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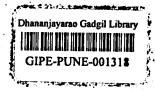
MANUAL

OF

LIBRARY CLASSIFICATION

AND

SHELF ARRANGEMENT



TAMES D BROWN

LIBRARIAN, CLERKENWELL PUBLIC LIBRARY, LONDON

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PREFACE

THIS work has been prepared to meet the requirements of those who are engaged or interested in the study of practical library methods. No English book on this subject has been issued since Edwards dealt with classifications generally in his Memoirs of Libraries, published in 1850; and the literature of the subject consists of little more than papers on single schemes. Classification has never been a strong point in British libraries, and this has arisen partly from apathy on the part of librarians, but also from the difficulty of obtaining information about American and foreign schemes which have been successfully applied to Leaving out of view Petzholdt's list of libraries. classifications contained in his Bibliotheca Bibliographica (1866), I have been unable to find that any single work devoted entirely to a systematic examination of schemes has ever been issued in any country. This little book has been prepared, accordingly, to fill a well-defined space in library literature; and however inadequate or slight the attempt may be, it is earnestly hoped that it will in some measure help to stimulate interest in the subject of classification.

The "Adjustable Classification" has been prepared for the use of municipal public libraries chiefly; but it can be adapted to almost any variety of general library, provided arrangements are made for subdivisions. Two thousand two hundred and fifty divisions are provided, excluding general heads, while provision is made for four thousand five hundred divisions by means of blanks. Each of these divisions is capable of infinite sub-division. For most ordinary purposes the divisions printed will meet every need.

Suggestions and corrections will be gladly received from any one interested in the subject.

JAMES D. BROWN.

CLERKENWELL PUBLIC LIBRARY, LONDON. January, 1898.

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CHAPTER I

GENERAL CONSIDERATIONS

- 1. THE subject of classification has attracted the notice of scholars and practical men alike for nearly four hundred years. Its difficulties and disputed points have furnished exercise and amusement for many minds since the earliest attempt was made to tabulate the branches of human knowledge in a systematic and useful manner. At the end of the nineteenth century, after hundreds of schemes have been submitted as fulfilling every requirement, there is nearly as much diversity of opinion concerning the exact manner of dealing with certain topics as there has been any time during the past three centuries. In one respect, however, there is more unanimity of feeling than ever there was before, and that is as regards the necessity for systematic classification of some kind in every department of human life and effort. We see this more particularly in such departments of learning as Biological Science, Medicine, Chemistry, and in institutions like Museums and Art Galleries, which depend for their educational value and effect upon the system of arrangement adopted.
- 2. The principle of classification is of almost universal application. It is to be seen in nature on a gigantic scale in the disposition of earth, air, and water, and in the natural laws which govern them. Artificially it has a very good rudimentary exposition in the practice of the costermonger, a familiar object in the streets of our large towns, but nevertheless a classifier of considerable skill. He does not put gooseberries, cherries, and strawberries all together in one

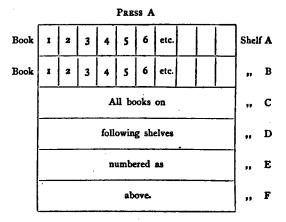
barrow, and sell them mixed under the comprehensive name of "Fruit" at threepence a pound, but carefully divides and keeps them apart under a strict plan of classification. He may sub-divide his main class, "Strawberries," into two sub-classes, "Sir Joseph Paxtons" and "British Queens" respectively, attaching to each different values, and he may further sub-divide the "British Queens" into two divisions of different qualities at varying prices; while he is certain to adopt an even more minute quantitative sub-division by arranging that all the large berries shall be at the top and the small ones at the bottom!

- 3. With such an example before us of careful and minute classification, selected from the daily practice of a humble commercial class, we should doubtless expect to find in our public libraries a similar and more scientific system of exact classification: not only finding all the books on a given subject together on the shelves, but in close proximity to all other works on related topics. The belief appears to be quite common, at least among educated people, that in English public libraries some method of classification is universal by which all the books on large subjects like Law, Chemistry, Botany, United States, China, Building, Agriculture, Language, etc., are to be found together, not only in the catalogue, but on the shelves. It never seems to enter the mind of an unprofessional person that there can be any doubt on this point, or that books on related subjects in public libraries are not as certain to be kept together as the different articles of merchandise in a large general store. It would be considered by most people who give the matter a thought, just as absurd for a grocer to keep his tea and sugar mixed in one drawer, as for a librarian to mix his botanical books with those on manufactures and perhaps a score of other equally foreign topics. Yet it is the fact that, so far at least as British public libraries are concerned, close classification is just the one thing which does not prevail to any great extent.
- 4. From personal enquiries among librarians, visits to libraries, and a careful study of their catalogues, together with

the information given in Greenwood's Library Year Book. 1897, and other authorities, we are enabled to give the following particulars of the methods of arranging books in British libraries, both municipal and semi-public. Out of the two hundred and eighty-seven libraries embraced by our enquiry only thirty-four had classifications which can be described as scientific or minute, and in this number at least sixteen applied the method only to their reference departments. Of the others, only about twelve municipal, or rate-supported. libraries have adopted scientific classification for the arrangement of both lending and reference departments. thus two hundred and fifty-three important public libraries which are not classified at all, save in the broadest and most perfunctory manner. As these arrangements of books cannot be correctly described as classifications, along with the more exact and logical systems mentioned later on, it will perhaps be most convenient to dispose of them here.

- 5. Many reasons have been advanced to account for the extraordinary lack of scientific classification in the United Kingdom as compared with the United States; but it may be affirmed that the chief one has been the employment of underpaid, untrained, and not over-educated librarians in the early days of the public-library movement, when revenues were small and every expense had to be cut down in the most merciless manner. In the absence of scientific models on which to base their practice, these early librarians had each to devise a method of classifying or arranging books to suit local requirements. The principal requirement seems to have been the readiest means of finding the place of a given book when asked for by a certain number, and so arose the many varieties of numerical location systems which we shall briefly describe now, before passing to more general considerations affecting the whole question of classification.
- 6. It is hardly correct to include in this group of methods the old Collegiate plan of press-marking, which still flourishes in many places. But as the original classifications of which this kind of press-marking forms part have long since disappeared

under vast accumulations of books which have had to be stored somehow, it will be as well to give it first place in honour of its hoary antiquity. The system, then, which we have styled collegiate press-marking consisted in the plan of lettering or numbering the presses or alcoves in the library after assigning certain classes of books to each. The separate shelves of each press were numbered or lettered, and each volume on every shelf was differently numbered. This was one of the most minute kinds of this style of classification and shelf-marking. If a tier consisted of six shelves, the marking would be as follows:



Thus, supposing Press A to contain books on Chemistry, and Roscoe's *Chemistry* was the fifth book on the second shelf, it would receive the press mark AB5. This is a very close direction to the place of a book; but of course the plan is open to dozens of objections, of which the most obvious are that each book is practically fixed to a certain place, and congestion of any press or shelf is likely to lead to complete dislocation in the classification. As carried out in the older libraries, this system may fitly be termed one of the classifications which are not classifications. A survival of this plan is

to be seen in a modified form in the British Museum readingroom, where the presses are numbered and the shelves simply lettered A, B, C, etc., in each tier, the books not being numbered in any shelf order. A further development of this style of shelf-marking is described in Section 10.

7. We come now to another group of classification schemes which are not classifications; namely, the methods alluded to in Section 5 as being common to the majority of English public libraries. These we shall name for convenience' sake Numerical Finding Methods, as they are indeed but little The most rudimentary, and, luckily, also the most uncommon, of these plans is that of numbering the whole of the books in the library in one immense sequence of progressive numbers, each new book receiving the number after the last one already on the shelves. This plan has the undeniable advantage of reducing wear and tear on the librarian's brain to a very fine minimum; it insures considerable ease in the finding of a given book, provided its number is known; and presents the economic advantage of requiring shelf space to be reserved only at one unmistakable place -the end of the sequence. Furthermore the shelf and accession numbers coincide. Otherwise the books have no more arrangement or relation to each other than have the contents of a dust-bin.

8. The form of shelf arrangement most used in English public libraries is a variation of the numerical plan just described, the principal difference being that the library is broken up into six, eight, ten, or more broad classes or divisions, in each of which the books are arranged in a separate series of progressive numbers in the accidental order of their accession. The main divisions generally chosen are:

- A. Theology and Philosophy
- B. History and Biography
- C. Travel and Topography
- D. Law, Politics, Commerce, etc.
- E. Arts and Sciences

- F. Fiction
- G. Philology
- · H. Poetry and the Drama
 - J. Juvenile Literature
 - K. Miscellaneous and Magazines

No further sub-division is made, and the books are very much

mixed in every class, as may be seen by the following specimen selected from a typical shelf list:

CLASS C. HISTORY, GEOGRAPHY, ETC.

2569. Pinnock's Rome
2570. Summer Tours in Scotland
2571. Mayhew, Birchington-onSea
2572. Scenery of the Lakes
2573. Freeman, English People
2574. Bird, Rocky Mountains
2575. Society in London
2576. Buried Alive in Siberia
2577. Year in Manitoba

No attempt is made to gather in one place all the books on the same countries, and the catalogue is the only guide to the chaos. As regards most of the older catalogues, it may be said here that they were of no value whatever as indexes to the different classes of books. The practical inconvenience of this numerical arrangement may be further illustrated by this example from another library. The novels of Miss Marie Corelli are located in ten different places, as follows—1401-3. 2583-86, 2612, 2926, 2935, 3015-16, 3139-40, 3480-81, 3566, 3729; thus making it impossible for the librarian to tell, without considerable trouble, whether or not any of that novelist's works are available. If, further, any reader wished to examine a few works on Chemistry, he would have to wait till the librarian picked them out of the Science Section, where they are buried and distributed among a thousand other books on fifty or a hundred different subjects. In another library, arranged on this class-numerical plan, thirteen books on London are scattered all over a large division of over four thousand volumes in this order: 617, 651, 931, 937, 949, 1125, 1188, 1209, 1333, 1457, 1463, 3735, 4026. The difficulty of making easy and rapid reference under this distributive plan to books on one subject for a particular fact may be more easily imagined than described. One last example from an Indicator Key will help readers to comprehend the disorder which reigns in the average English public library, where much is sacrificed to the ambition to issue as many books as possible in a given time. This is how the novels stand on the shelves in a particular library; but it may be taken as a fair sample of the kind of thing existing in most of the others which are arranged on these lines:

```
1460. Kennard, Straight as a Die1462. Barr, In Spite of Himself1461. Lawrence, Breaking a1463. Sue, Mysteries of ParisButterfly1464. Barrie, Window in Thrums
```

For the information of any one desiring to adopt this plan, it ought to be explained that in libraries using the class-numerical system the numbers given are not necessarily the accession ones, but more likely special shelf numbers. In those libraries which use accession numbers only it is necessary to appropriate a large number of blanks for each division, in order to keep the books in one sequence of numbers on the shelves and on the classified indicator. This plan may be illustrated thus:

Class	A	has	appropriated	to it	Numbers	I	to	1000
77	В	. ,,	,,	,,	,,	1001	to	2000
,,	С	"	**	,,	,,	2001	to	4000
99	D	.,	"	,,	13	4001	to	4500
"	E	,,	>>	**	**	4501	to	6000
**	F	,,	,,	"	,,	6001	to	10000
			And so	on al	l through.			

In some other libraries the practice obtains of numbering the books in one series, as described in Section 7, but with the difference that the books of each division are picked out and kept separate, thus presenting a broken order of numbers. Class A, for instance, may be formed of Nos. 56, 99, 301, 857, 1003, etc.; Class B of 1, 10, 15, 36, 47, 98, 101, 175, etc.; and so on. The indicator shows but one series of numbers, and the accession number alone is used for numbering and cataloguing. Of course readers must specify the class letters when asking for books by this system, and the books must be kept in the order of their numbers. It has the advantage over the plan first described in this section, of simplifying stock-keeping, as no numerical shelf registers need be kept, apart from the accessions book.

The arbitrary distinction of size has modified the practice in a few of the older libraries, where, in addition to main divisions in numerical or alphabetical order, a further sub-division by folio, quarto, octavo, and duodecimo sizes is maintained. Beyond tidiness and enhanced appearance of the shelves, there is little practical benefit in this method, as no one would dream of wasting space by putting folios and octavos together, when methods exist of keeping them apart, yet classified.

- 9. A more logical method of shelf arrangement than any of the foregoing, though one equally capable of distributing and mixing subjects, is the plan of keeping an alphabetical sequence by names of Authors, or, in the case of anonymous books, the first word of the title-pages not an article. As regards Fiction, Poetry, and other Form Classes, this has an enormous superiority over all the numerical plans, especially when the books are arranged in broad divisions similar to those set out in Section 8. When the arrangement is an author alphabet in one great sequence, the sole merit is the somewhat important one of displaying and keeping all the works of one author together. In certain branches of study this is important, though an alphabetical catalogue obtains practically the same result. The amount of movement necessary by this system to provide for the proper intercalation of new authors or books is very considerable. For small libraries the author-alphabetical arrangement in broad divisions can be recommended as being easy to apply, and causing no trouble at a later stage of development, when it is thought advisable to adopt one of the modern scientific systems of subject classification. By this plan the accession number is used for cataloguing, charging, and all other purposes, as well as on the indicator, which must be kept in one sequence. Readers asking for books usually fill up forms which specify in very brief terms class, number, author, title. Some librarians have adopted methods of shelf arrangement combining both numerical and alphabetical order; but very few of those using sequential-finding systems are able to claim exact subject classification on the shelves.
- 10. There are only a few libraries in Britain which are arranged in an orderly array of Subjects, without being systematically classified according to a logical scheme like

those described in Chapters III. and IV. Among them the practice of the Mitchell Library, Glasgow, may be described as an example. Its shelves are numbered consecutively throughout in tiers of ten, but no marking is used for the different presses. Each book is numbered in order of receipt in a book of progressive numbers called a Location Book. which has columns ruled to show the shelf number or place of each book as well as its author and title. A certain number of shelves or tiers are assigned to each class of books, and on these shelves a fairly close subject classification is maintained: that is to say, all, or most, of the botanical, architectural, philosophical, and other works will be found together on adjoining shelves, though not necessarily with further sub-It is thus much more minute than the plan described in Section 8, though not so close as the systematic methods described later. To show the difference clearly, it may be as well to repeat that in class-numerical arrangements the books in Class E—Arts and Sciences—form a heterogeneous collection of all kinds of subjects mixed up anyhow in numbered order. Thus books on Music, Football, Building Construction, Botany, Sculpture, Drawing, Pottery, Fireworks, Architecture, Chess, and Watchmaking are all jostling each other in one great procession of numbers. The subject classification we are describing provides for the separation on the shelves of these different subjects in a rough but sufficiently close order. Class E-Arts and Sciences-may therefore have the sciences arranged in sub-classes, like Astronomy, Chemistry, Physics, Zoology, Botany, Geology, Mathematics, etc., so that the difficulties caused by the separation of related subjects would be partly overcome. The accession numbers are used for all purposes, and in cases where assistants do not remember the places of books when asked for, a reference to the book number in the Location Book directs at once to the shelf. The shelf number is also written on the label inside each book, so that there may be no difficulty or mistake about replacement. In the Mitchell Library the plan of giving ten numbers to each tier of shelves has been tried with the object of securing a

certain amount of uniformity. For example, the numbering of the first four tiers, as below, shows that each cross-range of shelves forms part of a decimal order:

				,
Shelf	i	11	21	31
,,	2	12	22	32
,,	4	14	24	34
,,	5	15	25	35
,,	6	16	26	36
,,	7	17	27	37
,,	8	18	28	38
"	9	19	29	39
"	10	20	30	40

There being only nine shelves in a tier, the third number is omitted in every ten. The chief advantage claimed for this plan, apart from appearance, is that it aids the memory of assistants in using the shelves.

The first application of this system, sometimes called the "Decimal," seems to have been at Boston, U.S., in 1856, though Edwards 1 states that it was "well known in European libraries for scores of years." However that may be, it is certain that Nathaniel B. Shurtleff was the first to devote a special treatise to the explanation of the system. It is entitled A Decimal System for the Arrangement and Administration of Libraries, Boston, 1856, privately printed; and besides an exposition of the so-called decimal system, contains a few very elementary hints on library organisation. Shurtleff's idea was to have the books arranged in alcoves containing ten presses or tiers, each of which was to have ten shelves. Without going into details as to certain shelves set apart for special purposes or his method of indicating bottom shelves, it may be said that the arrangement resulted in the shelf number forming in itself a direct reference to both press and shelf. An alcove

¹ Memoirs of Libraries, Vol. II., p. 928.

with its one hundred shelves in ten tiers might be numbered thus:

Shelf	101	111	121	
,,	102	112	122	
,,	103	113	123	
**	104	114	124	
,,	105	115	125	Αı
**	106	116	126	
,,	107	117	127	
,,	108	118	128	
,,	109	119	129	
**	110	120	130	
		l		1

And so on.

The books on each shelf are consecutively numbered 1, 2, 3, 4, 5, 6, etc., so that a press mark $\frac{5}{112}$ would mean the fifth book on the second shelf of the eleventh tier or press. The units denote shelves and the tens tiers all through the library, giving in one number a double direction to press and shelf. This is simpler than the collegiate plan described in Section 6, but resembles it in the fixed nature of its shelf notation and the lack of provision for inserting a book between, say, Nos. 3 and 4, supposing it were on the same subject. The system was at one time used in the Boston (U.S.) Public Library; but we are not aware of any place where it has been adopted in its integrity as described by Shurtleff.

The Glasgow system has been described on several occasions as the "movable location," in contradistinction to shelf systems, which provide only for the movement of whole classes and not single books. It would render the subject much clearer if the term "movable" were applied to shelf arrangements which do not require the press mark to be printed in the catalogue, while the term "fixed" might be reserved for plans

which depend upon the appearance of the press mark in the catalogue. These latter are called "movable," in our opinion. somewhat erroneously, because the fact that the numbers which are printed in the catalogue are those which denote the exact places of books in a fixed sequence of numbers is enough to show that no real movability or adjustability of individual books exists. For example, in a library arranged on the class-numerical plan (Section 8) it is impossible without altering the catalogue. etc., to change the position of any book. If E 596 is a work on History accidentally placed in the Science Class, it cannot be shifted to Class B without upsetting the printed catalogue and all MS. records. By the Glasgow plan, in which the accession number alone is used for cataloguing and all other purposes. any change of class or actual position can be effected by simply altering the shelf number in the Location Book and on the book label. Furthermore it is possible to place all popular books near to the point of service, irrespective of class, which is a very important consideration in large, busy reference libraries.

The following additional particulars of the Mitchell Library shelving system and the results as affecting the service have been sent by Mr. Barrett, the librarian:

"When we were rearranging the library for Miller Street, we went on the principle of breaking up the classification on the shelves in favour of an attempt to bring the books most used into nearness to the point of service. We selected several hundred volumes, including some from each class, and placed these on shelves close at the centre of the counter, where books are issued; these of course are books in constant demand. Next we selected the books in each class which are frequently called for, and arranged these in the long series of bookcases occupying the ground floor of the front building; these number a good many thousands, and they are of course classified on the shelves. The books in less frequent call are placed in the more remote parts of the building—on the walls round the reading hall (we generally put the better-looking books there, simply with a view to appearance), in the gallery,

in the top flat, in the basement. The point I want to bring before you is the outcome of this arrangement as affecting the service. I have had a series of observations made of the time taken to issue a book, counting from the instant a reader places his application paper on the counter to the instant the book is placed in his hands. The observer has a watch with seconds hand, and is instructed to note the time to a second. Naturally the time varies a good deal. Some books kept close at the counter are given out instantly-say, five seconds. Not many are over three minutes. One series of five hundred observations, taken at random of course, gave an average of one minute nine seconds. Another series, by a different observer, gave an average of one minute twelve seconds each issue. For a library of nearly one hundred and thirty thousand volumes. that appears to me to be a very satisfactory result. The larger a library becomes the longer the average time of issue will become, if only from the fact that many of the books must be more or less distant from the point of service."

- 11. The methods of arranging books on the shelves described in the foregoing sections comprise nearly the whole of the principal varieties used in British public libraries of all kinds. It will now be seen that only four chief methods exist; namely:
- r. The Fixed Location (Section 6), by which each book and class is permanently located or placed on a certain shelf or series of shelves in a fixed order, that order being determined by the press marks printed in the catalogue.
- 2. The Location in Numerical Sequence (Section 8), by which books are placed at haphazard somewhere in a main class without regard to subject, the appearance of the place number in the catalogue tending to fix individual books in a rigid order. This method is wrongly termed "movable." It might be better described as "class movable."
- 3. The Author-alphabetical Arrangement (Section 9) by large classes or in one series.
- 4. The Subject Location (Section 10), enabling books to be classified in any order and forming a "book movable" plan,

wherein the individual book, and not the whole main class or division, is the unit for arrangement.

None of these methods, excepting the fourth, are systematic classifications of books in a recognised order of subjects and related topics, but simply, as we have already stated, plans whereby books can be found when wanted. There is a certain merit in being able to lay hands readily upon a given book at short notice; but this is considerably minimised when it is known that other systems exist, combining in themselves complete, logical, and scientific classifications with simple and effective finding arrangements. The choice has been before British librarians for over twenty years, but with comparatively few exceptions has seldom been exercised. In the United States and British Colonies, on the contrary, the numerical methods we have described are practically unknown, every library being closely classified according to a scientific system both on the shelves and in most cases in the catalogues as well. The chief argument which has been used against close classification in Britain is that in collections of books not open to direct examination by readers there is no necessity for having books of a sort together; while the catalogue is held to meet every want that an index to a heterogeneous mass of books can supply. We deal with this latter claim in Chapter V.; while as regards the former, may now conclude this chapter with a few general observations in addition to what has already been said on the subject in Sections 1-8.

