | are a three part brace. The -- is an em rule, and ---- a 2em rule. Note that this lay has the numerals in the Lower case, but keeps ffi and ffl in the Upper case. The empty configuration is that of Moxon, Smith, (1755), Luckombe (1771), Stower (1804), Johnson (1824), Miller & Richard (1873), Southward (1882), Mackellar (1885), Barnhart Bros & Spindler's News (1890s), Stephenson Blake & Co (1922), Caslon (1925), etc.

The Savage New Lower Case English lay is that of Savage: *Dictionary of the Art of Printing* (1841). The long s has been discarded, so the f box is enlarged, and the long s ligature boxes become empty. Note the position of q in all these lays and that the letter k is still stored in the Upper case. The companion Upper is the Savage New lay and the empty case configuration is the English Lower.

The Savage New Upper Case English layout is shown by Savage: *Dictionary of the Art of Printing* (1841). It represents the position after the long s and its ligatures were discarded (pioneered by John Bell). The figures now move down nearer to the compositor's hand, diaeresis vowels move higher up, and grave and acute vowels swap rows so that acute are nearest to hand. The companion lower case is the Savage New lay, or Southward Bookwork (i.r.o. Lockwood), and an earlier long s Upper is the Luckombe lay. Note that the boxes with A, B, etc. are small caps. The | box represents a single dagger, and || a double dagger. The empty configuration is that of Moxon, Smith (1755), Luckombe (1771), Stower (1808), Mackellar (1870), Southward (1882), Barnhart Bros & Spindler's News (1890s), Stephenson Blake & Co (1922), Miller & Richard (?same period), Caslon (1925), etc.

The Savage Dublin Lower Case Irish lay is that of Savage: *Dictionary of the Art of Printing* (1841), as being the plan in use in Dublin. It differs slightly from Savage's New Lower by including hairs and em (shown as ---) and en (shown as --) rules and using different boxes for & ! ; ? [(and particularly including k in the Lower, rather than Upper, case. Savage says that the companion Upper is the normal lay in use in London at that time, but as that case has k in the Upper, this is not strictly true. The empty case is the English Lower.

The Edinburgh Lower Case Scottish lay is that given by Savage: *Dictionary of the Art of Printing* (1841). The Upper Case lay is Edinburgh, and the empty Lower configuration is Scottish Lower. Note the Scottish case has, in the top row, two wide k and g boxes, whereas the English Lower has four smaller boxes. Also in the 4th (or 3rd main) row, there is a single y box, and there are four boxes where w and , go in the English case.

The Scottish lay is given by Savage: *Dictionary of the Art of Printing* (1841) as being in use in Edinburgh. Savage shows ff in both the Upper and Lower, which cannot be correct, so one box is presumably for ffi. The equivalent lower case is Edinburgh. The boxes with A, B, etc. are small caps. The † and †† are really single and double dagger. The -- is an em rule and ---- is 2em (or possibly 3em). The typecase is partitioned into two bays, although some Scottish models are partitioned into three bays. The empty configuration is that of Moxon, Smith (1751), Stower (1808), Johnson (1824), Mackellar (1870), Southward (1887), Barnhart Bros & Spindler's News (1890s), Stephenson Blake & Co (1922), Miller & Richard (same period), Caslon (1925), etc.

The German Latin Case German case lay is shown by Savage: *A Dictionary of the Art of Printing* (1841). Savage says only that the case is made as one (i.e., unlike English Upper and Lower cases) and that it is for Roman. The actual case configuration is German Latin.

An Upper and Lower Greek case by Savage, *A Dictionary of the Art of Printing* (1841). The new style of case has the same box construction in the Upper but holds less accented letters, and has slightly fewer subdivided boxes in the Lower with the omission of some variant letters. The empty Upper case is Stower's of 1808. The empty Lower is Savage's Old.

The Adams Lower Case layout is the plan by T. F. Adams in his *Typographia* of 1844. Note that ffl is included here and not in the Upper case. Also, the boxes in the bottom row are divided in a different way from other lower cases, with boxes for spacing moved adjacent to the normal spacing box, and for example, w being in the bottom row, with the punctuation in higher rows. Subsequent U.S. lower cases e.g., MacKellar of 1870, did not adopt this style. The empty case is Adams, and the companion Upper lay is Adams Upper.

