latest editions are those of J. H. Cooke (London, 1865) and A. Janes (London, 1882). In Harding’s edition (1823 and at least twelve times since) the vowels are written on an improved plan, the dot in three positions representing *a, e, i,* and a tick in two positions *o*, *u.* Several other persons brought out Taylor’s system, in particular G. Odell, whose book was re-edited or reprinted not less than sixty- four times, the later republications appearing at New York. The excellence of Taylor’s method was recognized on the Continent : the system came into use in France, Italy, Holland, Sweden, Germany, Portugal, Roumania, Hungary, &c. In England at the present day no method excepting Pitman’s phonography is more popular than Taylor’s, although the systems which have appeared since Taylor’s are far more numerous than those which preceded it.

The *Universal Stenography* of William Mavor (1780 and nine times since) is a very neat system, and differs from Taylor’s in the alphabet and in a more definite method of marking the vowels. *A, e, i,* are indicated by commas, o, *u, y,* by dots, in three places with respect to a letter, namely beginning, middle, and end. Other systems by J. H. Lewis (1812) and Moat (1833) are still used to a small extent.

The vast mass of a, b, c systems are strikingly devoid of originality, and are mostly imitations of the few that have been mentioned. Nearly all may be briefly described as consisting of an alphabet, a list of common words, pre­fixes and suffixes expressed by single letters, a list of ar­bitrary and symbolical signs, a table showing the best way of joining any two letters, a few general rules for writing, and a specimen plate. @@1

Pitman’s phonography, on account of its enormous diffu­sion in Great Britain and the colonies, and in America, its highly organized and original construction, and its many inherent advantages, merits a more extended notice than has been given to the systems already mentioned. In 1837 Isaac Pitman, then teacher of a British school at Wotton- under-Edge and an excellent writer of Taylor’s system, composed at the invitation of Samuel Bagster a short stenographic treatise of his own, which Bagster published under the title of *Stenographic Sound-Hand.* The price was fixed at fourpence, for the author had determined to place shorthand within the reach of everybody. He had won the friendship of the Bible publisher by volun­tarily verifying the half a million references in the *Com­prehensive Bible,* and Mr Bagster for nine years published Mr Pitman’s shorthand books. In 1840 a second edition appeared in the form of a penny plate bearing the title *Phonography,* the principal feature of the system being that it was constructed on a purely phonetic basis. The name of Bagster helped the enterprise, and the author was indefatigable in spreading the knowledge of his system by lectures and gratuitous teaching through the penny post, then just established. In December 1841 the first number of what is now known as the *Phonetic Journal* appeared at Manchester in a lithographed form. It was then called the *Phonographic Journal,* and subsequently in turn the *Phonotypic Journal,* the *Phonetic News,* and the *Phonetic Journal.* The chief instruction books issued by the author at the present time from his press at the Phonetic Institute, Bath, are the *Phonographic Teacher,* a little sixpenny book for beginners, of which 1,030,000 copies have been published ; the *Manual of Phonography* (470th thousand), in which the art is sufficiently developed for the purpose of correspondence, private memoranda, and easy reporting; and the *Phonographic Reporter* (133d thousand). The weekly circulation of the *Phonetic Journal* is about 20,000 copies. A part of it is printed in the