12. It must be allowed that within the past five or six years a disposition has been manifested among English librarians to consider more closely the claims of systematic classification on the shelves. Where previously a tendency existed to scoff at such accuracy as a vain and unattainable ideal, there is now to be found a spirit of enquiry which will doubtless lead to a complete change of attitude in the future. What has helped towards the formation of this growth of opinion more than anything else has been the appearance and acceptance of various valuable and ingenious American systems, worked out to the smallest detail, completely indexed, and made widely available

through the medium of print. These have, to use a homely phrase, "knocked the wind" out of nearly every objector to close classification, by demonstrating not only its practicability, but also its general simplicity and usefulness. The objections heard against systematic classifications are no longer based upon such points as the impossibility of an all-round agreement being arrived at as to main classes, or the undesirability or difficulty of making one scheme to suit all libraries; but are directed almost entirely to criticism of such details as where in a main class to put given topics. The general acceptance of close classifications for reference libraries tends also to confirm our contention that the principle has been adopted very largely, though considerations of expediency may delay the execution in some libraries for several years. The labour involved in rearranging and properly classifying a large library which has for a long time been growing up in hopeless confusion under some primitive numerical plan, is certain to deter many librarians or committees from undertaking the work. But the gradual adoption of scientific systems here and there in Britain points to the ultimate extension of close classifications to all kinds of libraries.

The plea frequently advanced that in small libraries close classification upon the shelves is unnecessary has scarcely any force in these times, as, owing to the cheapness of books and the increase of means, libraries are growing at a rate hitherto unknown. This is, therefore, a good reason for urging that libraries should be classified from their very foundations in such a way that, when mere topics have grown as large in bulk as original main classes, they shall be found together on the shelves, and not scattered over the whole collection. The practical convenience of this could be illustrated by a hundred instances; but most librarians are painfully aware of the drawbacks, which need not now be recapitulated.¹

The necessity for training library assistants thoroughly in all that pertains to the educational side of their work points to the

^{&#}x27; See the Library for 1897, p. 143, article on "Cataloguing and Classification," by J. D. Brown,

need for such classificatory systems as will enable them to supply or suggest sources of information as quickly and effectually as possible, and this can only be accomplished by means of an arrangement which gathers as far as possible in one place all books on the same subject. It is only by this means that librarians or assistants can hope to become familiar with the material aspect of books on important subjects, and thereby be tempted to search for information which can only be obtained by enormous labour if the books on a subject are scattered about in several hundreds of different places. fact it is obvious that, with subjects widely separated in a large library, assistants will be disinclined to hunt for information which can only be found after severe physical exertion by actual examination of books. No catalogue describes books so minutely that readers can obtain a good general idea of their scope and contents, and it is therefore in the public interest that books should be so arranged as to be accessible for easy reference in minute sub-divisions under main classes. The ambition of the modern librarian to be considered a man of learning and method, as expressed at every conference of the Library Association, is another good reason why he should justify his claims by the use of practical scientific systems in place of elementary and inconvenient ones. This sort of simplicity may be all right for an easy start in library methods; but it is in after-years, when rapid and continuous growth has made libraries into gigantic stores of unclassified and widely distributed books, that the unwisdom of such unmethodical practice is demonstrated. There are plenty of old libraries now, which have grown up in a haphazard way, waiting for complete reorganisation on systematic lines. But the labour involved is too considerable to be lightly faced; and so the work is postponed, till ultimately it will assume gigantic dimensions, and cost comparatively large sums to execute.

CHAPTER II

THE CLASSIFICATION OF KNOWLEDGE

13. Before proceeding to describe the more important schemes which have been devised for the systematic classification of books in libraries and catalogues, it may be useful to the student to have before him a few simple facts concerning the classification of human knowledge generally. It has a very close relationship to the classification of knowledge contained in books, and so forms part of the subject. The study of nature in all its branches, and the sciences which have resulted in consequence, must at a very early period have turned the attention of enquirers to the necessity for some kind of order in the pursuit of different studies. As knowledge accumulated and observations were recorded, it would be forced upon the understanding of general scientists in early times that, although study of the stars and of plants was investigation of nature, there was nevertheless strong reason for keeping separate accounts of each class of phenomena. To mix facts concerning both in one huge series would certainly be to keep a record of acquired knowledge; but little of the information could be useful, because not kept in a form to show relationships and differences. It has been well said 1 that "the first necessity which is imposed upon us by the constitution of the mind itself is to break up the infinite wealth of nature into groups and classes of things, with reference to their resemblances and affinities, and thus to enlarge the grasp of our mental faculties, even at the expense of sacrificing the minuteness of information

¹ Treatise on Logic. By Francis Bowen. (Cambridge, Mass.: 1866.)

which can be acquired only by studying objects in detail. The first efforts in the pursuit of knowledge, then, must be directed to the business of classification." Every student of science is agreed as to this, and from early times various attempts have been made to tabulate and arrange the different kinds of knowledge, either as a whole or in sections. Huxley, altered by Jevons, 1 has defined the process of classification as follows: "By the classification of any series of objects is meant the actual or ideal arrangement together of those which are like and the separation of those which are unlike, the purpose of this arrangement being, primarily, to disclose the correlations or laws of union of properties and circumstances, and, secondarily, to facilitate the operations of the mind in clearly conceiving and retaining in the memory the characters of the objects in question." In most modern works on Logic definitions and explanations are given of classification as applied to science and knowledge generally. One of the most complete treatises of this kind, which students will find of value, is contained in The Principles of Science: a Treatise on Logic and Scientific Method, by W. Stanley Jevons (London: 1874), and later editions. Other works which may be profitably read on the subject at large are John Stuart Mill's Logic, any recent edition; Jevons' Logic; and Fowler's Inductive Logic.

14. As regards most of the older classifications of knowledge, the works of Edward Edwards ² and Julius Petzholdt ³ give full information. The former is very exhaustive in his descriptions and tables; the latter usually gives concise summaries, and, being later, is necessarily more complete than Edwards. From these and other works we have gathered a few brief particulars which will help students to trace the historical development of the classification of knowledge, and enable them to estimate the value of successive efforts and their bearing on the arrange-

¹ Principles of Science (Ed. 1892), p. 677.

³ Comparative Table of the Principal Schemes proposed for the Classification of Libraries (Manchester: 1855); and Memoirs of Libraries (1859), Vol. II., pp. 761-831.

^{*} Bibliotheca Bibliographica. (Leipzig: 1866.)

ment of libraries. One of the best and most influential schemes is that of Francis Bacon, Lord Verulam, first issued in 1623. It divides all knowledge into three main divisions, and subdivides each, as follows:

Bacon's Scheme (1623)

CLASS I. HISTORY (Memory)

- 1. Natural History
- 2. Civil History
 - a. Ecclesiastical
- 6. Literary
- c. Civil, Proper

CLASS II. PHILOSOPHY (Reason)

- 1. Science of God
- 2. Science of Nature
 - a. Primary Philosophy

- b. Physics
 - c. Metaphysics
- d. Magic
- e. Natural Philosophy
- 3. Science of Man

CLASS III. POETRY (Imagina-

- tion).
- I. Narrative Poetry
- 2. Dramatic Poetry
- 3. Allegorical Poetry

In 1767 D'Alembert, the French philosopher, extended this scheme, making it more suitable for the state of science in his day. His main classes and sub-divisions are as follow:

Bacon-D'Alembert (1767)

CLASS I. HISTORY

- I. Sacred History
- 2. Ecclesiastical History
- 3. Civil History
- 4. Natural History

- Arts of Thinking, Retaining, Communicating (= Logic, Writing, Printing, Decla-
- mation, Symbolism, Grammar, Rhetoric)
 c. Morals (= Ethics, Juris-
- CLASS II. PHILOSOPHY 4. Science of Nature
 - b. Physics

2. Science of God

- a. Natural Religion
- b. Revealed Religion
- c. Science of Good and Evil

1. General Metaphysics, or Ontology

- Science of Man
 - a. Universal Pneumatology

- a. Mathematics
- CLASS III. POETRY
- I. Narrative Poetry
- 2. Dramatic Poetry
- 3. Allegorical Poetry
- Music, Painting, Sculpture, Architecture, Engraving

Other amplifications of Bacon's scheme have been issued by later authorities; but the most practical is that of W. T. Harris, described in Section 35, and, with other attempts based on Bacon, is sometimes called the "Inverted Baconian" classification.

15. In the natural sciences, particularly Zoology and Botany, classification has been studied from early times, and numerous methods have been proposed. Many of these were purely artificial, and at one time it was thought that botanical classification was settled for all time by the system of Linnæus. Advances in biological knowledge have, however, completely upset this once-universal classification, which bears a striking analogy to the class-numerical or other empirical methods of book arrangement described in Chapter I. Like them, it is largely arbitrary, and also tends to crystallise and stagnate. As John Stuart Mill observes 1: "The only purpose of thought which the Linnæan classification serves is that of causing us to remember better than we should otherwise have done the exact number of stamens and pistils of every species of plants. . . . The effect of such a classification, when systematically adhered to, upon our habit of thought, must be regarded as mischievous." There can be little doubt of this so far as book classification in broad numerical divisions is concerned, and the history of the Linnæan classification furnishes another instance of the same kind of confusion resulting from the effort to substitute mere arithmetical progression for intrinsic values and kinds. John Locke, the philosopher, sought to classify all science (in 1688) under three main heads as follows:

Locke's Scheme for Science (1688)

PHYSICS

1. Natural Philosophy;
2. Mental Philosophy;
3. Natural Theology

Consequence States of Philosophy

Arts of Philosophy

Things of Machanier Arts of Fine Arts

OPERATIVE SKILL 1. Ethics; 2. Mechanical Art; 3. Fine Arts SIGN KNOWLEDGE 1. Logic; 2. Language; 3. Rites, Ceremonies, Customs, Fashions, etc.

This has not been adopted, so far as we know, and, like the Linnæan botanical classification, is no longer more than a curiosity.

¹ System of Logic.

16. We will pass over the numerous other methods for the classification of all, or scientific, knowledge which come between that of Bacon and Coleridge, as they have very little practical value, though all are of great interest, particularly that of Jeremy Bentham, first published in his Crestomathia (1816). The method of Samuel Taylor Coleridge was included in his "Essay on Method," forming the introduction to the Encyclopadia Metropolitana (1826); and though it is supposed to have been edited after it left his hands, is presented here in the form which has been preserved:

Coleridge's Scheme (1826)

CLASS I. PURE SCIENCES

- I. Formal Sciences
 - a. Grammar .
 - b. Logic
 - c. Rhetoric
 - d. Mathematics
 - e. Metaphysics
- 2. Real Sciences
 - a. Law
 - b. Morals
 - c. Theology

CLASS II. MIXED AND APPLIED SCIENCES

- I. Mechanics
- 2. Hydrostatics

- 3. Pneumatics
- 4. Optics
- 5. Astronomy
- 6. Experimental Philosophy
- 7. Fine Arts
- 8. Useful Arts
- 9. Natural History
- 10. Medicine

CLASS III. HISTORY

- r. National History
- 2. Biography
- 3. Geography, Voyages, and
 - Travels
- 4. Chronology

CLASS IV. LITERATURE AND

PHILOLOGY

17. The last of the classifications of all knowledge which we shall mention is that published in America by Dr. W. D. Wilson in his Treatise on Logic (New York: 1856). Like most of the American methods, this is practical, and more minute than many other previous schemes, though it bears a considerable general likeness to a classification proposed by Lord Lindsay in his Progression by Antagonism (London: 1845), which has for its main classes:

I. Revelation

II. Poetry

III. Science

IV. Philosophy

V. Bibliography and Collections

Wilson's method will strike modern librarians as lacking in places for such classes as Language and pure Literature (Poetry is included, but not Fiction, etc.):

W. D. Wilson's Scheme (1856)

CLASS I. THEORETICAL SCIENCES

Section 1. Exact Sciences

- 1. Meteorology
- 2. Ouranography
- 3. Geology
- 4. Geography
- 5. Chemistry
- 6. Mineralogy
- 7. Anatomy
- & Physiology
- 9. Botany
- to. Zoology
- 11. Ethnology
- 12. Psychology
- 13. History

Section a. Pure Sciences

- 1. Arithmetic
- 2. Geometry
- 2. Akrebra
- 4. Calculus
- 5. Trigonometry
- 6. Analytic Geometry
- 7. Analytics
- 8. Method
- 9. Ontology

CLASS II. PRACTICAL SCIENCES

Section 1. Mixed Sciences

- 2. Mechanics
- 2. Astronomy
- 3. Hydrostatics
- 4. Hydraulics

- 5. Pneumatics
- 6. Acoustics
- 7. Optics

Section a. Ethical Sciences

- I. Ethics
- 2. Polity
- 3. Natural Religion
- 4. Jurisprudence
- 5. Ecclesiastical Polity
- 6. Revealed Religion

CLASS III. PRODUCTIVE

SCIENCES OR ARTS

- Section 1. Fine Arts
 - 1. Gardening
 - 2. Architecture
 2. Sculpture
 - 4. Painting
 - 5. Music
 - 6. Puetry

Section a. Useful Arts

- 1. Agriculture
- a Metallurgy
- 3. Technology
- 4. Typography
- 5. Engraving
- 6. Commerce 7. Medicine
- & Rhetoric
- 9. Political Economy
- 10 //'at

18. As classifications of Solence are the most difficult, owing to the continual progress of discovery and the changes or modifications thereby introduced, we shall briefly consider a few points likely to be useful to library assistants. The two

principal sciences possessing classifications which to any extent affect the arrangement of books are Zoology and Botany. Nearly every text-book on these subjects has tables, and in accordance with the arrangement therein set forth books may be arranged on the shelves or in the catalogue. The examination papers of the Library Association have on several occasions contained questions such as, "Where in a zoological classification would a book on Beetles go?" "What is meant by Lepidoptera?" etc.; and as there seems to be much need for a series of tables embodying such information in a simple form, we have selected several systems of classification from elementary zoological text-books of old and recent dates which will no doubt be helpful to students of classification. It may be explained that, so far as the classification of biological books is concerned, it matters little whether Zoology or Botany is arranged on the evolutionary principle of progression from lowest to highest forms of life, or from highest to lowest forms. In either case it simply means looking backwards or forwards, and does not affect the question, very frequently enlarged upon, of the arrangement of general text-books to insure that students will begin with the simpler forms of life and work upwards to more complicated forms. The first zoological classification which we shall give is representative of the science as it existed about 1845, and we have ventured to add typical examples of each order to render the nomenclature more intelligible.

Zoological Classification 1

VERTEBRATES	Order 6. Cetacea (Whales, Seals,
CLASS MAMMALIA	etc.)
Order 1. Bimana (Man)	,, 7. Rodentia (Rats, Beavers,
,, 2. Quadrumana (Apes)	Hares)
" 3. Cheiroptera (Bats)	" 8. Edentata (Sloths, Pango
,, 4. Insectivora (Insect-eaters)	lins)
,, 5. Carnivora (Flesh-eaters:	,, 9. Ruminantia (Deer, Cattle,
Lions, etc.)	Sheep)

¹ From Carpenter's Zoology, 2 vols.

4

Order 10. Pachydermata(Elephants,

Horses, Pigs)

- 11. Marsupialia (Kangaroos, Pouched animals)
- 12. Monotremata (Egg-laying mammals)

CLASS BIRDS

Order 1. Raptores (Eagles, Vultures, Owls)

- 2. Insessores (Perching birds, 4 tribes)
- 3. Scansores (Parrots, Cuckoos)
- 4. Rasores (Pigeons, Pheasants, Fowls)
- 5. Cursores (Ostriches)
- Grallatores (Waders : Bustards, Cranes)
- 7. Natatores (Swans, Ducks, Gulls)

CLASS REPTILES

Order I. Chelonia (Turtles)

- 2. Loricata (Crocodiles)
- 3. Sauria (Lizards)
- 4. Ophidia (Snakes)

CLASS BATRACHIA (Frogs)

Order I. Anura

- 2. Urodela
- 3. Amphipneusta
- 4. Apoda
 - 5. Lepidota

CLASS FISHES

Order 1. Selachii

- 2. Ganoidei
- 3. Teleostei
- 4. Cyclostomi
 - Leptocardi

INVERTEBRATES

CLASS INSECTS

Order 1. Coleoptera (Beetles)

,, 2. Orthoptera (Grasshoppers)

Order 3. Physopoda

- 4. Neuroptera (Dragonflies)
- 5. Hymenoptera (Bees, Wasps, Ants)
- 6. Lepidoptera (Butterflies, Moths)
- 7. Rhynchota
 - 8. Diptera (Flies)
- 9. Aphaniptera 10. Anoplura
- " 11. Mallophaga
- 12. Thysanoura

CLASS MYRIAPODA (Centipedes)

Order 1. Chilopoda

2. Chilognatha

CLASS ARACHNIDA (Spiders, etc.)

Order 1. Pulmonaria

., 2. Trachearia

CLASS CRUSTACEA (Crabs, Lobsters, etc.)

- Order I. Decapoda | Podoph-
 - 2. Stomapoda J thalma
 - 3. Amphipoda | Edrioph-

Entomos-

traca

- 4. Læmodipoda thalma
- - 5. Isopoda
 - 6. Xyphosura
- 7. Phyllopoda
- 8. Cladocera
- 9. Ostracoda
- 10. Copepoda
- 11. Siphonostoma
- 12. Lernæida
- ,, 13. Cirrhopoda
- ,, 14. Araneiformia

CLASS ANNELIDA

Order I. Dorsibranchiata

- 2. Tubicola
- 3. Terricola
 - 4. Suctoria
- CLASS ENTOZOA

CLASS ROTIFERA

CLASS CEPHALOPODA (Cuttle-fish)

Order 1. Dibranchiata

. 2. Tetrabranchiata

CLASS GASTROPODA (Snails, etc.)

Order 1. Pulmonifera

,, 2. Prosobranchiata

, 3. Opisthobranchiata

,, 4. Heteropoda

CLASS PTRROPODA

CLASS LAMELLIBRANCHIATE

Conchifera

Order 1. Asiphonata
2. Siphonata

CLASS PALLIOBRANCHIATA

CLASS TUNICATA

Order 1. Ascidiæ

" 2. Salpæ

CLASS POLYZOA

CLASS ECHINODERMATA (Starfish)

Order I. Echinida

,, 2. Stellerida

3. Crinoidea

,, 4. Holothurida

CLASS OF POLYPIFERA

Order I. Helianthoida

., 2. Asteroida

CLASS OF HYDROZOA

Order 1. Hydroida

,, 2. Discophora

,, 3. Ctenophora

" 4. Siphonophora

PROTOZOA

Class I. Infusoria

., 2. Rhizopoda

,, 3. Porifera

Later classifications are more compressed; but the main classes are much the same, though nearly every naturalist has introduced various modifications to suit his own views. A comparatively modern classification, such as that set forth below, 1 represents the present-day ideas on the subject.

Modern Zoological Classification

SUB-KINGDOM I. VERTE-BRATA

CLASS I. MAMMALS

Ord. 1. Primates (Apes)

., 2. Chiroptera (Bats)

" 3. Insectivora (Insect-eaters)

., 4. Carnivora (Flesh-eaters)

" 5. Rodentia (Gnawers)

,, 6. Ungulata (Hoofed.

animals)
,, 7. Sirenia (Manatees)

,, 8. Cetacea (Whales)

" 9. Edentata (Sloths)

Ord. 10. Effodientia (Pangolins)

,, II. Marsupialia (Pouched mammals)

" 12. Monotremata(Egg-laying mammals)

CLASS 2. AVES (BIRDS)

Two Sub-classes and 34 Orders

CLASS 3. REPTILES

Ord. z. Crocodilia

" 2. Chelonia (Tortoises)

" 3. Squamata(Lizards, Snakes)

" 4. Rhynchocephalia(Quatera)

Lydekker's Concise Natural History (1897).

CLASS 4. AMPHIBIANS SUB-KINGDOM IIL MOI. Ord. I. Ecaudata (Frogs) LUSCA (Oysters, Snails. ,, 2. Caudata (Newts) Cuttlefish) " 3. Apoda (Cæcilians) CLASS 1. AMPHINEURA CLASS 5. FISHES CLASS 2. PELECYPODA (Bivalves) Four Sub-classes CLASS 3. SCAPHOPODA CLASS 6. CYCLOSTOMA (Lampreys) CLASS 4. GASTROPODA (Snails, CLASS 7. PROTOCHORDA(Lancelets) Limpets) CLASS 8. HEMICHORDA CLASS 5. CEPHALOPODA (Nautilus, Cuttlefish) SUB-KINGDOM II. ARTHRO-PODA SUB-KINGDOM IV. BRA. CLASS I. CRUSTACEA (Crabs, Lob-CHIOPODA (Lampshells) sters) SUB-KINGDOM V. ECHINO-CLASS 2. ARACHNIDA (Spiders) DERMA (Starfish) CLASS 3. MYRIOPODA (Centipedes) CLASS 4. PROTRACHEATA SUB-KINGDOM VI. BRYOZOA (Polyzoa: Seamats) CLASS 5. INSECTS Ord. 1. Coleoptera (Beetles) SUB-KINGDOM VII. VERMES ,, 2. Orthoptera(Grasshoppers) (Worms) " 3. Neuroptera (Dragonflies) ,, 4. Hymenoptera (Bees, SUB-KINGDOM VIII. Wasps, Ants) LENTERA (Sponges, Corals) 5. Lepidoptera (Butterflies, Moths) SUB-KINGDOM IX. PROTO-ZOA (Animalculæ: Lowest ,, 6. Hemiptera (Bugs, etc.)