The layout is T. F. Adams plan given in his *Typographia* (1844). It differs from other Upper case lays in that the J and U boxes are in alphabetic sequence, whereas the traditional lays have J and U in boxes at the end of the alphabet. It also omits ffl and puts it in the lower case. Apart from these differences, and repositioning & and dot leaders, etc. the lay is followed by later versions such as Hamilton of 1892. Other lays of the period, such as MacKellar of 1870, and Van Winkle of 1818, have the caps on the left and the small caps on the right. The boxes with A, B, etc. are the small caps. The box † is really a single dagger and †† a double dagger. The boxes ‹, ‹‹, › are really bottom, middle, and top of a three-piece brace. The - is an en rule, the -- is an em rule, the --- is a 2em rule and ---- 3em. The { is a 2em brace and { a 3em brace. The companion Lower case lay is Adams. The empty Upper configuration is the traditional Upper of Moxon (1683) and onwards, with all boxes the same size.

The Nederduitsche Bovenkas Dutch typelay is that shown by van Cleef: *Handboek ter beoefening der boekdrukkunst in Nederland* (1844). The companion lower lay is Onderkas. Note that † represents a dagger and --- an em rule. The empty case is Bovenkas. Note than unlike the UK/US Upper case, this case has only six rows of boxes. The construction is almost as Ronner (1915), apart from several extra divided boxes in the bottom two rows.

The Nederduitsche Onderkas Dutch typelay is shown by van Cleef: *Handboek ter beoefening der boekdrukkunst in Nederland* (1844). The companion Upper case is Bovenkas. The empty case is Onderkas No.2.

The Savage New Lower Case English lay is that of Savage: *Dictionary of the Art of Printing* (1841). The long s has been discarded, so the f box is enlarged, and the long s ligature boxes become empty. Note the position of q in all these lays and that the letter k is still stored in the Upper case. The companion Upper is the Savage New lay and the empty case configuration is the English Lower.

The Old Bookwork Upper Case English layout is shown by Timperley: *The Printers' Manual* (1838) as being on the Old Plan. In general, the lay is the same as Johnson's of 1824, apart from replacing Johnson's em dash with £, and the ç and hair spaces with fractions. Southward comments that many printers place the figures 1 to 7 in the fifth row of boxes in the left-hand division of the case, immediately under the capitals. The next row then has 8 9 0 £ ¼ ½ ¾ and the last (bottom) row contains the five vowels with diaeresis marks, the ç and k. Note that the boxes with A,B, etc. are small caps. The companion Lower is Bookwork Lower, and the empty configuration is that of Moxon (1683), Smith (1755), Luckombe (1771), Stower (1808), Miller & Richard (1873), Southward (1882), Mackellar (1885), Barnhart Bros & Spindler's News (1890s), Stephenson Blake & Co (1922), Caslon (1925), etc.

Ringwalt's California Lower Case English lay is based on the description in Ringwalt: *American Encyclopaedia of Printing* (1871). Unfortunately, the complete lay is not given by Ringwalt, so we have a version of the U.S. Lower of BBS (1890s), modified according to Ringwalt's instructions for adapting an ordinary case to the improved Californian lay that was in use in San Francisco. This involves dividing the h box into three (for ens 5-em 4-em spaces), the c box into two (for c and u), moving h to u box, dividing the en quad box into two (for \$ and &), putting hair and em dash into the 4-em and 5-em boxes. With these changes, the compositor's hand travelling distance was claimed to be reduced by more than half a mile per day.

The French Combination Case lay is that shown in Ringwalt, *American Encyclopaedia of Printing* (1871) as the case and lay being adopted by Parisian printers. The hs box represents hair space, and the row of e boxes are superscript characters. Ringwalt

shows the box for thins as having both 4 to em and 5 to em spacing and doesn't specify which spaces are in the thicks box, though presumably they are 3 to em. The empty case configuration is French Single. Although the case is partitioned into two bays, note that there are effectively seven cap boxes on one side and eight on the other. A later version, shown by Muller (c.1910) reduces the eight to seven, but adds an extra upper row, allowing for accents and ligatures, and thus giving more lower case room with fewer divided boxes.