phonographic character from movable types. The system has been warmly taken up in America, where it has been republished in more or less altered forms, especially by the author’s brother Benn Pitman, and by Messrs A. J. Graham, J. E. Munson, E. Longley, and Eliza B. Burns. A large number of periodicals lithographed in phonography are published in England and America. The *Shorthand Magazine,* monthly, has existed since 1864. Of standard English books printed or lithographed in phonography may be mentioned, besides the Bible, New Testament, and Prayer Book, *The Pilgrim's Progress, The Vicar of Wakefield, Pickwick Papers, Tom Brown’s School-Days,* Macaulay’s *Essays* and *Biographies, Gulliver’s Travels,* Blackie’s *Self-culture,* Bacon’s *Essays,* and a long list of tales and selections. Numerous societies have been formed in all English-speaking countries for the dissemination of phonography. The largest is the Phonetic Society with 3350 members, who have all certificates of a knowledge of the art and engage to teach through the post gratuitously. Most important towns in the United Kingdom have a phonographic association. London has three. Phono­graphy has been adapted to several foreign languages, but not so successfully as Gabelsberger’s German system. Mr T. A. Reed’s *French Phonography* (1882) is intended only for English phonographers who wish to report French speeches. Other adaptations to French are by A. J. Lawson and J. R. Bruce. A society for the adaptation of phonography to Italian was organized at Rome in 1883 by G. Francini, who has published his results (Rome, 1883, 1886). Phonography adapted to Spanish by Parody (Buenos Ayres, 1864) is practised by half the steno­graphers employed in the senate and chamber at Buenos Ayres. It has been adapted to Welsh by R. H. Morgan (Wrexham, 1876), and to German by C. L. Driesslein (Chicago, 1884). Phonography is steadily driving all other English systems out of the field. Mr T. A. Reed stated in the *Phonetic Journal,* 1883, p. 62, that of the 61 writers employed by the *Times, Standard, Telegraph, Morning Post,* and the Press Association 31 were using phonography, 18 Taylor’s, 5 Gurney’s (*i.e.,* Mason’s), 4 Lewis’s, and 3 other systems; of the 67 members composing the Institute of Shorthand Writers, chiefly practitioners in the law courts, 26 were using phonography, 29 Taylor’s, 7 Gurney’s (*i.e.,* Mason’s), 3 Mavor’s, and 2 Lewis’s ; while of the 80 mem­bers of the London Shorthand Writers’ Association, chiefly employed in business offices, at least five-sixths were phono­graphers. According to a recent (1882) history of short­hand, of 291 professional stenographers in London 134 used phonography, 89 Taylor’s, 35 Gurney’s, 8 Lewis’s, 8 Mavor’s, and 17 other systems (Byrom’s, Graham’s, Moat’s, &c.).

The main features of Pitman’s system must now be described. The alphabet of consonant-sounds is—*p, b; t, d; ch* (as in *chip), j ; k, g* (as in *gay) ; f, v ; th* (as in *thing), dh* (as in *them) ; s,z∙, sh, zh* (as in *vision) ; m, n, ng* (as in *thing) ; l, r ; w, y, h.* The sounds *p, t, ch, k* are represented respectively by the four straight strokes

∖l∕- ; and the corresponding voiced sounds *b, d, j, g* by exactly the same signs respectively written heavy. *F, th* (as in *thing), s,*

*sh* are indicated by 0 respectively ; the same signs written heavy and tapering to the ends are used for *v, dh, z, zh* respect­ively. *M, n, l, r* are denoted by <-x×—A respectively. *R* is also represented by written upwards and in a more slanting direction than the sign for *ch.* The signs for *sh* and *l* may be written up or down when in combination, but standing alone *sh* is written downwards and *l* upwards. The signs for *w, y, h* are

all written upwards. *H* has also 7 down. *Ng, mp* (or *mb), rch* (or *rj), lr,* are represented by the signs for *n, m, r, l* respectively written heavy. Signs are provided for the Scotch guttural *ch* (as in *loch),* the Welsh *U*, and the French nasal *n*, *S* is generally written by a small circle. The long-vowel sounds are thus classified—*â* (as in *balm), ē* (as in *bait), ec* (as in *fed), aw* (as in *law), o* (as in *coal), ōō* (as in *boot).* The vowels *ā, ē, ee* are marked by a heavy dot placed respectively at the beginning, middle, and end of a consonant-

@@@1 For early English systems, see especially some careful papers by Mr A. Paterson in *Phonetic Journal* (1886).