19. We will conclude this part of the work by a selection of three botanical classifications. The first, which represents the older systems of Bentham and Hooker, is that published in the later editions of Henfrey's *Botany*, and is not arranged on the evolutionary principle.

forms)

Botanical Classification

DIVISION I. PHANEROGAMIA
Sub-division I. Angiospermia
Class I. Dicotyledones
,, 2. Monocotyledones
Sub-division 2. Gymnospermia
DIVISION II. CRYPTOGAMIA
Sub-division I. Cormophyta

Class I. Vascularia
,, 2. Muscineæ
,, 3. Charales
Sub-division 2. Thallophyta
Class I. Algæ
,, 2. Fungi
,, 3. Protophyta

,, 7. Diptera (Flies)

The subject of botanical classification in its historical aspect is treated at some length in Sachs' History of Botany (1530–1860) (Oxford: 1890). The methods of Linnæus and Jussieu have little practical value for modern book-classifiers, and the reference to Sachs will probably meet every want. A comparatively recent classification is the following, which is arranged on the evolutionary plan:

Modern Botanical Classification, 1

GROUP I. THALLOPHYTA

Class 1. Algæ

,, 2. Fungi

GROUP 2. MUSCINEÆ

Class 3. Hepaticæ

,, 4. Musci

GROUP 3. PTERIDOPHYTA

Class 5. Filicinæ

' Class 6. Equisetaceæ

,, 7. Lycopodinæ

GROUP 4. PHANEROGAMIA

A. Gymnospermæ

Class 8. Gymnospermæ

B. Angiospermæ

Class 9. Monocotyledones

,, 10. Dicotyledones

Another variation of the evolutionary arrangement is the following⁹:

Modern Botanical Classification, 2

GROUP I. THALLOPHYTES

- I. Myzomycetes (Naked protoplasm)
- 2. Diatomacæ (Diatoms)
- 3. Schizophyta
- 4. Algæ (Seaweeds)
- 5. Fungi (Mushrooms)

GROUP 2. MUSCINEÆ (Mosses)

- I. Hepaticæ (Liverworts)
- 2. Musci (Mosses)

GROUP 3. VASCULAR CRYPTOGAMS

- 1. Filicineæ (Ferns)
- 2. Equisetineæ
- 3. Sphenophylleæ
- 4. Lycopodineæ

GROUP 4. PHANEROGAMS (Flowering plants)

- 1. Gymnospermæ (Naked seeds)
- 2. Angiospermæ (Enclosed seeds)

The classification of Chemistry, Mineralogy, Crystallography, Geology, etc., is not of a nature to be helpful save in special libraries, and all that is needful to gain an inkling of its principle may be gleaned from any text-book.

¹ From Prantl's Botany.

² From Goebel's Outlines of Classification and Special Morphology of Plants (1887).

20. The student of classification who wishes to pursue the subject in general in more detail will find much of interest in the authorities we have already mentioned, while additional matter will be found in such works as Remarks on Classification of Human Knowledge, by Sir J. W. Lubbock (London: 1834); Essay on the Classification and Geographical Distribution of the Mammalia, by Sir Richard Owen; History of the Inductive Sciences, by Whewell; Lectures on the Elements of Comparative Anatomy, and on the Classification of Animals, by T. H. Huxley (1864); The Classification of the Sciences, by Herbert Spencer; Zoological Classification, by F. P. Pascoe (1880); Synopsis of the Classification of the Animal World, by H. A. Nicholson (1882); Fothergill, Zoological Types and Classification (1891); and scientific text-books in general.

CHAPTER III

SCHEMES FOR THE CLASSIFICATION OF BOOKS AND CATALOGUES

- 21. HITHERTO we have been considering the arrangement of books on library shelves and the methodical classification of knowledge as it affects the classification of books. This chapter is concerned with the many important methods which have been devised within the past four hundred years for arranging libraries and their catalogues in groups of related subjects without making special provision for marking their order and place on the shelves. Although many of the later systems provide minute numerical or alphabetic signs to denote the order and place of topics in the scheme, such signs are not necessarily to be considered as furnishing a system of shelf-marking. What may be termed combination systems of classification and shelf-marking are described in Chapter IV.
- 22. Some of the earliest attempts at book classification were made for commercial purposes, and it may be assumed that convenience was the object aimed at in grouping together in printed lists the titles of books on kindred topics. Soon this plan was found necessary in libraries, either alone or in combination with lists of authors. It is quite evident that no motive of pedantry moved the old booksellers to attempt classified lists, as has been assumed by certain writers, but the practical idea of displaying their wares in a manner to attract customers. It is vain therefore for those who denounce exact classification and classified catalogues to attribute to

the users of methodical arrangements the foolish desire to be considered cleverer than their neighbours. Practical convenience was the sole cause, and any one who cares to investigate the matter will find that the methods of the early bookseller are used at the present time, not only by our humble costermongers (Section 1), but by every class of tradesman who has goods for sale. As regards booksellers, Edwards has pointed out 1 that the character of their classification seems to have been determined by their stockin-trade, and he cites the divisions used by the elder Aldus, the printer, in a catalogue of Greek books, 1498, which was divided into five groups, thus:

- t. Grammatica
- 2. Poetica
- 3. Logica

- 4. Philosophia
- 5. Sacra Scriptura

This is one of the earliest examples of rudimentary classification in a catalogue of printed books. Another early scheme for book classification was that devised by Conrad Genner in 1548, which has been regarded as "the first bibliographical system." This scheme has twenty-one main classes grouped together in a kind of genealogical sequence under the head of "Philosophia, comprehendit Artes et Scientias." The arrangement of classes is as follows:

- I. Grammatica et Philologica
- 2. Dialectica
- 3. Rhetorica
- 4. Poetica
- 5. Arithmetica
- 6. Geometria, Optica, etc.
- 7. Musica
- 8. Astronomia
- Q. Astrologia
- 10. De Divinatione et Magia
- 11. Geographia
- 12. Historia

- De diversibus artibus illiteratis, mechanicis, etc.
- 14. De Naturali Philosophia
- 15. Metaphysica et Theologia
- 16. De Morali Philosophia
- 17. De Philosophia Economica
- De re Politica id et Civili ac Militari
- 19. De Jurisprudentia
- 20. De re Medica
- 21. De Theologia Christiana

The earliest English bookseller's catalogue was that of Andrew

Memoirs of Libraries, Vol. IL, p. 761.

Maunsell, issued at London in 1597, under the title Catalogue of English printed bookes . . . gathered into alphabet, and such method as it is. It was published in two parts, the first comprising Divinity and the second Science.

23. Fifty-three years after this appeared the earliest systematic work on modern libraries, in which are given a few slight indications of what was then looked for in catalogues. John Durie, a Scots author, we owe a little work entitled The Reformed Librarie-keeper (London: 1650), containing, among other interesting matter, the following notes on classification and cataloguing as then understood: "All the books and manuscripts, according to the titles whereunto they belong, are to bee ranked in an order most easie and obvious to bee found, which I think is that of Sciences and languages, when first all the books are divided into their subjectum materiam whereof they treat." This indicates preference for classification in the catalogue; and he further advocates a shelf notation as follows: "In the printed catalogue a reference is to bee made to the place where the books are to be found in their shelves or repository." As a further guide he recommends "a catalogue of their Titles made alphabetically in reference to the autor's name with a note of distinction to shew the science to which they are to be referred." This is clearly a class catalogue with an author index, such as continued to be used long after Durie's His views were enforced nearly fifty years later by another Scot, the Rev. James Kirkwood, in an anonymous tract entitled An Overture for founding and maintaining of bibliothecks in every paroch throughout the kingdom [Scotland] (1699). He states that under his plan every parish library is to have "exact alphabetical catalogues" giving particulars of "the place where, and the time when, they [books] are printed." As regards classification, he writes: "It will be convenient that all the Bibliothecks in the kingdom observe the same method of ranking and placing their books, which method may be to rank the books according to their name and number in the general catalogue." The method of printing catalogues in broad classified sections continued for long to be the practice in libraries and among booksellers, though as great diversity of system existed then as now; some catalogues being partly indexed as Durie recommends, but most of them being simply set out in large sections. Another early example of a trade catalogue, somewhat akin to Maunsell's, was that issued by William London in 1658, entitled A Catalogue of the most vendible books in England orderly digested, under the heads of divinity, history, physic, law, etc. (London). These two lists were the forerunners of the more elaborate inventories of Low and Sonnenschein, as well as the less-known London Catalogue of Books . . . from the year 1700, properly classed under the general branches of literature, and alphabetically disposed under each head (1773).

24. Having now briefly described the methods of book classification in use in this country during the seventeenth and eighteenth centuries, we can turn to the methods of other countries. In France a method was introduced in the latter part of the seventeenth century which proved of immense value and influence, being used at the present time in various modified forms. The groundwork of this system, described indifferently as the "Paris" or "French" system, also as "De Bure's" or "Brunet's" system, was laid by Jean Garnier. a Jesuit, or Ismael Bouillaud, the compiler of the catalogue of De Thou's Library. This method was altered successively by Gabriel Martin, De Bure, Brunet, Barbier, and Achard, and forms the basis of many modern systems. It is not necessary to display the various plans in detail, the differences not being very important after the changes made by De Bure and Brunet. We will, however, just quote the main classes of

Garnier's Scheme

Class 1. Theology
,, 2. Philosophy
,, 3. Medicine
,, 4. Literature

Class 5. History
,, 6. Jurisprudence
,, 7. Heterodoxy

What may be termed the settled French scheme as used by Brunet and others was as follows:

French Scheme

CLASS I. THEOLOGY

- I. Holy Scriptures
- 2. Sacred Philology
- 3. Liturgies
- 4. Councils
- 5. Fathers
- 6. Collective Works of Theologians
- Singular and Fanatical Sects and Opinions
- 8. Judaism
- 9. Oriental Religions
- 10. Deism, etc.

CLASS II. JURISPRUDENCE

- I. General Treatises on Law
- 2. Natural and International Law
- 3. Political Law
- 4. Civil and Criminal Law
- 5. Canon and Ecclesiastical Law

CLASS III. SCIENCES AND ARTS

- 1. Dictionaries and Encyclopædias
- 2. Philosophical Sciences
- 3. Physical and Chemical Sciences
- 4. Natural Sciences
- 5. Medical Sciences

- 6. Mathematical Sciences
- 7. Mnemonics
- 8. Fine Arts
- 9. Mechanical Arts and Trades
- 10. Gymnastics Recreative Arts

CLASS IV. POLITE LITERATURE

- 1. Introductory Works
- 2. Linguistics
- 3. Rhetoric
- 4. Poetry
- 5. Prose Fiction
- 6. Philology
- 7. Dialogues, etc.
- 8. Letters
- 9. Polygraphy
- 10. Collective Works-Miscellanies

CLASS V. HISTORY

- I. Historical Prolegomena
- 2. Universal History
- 3. History of Religions, etc.
- 4. Ancient History
- 5. Modern History
- 6. Historical Paralipomena

An important English modification of this method was that of Thomas Hartwell Horne, the bibliographer, whose Introduction to the Study of Bibliography (1814) is a well-known work. He published his plan in Outlines for the Classification of a Library (London: 1825), and its leading classes and subdivisions were as follows:

Horne's Scheme

CLASS I. THEOLOGY OR RELIGION

- I. Introductory Works
- 2. Natural Religion
- 3. Revealed Religion
 - a. Holy Scriptures
 - b. Sacred Philology
 - c. Councils and Ecclesiastical
 Polity
- d. Liturgies
- e. Fathers and Collected Works of Theologians
- f. Scholastic Divinity
- g. Systematic Divinity
- h. Moral and Casuistical Divinity
- i. Catechetical Divinity

44 Manual of Library Classification—25, 26

- I. k. Polemical Divinity
 - 1. Pastoral Divinity
 - m. Hortatory Divinity
 - n. Mystical and Ascetical Divinity
 - o. Miscellaneous Treatises
- 4. History of Religions

CLASS II. JURISPRUDENCE

- I. Public Universal Law
- 2. Ancient Civil and Feudal Law
- 3. Canon Law
- 4. British Law
- 5. Foreign Law

CLASS III. PHILOSOPHY

- Introductory Works—Encyclopædias, etc.
- 2. Intellectual Philosophy
- 3. Moral and Political Philosophy
- 4. Natural Philosophy
- 5. Mathematical Philosophy

CLASS IV. ARTS AND TRADES

I. History of Arts

- 2. Liberal Arts
- 3. Economical Arts, Trades and Manufactures
- 4. Gymnastic and Recreative Arts

CLASS V. HISTORY

- I. Historical Prolegomena
- 2. Universal History
- 3. Particular History
 - a. Ancient
 - b. Middle Ages
 - c. Modern
- 4- Biographical and Monumental History
- 5. Historical Extracts and Miscellanies.

CLASS VI. LITERATURE

- 1. Literary History and Biography
- 2. Polite Literature
 - a. Grammar
 - b. Philology and Criticism
 - c. Rhetoric and Oratory
 - d. Poetry
 - e. Literary Miscellanies.
- 25. Returning to British systems, reference may be made to the old classification of the London Institution, devised by Richard Thomson, E. W. Brayley, and William Maltby, and appearing in the Catalogue of the Library of the London Institution systematically classed (London: 1835). The main feature of this method is the synoptical table of classes arranged under such main heads as Theology, Jurisprudence, Philosophy, Mathematics, etc., sub-divided in somewhat inexact sections. The most extraordinary point in connection with this particular scheme is the plan adopted of locating classes by their positions over fireplaces, in recesses or galleries, etc. Presses indicated by busts of Roman emperors or others surmounting them are common; but to locate Theology or Botany over a fireplace seems a very primitive, not to say prosaic, method of shelf arrangement.
- 26. About this time (1836-38) the systematic classification used in the British Museum was first applied generally to the

collections in that library. It is somewhat important as the system used in the largest British library possessing unusually valuable stores of books on every conceivable subject, and is therefore interesting as an example of the provision requisite for storing the leading sections of literature to be found in complete libraries. The system is described by Dr. Richard Garnett in the *Transactions of the Library Conference*, 1877; and he explains that only principal sub-divisions are given. We have not set out every sub-division given by Dr. Garnett, but only enough to show the details of the scheme. It bears a slight resemblance to the scheme of Horne, Section 24, but in the multiplication of main classes and details of working out differs from most of the larger classifications with which we are acquainted.

British Museum Scheme			
I. T	HEOLOGY	21.	Bible Commentaries, Gos-
I.	Bibles, Polyglot	•	pels and Acts
2.	Hebrew	22.	Epistles
3.	Greek	23-25.	Liturgies
4.	Latin	26-27.	Metrical Psalms, Hymns
5.	French, Italian, Spanish,	28-80.	Prayers, Theology, Ser-
	etc.		mons
6.	German	8r.	Mythology
7.	Dutch and Scandinavian	82.	Scriptures of Non-Chris-
8.	English		tian Religions
	Celtic		Jewish History
10.	Slavonic	84-99.	Church History, General
II.	Oriental		and National
12.	American, Polynesian,	100-102.	Missions
	etc.	103.	Religious Fraternities
_	Bible Concordances	104.	Freemasonry
14.	Bible Commentaries,	105.	Biography, General Reli-
	General		gious
15.		106.	
	Other Historical Books	107-109.	
	Psalms	110-115.	
18.	Prophets and Hagio-	116.	Juvenile Religious
	grapha	117.	Theological Bibliography
19.	Unfulfilled Prophecy		
20.	New Testament, Gene-	•	URISPRUDENCE
	ral	ı.	Papal Bulls

II. 2. Councils

3-6. Canon, Ecclesiastical, and
Marriage Law

7. Roman Law

8. Mediæval Jurists

9-28. Law, National, Foreign

29-33. Jurisprudence, Crime, Prisons, Forensic Medicine

34-44. English Law, General and Special

45. Trials

46-48. Law of Ireland, Scotland, Colonies

49-52. Law of United States

53. Law of South America

54-55. Maritime and Military
Law

56. Treaties and Conventions

57. International Law

III. NATURAL HISTORY AND
MEDICINE

1. Natural History, General

2. Botany

3. Horticulture

4. Agriculture

5. Mineralogy

6. Geology

7. Palæontology

8. Zoology, General

9. Mammalia

Ornithology

Herpetology

12. Ichthyology

13. Domestic Animals (with Veterinary Surgery)

14. Entomology

15. Conchology, etc.

16. Dictionaries of Medicine

17-18. Medical Principles and Theses

19. Domestic Medicine

20. Physiology

 Phrenology, Animal Magnetism, etc. 22. Anatomy

23-24. Pathology, Therapeutics

25. Mineral Waters

26. Surgery

27. Materia Medica

28-36. Diseases, Hospitals, etc.

IV. ARCHÆOLOGY AND ARTS

1-2. Archæology

3. Costumes

3. Costumes

4. Numismatics
5. Fine Art, General

Anabitantura

6-7. Architecture

8. Painting and Engraving

9. Sculpture

10. Music

11. Field Sports

12. Games of Chance

13. Games of Skill

14. Useful Arts

15. Domestic Economy

16-17. Exhibitions, etc.

V. PHILOSOPHY

1-24. Politics (National) Political Economy, etc.

25-29. Commerce, Charities, etc.

30-33. Education, Schools, etc.

34. Moral Philosophy

35-37. Marriage, Women, Temperance, etc.

38-39. Metaphysical Philosophy

40. Logic

41. History of Philosophy

42-46. Mathematics: Arithmetic, Geometry, etc.

47. Astronomy

48-50. Astrology, Occult Science, Spiritualism

51. Physics

52. Optics

53. Meteorology

54. Electricity

55. Mechanics

56. Hydrostatics, Hydraulics

V. 57.	Nautical	Sciences
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- 58. Arms and Military Engines
- 59. Military Art
- 60. Chemistry
- 61. Spectral Analysis
- 62. Photography

VI. HISTORY

- 1. Chronology
- 2. Universal History
- 3. History, Asia
- 4. Asia, British India
- 5. Africa
- 6-8. Europe, General
 - g. Byzantine and Ottoman
- 10-29. Europe, National
- 30-35. England
- 36-43. America, U.S., Australia
- 44-45. Heraldry, Genealogy
 - 46. Pageants, Processions, etc.

VII. GEOGRAPHY

- 1. Cosmography
- 2. Ethnology
- 3. Circumnavigations
- 4. Voyages in two or more parts of the World
- 5-39. Travels, by Countries
 - 40. Hydrography

VIII. BIOGRAPHY

- 1-19. Collective and National
- 20-22. Epistles

IX. BELLES LETTRES

- 1. Classical Polygraphy
- 2-8. Homer, Greek and Latin Poets and Orators
- 9-16. Poetry, Italian
- 17-18. Spanish, Portuguese
- 19-21. French, Provençal
- 22-24. German
- 25-26. Dutch, Scandinavian
- 27-28. Slavonic, Celtic, etc.
- 29-41. English

- 42. Poetry, American
- 43-58. Drama, National
 - 59. Rhetoric
- 60-61. Literary Criticism and History
 - 62. Typography
 - 63. Bibliography
 - 64. Catalogues
- 65-67. Compendiums, Encyclopædias, etc.
- 68-77. Collected Works of Authors, by Nationalities
 - 78. Speeches
 - 79. Fables
- 80-81, Proverbs, Anecdotes
 - 82. Satire and Facetiæ
 - 83. Essays and Sketches
 - 84. Fiction, Collected
 - 85. Folk-Lore, Fairy Tales
 - 86. Early Romances
 - 87. Fiction, Italian
 - 88. Spanish and Portuguese
 - 89. French
 - 90. German
 - 91. Dutch and Scandinavian
 - 92. Slavonic and Hungarian
 - 93. English, Collected
 - 94. Waverley Novels
 - 95. English, Translations
 - 96. English, Early
 - 97. Republications
 - 98. English, General
 - 99. Minor
 - Ioo. American
 - 101. Tales for Children

X. PHILOLOGY

- I. General Philology
- 2. Languages, Semitic
- 3. Other Asiatic and African
 - . American and Poly-
- 5. Chinese and Japanese
- 6. Greek

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X. 7. Languages, Latin 8-10. Italian, Spanish.

8-10. Italian, Spanish, French 11-13. German, Dutch, Scandinavian, Slavonic 14. Languages, Celtic

15. English

16. Phonography
17. Books for the Blind

27. The Germans are responsible for a number of schemes dating from that of Leibnitz (1700) to recent times; but most of them are more adapted for the libraries of universities or learned societies than the general public libraries we are familiar with in Britain and the United States. It will be sufficient to name the methods of Ersch (1793), Preusker (1830), and the minute scheme of Thienemann (1847), the main heads of which are given in Edwards' Memoirs. Room may be found for some of the chief divisions of Dr. Schleiermacher's method, which is worked out with much elaboration in his Bibliographisches System der gesammten Wissenschaftskunde, and condensed by Edwards.