The Jobbing Half Lower Case English typecase lay is shown by Southward: *Printers Register*, 6 April 1872. The case dimensions are 14" front to back by 16" across, and it is as adopted by a London Printing House of the time (McCorquodale). There is a companion Upper case lay, and the empty case is Upper for either Upper or Lower. The half case shown by Southward 1887 is much simpler, having all seven rows of boxes the same size.

The Jobbing Half Upper Case English typecase lay is shown by Southward: *Printers Register*, 6 April 1872. The case dimensions are 14" front to back by 16" across, and it is as adopted by a London Printing House of the time (McCorquodale). There is a companion Lower case lay, and the empty case is Upper for either Upper or Lower. Another Half Case shown by Southward in 1882 is much simpler, having all seven rows of boxes the same size.

The Improved Jobbing Double Case English layout is given in *Southward Practical Printing* 1882, and the improvement is the reduction in rows in the upper case bay, from seven to five, to make more room for the capitals. The empty configuration is Improved Double. The more modern Improved Double Case of Stephenson, Blake & Co. (1922) differs in having six rows of boxes in the upper case section, rather than five rows.

The Hoogen Tekst Romein Boven Belgian lay matches the Hoogen Tekst Romein upper case VV 2,6,R47-B (undated, but probably pre-1876) on view in the Plantin-Moretus Museum. The companion Lower case is Onder, and the empty case is Hoogen Tekst Romein. The |t box represents long s and t ligature. The fi ligature box may be a misplaced character, as

fi also appears in the Onder case. The case is 33½ x 13¾” overall. Note that there are only six rows of boxes, unlike U.K. and U.S. Upper cases, which have seven rows, as do two other Upper cases in the Museum.

The Hoogen Tekst Romein Lower Case Belgian lay matches the Hoogen Tekst Romein case (VV 2,6 R47-O) (undated, but probably pre-1876) in the Plantin-Moretus Museum in 1998. The companion Upper case is Hoogen Tekst Boven. The | box represents the long s box. The empty case is Hoogen Tekst Romein. Note that there are effectively three rows of boxes, unlike U.K. and U.S. cases, which have three-and-a-half rows. The case measures 33½ x 13¾” overall. There are several other styles of Onder Kasse on view in the Plantin Museum, eg Middelbarr, Klein Canon, Laagen Ascendonica, Klein Romein, Kapitalen, Laagen Tekst.

The Laagen Ascendonica Romein Onder Belgian lay is of case No. VV 2,6,R18-O on display in the Plantin-Moretus Museum, Antwerp, in 1998. It is undated, but is probably pre-1876, which is when the Museum became the property of the City of Antwerp. The companion Upper is Romein Boven. The boxes with ç are boxes where it was not possible to see which character was within. The ae box includes oe and hr is hair spacing. The | represents the long s. The empty case is Onder. It measures 33⅜” x 15½” and has a front lip (which the companion Boven case does not have, since it sits above the Onder case). The Onder has the same number of rows as an English or U.S. Lower case, unlike many of the other Onder cases on view in the Museum, which have a half row less, e.g., Middelbarr, Klein Canon, Klein Romein, Laagen Tekst. Its Upper also matches the English pattern of case, c.f. Moxon, et al.

The Laagen Ascendonica Romein Upper Case Belgian lay is in case No. VV 2,6,R18-B on display in the Plantin-Moretus Museum, Antwerp. It is undated, but is probably pre-1876, which is when the Museum became the property of the City of Antwerp. The companion lower is Romein Onder. The boxes with ç are boxes where it was not possible to see which character was within. The boxes with (J) and (W) may be incorrect, as again it was difficult to see the contents. The a- c-

n- are letters with a horizontal tail. The | represents the long s. The # represents a cross. The A, B, etc. are small capitals. The empty case is the normal Upper of Moxon (1683), Smith (1755), Luckombe (1771), Stower (1808), Johnson (1824), Savage (1841), Miller & Richard (1873), Southward (1882), Stephenson Blake & Co (1922), etc., and Adams (1844), Mackellar (1866), Harpel (1870), and the News Upper Case of Barnhart Bros & Spindler (1893).