Schleiermacher's Scheme

CLASS I. Encyclopædias, Literary
History, and Bibliography
CLASS II. Polygraphy
CLASS III. Linguistics and Philology
CLASS IV. Greek and Latin Literature

CLASS V. Polite Literature in Modern and Oriental Tongues CLASS VI. Fine Arts

CLASS VII. Historical Sciences

CLASS VIII. Mathematical and Physical Sciences CLASS IX. Natural History CLASS XI. Industrial and Economical Sciences CLASS XII. Philosophy CLASS XIII. Theology CLASS XIIV. Jurisprudence and

Politics

28. From about 1850 onwards the systems of classification become more practical, more minute, and more in accordance with modern ideas. The advances made in science and the great increase in the publication of technological literature gradually altered the arrangement of main classes and subdivisions. The passing of the Public Libraries Acts in Britain and the immense strides made in library work in the United States tended to direct more attention to the study of classification, and it is from this period that most of the best systems date.

The following classification is very useful and suggestive; and as the catalogue from which it is taken is well indexed, it forms one of the most complete answers to those who in earlier times doubted the possibility of producing a satisfactory classed catalogue or dismissed the whole type as "logical absurdities." The Classified Catalogue of the Library of the Royal Institution of Great Britain, compiled by Benjamin Vincent (London: 1857), has the undernoted main classes and sub-divisions:

Royal Institution Scheme (1857)

CLASS L. THEOLOGY I. Holy Scriptures (19 sections) II. Helps to Study (10) III. Apocryphal Writings IV. Liturgies (4) V. Church Discipline and Government VI. Theological Controversy (5) VII. Miscellaneous Theology (4) VIII. Ecclesiastical History CLASS II. GOVERNMENT, POLI-TICS, JURISPRUDENCE I. Government and Politics (11)IL Jurisprudence (12) III. Commerce (4) CLASS III. SCIENCES AND ARTS. I. Moral and Intellectual Philosophy (8)

II. Medical Sciences (13)
III. Natural History (23 under

5 heads)

IV. Natural and Experimental
Philosophy (25 under 11
heads)

V. Chemistry (3)

VI. Mathematical Sciences (9)

VII. Astronomy (7)

VIII. Architecture IX. Civil Engineering (6)

X. Navigation and Naval
Architecture (3)

XI. Military Art (2)

XII. Mechanic Arts (2)

XIII. Fine Arts (5)

XIV. Music

XV. Sports and Games

XVI. Domestic Economy

XVII. Miscellaneous

CLASS IV. LITERATURE

L History and Study of Literature (7)

II. Bibliography (7)

III. Language (3)

IV. Classical Literature (2)

V. Miscellanea Latina

VI. Anglo-Saxon

VII. English Literature (4)

VIII. French Literature

IX. Italian Literature

X. Spanish and Portuguese Literature

XI. German Literature

XII. Oriental Literature (5)

CLASS V. GROGRAPHY

I. Ancient and Modern Geography (4)

II. Voyages and Travels (37)

CLASS VI. HISTORY, MYTHOLOGY, ARCHÆOLOGY, BIOGRAPHY

I. Study of History

II. Mythology

III. Archæology (3)

IV. Chronology and GenealogyV. Biography (3)

VI. History (29)

CLASS VII. BRITISH GEOGRAPHY, ANTIQUITIES, HISTORY, AND BIOGRAPHY

I. British Geography and Antiquities (13)

II. History of England (12)

III. Wales
IV. Scotland

V. Ireland

VI. British Biography, Letters, Peerages (4)

VII. Government (4)

VIII. Honours and Dignities (3)

IX. Historical Tracts

The classification of Nicholas Trübner, designed for a Bibliographical Catalogue of American Literature, is worthy of mention here as a practical method of arranging books on a special subject.

Trübner's Scheme (1859)

Bibliography
 Collections
 Military Science
 Theology
 Jurisprudence
 Rural and Domestic Economy
 Medicine
 Politics
 Natural History
 Chemistry and Pharmacy
 Belles Lettres

7. Chemistry and Pharmacy 23. Belles Lettres 24. Fine Arts 9. Mathematics, Astronomy 25. Music 26. Freemasonry 27. Music 27. Music 28. Freemasonry 29. Music 29. Music 29. Freemasonry 29. Music 29. Freemasonry 29. Music 29. Freemasonry 29. Music 2

11. Education
12. Modern Language
13. Philology
27. Mormonism
28. Spiritualism
29. Guide Books

14. American Antiquities 30. Maps
15. History 31. Periodicals

16. Geography

29. We come now to the most important of the English classifications which for years has formed the basis of a large number of the broad schemes described in Chapter I. This is the very complete method of Edward Edwards, outlined in his Memoirs of Libraries, Vol. II., p. 815, and stated by himself to be designed for "the special characteristics and requirements" of public libraries, then only recently established by the Acts of 1850 and 1855. The Manchester Public Library, organised by Edwards, is classified according to this system, and other libraries have adopted some of the main classes and

sub-divisions. The weakest part of the system is, in our opinion, the cumbrous notation or method of briefly indicating the classes. Thus "Ecclesiastical History of England Generally" requires a mark like this, "III -7 § f i," so that such symbols are out of the question for shelf arrangement. The general excellence of this classification marks it as one well adapted for careful study by librarians; and as the method of indicating divisions and sub-divisions seems to act as a stumbling-block to many, we have ventured to simplify them, and present a condensed table of the entire method. We have accordingly applied letters instead of figures to the main classes, retained the original divisional numbers, and noted all further subdivisions by a second sequence of numbers following a dash. Thus "Ecclesiastical History of England Generally" becomes simply C 7 -5.

Edwards' Scheme (1859)

CLASS A. THEOLOGY

- I. Holy Scriptures
 - -1. Complete Texts
 - -2. Detached Books of O. and N. Tests.
 - -3. Harmonies of O. and N. Tests.
 - -4. Apocryphal Scriptures
 - -5. Bible Histories
- 2. Sacred Philology
 - -I. Introductions to Bible
 - -2. Commentaries and Paraphrases
 - -3. Concordances and Dictionaries
 - -4. Biblical Antiquities
 - -5. Geography and Natural History of Bible
 - -6. Connexions of Sacred and Profane History
- 3. Collective Works of Theologians
- 4. Dogmatic and Polemic Theology
- 5. Catechetical Theology
- Pastoral and Hortatory Theology

- 7. Mystical Theology
- 8. Liturgies, Rites, and Ceremonies
- 9. Judaism
- 10. Natural Theology

CLASS B. PHILOSOPHY

- I. General and Collective Works
- 2. Ethics
- 3. Metaphysics

CLASS C. HISTORY

- 1. Study of History
- 2. Universal History and Biography [including General Geography and Collections of Voyages]
- 3. Ancient History and Biography
- 4. History of the Middle Ages
- 5. General Ecclesiastical History
- 6. History of Modern Europe, General [including Travel]
- History of Great Britain and Ireland, General
 - -I. England, General
 - -2. Before Conquest
 - -3. Individual Reign

C. 7. -4. United Kingdom, Ecclesiastical History, General -5. England, Ecclesiastical History, General -6. Before Reformation Reformation -7. -8. Post-Reformation -9. History of Dissenters. General History of Dissenters. -10. Denominational

-11. England, Parliamentary History

-12. United Kingdom, Naval History (also England) Military History (also -13.

England) -14. Monetary and Medallic

History (also England) -15. England, Topographical

History, General Architectural and Sepul--16.

chral Antiquities -I7. County Topography

-18. Travels

-19. United Kingdom, Collective Biography (also England)

-20. Particular Biography (also England)

Peerages, Baronetages, -21. Political Indexes (also England)

-22. State Papers and Records (also England)

-23. Scotland, General History

Ecclesiastical History -24. Military History -25.

~26. Topographical History

Travels -27. Biography

--28.

State Papers and Records -29.

-30. Ireland, General History

Ecclesiastical History -31.

7. -32. Ireland, Military History

-33. Topographical History

Travels -34-

Biography -35.

-36. State Papers and Records

-37. Wales, History

-38. British Colonies, History, General

American Collective His--39. tory

-40. West India

-41. Australian

-42. History of **Particular** Colonies

-43. British India, History

8. Europe, Modern History, Gene-

-1. Belgium and Holland

-2. Denmark, Sweden, Norway

-3. France

-4. Germany -5. Greece

-6. Hungary

-7. Italy

-8. Poland

-q. Russia

-10. Switzerland

-11. Turkey

-12. Other Parts of Europe America, History, General

-1. United States [since Independence]

-2. Mexico

-3. Hayti

and Southern -4. Central

America

10. Africa and Asia. Modern History

CLASS D. POLITICS AND COM-MERCE

I. Politics and Government, -General

2. National Constitutions

- D. 3. Monarchy, General
 - -I. Crown of England, Succession and Prerogatives
 - 4. Parliamentary and Representative Assemblies, General
 - -I. House of Lords
 - -2. House of Commons, Constitution, etc., General
 - -3. Reform
 - -4. Bribery at Elections
 - -5. Ballot and Electoral Reform
 - -6. Privileges
 - -7. Internal Economy and Business
 - -8. Reports and Papers
 - -9. Foreign Countries, Representative Assemblies
 - 5. Civil Government, General
 -1. Civil Service of United
 - Kingdom 6. Law, General
 - 7. Laws, Collective, U.K. and England
 - -1. Laws, Commentaries, England
 - -2. Codification, England
 - -3. Reform
 - -4. Courts of Law
 - -5. Scotland
 - -6. Ireland
 - -7. Wales
 - -8. Colonial
 - -9. United States
 - -10. Foreign Countries
 - -11. International Law
 - Criminal Law (4 sub-divisions)
 - Political Economy: Commerce, Pauperism, Population, etc. (33 sub-divisions)
 - 10. Church Establishments
 - Public Education (3 sub-divisions)

- Army and Navy, Organisation, etc.
- Foreign Policy, Ambassadors and Consuls
- 14. Political Satires, Liberty of the Press

CLASS E. SCIENCES AND ARTS

- I. General: Dictionaries, Society
 Transactions
- 2. Physical Sciences, General
 - -I. Physics
 - -2. Mechanics
 - -3. Acoustics
 - -4. Optics
 - -5. Pneumatics, Electricity, Meteorology, etc.
 - -6. Physical Astronomy
 - -7. Chemistry, General
 - -8. Inorganic
 - -9. Organic
 - -10. Analytical
 - -11. Technical
- -12. Society Transactions,
 Periodicals
- -13. Mineralogy and Crystallography
- -14. Geology, General
- -15. Particular
- -16. Societies and Periodicals
- -17. Biology, General
- -18. Comparative Anatomy and Physiology
- -19. Human Anatomy and Physiology
- -20. Zoology, General
- -21. Particular
- -22. Local
- -23. Societies and Periodicals
- -24. Botany, General
- -25. Physiological
- -26. Local
- -27. Societies and Periodicals
- -28. Palæontology

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- E. 3. Mathematical Sciences, General
 - -1. Arithmetic; -2. Algebra; -3. Geometry, Conic Sections, Mensuration; -4. Trigonometry; -5. Calculus
 - 4. Mechanical Arts, General
 - -I. Civil Engineering ; -2. Steam Engine; -3. Roads. Railways, Bridges ; -4. Docks, Harbours, Canals, etc.; -5. Field Work; -6. Building; -7. Mining and Metallurgy, Machinery, etc.; -8. Textile Fabrics; -9. Mathematical Instrumenta, Watch and Clock-making; -10. Type-founding, Printing, Lithography, etc.; -11. Pottery, Ceramics, Glass;
 - -12. Other Arts and Trades 5. Military and Naval Arts (8 sub-
 - divisions) 6. Arts of Design, General
 - -1. Painting (3 sub-divisions); -2. Sculpture; -3. Engraving; -4. Architecture; -5. Landscape Gardening; -6. Photography
 - 7. Art of Writing, General
 - -1. Palmography; -2. Shorthand; -3. Secret Writing
 - 8. Musical and Histrionic Arts. General
 - -1. Music, General: -2. Music, Theory and Composition: -3. Music, Practical Treatises, Instruments, Voice; -4. Music, History; -5. Histrionic Art, Histories of the Stage
 - 9. Medical Arts. General
 - -1. Medicine, l'articular Branches;

- -2. Surgery and Surgical Anatomy ; -3. Materia Medica and Pharmacy; -4. Dietetics
- 10. Domestic and Recreative Arts

CLASS F. LITERATURE AND POLY-GRAPHY.

- 1. History of Literature, General
- 2. Linguistics or Philology, General
 - -1. Particular Languages; -2. Dictionaries, Lexicons, etc.
- 3. Poetry and Fiction, General Collections and History
 - -1. National Collections; -2. Classic Greek Poets 1 -3. Classic Latin Poets; -4. British Poets; -5. Modern Foreign Poets; -6. Early Romantic Fiction: -7.. Comic, Pastoral, and Heroic Romance : -8. Dramatic Poetry, Collections of Plays: -o. Collective Works of Individual Authors : -10. Separate Plays; -11. History of Dramatic Poetry; -12. Modern Tales, Novels and Romances
- 4. Oratory: Speeches and Treatises on Oratory
- 5. Essays, Proverbs, Literary Miscellanies
- 6. Epistolography, or Collections of Letters
- 7. Bibliography and Literary History of Particular Countries
- Polygraphy [collections of works in a or more classes]
 - -1. British; -2. Foreign; -3. Eneyclopædias; -4. Reviews, Magazines, etc.
- 30. A modern English system of great practical value is

that used by Mr. W. Swan Sonnenschein in his important bibliographies of general literature entitled *The Best Books*. The classification of this invaluable library tool has the great merit of being based upon the actual printed books of contemporary and recent literature, as well as the older literature represented by reprints. It thus exhibits not only a complete scheme of headings or classes under which books can be grouped, but by giving examples of actual titles under every main class and sub-division presents one of the most useful text-books which can be studied by the young librarian. Its valuable index adds materially to its usefulness and completeness. We add the main classes and principal divisions, with an indication of the number of sub-divisions.

Sonnenschein's Scheme (1887)

CLASS A. THEOLOGY

- 1. General (1-3)
- 2. Natural Theology (4-8)
- 3. Ethnic Theology, Oriental (9-15)
- 4. Bible (16-47)
- 5. Ecclesiastical History, General (48-59)
- 6. National (60-75)
- 7. Denominational (76-101)
- 8. Ecclesiastical Polity (102-112)
- 9. Practical Theology (113-118)
- 10. Systematic Theology (119-134)

CLASS B. MYTHOLOGY

- 1. Comparative (1-2)
- 2. Special Departments (3-10)
- 3. Mythology and Folk-Lore, National (11-39)

CLASS C. PHILOSOPHY

- 1. General
- 2. History (2-4)
- 3. Ancient Philosophers by Schools (5-15)
- 4. Modern Philosophers (16-67)
- 5. Special Departments [68. Logic;
 - 69. Metaphysics ; 70. Ethics ;
 - 71. Psychology; 72. Æsthe-

tics; 73. Philosophy of History; 74. Political and Social Philosophy; 75. Philosophy of Law]

CLASS D. SOCIETY

- I. Law, General
- 2. Statutes, etc. (2-3)
- 3. General (4)
- 4. History (5-7)
- 5. Special Departments (8-100)
- 6. Courts, Procedure (101-109)
- 7. Roman and Oriental(110-112)
- 8-9. International (113)
- 10. Political Economy (114-124)
- 11. Social Economy (125-133)
- 12. Politics (134-147)
- 13. Commerce (148-154)
- 14. Education (155-172)

CLASS E. GEOGRAPHY

- I. General (I-8)
- 2. Historical Geography (9-10)
- 3. Europe (11-29)
- 4. Asia Minor (30)
- 5. Asia (31-40)
- 6. Africa (41-51)

- 7. America (52-61)
- 8. Australasia (62-67)
- q. Polar Regions (68-69)

CLASS F. HISTORY

- I. General (1-4)
- 2. Primitive Society (5)
- 3. Ancient History (6-12)
- 4. Middle Ages (13-14)
- 5. Europe (15-60)
- 6. Asia (61-64)
- 7. South Africa (65)
- 8. America (66-75)
- Gypsies (76)

CT ACC G. ARCHÆOLOGY AND HISTORICAL COLLATERALS

- 1. Antiquities, General and Local (1-11)
- Classical (12-21)
- 3. Genealogy, Heraldry, Names (22-24)
- 4. Miscellaneous [25. Costume; 26. Autographs; 27. Stamps; 28. Flags; 29. Signboards; 29*. Pipes; 30. Lives of Antiquaries]

CLASS H. SCIENCE

- General (1-4)
- 2. Mathematics (5-9)
- 3. Physics (10-16)
- 4. Chemistry (17-20) [5. and 6. accidentally omitted]
- 7. Astronomy (21-24)
- Physiography (25–30)
- 9. Geology (31-41)
- 10. Biology (42-47)
- 11. Botany (48-69)
- 12. Zoology (70-106)

CLASS H*. MEDICINE

- I. General (1-3)
- 2. Human Anatomy and Physiology (4-9)
- Medicine (10–13)

- 4. Endemic Disease (14)
- 5. Special Diseases (15-25)
- 6. Surgery (26-33)
- 7. Local Surgery (34-44)
- 8. Obstetrics (45-47)
- 9. Diseases of Children (48)
- 10. Pathology (49-50)
- 11. Materia Medica and Therapeutics (51-53)
- 12. Medical Jurisprudence and Toxicology (54)
- 13. Hygiene (55-57)
- 14. Hospitals, Nursing (58-59)
- 15. Domestic Medicine (60)
- 16. Homoeopathy (61-62)

CLASS I. ARTS AND TRADES

- I. Collective (1-2)
- 2. Engineering (3-12)
- Electrical (13) 3.
- Military (14-18) 4.
 - Naval (19-23)
- 6. Agriculture (24-51)
- 7. Industries and Trades (52-81)
- 8. Fine Arts (82-115)
- q. Architecture (116-122)
- 10. Music (123-133)
- 11. Drama (134-136)
- 11*. Other Public Performers (136*, **)
 - 12. Domestic Arts (137-145)
- 13. Sports and Recreations (146-172)

CLASS K. LITERATURE AND PHILOLOGY

- 1. Reference Works (1-2)
- 2. Bibliography (3-10)
- 3. Printing, History (11-15)
- 3*. Libraries (16-16*)
 - 4. Literature, National: History, Biography, Criticism (17-42)
 - 5. Prose Fiction (43-58)
 - 6, Facetiæ (58°-61)

- 7. Poetry, National (62-78)
- 8. Dramatists (79-82)
- 9. Essayists (83-85)
- 10. Letter Writers (86)
- 10*. Oratory (86*)
 - 11. Maxims, Epigrams (87)
- 12. Anecdotes (88)
- 13. Collections and Miscellanies (89-91)
 - PHILOLOGY AND ANCIENT LITE-RATURE
- 14. General Philology (92-100)
- Hamitic Philology and Literature (101-104)
- 16. Semitic Philology and Literature (105-118)
- 17. Aryan Philology and Literature
 (119-139)
- 18. Non-Aryan and Non-Semitic (140~157)

- 19. Malay and Polynesian (158-160)
- 20. African (161)
- 21. American (162–164)
- 22. Hyperborean (165)
- 23. Unclassed Philology (166)
- 24. Greek and Latin, General (167-174)
- 25. Greek Philology and Literature (175-198)
- 26. Latin Philology and Literature (199-224)
- 27. Teutonic Philology (225-255)
- Romance Philology and Literature (256-278)
- 29. Celtic Philology and Literature (279-283)
- Slavonic Philology and Literature (284–285)
- 31. Artificial Universal Language (286)
- 31. A modern German system which has had some vogue is that prepared for the University of Halle by Otto Hartwig.¹ The following main classes and divisions will give some idea of its character:

Hartwig's Scheme (c. 1888)

- CLASS A. BIBLIOGRAPHY AND GENERAL WORKS
 - Aa. Library Science
 - Ab. Bibliography
 - Ac. Printing and Publishing
 - Ad. Introductions to Sciences and History of Sciences
 - Ae. History and Publications of Learned Societies
 - Af. General Works (General Periodicals, Encyclopædias, etc.)
- CLASS B. LINGUISTICS, GENERAL, AND ORIENTAL LANGUAGES Ba-Bh

- CLASS C. CLASSICAL PHILOLOGY
 Ca-Cl
- CLASS D. MODERN PHILOLOGY Da-Dn
- CLASS E. FINE ARTS
 - Ea. Plastic Arts in General
 - Eb. Ancient Art
 - Ec. Mediæval and Modern Art
 - Ed. Music
 - Ee. Acting
- CLASS F. PHILOSOPHY
 - Fa-Fc
- CLASS G. PEDAGOGY
- Ga. Pedagogy, Public Education

¹ Taken from Graesel-Laude's Manuel de Bibliothéconomie (1897),

58 Manual of Library Classification—31, 32 Gb. History and Statistics of Nn. History, Great Britain Universities No. France Gc. School Books, Works for the Np. Young Nq. Italy Nr. Balkan Peninsula CLASS H. HISTORY OF CIVILISA-Ns. Russia TION Nt. Scandinavia Ha-Hb Nu. CLASS I. THEOLOGY Nv. Biography Ia-Ib. General CLASS O. GEOGRAPHY Ic-Ie. Exegetical Theology Oa. General If-Ig. Dogmatic Theology Ih-Ik. Historical Theology Il-Im. Practical Theology graphy CLASS K. JURISPRUDENCE Ka-Ku CLASS L. POLITICAL SCIENCES La-T.h Pb. Mathematics, General Pc. Pure Mathematics CLASS M. SCIENCES AUXILIARY Pd. Astronomy TO HISTORY Pe. Applied Mathematics Ma. General (Diplomatics, Palæography, Genealogy, Heraldry) LOGY Mb. Chronology, Numismatics Qa-Qc CLASS N. HISTORY CLASS R. CHEMISTRY Na. General and Universal His-Ra-Rb tory Nb. History, Ancient

Nc. Mediæval

Nd. Modern Ne. Germany

Nf. Prussia

Ng. Prussian Provinces Nh.

North German Ni. South German

Nk. Austria-Hungary

NI. Switzerland

Holland and Belgium

Spain and Portugal

Other European Countries

Ob. Voyages and Itineraries

Oc. Political and Statistical Geo-

CLASS P. NATURAL AND MATHE-MATICAL SCIENCES, GENERAL

Pa. Natural Sciences, General

CLASS Q. PHYSICS AND METEORO-

CLASS S. NATURAL SCIENCES

Sa. Mineralogy, Geology, Palæontology

Sb. Botany Sc. Zoology

CLASS T. AGRICULTURE, ETC.

Ta-Tb

CLASS U. MEDICINE

Ua-Uo

32. Another scheme, of Italian origin, based on that of Hartwig and certain American methods, is that of Bonazzi,

first published as Schema di catalogo sistematico per le Biblioteche Parma (1890). Its main feature is the uniform sub-division of each main class, shown in detail below.

Bonazzi's Scheme (1890)

CLASS A. GENERAL WORKS
CLASS B. ETHNIC RELIGIONS.

MYTHOLOGY, ETC.

CLASS C. CHRISTIAN RELIGION CLASS D. JURISPRUDENCE

A. Bibliography

B. Periodicals

C. Proceedings
E. Introductory Works

F. Text-books

G. General Treatises

H. Collections

Y. Polygraphy

Z. History and Biography

CLASS E. SOCIOLOGY

CLASS F. PHILOLOGY

CLASS G. LITERATURE CLASS H. PHILOSOPHY

CLASS I. PHYSICAL AND MATHE-

MATICAL SCIENCES
CLASS K. CHEMISTRY

CLASS L. NATURAL SCIENCE

CLASS M. MEDICINE

CLASS N. SURGERY CLASS O. PHARMACY

CLASS P. VETERINARY SCIENCE

CLASS O. AGRICULTURE

CLASS R. INDUSTRY AND MANU-

FACTURES

CLASS S. FINE ARTS

A. Bibliography

B. Periodicals

C. Proceedings

E. Introductory Works

F. Text-books

G. General Treatises

H. Collections

Y. Polygraphy

Z. History and Biography

CLASS T. MUSIC

CLASS U. RECREATIVE ARTS

CLASS V. THEATRE

CLASS W. TRAVEL

CLASS X. ARCHÆOLOGY

CLASS Y. BIOGRAPHY

CLASS Z. HISTORY

Each class is divided like D and S above, and the scheme bears a general resemblance to some American methods possessing "mnemonic" or "local" features.

33. The last scheme which comes into this section is one introduced in 1894 for libraries in which readers have the privilege of direct access to the shelves. In this respect it differs from all the methods hitherto described. It has been adopted in a number of open access libraries in England, and in addition was in use in its main features since 1888 in the Clerkenwell Public Library, London. It is based on older schemes, and is not provided with a shelf notation, being intended solely for arrangement. It is described in a paper

entitled "Classification of Books for Libraries in which Readers are allowed Access to the Shelves," by John H. Quinn and James D. Brown, first read at the Belfast meeting of the Library Association in 1894, and printed in the *Library* for 1895.

Quinn-Brown Scheme (1894)

- CLASS A. RELIGION AND PHILO-SOPHY
- Bible (a. Texts, b. Commentaries,
 c. History, d. Aids)
- 2. Church (a. History, b. Law, c. Liturgy, d. Rituals by Sects)
- Theology (a. Natural Theology, b. Christianity, c. Non-Christian Systems, d. Mythology, c. Popular Beliefs)
- Philosophy (a. Schools, b. Mental Science, c. Logic, d. Moral Science)
- CLASS B. HISTORY, TRAVEL, AND TOPOGRAPHY
- a. Universal History and Geography,
 b. Dictionaries, c. Chronology,
 d. Archæology (including Numismatics), c. Gazetteers, f. Atlases, etc.
- National History and Topography
 [by countries, sub-divided as
 required]—1. Europe, 2. Asia,
 3. Africa, 4. America, 5. Australasia, 6. Polar Regions

CLASS C. BIOGRAPHY

- Dictionaries and General Collections (a. Peerages, b. Army, c. Clergy, d. Law and other lists, c. Dignities, f. Heraldry, g. Genealogy and Family History)
- Classes, including Criticism (a. Actors, b. Artists, c. Authors, d. Clergy and Religious, c. Engineers, f. Inventors, g. Legal,

- A. Monarchs, s. Philosophers, j. Philanthropists, A. Scientists, l. Statesmen, m. Travellers, etc.)
- CLASS D. SOCIAL SCIENCE
- Society (a. Manners and Customs,
 Folk-lore, c. Marriage,
 Women, c. Pauperism, f.
 Crime, g. Socialism, etc.)
- Government and Politics

 (a. Public Documents, b. Statutes, c. Army, d. Navy, c. Civil Service, etc.)
- Law (International, English, Colonial, Foreign, Special as Patent, Commercial, etc.)
- Political Economy (Taxation, Free Trade, Capital and Labour, Land, Rent, Statistics)
- 5. Education
- 6. Commerce

CLASS E. SCIENCE

- 1. Biology (Evolution, General)
- 2. Zoology
- 3. Botany
- Geology (Palæontology, Mineralogy and Crystallography)
- 5. Chemistry
- Physiography
- 7. Astronomy
- 8. Physics
- 9. Mathematics

CLASS F. FINE AND RECREA-TIVE ARTS

- I. Architecture
- 2. Painting

- 3. Sculpture and Carving
- 4. Decoration
- 5. Engraving
- 6. Music
- 7. Amusements
- 8. Sports

CLASS G. USEFUL ARTS

- Engineering (Steam, Naval, Military, Civil, Mining, Railway, Electrical, etc.)
- 2. Building and Mechanical Arts
- 3. Manufactures
- 4. Agriculture and Gardening
- 5. Sea and Navigation
- 6. Health and Medicine
- 7. Household Arts

CLASS H. LANGUAGE AND LITERATURE

1. Philology

- 2. Literary History
- 3. Bibliography
- 4. Libraries

Class J. Poetry and the Drama

- Poetry (Anthologies, Poets alphabetically)
- 2. Drama (Stage History, Dramatists alphabetically)

CLASS K. FICTION

- Collections, Author Alphabet and Anonyma
- 2. Juvenile

CLASS L. GENERAL WORKS

- 1. Encyclopædias, Directories
- 2. Miscellanies (Sketches, Essays, Anecdotes, Proverbs)
- 3. Collected Works
- 4. Periodicals not in other Classes

CHAPTER IV

SCHEMES FOR THE CLASSIFICATION OF BOOKS CONJOINED WITH SHELF NOTATIONS

34. The classification methods just examined are primarily for use in arranging books in catalogues or on shelves without providing a system of serial numbers or marks by which single books can be referred to and found as well as placed. To a certain extent the marking of the systems of Edwards. Sonnenschein, Bonazzi, Hartwig, and Quinn-Brown could be used for finding and charging purposes; but class numbers alone, without some method of indicating individual books, are not sufficient for all purposes. Turning back to Section 20. it will be noticed that in Edwards' scheme C 7-27 is a general reference to Travels in Scotland. But there may be two hundred separate works in this sub-division, and no means are provided for distinguishing one from another. Of course the books in C 7-27 might be arranged in an author alphabet; but this would still make the entry of a loaned book cumbrous, as it would be necessary to note the author and brief title thus: "C 7-27. Garnett's Tour." The accession number alone can be used for purposes of identifying the individual works of a sub-division, as is done with the Quinn-Brown method; but this was not contemplated in any other of the schemes described in Chapter III. This chapter is therefore concerned with the methods, mostly of modern origin, which are combination systems for classifying, shelving, cataloguing, charging, and otherwise identifying, not only main or subclasses, but single books.

35. The first scheme of this sort is of American origin, as

indeed are the whole of the published combination classifications. It was devised by Dr. William T. Harris, Superintendent of Public Schools, St. Louis, who was also one of the managers of the Public School Library of that city. His system was adopted at this library, and has been also used in other American libraries, particularly that of Peoria, Ill., which published an important modification or rather amplification of the scheme in 1896. Harris's method is sometimes styled the "Inverted Baconian" plan, from its general arrangement in the three main classes "Science," "Art," and "History," which roughly correspond to Bacon's "Philosophy," "Poetry," and "History," tabulated in Section 14. To Harris belongs the credit of having first produced a method adapted to the wants of a modern library. It bears a certain resemblance to the decimal system of Dewey, in its provision of a hundred divisions and general sequence of main divisions. The first draft of this system was printed in the Journal of Speculative Philosophy (1870), Vol. IV., p. 114-19, a periodical edited by Harris at St. Louis. It is also briefly described in the official work entitled Public Libraries in the United States of America (Washington: 1876). In actual use the main class letters and numbers of Harris's scheme are not required. Indeed he says that the proximate classes are numbered from 1 to 100, so as to have only two figures for most classes, with letters added for sub-classes. This is clearly enough shown in the following table, which is condensed from the Peoria Public Library scheme, it being, as before remarked, more complete than Harris's original plan:

Harris's Scheme (1870) ORIGINAL FORM

- A. SCIENCE. 1. Philosophy, 2.
 Religion
 Social and Political Science.
 3. Jurisprudence, 4. Politics, etc.
 Natural Sciences and Useful Arts.
 7. Mathematics, 11. Useful Arts
- B. ART. 12. Fine Arts, 13. Poetry, 14. Pure Fiction, 15. Literary Miscellany
- C. HISTORY. 16. Geography and Travel, 17. Civil History, 18. Biography
- D. APPENDIX. 19. Appendix— Miscellany

PEORIA FORM

SCIENCE

- 2. Philosophy in General
- Philosophies and Philosophers

 (a. Ancient, d. Early
 Christian, e. Modern, s.
 Special)
- 4. Metaphysics (4a. Anthropology, 4b. Psychology, 4c. Logic)
- 5. Ethics
- 6. Religion
- 7. Bible
- Commentaries
- 9. Theology, Doctrinal, Dogmatics
- 10. Devotional, Practical
- 11. Natural Theology
- 12. Religious and Ecclesiastical
 History
- 13. Modern Systems
- 14. Judaism
- 15. Mythology and Folk-Lore
- 16. Oriental and Pagan Religions
- SOCIAL AND POLITICAL SCIENCES
- 18. Jurisprudence
- 19. Law
- 20. International Law
- 21. Ancient, Feudal, and Civil Law
- 22. Common Law, Canon Law, Equity
- 23. Statute Law, Reports and Digests
- 24. Constitutional Law and History
- 25. Law Treatises (Criminal, Martial, etc.)
- 26. Political Science
- 27. Legislative Bodies and Annals
- 28. Administration
- 29. Social Science
- 30. Economics
- 31. Education
- 32. Philology
- 33. Grammars and Text-books
- 34. Dictionaries

NATURAL SCIENCES AND USEFUL ARTS

- 35. Natural Science (a. Scientific Periodicals)
- 36. Mathematics in General (a. Weights and Measures)
- 37. Arithmetic
- 38. Algebra
- 39. Geometry, Trigonometry, Cal-
- Engineering (a. Railroad, Canal, etc., b. Bridges and Roofs, d. Military and Naval, etc.)
- 41. Mechanical (Steam Engines, Machinery, etc.)
- 42. Physics (General and Special)
- 43. Electricity
- 44. Chemistry
- 45. Astronomy
- 46. Natural History (a. Biology, b. Evolution, c. Microscopy, d. Collectors' Manuals, c. Out-of-doors Books)
- 47. Physical Geography (a. Land, b. Water, c. Atmosphere)
- 48. Geology
- 49. Botany
- 50. Zoology
- 51. Ethnology 52. Archæology, Antiquities
- 53. Medicine
- 54. Anatomy, Physiology
- 55. Materia Medica, Pharmacy
- 56. Pathology, Diseases, Treatment
- Hygiene (a. Food, b. Clothing,
 c. Children, d. Physical Culture, c. Public Health)
- 58. Amusements, Recreations
- 59. Useful Arts and Trades (a. Exhibitions, b. Patents)
- 60. Military Arts (e. Naval Science)

- 61. Mechanic Arts and Trades
 (Building, Manufactures,
 Chemical Technology)
- Commercial Arts, Business (a. Book-keeping, b. Writing, c. Printing, etc.)
- 63. Productive Arts (a. Mining,
 b. Agriculture, c. Cookery,
 d. Housekeeping, f. Furniture, g. Needlework)

ART

- 64. Fine Arts, General
- 65. Fine Arts, History
 - a. Architecture (5 sub-divisions)
 - b. Sculpture (3 sub-divisions)
 - c. Drawing (4 sub-divisions)
 Painting (10 sub-divisions)
 - d. Engraving, Lithography, Etching
 - 1. Photography
 - e. Art Works, Collections of Pictures
 - f. Minor Arts, Decorative and Industrial
 - g. Music (11 sub-divisions)
- 66. Poetry and the Drama, History and Criticism (a-w. National)
- 67. English Poetry
- 68. Foreign Poetry and Drama
- 69. Prose Fiction
- 70. Juvenile Literature
- 71. Literary Miscellany
- 72. Fables, Anecdotes, etc.
- 73. Rhetoric, Elocution
- 74. Orations and Speeches
- 75. Essays

- 76. Collected Literary Works
- 77. Literary History and Criticism
- 78. Bibliography (including Library Economy)

HISTORY

- 80. Geography and Travel, General
- 81. Geography (a. Ancient, b. Modern)
- 82. Voyages
- America, Travels (II subdivisions)
- 84. Europe, Travels (11 subdivisions)
- 85. Asia, Travels (6 sub-divisions)
- 86. Africa, Travels (5 sub-divisions)
- 87. Travels in Several Quarters (5 sub-divisions)
- 88. Philosophy of History, civilisation
- 89. Historical Collections
- 90. Ancient History
- 91. History of United States
- 92. America at large
- 93. British
- 94. Modern Europe
- 95. Asia
- Historical Miscellany (a. Crusades, b. Battles, c. Coins, d. Costume, e. Customs, f. Secret Societies)
- Biography (a. Collective, b. Individual, c. Genealogy and Heraldry, d. Names)
- 99. Cyclopedias and Collections
- 100. Periodicals, Newspapers, Journalism

36. Following closely upon the Harris classification is another American scheme, dating from about 1871, in which an attempt is made to combine a numerical sub-classification with sizes. The method is described in the *Library Journal* (1878), Vol. III. There are twenty-five classes, each designated by the letters from A to Z, excluding J. Each of the twenty-five

classes is divided into nine sub-classes by adding 1 to 9, and these sub-classes are further sub-divided by adding one of the twenty-five letters. A further element is introduced by a series of letters to denote sizes, D = duodecimo, o = octavo, Q = quarto, and F = folio. Thus a book may have a number like "A8mo." This system was invented by Mr. Jacob Schwartz, of the Apprentices' Library, New York; and in 1879 he issued an amplification of the same, which is described in the Library Journal (1879), Vol. IV. It is styled the "Mnemonic System of Classification," and its main outlines are these:

Schwarts's Scheme (1871-79)

A. A	RTS.	FINE	AND	USEFUL
------	------	------	-----	--------

- I. Agriculture
- 2. Carpentry
- 3. Fine Arts, General
- 4. Games
- 5. Household Science
- 6. Music
- 7. Painting
- 8. Sculpture
- 9. Useful Arts
- B. BIOGRAPHY
- C. Customs
- D. DRAMA AND POETRY
- E. EUROPE, HISTORY AND TRAVEL
- F. FICTION, TUVENILE

G. GOVERNMENT AND SOCIAL SCIENCE

- H. HISTORY, GENERAL
- J. JURISPRUDENCE
- K. LANGUAGE
- L. LITERATURE
- M. MENTAL AND MORAL SCIENCE
- N. NATURAL HISTORY
- O. ORIENTAL HISTORY AND TRAVEL
- P. PERIODICALS
- R. REFERENCE AND RARE BOOKS
- S. SCIENCE
- T. THEOLOGY
- U. United States History and Travel
- V. VOYAGES AND TRAVEL
- W. WORKS, COLLECTED

Every class is sub-divided as at A, in a little alphabetical sequence, wherein an arrangement is followed which makes I always begin with A or B, 2 with C or D, 3 with E or F, 4 with G or H, and so on. No doubt the correspondence between the class letter and the initial of the class name is an assistance to the memory of assistants; but it is doubtful if this compensates for the separation of the Geographical and Historical classes. In the Library Journal (1882), Vol. VII.,

Mr. Schwartz published a "New Classification and Notation," in which an attempt is made to combine the numerical, the alphabetical, and the classified forms. This is accompanied by an interesting tabulated plan of the scheme. Mr. Schwartz was one of the parties to the clever and amusing controversy on classification schemes which for several years, from about 1879, raged in the Library Journal among such experts as Dewey, Cutter, Perkins, and Schwartz. This was one of the most instructive discussions which ever took place upon an abstruse library topic, and it undoubtedly did much to educate and fix the opinion of American librarians wholly in favour of systematic classification.

37. We have arrived now at the most generally adopted and influential of all the schemes of systematic library classification, that devised by Mr. Melvil Dewey (of the State Library, Albany, New York) about 1873, and first applied to the library of Amherst College, Mass. It was originally published anonymously in 1876 as A Classification and Subject Index for cataloguing and arranging the Books and Pamphlets of a Library (Amherst, Mass.), and in the same year a brief account of the method appeared in Public Libraries in the United States of America. In 1885 and 1888 extensive improvements were introduced, especially a Relative Index, and in April, 1895. an Abridged Desimal Classification and Relative Index was published as Vol. IV., Nos. 13, 14, of Library Notes. No system of classification has been so widely adopted or so generally appreciated, and no other system has done so much valuable missionary work in the cause of systematic classification. It is so well known, that a very brief description and a few extracts will serve to make its general outlines clear. In the first edition acknowledgment is made of indebtedness to the Nuovo Sistema di Catalogo Bibliografico Generale, of Natale Battezzati, of Milan, and to the systems of Messrs. Harris and Schwartz. As the older forms have been modified or discarded, it is unnecessary to further examine the earlier editions. At present the method consists of ten main classes, arranged as follows:

Dewey's Scheme (1873-76)

о.	General Works	5.	Natural Science
ı.	Philosophy	6.	Useful Arts
2.	Religion	7.	Fine Arts
3.	Sociology	8.	Literature
4.	Philology	9.	History

Each of these classes is divided into ten divisions, and each of these into ten sections. In all cases the o indicates general works on each class, division, or section. Sub-divisions of sections are indicated by another series of consecutive numbers coming after a period or point. Thus 553.7 means Class 5 Natural Science, Division 5 Geology, Section 3 Economic Geology, Sub-section 7 Mineral Waters. The scheme possesses various mnemonic features, a certain number, for example, always standing for a certain country or topic. In such an elaborate and well-indexed method, these extra aids do not appear to us to possess much value. "The books are arranged on the shelves in simple numerical order, all class numbers being decimal. Since each subject has a definite number, all books on any subject must stand together." The order of the divisions is as follows: and it will be seen that, when shelved. the books in a library will be arranged in a simple numerical sequence, yet perfectly classed in an accurate scheme of related main classes and subordinate subjects:

Dewey Divisions

000 GENERAL WORKS	100 Philosophy
010 Bibliography	110 Metaphysics
020 Library Economy	120 Special Metaphysical Topics
030 General Cyclopedias	130 Mind and Body
040 General Collections	140 Philosophical Systems
050 General Periodicals	150 Mental Faculties, Psychology
060 General Societies	160 Logic
070 Newspapers	170 Ethics
080 Special Libraries, Polygraphy	180 Ancient Philosophers
090 Book Rarities	190 Modern Philosophers

¹ Tables and Index of the Decimal Classification and Relative Index for arranging and cataloguing Libraries, Clippings, Notes, etc. 3rd Edition. (Boston: 1888.) A fifth edition has since appeared.