The Middelbaar Canon Boven Belgian lay is for the Middelbaar Canon Upper case VV 2,6,R15-B (undated, but probably pre-1876, and whose wood looks older than many of the other cases) on view in the Plantin-Moretus Museum. The companion Lower case is Onder. The | represents a long s. V- represents Versicle, and ç is an unclear character but possibly q with an acute accent, or might be j which otherwise is missing from the case. Some accents are missing, eg é which clearly could go in the empty box next to è. The diphthong Æ occupies two boxes (and is not A E as shown), and there is no OE. The i and u either side of ð should have tilde. Note that there is no W or W, nor is there a w in the Lower case. The small cap Z is missing, but possibly this is just a shortage of type, as there is an empty box next to Y, and also there is a Z box. Also, | and f and g appear in both the Upper and Lower case, which may just be gratuitous use of empty boxes in the Upper case. The case is 33½" x 14", and the empty case is Boven. Its construction is the same as Klein Romein, apart from the undivided box in the centre bottom row of the left bay. Note that there are only six rows of boxes, unlike U.K. and U.S. Upper cases, which have seven rows (as do two other Upper cases in the Museum, e.g., Laagen Ascendonica and Klein Canon Romein).

The Middelbaar Canon Onder Belgian lay is of the Middlebaar Canon lower case (VV 2,6,R 15-O) (undated, but probably pre-1876, and whose wood looks older than many of the other cases) on view in the Plantin-Moretus Museum, Antwerp in 1998. The companion Upper case is Middlebaar Canon Boven. The | represents the long s. Its ligatures are all in the Boven case. Note that ç is in the Onder case, but j is in the Boven case, and note also the i box, where U.K./U.S. cases place h. The case measures 33½" x 14". Note that

there are effectively three rows of large boxes, unlike U.K. and U.S. cases, which have three-and-a-half rows. The empty case is Onder. There are several other styles of Onder Kasse on view in the Plantin Museum, eg Laagen Tekst, Klein Canon, Laagen Ascendonica, Kapitalen, Klein Romein. Although these are all paired (Upper and Lower) cases, Plantin also used Single cases. Voet: *The Golden Compasses* (1972) notes that Plantin's accounts of October 1563 give 81 pairs of cases and 30 single cases. Whilst the paired cases were used for Latin (i.e., Roman letter) composition, there were still some Roman and italic founts in singles, in addition to the fraktur etc. founts.

Gould's Lower Case English typecase lay is that of Joseph Gould: *The Letter-press Printer*, 1876. He comments that this is the common lay almost universally used, with a few slight alterations, although it is capable of being greatly improved. Note that the { } { boxes represent a three part brace. Gould's companion Upper is the Upper lay, and the empty case is the English Lower.

Gould's Upper Case English layout is shown by Joseph Gould: *The Letter-press Printer* (1876). Note that the boxes with A, B, etc. are small caps. The † box represents a single dagger, and †† a double dagger. The empty case configuration is that of Moxon, Luckombe (1771), Southward (1882), Mackellar (1885), Barnhart Bros & Spindler's News (1890s), Stephenson Blake & Co (1922), Caslon (1925), etc. The companion lower case is the Gould lay.

Gould's Greek Lower Case English Greek layout is shown by Joseph Gould: *The Letter-press Printer* (1876). The empty case configuration is Greek, and the companion Upper case is the Gould lay.

Gould's Greek Upper Case English Greek layout is shown by Joseph Gould: *The Letter-press Printer* (1876). Gould does not have many accented characters. The empty case configuration is that of Stower 1808, and the companion lower case is the Gould lay.

Gould's Hebrew Lower Case English Hebrew layout is shown by Joseph Gould: *The Letter-press Printer* (1876). The empty case

configuration is Savage Hebrew, and the companion Upper case is the Gould lay.