	•	5, 5,
	200 Religion	600 Useful Arts
	210 Natural Theology	610 Medicine
	220 Bible	620 Engineering
	230 Doctrinal Theology, Dog-	630 Agriculture
	matics	640 Domestic Economy
	240 Devotional and Practical	650 Communication and Commerce
	250 Homiletic, Pastoral, Parochial	660 Chemical Technology
	260 Church, Institutions, Work	670 Manufactures
	270 Religious History	680 Mechanic Trades
	280 Christian Churches and Sects	690 Building
	290 Non-Christian Religions	
	_	700 FINE ARTS
	300 Sociology	710 Landscape Gardening
	310 Statistics	720 Architecture
	320 Political Science	730 Sculpture
	330 Political Economy	740 Drawing, Design, Decoration
	340 Law	750 Painting
	350 Administration	760 Engraving
	360 Associations and Institutions	770 Photography
	370 Education	780 Music
	380 Commerce and Communication	790 Amusements
	390 Customs, Costumes, Folk-Lore	
		800 LITERATURE
	400 PHILOLOGY	810 American
	410 Comparative	820 English
	420 English	830 German
	430 German	840 French
	440 French	850 Italian
	450 Italian	860 Spanish
	460 Spanish	870 Latin
	470 Latin	880 Greek
	480 Greek	890 Minor Languages
	490 Minor Languages	•
		900 HISTORY
	500 NATURAL SCIENCE	910 Geography and Description
	510 Mathematics	920 Biography
	520 Astronomy	930 Ancient History
	530 Physics	940 (Europe
	540 Chemistry	950 Asia
	550 Geology	960 Africa
	560 Paleontology	970 North America Modern
	570 Biology	980 South America
•	580 Botany	990 Oceanica and Polar
	590 Zoology	Regions

To show the arrangement of sections we select the division 620 Engineering, which is divided thus:

621 Mechanical 626 Canal
622 Mining 627 River and Harbor
623 Military 628 Sanitary, Water Works
624 Bridge and Roof 629 Other Branches
625 Road and Railroad

The arrangement of 621 is continued in sub-sections as follows:

621'1 Steam Engineering
621'2 Water Engines or Motors
621'3 Electrical Engineering
621'4 Air and Gas Engines and
Other Motors
621'5 Air Compressors, Ice Machines
621'9 Machine Tools
621'9 Machine Tools

621'1 Steam Engineering is in its turn further divided thus:

621'11 Mechanism of Steam Engine 621'16 Stationary Engines 621'17 621'18 Steam Generation, Boilers, 621'13 Locomotive Engines 621'14 Traction Engines 621'15 Steam Heating 621'16 Stationary Engines 621'17 621'18 Steam Generation, Boilers, 621'19 Steam Heating 621'19 Steam Heating

This classification provides places and symbols for every topic, however minute, and there only remains some method of distinguishing individual books. There may be, for instance, twelve books on 62118, which would all have the same class number. How then to distinguish Courtenay on Boilers from Shock on Boilers? Several ways have been suggested, as in finding and charging it is essential that a reader should be credited only with the single book of a class which he borrows, and not with all the books in the class. One plan is to use the accession number, which might give symbols like this:

621'18- 4689 Courtenay, Boiler-maker's Assistant 621'18-10673 Shock, Boilers

The most generally adopted plan, used greatly in American

libraries, is to apply the "Cutter Author Marks," a system of numbering all the best-known surnames, invented by Charles A. Cutter, late of the Boston Athenæum. The main features of this scheme may be briefly noted here, those who desire further particulars being referred to the tables published by the Library Bureau. "Books on the shelves are kept alphabeted by marking them with the initial of the author's family name, followed by one or more decimal figures assigned according to a table so constructed that the names whose initials are followed by some of the first letters of the alphabet have the first numbers, and those in which the initials are followed by later letters have later numbers":

Abbott = Ab2	Gardiner = G16
Acland = Ac6	$Gerry = G_36$
Cook = C77	Gilman = G42
Cousin = C83	Shock = Sh8
Cmbb - C84	

These initials and surname numbers serve to keep minute class divisions in strict alphabetical order, and can also be used for registering books. Shock on Boilers would be numbered 621'18Sh.8, which would differentiate it from every other book in the same sub-section and from every other book in the library. These, then, are the principal points in the Decimal classification. Of its merits it is unnecessary to speak, as the method has been generally accepted all over America and in many British, Colonial, and Continental libraries. The chief objection we have seen urged against it, apart from such questions as the arrangement and constituent subjects of main classes, has been the uniformity of progression by tens, and the plan of making every class, division, section, or subsection conform to this system. It may be said, however, and a slight examination will confirm this, that the advantages of the Decimal notation far outnumber the disadvantages of an occasional distortion or needless inflation of a class, division, or section.

38. There have been several modifications of Dewey's Decimal classification introduced at different times; but the

only one we propose to notice is that of Sion College, London, first printed in 1886, and afterwards revised and enlarged as Order of the Classification of Sion College Library, London (1889). This was the work of the Rev. W. H. Milman, librarian of the college, assisted by Mr. J. P. Edmond, now librarian to the Earl of Crawford at Haigh Hall, Wigan. In it Dewey's notation has been abandoned in favour of the old system of class letters and separate numerical progressions under each class. The order of classes has also been changed, and other variations introduced, with the object of adapting the scheme to the needs of an essentially theological library. It will be enough to briefly indicate the main classes and give a detailed specimen of the divisions and sub-divisions:

Sion College Scheme (1886-89)

CLASS A. Theology (including Ecclesiastical History and Canon Law)

- " B. History
- . C. Philosophy
 - D. Social Science
- . E. Natural Science
- F. Useful Arts
- .. G. Fine Arts
- , H. Philology
- ., K. Literature
- L. Bibliography and Literary History

CLASS C. PHILOSOPHY

- C 10. General
- C 11-12. Ancient Philosophers
- C 13-14. Mediæval and Modern Philosophers
 - C 15. Biographies and Correspondence of Philosophers
 - C 20. Logic
- C 30-33. Metaphysics
- C 40-45. Ethics
- C 50-51. Applied Morality
 - C 60. Aberrations from Morality (Suicide, Magic, Witchcraft, etc.)

Detail of C 20:

Logic

C 20'0. General C 20'2a. Systems, Greek C 20'1. Introductions C 20'2b. Latin

C 20.2. Systems C 20.2c. Modern

All through this scheme there are numerous departures from the Dewey tables, and the whole method is well worth careful study for its suggestiveness. The Cutter author marks are used to identify individual books.

39. One of the most scientific and complete modern schemes of classification is the "Expansive" method of Mr. Charles A. Cutter, which has been adopted within recent years in a number of libraries in the United States. Mr. Cutter is well known to librarians the world over as the author of the standard Rules for a Dictionary Catalogue, and for his valuable services to library science rendered while he was librarian at the Boston Athenæum. His system of classification was developed many years ago, probably before 1879, but has only been fully worked out in minute detail within the last few years. It was first published, in parts, at Boston, in 1801, as Expansive Classification, when the first table was issued. The other six tables have since been printed, and now librarians have an opportunity of examining the details of the scheme. Library assistants will find a summary of the method and its application to cataloguing in the Catalogue of "A. L. A." Library, issued by the U.S. Bureau of Education in 1803. Mr. Cutter also described his system at the International Library Conference held at London in July, 1897, and from his paper we select a few points of interest and importance:

"It consists of seven tables of classification of progressive fulness, designed to meet the needs of a library at its successive stages of growth. The first table has few classes and no subdivisions. It is meant for a very small collection of books. The second has more classes and some sub-divisions, but retains all the old classes with their previous marks. This is intended for the small collection, when it has swelled so much that it must be broken up into more parts. Now the books which are put into the new classes must of course have new marks; but those in the old ones remain as they are—their marks need no change. In this way we go on, gradually increasing the number of classes and sub-classes, and yet in each transition from the simpler to the more complex scheme pre-

serving all the old notation; so that there is only the absolutely necessary amount of alteration. . . . Passing through the third, and fourth, fifth, sixth, it comes finally to the seventh, which is full and minute enough for the British Museum, with a capacity of increase that would accommodate the British Museum raised to the tenth power; for there might be an eighth and a ninth and a tenth table if need be. From this adaptation to growth comes the name expansive. . . .

"This system is the first in which a series of expanding tables has been actually printed, the first in which the idea was made prominent. Much more characteristic, however, are two features of the notation. The first is not original, the second is. The first is the use of letters for notation; i.e. of the twenty-six letters of the alphabet to mark the classes (A being the general classes, Polygraphy; B, Philosophy and Religion; C, the Christian Religion; D, Ecclesiastical History; and so on); and of a second letter for the sub-classes (Ca being Judaism; Cb, the Bible; Cc, Collected Works of the Fathers of the Church; Cd, Later Divines; and so on). This second letter divides each of the twenty-six main classes into twenty-six parts, and then a third letter divides each of these six hundred and seventy-six divisions into twentysix parts, or over eighteen thousand in all, taking the singleletter, the double-letter, and the triple-letter classes together. This gives of course more classes than a smaller base; and, on the other hand, many fewer characters are needed to express the same closeness of classification. . . .

"The other characteristic of which I spoke, the original one, is this. We use figures to mark countries, and letters for all other subjects; so that it is possible to express the local relations of any subject in a perfectly unmistakable way, the letters never being used to signify countries, and the figures never being used for any other subjects but countries. Thus 45 is England wherever it occurs: e.g. F being History, F 45 is the History of England; G being Geography, G 45 is the Geography of England, or Travels in England, and so on. This local notation can be used, not merely with the main classes,

but with every sub-division, no matter how minute, if it is worth dividing by countries, as: K145, English Law; H145, English Joint-stock Companies; HT 45, English Budget; HV 45, English Tariff; Ic 45, the English Poor; Iv 45, English Schools; Ix 45, English Universities; JT 45, the English Constitution; Jv 45, English Politics; Jv 45, English Administration. Or, to turn to another country and a different order of ideas: X 39, French Language; Y 39, French Literature; Zv 39, History of French Literature; Zv 39, French Bibliography; WF 39, French Architecture; WP 39, French Painting. Wherever one wishes to separate what relates to France from other works on any subject, one has only to add the two figures 39, and the thing is done."

The scheme has other features which are described in the paper from which our extracts are taken and in the printed system itself. Those who wish to study the method as a whole are referred to Mr. Cutter's published tables. Following is a brief outline of the main classes and examples of their sectional treatment. It should be added that for the identification of individual books, the Cutter author tables are used.

Cutter's Expansive Scheme.

A,	GENERAL WORKS	C.	Christianity and Judaism
AD.	Dictionaries	CA.	Judaism
AE.	Encyclopædias	CB.	Bible
AI.	Indexes	CC.	Christianity
AM.	Museums	CE.	Apologetical Theology
AP.	Periodicals	CF.	Doctrinal Theology
AQ.	Quotations	CK.	Ethical Theology
AR.	Reference Books	CP.	Ecclesiastical Polity
AS.	Societies	CR.	Ritual Theology
_	_	CX.	Pastoral Theology
B.	PHILOSOPHY	D.	Ecclesiastical History
BG.	Metaphysics	_	_
BH.	Logic	B.	Biography
BL.	Psychology	F.	HISTORY (with Local List)
BM.	Moral Philosophy		•
BR.	Religion	FF.	Antiquities
		FN.	Numismatics.
BS.	Natural Theology	FS.	-
BT.	Religions	FV.	Heraldry

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G.	GEOGRAPHY AND TRAVELS (with Local List)	RT. RY.	Electric Arts Domestic Economy
_			CONSTRUCTIVE ARTS:
H,	SOCIAL SCIENCE	S.	Engineering
HB.		SG.	Building
HC.	Economics, Political Eco-	SJ.	Sanitary Engineering
_	nomy	SL.	Hydraulic Engineering
I.	Demotics, Sociology	ST.	Arts of Transportation
IK.	Education	T.	Fabricative Arts
J.	Civics, Political Science	U.	Art of War
K.	Legislation	UN.	Nautical Arts
KW.		V.	Athletic and Recreative
KX.	Societies		Arts .
L.	Sciences and Arts		FINE ARTS
7.4	Correspond (Normana)	vv.	Music
LA,	SCIENCES (NATURAL)	W.	Art, Fine Arts
LB.		WD.	Plastic Arts
LH.	Physics, Natural Philo-	WE.	Landscape Gardening
7.0	sophy	WF.	Architecture
LO.	Chemistry	WJ.	Sculpture
LR.	Astronomy	WL.	Arts of Design
М.	Natural History	WM. WP.	
MB. MC.	Microscopy		Painting
	Geology	WQ. WR.	Engraving
MD. MG.	Mineralogy	WS.	Photography Decorative Arts
	Physiography	11 3.	Decorative Arts
MQ. MV.	Palæontology		ARTS OF COMMUNICATION
N.V.	Biology		BY LANGUAGE
O.	Botany	X.	English Language
О. Р.	Zoology Vertebrates	XII.	Language in General
PW.		XX.	Oratory
r w.	Anthropology and Ethnology	Υ.	English and American Lite-
Q.	MEDICINE	••	rature
		YD.	Drama
R.	Useful Arts, Technology	YF.	Fiction
RC.	Metric Arts	YJ.	Juvenile Literature
RCZ.	Extractive and Productive	YP.	Poetry
	Arts	YII.	Literature in General
RD.	Mining	Z.	Book Arts
RF.	Metallurgy	ZN.	Private Libraries
RG.	Agriculture	ZP.	Public Libraries
RJ.	Animaliculture	ZT.	Bibliography
RQ.	Chemical Technology	ZY.	Literary History

The method of sub-division is illustrated by the class N. Botany and SG. Building:

N. Botany

Na. Botanical Gardens, Herbaria

Nb. Phytology, Theoretical Botany Nc. Phytography, Descriptive

Botany Nd. Cryptogams

Nr. Phanerogams

Nw. Flowers, Fruit, and Colored Leaves

Nx. Sylvæ

Nx. Sylvæ

Ny. Insectivorous and Parasitic

Nz. Economic and Medical Botany

SG. Building

SGb. Building Laws

SH. Carpentry

SHh. Stairs SI. Painting and

SI. Painting and Glazing SIv. Varnishing and Gilding

SIw. Papering

SIx. Bell-hanging

When further sub-division is necessary, it is accomplished by means of the ordinary numerals—N 1, N 2, N 3, Nd 1, Nd 2, Nd 3, etc.; while the arrangement of each minute sub-division, whatever it may be, is by author alphabet indicated as before stated by the Cutter author marks. The long period during which this system has been building will account in a great measure for its comparative neglect, and for the general ignorance of its main features among British librarians. But it is certainly one of the systems most deserving of study.

40. Another careful and practical American scheme is that of Mr. Fred. B. Perkins, late librarian of the San Francisco Public Library. It was published in a final form as A Rational Classification of Literature for shelving and cataloguing Books in a Library, with Alphabetical Index (San Francisco: 1882). The idea had long been maturing in Mr. Perkins' mind, and a variation of the 1882 method was previously issued in which a progressive series of numbers ran through the whole scheme. This was withdrawn in favour of the revised system of 1882, in which each main class got an independent series of numbers. The Perkins' system is a library classification pure and simple, in which each topic has a distinct mark, and there is no attempt made at mnemonic or other features. The following are its main classes and chapters or divisions:

Deshinel Detional Scheme (1994)

Perkins' Rations	al Scheme (1882)
CLASS A. RELIGION	CLASS E. BIOGRAPHY
Chap. I. Bible, Biblical Study II. History of Religion III. Systematic Theology IV. Christian Polity V. Devotional	Chap. I. Collective: Generally and by Nations ,, II. By Classes ,, III. Genealogy and Names
VI. Practical	CLASS F. SCIENCE
,, VII. Collective Works	Chap. I. General Treatises
CLASS B. PHILOSOPHY	,, II. Mathematics
Chap. I. Mental Philosophy: History and Systems	,, III. Natural Philosophy ,, IV. Astronomy
II. Mental Philosophy: Departments	,, V. Cosmology ,, VI. Geology
" III. Mind and Body " IV. Moral Philosophy	,, VII. Chemistry ,, VIII. General Natural History and Zoology
CLASS C. SOCIETY	,, IX. Botany
Chap. I. Government and Law	,, X. General Medicine
n II. Public Administration	" XI. Hygiene
,, III. Social Organisation	" XII. Medical Practice
, IV. Political Economy V. Education: Methods	" XIII. Surgical Practice
and Departments VI. Education: Institution	CLASS G. ARTS
and Reports	Chap. I. General Treatises 11. Engineering
,, VII. Business	" III. Architecture, Building
CLASS D. HISTORY	IV. Military Arts
Chap. I. General Geography	,, V. Naval Arts
and Travels	,, VI Mechanic Arts and Trades
III Minorical Collegenda	" VII. Agriculture
IV. Ancient History	,, VIII. Domestic Arts
V. Medizval History	,, IX. Fine Arts
,, VI. Modern and European History	,, X. Music ,, XI. Recreation
, VII. Asia	
, VIII. Africa	CLASS H. LITERATURE
" IX. South Seas, Austra-	Chap. L. History of Literature
lasia, Single Islands	,, IL Philology
,, X. America, except Uni-	,, III. Linguistics
ted States	,, IV. Critical Science

V. Poetry

XI. United States

Chap.	VI.	Drama	Chap.	X.	Periodicals
,,	VII.	Fiction	,,	XI.	Encyclopædias
,,	VIII.	Oratory	" X	II.	Bibliography
**	IX.	Collections	,, XI	III.	Libraries

Each class is numbered throughout in one sequence, and in actual arrangement the chapter numbers are ignored. Thus a book on Algebra would not be marked Fil 8, but simply F 8. The arrangement under classes will be illustrated by a few extracts from Class F:

I. GENERAL TREATISES	F 11. Trigonometry
F 1. Encyclopædias and Dic-	,, 12. Calculus
tionaries	,, 13. Quaternions
,, 2. Periodicals and Transactions	,, 14. Probabilities
,, 3. Histories, General	,, 15. Logarithms, Tables
II. MATHEMATICS	,, 16-25. Blank
F 4. Periodicals and Transactions	
,, 5. Histories	XIII. SURGICAL PRACTICE
,, 6. General Treatises	F 861. Surgery Generally
,, 7. Arithmetic	., 862. Military Surgery
,, 8. Algebra	,, 863. Obstetrics, Maternity
,, 9. Geometry	" 864. Dentistry
,, 10. Conic Sections	,, 865. Anæsthetics

The method recommended for marking individual books in each section is to number them consecutively in order of accession. Thus, in F 8, a progression like this might result:

```
F 8.1. Todhunter, Algebra F 8.2. Anderson, Algebra F 8.4. Smith, Algebra
```

But of course accession numbers could be used, or the Cutter author marks.

41. The method of Mr. Lloyd P. Smith was set forth in a book named On the Classification of Books: a Paper read before the American Library Association, May, 1882 (Boston: 1882). It has an alphabetical index of topics, but so far as we know has not been adopted to any extent even in America. There are only six main classes, and the method is based on the old Paris or French scheme.

Smith's Scheme (1882)

			 •	,	
Class	A.	Theology	Class	o.	Belles Lettres
**		Jurisprudence	19	U.	History
**	I.	Science and Arts	**	Y.	Bibliography

Sub-classes are indicated by letters a, b, c, d, etc.; divisions by figures 1, 2, 3, 4, etc.; and sub-divisions by symbols +, \triangle , \square , IV, V, VI, etc. The following is part of Class A:

A. RELIGION

- a. Toleration
- b. Natural Religion
- c. Holy Scriptures
 - I. Bibles
 - 6. Parts of New Testament
- o. Ecclesiastical History
 - I. Oriental Churches
 - 2. Latin Churches
 - + Jansenists
 - △ Gallican Church
 - ☐ Spain
 - IV Roman Catholic Church in U.S. and Canada

The notation is not particularly clear, and Ao2 seems rather a forbidding symbol to denote the Inquisition in Spain, for example; while if a Cutter author mark, or even accession number, is added, one might get marks like this: Ao2, B98, or Ao2, 3649. This rather unfortunate notation does not detract from the merit of the classification as a whole, which is rather high.

42. The last of the published American schemes is that of Mr. W. I. Fletcher, librarian of Amherst College, which was first issued in his little work on *Public Libraries in America*, "Columbian Knowledge Series," No. 11 (Boston, 1894; also London, Low); and afterwards separately "reprinted, with alterations, additions, and an index," as *Library Classification* (Boston: 1894). The first draft of this scheme was published in the *Library Journal* (1889). It is stated by the compiler to have been drafted "to offer a way of escape for those who shrink from the intricacies and difficulties of the elaborate systems, and to substitute for painstaking analytical classification a simple arrangement, which it is believed is better adapted to be practically useful in a library, while doing away with most of the work involved in carrying out one of these schemes." Mr. Fletcher uses eleven main classes, excluding

Fiction and Juvenile, which seem to be considered as separate divisions. The arrangement of the scheme is as follows:

Fletcher's Scheme

Fiction (no class number) 125-172. Sciences Juvenile Books (use I in 179-240. Useful Arts place of a class number) 245-277. Fine Arts 279-350. Political and Social 1-13. English and American Literature: Universal 352-416. Philosophy and Religion 421-456. Language and Literature Literature (English and American 15-75. History 81-82. Biography excepted) 461-468. Reference Books and 85-120. Voyages and Travels. Geography

Geography Special Classes

The blanks between the classes are intended for additional

The blanks between the classes are intended for additional divisions. In arranging books by this method an authoralphabetical sequence in each division is recommended, without author marks or additional symbols. If it is desired to insert a new division between any two existing divisions, the first number is to be taken and differentiated by means of a letter, thus: 114, 114^a, 115. Individual books are to be designated by means of separate book numbers added to the class numbers. Roscoe's *Chemistry* might therefore simply be marked 146·30. To show the progression of divisions in each class, we subjoin the whole of the class Sciences:

149.

125. History and Philosophy of the Sciences 126. Scientific Societies and Academies. Periodicals Essays and Miscellanies 128. Evolution and Cosmology 129. Natural History (works combining Zoology, Botany, etc.) 130. Biology and Embryology 131. Comparative Anatomy and Physiology 132. Zoology Lowest Forms of Animal 133. Life Mollusca, Insects 134.

135. Zoology, Fishes 136. Reptiles 137. Birds Mammalia 138. Man 139. 140. Botany: General Cryptogamia 141. 142. Of Countries and Localities 143. Geology: General Of Countries and Localities 145. Mineralogy and Crystallography 146. Chemistry: General 147. Inorganic 148. Organic

Analysis. Text-books

150. Physics	162. Astronomy: General
151. Heat	163. Descriptive
152. Light. Optics	164. Practical
153. Electricity	165. Almanacs (not Statistical)
154. Telegraph and Telephone. Phonograph	166. Mathematical Sciences: General
155. Electric Lighting	167. Arithmetic. Book-keeping
156. Electro-dynamics	168. Algebra
157. Sound	169. Geometry
158. Hydraulics	170. Higher Mathematics
159. Mechanics	171. Geodesy and Surveying
160. Physical Geography	172. Navigation
161. Meteorology	-

43. Other schemes have been proposed and carried out in the United States, many of them possessing points of interest and value, but it is not necessary to describe them here. The method of the Mercantile Library of Philadelphia by John Edmands was described in a separate pamphlet—New System of Classification and Scheme for numbering Books applied to the Mercantile Library of Philadelphia (Philadelphia: 1885); and other methods or variations of methods have been described in both the Library Journal (American) and Library Chronicle and Library (English).

CHAPTER V

CLASSIFIED LIBRARIES AND CATALOGUES

- 44. We have now described most of the important schemes of classification which have been introduced down to recent times, and may add a few remarks on the application of systematic classification to libraries and catalogues. It matters little what scheme a librarian adopts for his books, provided it is complete in itself and is suitable to the general character of his library. He must decide beforehand whether or not he is going to use a combined scheme for classification, shelf-marking, and charging, or simply going to use it for classification and shelving, plus accession numbers for charging and other purposes. important that this point be determined at the outset, as everything depends upon what he intends the system to accomplish. As libraries differ so much in their condition and composition, it is obvious that no single system in its integrity is capable of being successfully applied all round. The classification which suits a general public library of 20,000 or 50,000 volumes will not serve so satisfactorily for a Zoological Library of equal size, because its comparatively broad divisions of Biological Science would be inconvenient in a specialised collection containing a multitude of minute sub-divisions. So in turn would this minuteness of sub-division be even more necessary in an Entomological Library, and still more so in a collection of books and specimens of the Lepidoptera.
- 45. Having decided on the lines which his classification is to follow, the librarian must see that his scheme is provided with an alphabetical index, giving references, not only to actual names or words used in the system, but to synonyms as

well, and all relative words or terms. The necessity for this is apparent, and most American systems have been provided with indexes, that to Dewey's method being particularly elaborate and useful. Without an index the librarian is very apt to make mistakes with any system, in classifying books on topics which might be consistently placed in two or more main classes. Thus, Photography might rank as a department of either Optics or Chemistry and be put in Science, or with equal reason be considered as belonging to the same section as Engraving in Fine Art; while those who deny its claim to be considered a Fine Art would have no hesitation in relegating it to the main class Useful Arts. Librarians often change their minds as regards the class of particular books, especially when they pass through their hands at long intervals. A book on some obscure topic may seem correctly placed in Philosophy when first encountered, while next time a similar work turns up it may be just as confidently placed in Social Science. Hence the necessity for an alphabetical reference index to the scheme of classification and for religiously sticking to a first choice of main class, unless some overpowering reason appears to make a change desirable. There is no hard-and-fast rule for the librarian who classifies without reference to a detailed system. because some subjects are so eclectic that almost any main class will afford them an asylum. Therefore a library classified by memory or the whim of the moment is liable to show some queer instances of human inconsistency and to have its topics distributed impartially all over the place. It is manifest that the mere adoption of a systematic classification is not all that is necessary. To use it intelligently and successfully a librarian must deal with each book of a doubtful kind according to its merits, and bear in mind above all the purpose, as far as this can be discovered, for which it has been issued. Jevons in his Principles of Science declares that "it is a very difficult matter to classify the sciences, so complicated are the relations between them. But with books the complication is vastly greater, since the same book may treat of different sciences, or it may discuss a problem involving many branches of knowledge." Quite so; but every rational system of classification assumes the existence of general or encyclopædic books on all subjects, and provides for the difficulty accordingly, while it must be remembered that the vast majority of books are particular or limited in scope and not general at all. Tevons goes on to illustrate his argument by stating that an account of the Steam Engine may be antiquarian, scientific, economical, or biographical, and so present difficulties as regards its assignment to a definite class. But surely, on the other hand, the book, whatever its style or treatment of subject matter, is on the steam engine and nothing else; and as the whole object of exact classification is to collect together books on specific subjects, there can only be one place for books on the steam engine, from whatever point of view they are written. another part of his work Jevons states that "there is nothing really absurd except that which proves contrary to logic and experience." As experience has proved the absolute value of exact classification, we may assume that excess of logic and lack of experience are jointly accountable for Jevons' attitude towards book classification. Nevertheless, the point which we have raised as to difficulties in the way of assigning places for certain kinds of books, even in detailed systems, is one well worth careful consideration, as it is the one on which everything hinges in any sort of classification, broad or close. Let us take, for example, an inscribed stone to illustrate further the latitude which classification allows in regard to the possible choice of appropriate headings for subjects. Which of the following characteristics are we to accept as the most important in determining the place in a classification?-

- 1. The Language of the Inscription
- 2. The Subject of the Inscription
- 3. The Form of the Letters
- 4. The Locality in which the Stone is placed
- 5. The Substance of the Stone itself
- 6. The History or Traditions of the Stone
- The Purpose for which the Stone was erected [i.e. Landmark or Monument]
- 8. The Design of the Stone

There is here presented a great diversity of possible allocations for this single subject, which shows that care and intelligence are necessary to the satisfactory use of systematic classification. The example also enforces our remark that purpose must be taken largely into account in classification. In most doubtful cases, if we determine the object or reason for the existence of a book or subject, we have reached the solution of the difficulty. In the case of an inscribed stone, not of the "Aiken Drum" or "Bil Stumps" variety,1 we may assume that it must have been erected as a record of either an event or a person. The choice is thus narrowed down to History or Biography, and common sense counsels the rejection of all qualities which are merely those of form or material. In classifying books therefore we have to pay chief regard to subject and purpose. leaving out of account entirely such features as form, appearance, or style of treatment. A history of England philosophically written has no more right to be placed in Philosophy beside Aristotle, Hume, and Descartes, than a book entitled Picture Logic has to be classed as Fine Arts.

46. The main divisions of classification schemes are liable to much change: the sub-divisions are also liable: but specific subjects may be regarded as beyond change in relation to one another, though various circumstances may combine to make their transference to other sub-divisions or main classes desirable. However that may be, the fact remains that it is of the utmost importance in close classification to have books on specific subjects all together, and not distributed among several main classes or their sub-divisions. It is, after all, a matter of minor consequence in which main class any definite subject is put, provided always all the works on that subject are kept together and in juxtaposition to other books on related topics. No one is likely to put books on Organic Chemistry among Prose Fiction, or do anything of a similar outrageous character. There is no room in a properly formulated scheme for vagaries of this sort, nor is there much likelihood of any inaccuracies happening, unless in the case of obscure subjects, or those

¹ Scott's Antiquary, Dickens' Pickwick Papers.

which are so very debateable that it does not really matter where they are put. Such a subject is Numismatics, which has appeared in nearly every possible main class. But if all the single works on Coins and Medals are put together in History, or Social Science (Currency), or Fine Arts, or Useful Arts, does it affect the classification in the slightest degree? Not at all, when it is properly indexed; but certainly, if the index we have urged as indispensable is not provided. was the lack of proper alphabetical indexes in classified catalogues and schemes which caused De Morgan, Jevons, and other writers of authority to denounce subject classification and classed catalogues as delusions and snares. The misconceptions of the past and the necessities of the present point therefore to a full alphabetical index as an indispensable adjunct to every classification scheme or systematically classified catalogue. In cases where the scheme does not possess a printed index we advise the compilation of a card or slip index for library use, giving simply subject words and class numbers:

Algæ = A 216

Additions in alphabetical order can be made to this at any time.

47. The question of alphabetical versus classified catalogues has been debated for years with more energy and spirit than any other subject connected with librarianship. Not only professional men, but outsiders of all sorts, have laid down the law on the matter, till the special literature of catalogue compilation has grown to large dimensions. Among this accumulation of varied opinion one fact emerges with conspicuous clearness. The advocates on both sides, while admitting excellencies in the form of each variety of catalogue, have failed to observe that neither style is perfect, because not possessing all the advantages claimed for both. It has been claimed of course that one form or another has a majority of advantages; but that scarcely affects the point that neither of

them has all. The controversy has therefore been raging over efforts to make one inefficient system serve every purpose. Let us consider for a little the varied information which frequenters of libraries desire. Every librarian knows that before all others facts or Subjects are first in demand. reference libraries, for example, such questions as, "Have you a book on the Indian Mutiny?" "What is the origin of a given quotation?" "When was the Battle of Alma fought?" "What is the flash point of oils?" "Have you a book on cantilever bridges?" "What is the meaning of a given word?" "I want an essay on whales," and so on, are asked twenty times as often as questions concerning authors. importance come questions as to books of a certain Title. Ouestions relating to Authors rarely extend to more than demands for other works by the same writer; while questions concerning works written in a certain Form (Essays, Poetry, Grammars, etc.) are perhaps least often asked. It is necessary to enforce this statement as to subjects being most in demand, as on this point more than any other turns most of the original argument against classified catalogues. We therefore quote the remark 1 of Mr. F. T. Barrett, himself an opponent of classified catalogues, but a librarian whose experience in all that relates to readers and their wants is second to none. He says: "In my experience the enquiry which is most frequently made is. What is there in the library on some stated subject?" This is in harmony with the experience of every librarian, and may be taken as definitely settling the matter. How, then, does it happen that, from the time of De Morgan till now. there are to be found many influential writers who contend that an alphabetical catalogue under authors' names is allsufficient? The reason is not far to seek. Most of these men are scholars who have devoted years to the study of particular topics, and who are in consequence saturated with knowledge of the writers on their subjects; or they may be bibliographers or literary men to whom the biographical interest

¹ In a paper on "Catalogues" read before the International Library Conference, 1897.

of author entries appeals with peculiar force. The practice of the British Museum in providing until recently only one huge author-alphabetical catalogue has also had some influence on the opinion of many authors. But none of these opinions have any value where the needs of the general public are concerned. The authorship of a particular book, or piece of music, or work of art, or popular play is about the last thing in connection therewith that the average citizen will remember. When a lady enquires for a song at a music-seller's, it is not by the name of the composer, but almost invariably by its title. So it is as regards books; and Thackeray's little scene in Pendennis, where Arthur tells Miss Costigan that Kotzebue wrote The Stranger, and she declares that "the man's name at the beginning of the book was Thompson"! may be taken as an exact record of the general state of public interest and knowledge of authors. Save to a very small class of special students (biographers and bibliographers) author catalogues are in themselves of comparatively little value. It seems extraordinary that, at this late time in the life of public libraries, any arguments against the exclusive use of author lists should be necessary. But the inexperienced opinions of past and present writers in positions of authority render some defence needful.

48. Augustus De Morgan was one of the first to attack classified catalogues, and his opinions have been quoted and accepted in many quarters without qualification. He says 1: "An alphabetical catalogue has this great advantage, that all the works of the same author come together." [This depends largely on the cataloguer and his knowledge of anonyma and pseudonyma.] "Those who have had to hunt up old subjects know very well that of all lots which it is useful to find in one place the works of one given author are those which occur most frequently. Again, those who go to a library to read upon a given subject generally know what authors they want." The late W. S. Jevons agrees entirely in this view, 2 and adds "that classification according to the name of the author is the only one practicable in a large library, and

Dublin Review (1846). 2 Principles of Science.

this method has been admirably carried out in the great catalogue of the British Museum. The name of the author is the most precise circumstance concerning a book which usually dwells in the memory." As we have just shown, the opinion of every experienced librarian is dead against this assumption, and it is only necessary to quote the remark of Edwards in reference to the author catalogue of the British Museum: "Many a reader has spent whole days in book-hunting which ought to have been spent in book-reading." Both De Morgan and Jevons wrote from the purely personal standpoint. Each was a scholar, knowing nearly everything there was to be known about his special subject. They lived and wrote before perfect catalogues or classifications had been introduced, and De Morgan illustrates in his own case the folly of depending on memory and author lists alone for bibliographical or other information concerning subjects. If De Morgan could have had access to properly compiled subject catalogues, the little bibliography of Arithmetical Books (1847), on which he must have been engaged when he laid down the law regarding author catalogues, would have been rendered much more perfect. The very best mathematical or logical memory in the world is not capacious enough to retain everything relating to even a small subject: hence the enormous advantage of subject lists in one place over author entries scattered in alphabetical order throughout a catalogue of perhaps a hundred thousand titles. Practically the whole of the classified catalogues to which writers like De Morgan (1845-46) and Jevons (1873) had access were imperfectly indexed or not indexed at all, and down to comparatively recent times complete systematic classifications and catalogues were non-existent. Mr. Cutter, writing in 1876.1 states that he only knew of three classified catalogues in the United States which had proper indexes. These were issued by the Mercantile Library of Philadelphia (1850), the Newark Library Association (1857), and the California State Law Library (1870). In England there was an equal paucity of good examples, though several indexed

Public Libraries of America.

catalogues, such as the Royal Institution (1857), had been issued, and even in 1805 an attempt had been made, in a catalogue of the Signet Library, Edinburgh, to render the contents of the classified portion available by means of indexes. But the general run of catalogues were bare, unindexed, classified inventories, to use which it was necessary, as De Morgan points out, for readers to place themselves in the impossible mental position of seeing everything from the compiler's standpoint.

49. About 1857 a new order of catalogue began to become common, which has remained till now the standard pattern in most British public libraries. This was the so-called Dictionary² catalogue, arranged in a single alphabet of authors, titles, and such subject words as occurred on the title-pages. The once widely circulated and strongly believed dictum that no cataloguer had a right to go beyond the title-page of a book for particulars of its subject or scope was originally laid down by Dr. Crestadoro, of Manchester, and adopted in many quarters, as plenty of catalogues remain to prove. Of course the main idea in propounding such a doctrine was based on the De Morgan-Ievons formulæ that readers knew either the authors or titles of the books they wanted and did not particularly require to know about subject matter. Most modern librarians have abandoned this position, and many good examples exist of dictionary catalogues accurately and intelligently compiled. But few, if any, of such catalogues succeed in giving in one comprehensive view the titles of all books possessed by the library on important subjects. In British examples of such dictionary catalogues the failure is very marked, even in the few cases where cross-references intended to bind together the disjointed parts of a main subject have been lavishly used.

¹ Classified Catalogue, compiled by George Sandy, librarian, "with an Alphabetical Index of Authors and Subjects,"

³ The first English use of this term seems to be that on the title-page of the Middle Temple Library (London) Catalogue of 1734—Catalogus librorum Bibliothecæ Honorabili Societatis medii Templi Londini, ordine Dictionarii dispositus.

We have already pointed out that neither the classified nor dictionary forms of catalogue are sufficient in themselves to convey every variety of information. For one thing, a classified catalogue spreads the works of certain authors, but collects and shows in close relationship those about subjects, specific and general. The ordinary dictionary catalogue shows the works of given authors all together in one place, but distributes the information concerning large topics, and frequently small ones For example, the student of Biology using a recent public-library dictionary catalogue would have to look in thirtynine or more places for all the books bearing on the subject and its sub-divisions. He would not find anywhere a collective list of topics, but would have to range from one part of the alphabet to another in pursuit of information. Here are a few of the headings in this particular catalogue, just as we found or remembered them: Biology, Sea-shore and Seaweeds, Botany, Natural History, Aquarium, Birds, Evolution, Fishes, Insects, Microscope, Marine Zoology, Ocean, Palæontology, Taxidermy, Zoology, Science, Physiology, Ferns, Fungi, Bacteria, Flowers, Trees, Molluscs, Apes, Anthropology, Monkeys, Reptiles, Mosses, Butterflies, Spiders, Heredity, Crustacea, Embryology, Worms, etc. In a classified catalogue the reader would find all the biological works collected in systematic order within a few pages, while the alphabetical index would instantly guide him to any specific heading. Another point to be considered as regards dictionary catalogues in one alphabet is the additional cost of repeating entries under author, subject, and title. In classified catalogues one full entry under the class usually suffices, all the relative index entries being merely single words or short lines.

50. When all is said that can be said for and against each type of catalogue, it will be found by librarians that the public will derive most advantage, not from an attempt to make one of the two imperfect forms serve every requirement, but from the full provision of both varieties. No librarian has a right to assume that a classified catalogue alone will suit all his readers, nor must it be supposed either that alphabetical

catalogues are easier used or more appreciated by the public. Personal experience of both varieties and the success of classed catalogues in the United States have convinced us that readers in libraries use one sort with as much facility as another. is all a matter of custom and experience. To young librarians we tender the advice that, when compiling alphabetical dictionary catalogues for printing, they should prepare adequate class lists as well, to be kept in MS, if the cost of printing is too great. And to those who prefer printed classified catalogues or class lists we advise an adequate provision of alphabetical indexes, either printed or MS. By this combination of advantages the catalogue will more perfectly make known the treasures and resources of the library, while there will be added the satisfaction of knowing that all classes of reader and all kinds of enquiry about books are likely to be adequately served and answered. It may be mentioned incidentally that exact classifications and classified catalogues possess one great advantage in common which is not shared by any purely alphabetical or broad system. When libraries are being formed. the task of selecting representative books on specific subjects and classes at large is greatly simplified and facilitated by the suggestive tables of relative subjects always to be found in close methods of classification. Any one who uses the English Catalogue, or some such alphabetical list, and afterwards compiles his lists from Sonnenschein's Best Books, will be strongly impressed with the truth of this statement.

51. One of the most frequent objections urged against exact classification is the fact that many books treat of two or more different subjects, and consequently do not readily fall into any particular class or division. The books in question are not so much encyclopædic works, or even general works belonging to specific main classes, as books which treat of two or more main classes, and two or more divisions of a single main class. Hitherto it has been the practice of classifiers to treat such composite books as class-general or division-general works, the result being that in many cases they are separated entirely from other related topics and become lost

in a general heading. Of course this affects the shelves only. In the catalogue it is assumed that all necessary analyses and cross-references from and to headings are supplied. To partly get over the difficulty of separating books from the smallest divisions that will contain them, and to avoid making general classes or divisions mere refuges for everything doubtful or composite, we have proposed a method of marking, in the Adjustable Classification tabulated in Section 58, which will to some extent minimise the evil.

52. Proposals have been made at various times for classifying Fiction otherwise than in broad national or alphabetical divisions such as are adopted in various schemes, but so far none of them have been carried into actual practice. In 1881 Mr. A. P. Massey, of Cleveland, Ohio, published 1 a plan for numbering the surnames of novelists to facilitate shelving and charging, in a manner very similar to that used by Mr. Cutter in his author tables. Several librarians have given in their catalogues, under various historical headings, lists of novels dealing with particular periods or events. Historical novels have also been classified and tabulated in Bowen's Historical Novels and Tales (1882), and elaborately catalogued by the libraries of Boston (U.S.), San Francisco, Los Angeles (U.S.), Clerkenwell. Peterborough, etc. But no attempt has been made to extinguish the class entirely by distributing its contents among the other classes of the library. A jocular proposal to this effect was made in an article on "Fiction Classification" contributed to the Library of 1896 by the present writer. In this it was pointed out that Fiction is only a method of "instruction by parable," and that novels generally had subject matter sufficiently definite to enable them to be classed like formal treatises on sciences, history, or philosophy. Didactic poetry also lends itself to the same kind of treatment, and no doubt the day will come when books will be classified only according to their subject matter, and not by the particular form in which they are written. Metrical chronicles, like those of Wyntoun, can only be called poetry by a very wide stretch

In the Library Journal, Vol. VI. (1881), = "Classification of Fiction."

of indulgence; and there are hundreds of other works in rhyme which are equally devoted to other prosaic subjects. But difficulty arises when a rule has to be rigidly applied all round. Charles Reade's It is Never Too Late to Mend is a contribution, of a sort, to the literature of prison management; and Scott's Quentin Durward may be regarded as a masterly sketch of the crafty Louis IX. Yet to many minds it would seem an outrage to class the former in Social Science and the latter in Biography or History. And would it not be a frightful strain upon one's reverence for literary art and sympathy with traditional usages to class imaginative works like Thomson's Seasons as Physiography, Falconer's Shipwreck as Navigation, Milton's Paradise Lost as Theology, or Goldsmith's Deserted Village as Irish Topography?

53. To avoid some of the difficulties of classification, especially in regard to overlapping classes or topics, attempts have been made at national divisions, of which Mr. Cutter's "local" list may be mentioned as an instance. There is a considerable attraction about the plan of adopting nationality as the basis for classification, and in many cases a real convenience would result. An ingenious mind could very easily elaborate such a method by starting with the assumption that all literature is divisible into two main classes, the Abstract and the National. Books which treat of sciences or arts in the abstract without particular reference to geographical areas could be classified according to any minute scheme as at present. Books treating of sciences or arts with reference to nationality could be classified under each country in the order of the abstract main classes. Thus a result would be obtained like this:

ABSTRACT. Class A, B, C, D, E, F, G, etc.
NATIONAL. England. Class A, B, C, D, E, F, and so on.

We have never seen a classification proposed or carried out on this basis, but the suggestion is worth consideration. So far as real saving of numbers or places is concerned, we think there would be none, because, if the Botany of England did not appear in Abstract, Class A, it would have to appear in National, England, Class A; and so with every other country. We recommend this system to young librarians for consideration and study.