Gould's Hebrew Upper Case English Hebrew layout is shown by Joseph Gould: *The Letter-press Printer* (1876). The empty case configuration is the Upper of Moxon 1683, et. al, and the companion lower case is the Gould lay.

The Curtis & Mitchell Lower Case U.S. layout matches that shown by Curtis & Mitchell, of Boston, in their *Specimens of Types, Borders, Rules, Cuts, etc.* (1886). The configuration of the empty case is MacKellar's US Lower and the companion Upper case lay is Curtis & Mitchell.

The Curtis & Mitchell Upper Case U.S. layout matches that shown by Curtis & Mitchell, of Boston, in their *Specimens of Types, Borders, Rules, Cuts, etc.* (1886), and also in their earlier Reduced Price List (of around 1878). The configuration of the empty case is still Moxon's Upper (of 1683) and the companion lower case lay is Curtis & Mitchell.

The Bas de Casse French lay is given in Lefèvre: *Guide pratique du compositeur d'imprimerie* (1880). The companion Upper case is Lefèvre. Note that j is in the Upper, and é and ç in the Lower. The Lower lay is similar to Diderot (1751) except that the long s has been dropped, and, for example, & has moved to the Upper and w to the Lower. Even as late as 1940, OUP still followed the French pattern of putting i in the box where English/U.S. lays put h. The empty case configuration is the same as Diderot and differs from English/US cases, e.g., the style of 1½pt space, w, k, demi-cadratin and — boxes, and the é box.

The Haut de Casse French lay is shown by Lefevre: *Guide Pratique du Compositeur d'Imprimerie* (1880). The companion Lower is Lefevre. The boxes with A, B, etc. are for small caps, and with s, e etc., are for superscripts. The box with V/ and R/ are for Versicle and Response, and --- is em dash (tiret). Note that j and fl and ; are in the Upper case and é and ç and ff and ffl are in the Lower case. The empty case configuration is that of Moxon, Diderot (1751), Smith (1755), Luckombe (1771), Stower (1808), Savage (1841), Mackellar (1870), Southward

(1887), Barnhart Bros & Spindler's News (1890s), Stephenson Blake & Co (1922), etc.

The Bas de Casse Polish lay is that given in Lefevre: *Guide Pratique du Compositeur d'Imprimerie* (1880). The companion Upper case is Lefevre. Lefevre has included q ç ae oe in the lay because although not used in Polish, they may be needed for the occasional word in French or Latin. For ease, he has altered a normal French case, to take account of the different frequency of certain letters in Polish. The a, and e, represent letters with an ogonek (not cedilla as shown), z · a z with dot, c ´ n ´ letters with an acute and l- a barred l. The -- is an em rule. The ´ represents an apostrophe and “ an opening double quote. The empty case configuration is Polish.

The Haut de Casse Polish layout is shown by Lefevre: *Guide Pratique du Compositeur d'Imprimerie* (1880) and the companion Lower is Lefevre. Ç Q AE and OE are not used in Polish but included by Lefevre in the lay for the occasional words in French or Latin. Lefevre suggested the empty boxes be used for the various superiors that may be required. As these were rarely cast (in France), he recommended substituting the superiors with suitable characters from a fount of a much smaller size. The boxes with A, B, etc are for small caps. Those with A, etc. represent letters with an ogonek (not cedilla as shown), and S ´ etc. are letters with an acute. Z · represents Z with a dot above, and L- is a barred L. The box with V/ and R/ are for Versicle and Response and with † is for a single dagger. The empty case configuration is the traditional Upper of Moxon (1683), Diderot (1751), Smith (1755), Luckombe (1771), Stower (1808), Savage (1841), Mackellar (1870), Southward (1887), Barnhart Bros & Spindler's News (1890s), Stephenson Blake & Co (1922), etc.

The Hebrew Typelays by Southward layout of Hebrew letters with masoretic points, as shown by Southward, *Practical Printing* 1887, using a standard (English) Upper case to hold the type. There are variants in the construction of Upper cases, and there are also variants in the distribution (lay) of the Hebrew characters. Note that an Upper case is normally paired with its companion Lower case, and shelved one above the other in the frame. See the links below for other case styles. The

layout of the normal Hebrew characters, plus loose points and spacing, as shown by Southward, *Practical Printing* 1887, using a standard (English) Lower case to hold the type. There are other layouts for these characters, e.g., Hamilton/ATF of 1923, and there are variants in the construction of ordinary Lower cases.

The Mackie Lower Case English case lay is that of Mackie given by Southward: *Practical Printing* 1st ed. (1882). The figures have remained in the Upper but the ligatures are now in the Lower, as is k. Southward noted that the ; ! and : were cast with a thin space incorporated, to save labour. The companion upper is the Mackie Upper lay and the empty case configuration is the normal English Lower.

The Mackie News Upper Case English layout is given by Southward: *Practical Printing* (1882) as that used by Mackie for news work. The lay keeps the figures in the Upper, but moves the lower case ligatures and hair spaces to the Lower. With no accents, there is more room for fractions and signs. The caps and small caps are moved to the bottom rows, i.e. nearer the compositor's hand, which thus had to travel less. Southward also shows a Provincial, a Times, and a Spurrell lay, as well as the Old lay. The boxes with A, B, etc. are small caps. The companion lower is Mackie Lower, and the empty case configuration is the normal Upper of Moxon (1683), and Smith, (1755), Luckombe (1771), Stower (1804), Johnson (1824), Miller & Richard (1873), Southward (1882), Mackellar (1885), Barnhart Bros & Spindler's News (1890s), Stephenson Blake & Co (1922), Caslon (1925), etc.

The Provincial News Lower Case English lay is that given in Southward: *Practical Printing* (1882), as the improved lay used by some provincial newspapers. The Provincial News lay is the companion Upper. Note the position of y in the Lower case, where most lays put spacing. Some other Lower case lays given by Southward are an Old lay, an Improved lay, a Times Office lay, and an American lay. The empty case configuration is shown as Lower case.

The Provincial News Upper Case English layout is given by Southward: *Practical Printing* (1882) as that used by several

provincial news offices, as an improvement on the Old lay. The caps and small caps have moved to the bottom rows, nearer the compositor's hand, and the figures and some of the ligatures are in the Lower case. The lay provides for fractions, but not for accents, these not being much required in news work. The boxes with A, B, etc. are small caps. The box | is really a single, and || a double, dagger. The boxes { and «» are really middle, top, and bottom of a three piece brace. The ---- are em rules. The empty configuration is the normal Upper of Moxon (1683), Luckombe (1771), Johnson (1824), Southward (1882), Mackellar (1885), Barnhart Bros & Spindler's News (1890s), Miller & Richard (1897), Stephenson Blake & Co (1922), Caslon (1925), etc.

The Spurrell Improved Upper Case English layout is given by Southward: *Practical Printing* (1882) as Spurrell's improved lay. Southward also shows a Provincial and a Times and another Improved lay, as well as the Old lay. The equivalent lower is Spurrell Lower. The main improvement is moving the caps and small caps into the bottom rows, to be nearer the compositor's hand and also reducing the chance of accidents if the case is drawn out too far. The boxes with A, B, etc. are small caps. The Welsh accented letters ³ should be y with a grave accent, [^] y with a circumflex and ² should be a w with grave accent and ¹ w with circumflex. Note that this lay has the numerals in the Lower case, but the ligatures in the Upper case. The Welsh sorts may be replaced by braces, rules, Per, lb, etc. or any special sort required, and superiors or fractions may occupy the accent boxes. The empty configuration is that of Moxon, Smith, (1755), Luckombe (1771), Stower (1804), Johnson (1824), Miller & Richard (1873), Southward (1882), Mackellar (1885), Barnhart Bros & Spindler's News (1890s), Stephenson Blake & Co (1922), Caslon (1925), etc.

The Spurrell's Lower Case English lay is that given in Southward: *Practical Printing* (1882), as Spurrell's improved lay. The Spurrell Upper lay is the companion Upper lay. The improvements are, for example, to move the figures close to the em and en quadrats and also to avoid the liability of 1 2 and 3 falling into the 8 9 and 0 boxes. The middle and thin spaces are separated and placed conveniently between the thicks and ens, thus also avoiding the mids and thins from overflowing into

the i box. And q u c k ; en are respectively nearer each other. The only constructional change is to divide up the r box, to accommodate the thin spacing. The l s and y boxes should not be as wide as shown above. Some other Lower case lays given by Southward are an Old lay, an Improved lay, a Times Office lay, and an American lay.

The Times Office Lower Case English typeset lay is that given in Southward: *Practical Printing* (1882), as the lay used by the Times newspaper. The equivalent Upper is the Times Upper lay. The empty configuration is shown as Lower case.

The Times Office Upper Case English layout is given by Southward: *Practical Printing* (1882) as that used by The Times newspaper. The equivalent lower is the Times Lower lay, which has the ligatures. The boxes with A, B, etc. are small caps. The empty case configuration is the normal Upper of Moxon (1683), Luckombe (1771), Johnson (1824), Southward (1882), Mackellar (1885), Barnhart Bros & Spindler's News (1890s), Miller & Richard (1897), Stephenson Blake & Co (1922), Caslon (1925), etc.

The US. Lower Case English lay is shown in *Barnhart Bros & Spindler Pony Specimen* 1893. The empty case configuration is Van Winkle's US Lower.

The Italian Lower Case Italian lay is that of Pozzoli: *Nuovo Manuale di Tipografia* (1882). The companion Upper case is Pozzoli. Gaskell's illustration does not show which spacing is in the right hand boxes, so en and em are speculation, but for example, Lockwood shows them in 1894, although in reversed order. The empty case configuration is Italian Lower.

The Italian Upper Case Italian lay is that of Pozzoli: *Nuovo Manuale di Tipografia* (1882). Note that the boxes with a, etc are superscript characters. The † box represents a single dagger. The Vr is Versicle and Rs is Response. The grave accents and the numerals are in the Lower Case. The empty case configuration is Pozzoli.

The MacKellar's German Lower Case U.S. layout for German is given by MacKellar: *The American Printer* 15th ed 1885. The

lay is for Fraktur type. The † represents a long s. The lay has a thin for 5 em, mid for 4 em, and thick for 3 em spacing, as would be expected as his book is a U.K. publication. The configuration of the empty case is MacKellar's US Lower and the companion Upper case lay is German Upper.

The MacKellar's German Upper Case U.S. lay for German is shown by MacKellar: *The American Printer* 15th ed 1885. It is for Fraktur type. The dashes (rules) are - en, -- em, --- 2em ---- 3em and -^ is a 2em brace and --^-- a 3em brace and \- -v- and -/ are a 3 part brace.

The Southward Old Lower Case English typecase lay is that given in Southward: *Practical Printing* (1882), as the old-fashioned book work lay. The Southward Old lay is the companion Upper. This is the first time the figures appear in the standard Lower case. The empty configuration is shown as Lower case.

The Southward Old Upper Case English layout is given in Southward: *Practical Printing* (3rd ed. 1887), as the old-fashioned book work lay, and its companion lower is Southward Old. However, the lay has the caps and small caps in the bottom rows, whereas earlier (and thus Old) lays had these in the top rows. Certainly, moving the caps down was an improvement, as they became closer to the compositor's hand, and thus allowed for quicker setting. Southward also shows the change of placing figures and some ligatures into the Lower case, using the vacated boxes in the Upper for fractions and signs. His lay does not include accents, but his Improved lay also shown in the 3rd edition does provide for accents, and keeps the figures in the Upper. Note that all the boxes are the same size. The boxes with A, B, etc. are small caps. The box † represents a single dagger, and † † a double dagger. The boxes « and » and » are bottom, centre, top of a three piece brace. The empty case configuration is the normal Upper of Moxon (1683), Smith (1755), Stower (1808), Miller & Richard (1873), Mackellar (1885), Barnhart Bros & Spindler's News (1890s), Stephenson Blake & Co (1922), Caslon (1925), etc.

The Southward Improved Lower Case English lay is that given in Southward: *Practical Printing* (3rd ed. 1887). For example, it

moves thins near thicks, x near e (there being some 600 words with ex), y near l and b (given the large number of ly and lby words), q and j near u (there being some 200 words with ju), v near to e and i (given the number of combinations of v with e, i, s or o), k from the Upper case, and : ; near ,. The improvements were claimed to save half a mile of travel of a compositor's hands during the working day. The companion Upper case is Improved Upper. Southward also gives an Old lay, a Times Office lay, a provincial News lay, and an American lay. The empty typecase configuration is shown as Lower case.

The Southward Improved Upper Case English layout is given by Southward: *Practical Printing* (3rd ed. 1887) as the best for both book and news work. The equivalent lower is Improved Lower, which holds the ligatures. The types most in-demand are nearest the compositor's hand, and the small caps and sorts, being least used, are moved to the left, so as to be underneath the "copy." The boxes with A, B, etc. are small caps. The box † is really a single, and †† a double, dagger. The ---- are em rules. The empty case configuration is the traditional Upper of Moxon (1683), Smith (1755), Johnson (1824), Mackellar (1885), Southward (1882), Barnhart Bros & Spindler's News (1890s), Miller & Richard (1897), Stephenson Blake & Co (1922), Caslon (1925), etc.

The Scottish Lower Case Scottish lay is that given in *Chambers Encyclopaedia* (1891). The companion Upper Case lay is Scottish Upper, and the empty case configuration is Scottish Lower. Note the Scottish case has, in the top row, one wide k and g box, whereas the English Lower has four boxes. Also in the 4th (i.e., 3rd main) row, there is a single y box, and there are four boxes where w and , would go in an English case. The 4m and 5m boxes are for mid and thin spaces, respectively.

The English Lower Case English typecase lay is given by Oldfield: *A Practical Manual of Typography* (1892). It is on display at the Gulgong Pioneer Museum, New South Wales. The empty typecase configuration is shown as Lower case, and the companion Upper Case is Oldfield or Southward.

The Oldfield Upper Case English layout is that of Oldfield: *A Practical Manual of Typography*, 1st edition (1892). Note that all

boxes are be the same size. The boxes with A, B, etc. are small caps. The box for à also contains á, â, ä. The box | | is really single and double dagger. The box «» is really top, middle, and bottom three-piece brace. The ---- are sizes of em dash. The companion lower case is Oldfield, and the empty configuration is the normal Upper of Moxon (1683), Smith (1755), Stower (1808), Johnson (1824), Miller & Richard (1873), Southward (1882), Mackellar (1885), Barnhart Bros & Spindler's News (1890s), Stephenson Blake & Co (1922), Caslon (1925), etc.

The Palmer & Rey Lower Case U.S. layout is shown in Palmer & Rey's *Specimen Book* of 1892, as the one generally used all over the Pacific Coast. The Palmer & Rey Cap is the companion Upper lay and the empty case configuration is MacKellar's US Lower.

The layout is that given in Palmer & Rey's *Specimen Book* of 1892, claiming to be the one generally in use all over the Pacific Coast. The boxes with A, B, etc. are small caps. The box | is really a single, and | | a double, dagger. The boxes «, «», » are really bottom, middle, and top of a three-piece { brace. The -en- is an en rule (dash) and -4em- a 4em rule, etc. The companion lower case lay is Palmer & Rey. The configuration of the empty box is unchanged from that of Moxon (1683).

The California Job Case lay is that given by Palmer & Rey: *Specimen Book* (1892). Like most Cap case lays, it puts ffl in the bottom right box, which Palmer & Rey do not do, in either their Cap or Job case lay. The lay became the more normal lay, though with various omissions of some spacing, ligatures, and signs. The empty case configuration is California Job. Note that the right hand bay has one short row, and four tall rows, which style continued until at least 1907 (see BB&S *Book of Type Specimens No.9*). The more modern California Job and California Job versions have an upper bay of one short row, three tall rows, and one short row, eg Henry (1917), Atkins (c1930), Polk (1937), Whetton (1946), Polk & Gage (1953), Missouri-Central (1959), Hostettler (1963), Kelsey (1969), and American Printing Equipment & Supply Co (1983).