Our descriptions of book arrangement on the shelves have been mainly confined to those by authors, numbers, subjects, and sizes; but other proposals have been made from time to time. It will be sufficient to briefly refer to Mr. W. S. Biscoe's "Chronological Arrangement on Shelves," which was proposed in the *Library Journal* (1885). For certain subjects or special collections a chronological arrangement has decided advantages, but for general libraries it cannot be recommended. Mr. Biscoe's proposal is to assign a letter for certain groups of years thus:

A = Before Christ	J = 1830 to 1839
B = 0 to 999	K = 1840 to 1849
C = 1000 to 1499	L = 1850 to 1859
D = 1500 to 1599	M = 1860 to 1869
E = 1600 to 1699	N = 1870 to 1879
F = 1700 to 1799	O = 1880 to 1889
G = 1800 to 1809	P = 1890 to 1899
II = 1810 to 1819	Q = 1900 to 1909
I = 1820 to 1829	R = 1910 to 1919.

Undated books to be approximately placed and marked with the letter of the supposed date. Thus M would indicate a book issued between 1860 and 1869. All other books receive letters and numbers in this manner: 1623 = E 23; 1814 = H 14; 1898 = P 98, and so on. The letter represents a century or decade, and the figures the actual year of the century.

CHAPTER VI

ADJUSTABLE CLASSIFICATION SCHEME

54. This method of classification has been compiled largely in response to a demand for an English scheme with a notation enabling continual intercalation of divisions and single topics or books to be carried on. The Quinn-Brown method (Section 33) has been used as a basis, but suggestions have been freely adopted from every important classification described in this Manual.

The name "Adjustable" has been taken to distinguish the system from all others and to describe its principal feature.

The main classes are distinguished by the first eleven letters of the alphabet, excluding I, and are arranged thus:

- A. Sciences
- B. Useful Arts
- C. Fine and Recreative Arts
- D. Social and Political Science
- E. Philosophy and Religion
- F. History and Geography
- G. Biography and Correspondence
- H. Language and Literature
- J. Poetry and Drama
- K. Prose Fiction
- L. Miscellaneous

Should it be thought desirable to have more main classes, or to divide any of those already fixed, double letters can be used for the purpose, as shown below:

- A. Natural Sciences
- AA. Mathematical Sciences
- B. Useful Arts
- C. Fine Arts
- CC. Recreative Arts

- D. Social Science
- DD. Political Science
- E. Philosophy
- EE. Religion
 - And so on

When this is done, it will be necessary, or at least desirable, to renumber the divisions under each main class, and change the reference numbers in the index.

In each main class the class letter alone is given to general works covering the whole or a considerable portion of the subject matter of the class at large. Thus B would mark all the general treatises or dictionaries on the Useful Arts; G general collections of Biography. The letters from M to Z can be reserved for special or local collections which are kept separate. It has not been thought advisable to provide for an elaborate system of sub-classes, divisions, and sub-divisions, but simply to number in one sequence of even numbers each sub-class or division in its order. This enables the class of most books to be easily expressed by the plain notation of a letter and a figure or two—G 2, B 30, F 196, etc. The odd numbers are reserved for fresh divisions of the main classes, and it is thought this feature will be found useful in most libraries where new subjects are continually cropping up.

If it is absolutely necessary to use more divisions than the scheme provides, even when the odd numbers are all appropriated, this can be done by adding letters thus:

F 641	F 642b
F 641°	F 642°
F 641b	F 643
F 642	F 644
F 642	

55. Minute sub-division to any extent may be carried out by simply adding to the divisional numbers, after a hyphen, a fresh series of odd numbers from 1 onwards in each case. Thus one might get this progression:

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G 12. Scottish General Biography G 12-5. Scottish Covenanters G 12-1. ,, Artists G 12-7. ,, Monarchs, etc. G 12-3. ,, Authors
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which seems minute enough and clear enough for all ordinary purposes. Further sub-division is quite unnecessary in most public libraries; but should it be deemed absolutely indispensable, it can be carried out with a little extra complication and trouble by starting another series of odd numbers after a colon, so:

G 12-3: Scottish Authors, G 12-3:3. Scottish Novelists
General G 12-3:5. ,, Poets
G 12-3:1. , Historians

But the plan of wide sequential numbering adopted in each class should render the use of wearisome sub-division almost needless in the majority of cases. As in the case of divisions, alternate numbers only need be used, the even series being available for additional sub-divisions.

56. In applying the system it is recommended that the class letter and number be used for shelving and cataloguing only, and that charging or other necessary registration be done by means of the accession numbers. Each book as received should get the usual progressive accession number, and in addition the class letter and number showing where it is to be located. For this system it is not necessary to number alcoves, presses, or shelves, as the books will stand in the order of the classification herein tabulated. Additions can be made at any time and at any point, and each book takes its place, if correctly marked, among all the other books on the same subject.

In the catalogue it will be advisable to print both accession and class numbers, one series on each margin, so that the system can be applied to libraries using indicators, cards, ledgers, or open access. Where an indicator is used the accession numbers must be kept in one sequence, and in the case of Cotgreave's variety the class letters and numbers must be written into the indicator books, while in the case of Chivers' variety the same must be done on the recording tabs, as a direction to the assistant. Or a brief application form may be used, giving both class and book numbers, as will be necessary in the case of the Elliot or any other indicator having numbered pigeon-holes.

57. The arrangement of divisions on the shelves will be by authors alphabetically. There is no absolute need to mark

individual books further if this is done properly. The accession number being used for charging, renders any system of author marks unnecessary. In open access libraries the shelves should be plainly marked with labels specifying their contents. Presses should also be marked with the names of the main classes shelved. It is further recommended that in such libraries the books on all shelves be differentiated by means of coloured labels, such as are generally used in British open access libraries, in order to aid the eye in detecting misplacements. The presence of a mere class or notation mark on the back of a book is not sufficient in itself to prevent misplacement, owing to the uniformity of the general appearance. It should be possible to detect instantly such a transposition as G 10 for C 10, without scanning each shelf carefully and separately.

58. Composite Books. When a book treats of two or three different classes, in whole or part, it is not to be put in Class L or L 34, but with the books in the class most fully covered by the preponderating subject (see Section 51). The author's description on the title-page is to be accepted as the authority for the relative importance of classes, the first subject word being always taken; but where this is vague, bulk must be taken to represent values. Thus a book entitled Hints on Chemistry, Engraving, and Building Construction, if put with Class L or L 34, is completely separated from all related subjects; but if marked A 250 x C 104 x B 60, and placed after A 250, its composite character is at once indicated, and the book shelved with the class of which its most important section treats. Luckily main classes are very seldom mixed like our example, unless in encyclopædic works, and it will not often be necessary to insert composite works like the one mentioned. The main value of this composite marking will be found in single main classes, in which examples frequently occur of books treating of two or three distinct divisions. Fortune's Journey to the Capitals of Japan and China (1863), if put in F454, "Asia, General," is widely separated from all the other literature of both China and Japan; and though the catalogue would no doubt bring such scattered articles together,

it is just as desirable that the shelves should give the same information as far as physically possible. If, therefore, Fortune's book is marked F508 x 470, the local section will be strengthened, and the general section, always a dumping ground for the vague or the complex, will be made less unwieldy and overcrowded. One of the best descriptions of the arid plains of Queensland will be found in Boothby's On the Wallahy, which contains a preliminary tour through Ceylon. the Malay Peninsula, Java, and New Guinea. The title gives some idea of this: but a very brief examination of the book will show the exact ground covered, and also bring out the fact that Queensland is the preponderating subject. If marked F 86, a valuable contribution to the descriptive topography of Oueensland is separated from all other books on that topic: but if marked F 1200 x 86, it at once takes its place with the geographical division of which it principally treats, while at the same time it is qualified in such a manner as to indicate that it deals with other areas.

Three separate topics in one composite book seems a fair limit for the "General," which is not general enough to be separated from some allied class or division. When more than three independent classes are included in one book, it is best that it should be treated as an encyclopædic composite, and put in Class L 34. In the case of works treating of more than three independent divisions of a main class, the same rule is to be observed, the "General" number in each case being the receptacle.

59. As indicated above (Section 54), special collections of all kinds can be marked by the unused class letters M to Z. It is generally best not to incorporate such collections in the ordinary classification, but to shelve them apart. The books in a special collection, of whatever nature, are to be classified the same as other books; but a qualifying letter can be used to distinguish them. A collection of books on the county of Northampton could be indicated by the additional class letter N put before the ordinary class letter and number. For example:

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NA 8. Scientific Societies, Tour-NG 8. Local Biography, General nals, Reports, etc. NH 158. Glossaries NA 62. Local Fauna NH 384. Libraries NA 106. Ornithology NJ 14 Poetry ND 434. Schools-Histories and And so on

In ordinary libraries the sub-division of countries can be carried out by adding sub-divisional numbers to express the classification thus:

F 750. Northamptonshire, Generally
750-1. Scientific Societies, Journals
750-3. Fauna and Flora
750-5. Geology
Etc.

Special collections of a certain author's works can also receive an independent letter; but in this case the following arrangement is recommended. In a collection relating to Shakespeare, Scott, Burns, or other great author, proceed thus:

S I. Collected Editions in Chronological Order. Author's

Reports, etc.

- S 2. Collected Editions in Chronological Order. Editors'
- S 3. Selections
- S 4. Single Works in Chronological Order of Publication, Originals and Reprints together, and Parodics
- S 5. Translations of Collected Works
- S 6. Translations of Single Works

- S 7. Musical Settings of Works
- S 8. Dramatic Versions of Works
- S 9. Pictures suggested by Works
- S 10. Biographies
- S 11. Correspondence, including
 Autographs
- S 12. Portraits
- S 13. Criticism, History, and Aids to Study of Works
- S 14. Periodicals and Societies
- S 15. Ana, Scraps, etc.
- S 16. Bibliography

Other varieties of special collections can be arranged in any order to suit local conditions; but as we have said before, it is best to keep such collections separate, as there will always be a tendency to distort classes or divisions by including specially fostered subjects.

60. In all schemes of classification the question of the sizes of books crops up as a disturbing or qualifying factor.

It would be an extravagant waste of space to shelve Owen Jones's Grammar of Ornament alongside Lewis Day's little books on the same subject, or to place the huge atlases of Johnston and Stanford cheek-by-jowl with pocket varieties. Convenience, considerations of appearance, and even tradition, all point to the separation of the great from the small as inevitable. New libraries should therefore provide adequate storage room for quarto and folio books in addition to ordinary octavos, and this is best done by erecting special cases with space for folios below and quartos above a projecting ledge about three feet from the floor. The classes will run in three separate sequences—one for demy 8vos and under, one for royal 4tos and under, and another for folios larger than the largest 4to and above that size. In the catalogue these can be indicated thus:

Octavos, etc. No mark other than the class letter and number
Quartos By an asterisk before the class letter, *F 90
Folios By a small cipher before the class letter, oF 90

Experience proves that qualifying letters or signs put after numbers are generally overlooked. For staff purposes it is not needful to put guides, dummies, or directs on the shelves where folios and quartos ought to be. For the public, if open access is allowed, a general statement explanatory of the triple arrangement posted liberally about will be found ample; or class location books can be used. In Lending Libraries it will seldom be necessary, unless as regards Music, to provide much folio or quarto space. There are several good varieties of adjustable shelving now to be had, which greatly diminish the difficulties connected with size classification.

It only remains to state, as regards the classification itself, that the divisions "General" and "Special" provided all through the tables are intended to render sub-division easy when the library has attained very large dimensions. B 90 will probably contain every variety of complete general work on Civil Engineering; while for years to come the division B 92 will serve to mark works on single parts of the main topic, as

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Bridges, Canals, Docks, Harbours, Roads, etc. When the time arrives, the only fresh mark necessary will be a simple figure added to the existing divisional number;

B 92-1. Bridges
B 92-3. Canals
B 92-5. Docks

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B 92-7. Harbours B 92-9. Roads

or whatever the subjects may be. There is no complication about this, and the sub-divisional numbers may be kept from the very first if thought necessary. The "Adjustable Classification" is not put forth as either perfect or complete, nor is the index more than a fair selection of likely subject words. Suggestions for improvement and notifications of errors or omissions will gladly be received by the author.

TABLES OF ADJUSTABLE CLASSIFICATION

A.	BULEIN CE,	General
2.	History	
_		

4. Theory and Philosophy

6. Periodicals

8. Societies

Biology, General
 Theory and Evolution

14. Periodicals and Societies

16. Methods of Research

3. Microscopy and Laboratory
Practice

20. General Collectors' Manuals, Menageries

22. Taxidermy

24. Systematic, General

26. Bacteriology

 Popular [Essays and Sketches of Animal and Plant Life]

30. Zoology, Man, General

82. Periodicals and Societies

34. Prehistoric

36. Ethnology and Anthropology

Natural History and Homologies

40. Anatomy, General

42. Special

44. Periodicals and Societies

46. Physiology, General 48. Special Organs

20. Decria Organs

50. Expression, Temperament

52. Zoology, Animal, General. History, Theory

54. Periodicals

56. Societies

58. Systematic, General

60. Classification and Distribution

62. Local Fauna

64. Comparative Anatomy and Physiology

66. Embryology

68. Popular [Essays and Sketches of Animal Life]

70. Vertebrates, General

72. Mammalia, General

74. Economic

76. Primates (Monkeys, etc.)78. Chiroptera (Bats)

80. Insectivora (Insect-eaters)

82. Carnivora (Flesh-eaters: Lions, Tigers, Dogs, Cats)

84. Economic (Dogs, Cats, etc.)

86. Rodentia (Gnawers: Rats, Mice. etc.)

88. Economic

90. Ungulata (Hoofed animals)

92. Economic

94. Sirenia (Manatees, vul. Mermaids)

96. Cetacea (Whales, Seals, etc.)

98. Edentata (Sloths, etc.)

100. Effodientia (Pangolins)

102. Marsupialia (Pouched mammals: Kangaroos)

104. Monotremata (Egg - laying mammals: Platypus)

106. Birds, General

A 108. Economic Ornithology 110. Raptores (Birds of prey: Eagles, Owls) 112. Insessores (Perching birds) 114. Scansores (Climbers: Parrots, Cuckoos) 116. Rasores (Scratchers: Pigeons, Pheasants, Fowls) 118. Economic (Poultry) 120. Cursores (Runners: Ostriches) 122. Grallatores (Waders: Cranes, Bustards) 124. Natatores (Swimmers: Swans, Ducks, Gulls) 126. Periodicals 127. Crocodilia (Crocodiles) 128. Societies 130. Reptilles, General 132. Crocodilia (Crocodiles) 134. Chelonia (Turtles, Tortoises) 135. Sauria (Lizards) 136. Sauria (Lizards) 137. Epishes, General 144. Special 146. Economic (Fish culture) 148. Minor Classes of Vertebrates 150. Invertebrates, General 152. Crustacea (Crabs, Lobsters, etc.) 154. Arachnida (Spiders) 156. Myriapoda (Centipedes) 166. Periodicals 167. Economic (Fish culture) 168. Erachiopoda (Lampshells) 168. Brachiopoda (Lampshells) 168. Bryozoa (Sea Mats) 169. Vermes (Worms) 169. Cwlentera (Sponges, Corals, Jellyfish) 169. Botany, Societies 160. Economic (Fish culture) 161. Brachiopoda (Lampshells) 162. Celentera (Sponges, Corals, Jellyfish) 162. Celentera (Sponges, Corals, Jellyfish) 168. Bryozoa (Sea Mats) 169. Vermes (Worms) 169. Cwlentera (Sponges, Corals, Jellyfish) 169. Botany, Societies 160. Economic (Fish culture) 161. Brachiopoda (Lampshells) 162. Celentera (Sponges, Corals, Jellyfish) 168. Bryozoa (Sea Mats) 169. Vermes (Worms) 169. Crollentera (Sponges, Corals, Jellyfish) 169. Portozoa (Animalculæ, Lowest forms of life) 160. Economic (Fish culture) 161. Brotoniodicals 162. Crocodilia (Crocodiles) 163. Periodicals 164. Protozoa (Animalculæ, Lowest forms of life) 165. Botany, Societies 166. Botany, Societies 167. Filicinæ (Ferns) 168. Brachiopoda (Lampshells) 168. Bryozoa (Sea Mats) 169. Crollentera (Sponges, Corals, Jellyfish) 169. Crocodilia (Forocodiles) 160. Economic (Fish culture) 161. Botany, Societies 162. Cryptogamia, General 163. Cryptogamia, General 164. Argæ (Musbrooms) 165. Algæ (Seaweeds) 166. Myriapoda (Centipedes) 167. Brotogamia (Forocodiles) 168. Hymenoptera (B	_	109 F	400 50
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176. Hemiptera (Bugs, etc.) 246. Special			•
175. Diptera (Flies) 245. Crystatiography			
		Me. Diptera (Flies)	220. Crystattograpmy

and management of Horses,

Sheep, Cattle, Pigs, etc.)

A	250.	Chemistry. Societies and	324. History and Theory
		Periodicals	326. Systematic, General
		History and Theory	328. Algebra
		Systematic, General	330. Arithmetic
		Inorganic	332. Book-keeping
	258.	Organic	334. Calculus
	260.	Analysis	336. Geodesy and Surveying
	262.	Electro-Chemistry	338. Geometry, Conic Sections
	264 .	Physics. Societies and	340. Logarithms
		Periodicals	342. Mensuration
	266.	History and Theory	344. Probabilities, Annuity Tables
	268 .	Systematic, General	346. Trigonometry
	270.	Electricity and Magnetism,	348. Weights and Measures
		General	350. Metric System
	272.	Special	352. Occult Sciences, General
	274.	Heat	854. Alchemy
	276.	Hydrostatics, Hydraulics	356. Astrology
	278.	Light (Optics), General	358. Magic, Necromancy
	280.	Special	360. Mesmerism, Animal Mag-
	282.	Mechanics (Dynamics), General	netism
	284.	Special	362. Psychical Research
	286.	Pneumatics	
	288.	Sound (Acoustics)	
	290,	Physiography. Societies	B. USEFUL ARTS, General
		and Periodicals	2. Societies. Exhibitions
	292.	General	4. Periodicals
	294.	Earthquakes	6. History
		Volcanoes, etc.	8. Inventions
	298.	Glaciers, Icework, etc.	10. Patents Specifications, British
	800.	Meteorology	12. American
	302.	Hydrography, Ocean Currents,	14. French
		etc.	16. German
	304 .	Astronomy. Societies and	18. Other
		Periodicals	20. Recipes, General
	806.	History and Theory	22. Agriculture. Societies and
	308.	Systematic, General	Periodicals
	310,	Sun	24. History
	312.	Stars and Planets	26. General (British)
	814,	Moon	28. Farm Buildings and Imple-
	316.	Comets and Meteors	ments
٠.	318.	Popular (non-mathematical)	30. Farm Soils and Crops
	320.	Nautical	32. Farm Stock, General (Breeding
	999	Mathematica Continuent	and ware somest of Horson

322. Mathematics. Societies and

Periodicals

B 34. Farm Stock, Special 36. Dairy Farming 38. Special Cultivations. Foreign [Coffee, Cotton, Tea, Sugar, Tobacco, Vines, etc.] 40. Gardening and Forestry. Societies and Periodicals 42. History 44. General 46. Fruit Culture 48. Flower Culture Kitchen and Market Gardening 52. Landscape and Formal Gardening 54. Window Gardening 56. Forestry, General

58. Special
60. Building. Societies and
Periodicals

62. General

64. Construction, General

66. Special

t. Materials, General

70. Special [Bricks, Lime, Stones, Timber, etc.]

72. House Decoration

74. Sanitation, Ventilation, Gasfitting, etc.

76. Engineering. Societies and Periodicals

78. General

80. History

82. Aerial. Societies

84. General 86. Special

88. Civil. Societies and Periodicals

90. General 92. Special

94. Electrical. Societies and Periodicals

96. General 98. Lighting

100. Telegraphy

102. Telephone, Phonograph, etc.

104. Mechanical. Societies and Periodicals

106. General

108. Applied Mechanics

110. Workshop Practice

112. Machinery, Tools
114. Military, and Art of War.

116. General

118. Army Organisation, British

Periodicals and Societies

120. Foreign

122. Arms and Armour

124. Artillery

126. Cavalry

128. Engineers

130. Infantry 132. Militia

134. Volunteers

136. Yeomanry 138. Fortification

140. Barracks, Transport, etc.

142. Tactics

144. Naval. Societies and Periodicals

146. General

148. Navy Administration, British

150. Foreign

152. Tactics and Warfare

154. Shipbuilding, General

Special

158. Seamanship and Navigation,

General

160. Special. Charts, Sailing Directions

162. Lifeboats

164. Lighthouses

166. Coastguard

168. Merchant Service and Sailors

170. Mining and Quarrying. Societies and Periodicals

172. History

174. General

176. Prospecting

= ,,	, , , , , , , , , , , , , , , , , , , ,
B 178. Coal Mining	254. Printing. Societies and Perio-
180. Iron ,,	dicals
182. Gold ,,	256. General
184. Silver	258. Special
186. Lead ,,	260. Binding. Periodicals
188. Salt ,,	262. General
190. Tin ,,	264. Special
192 Railway. Societies and	
Periodicals	Periodicals
194. General	268. General
196. Special (including Tramways)	270. Bookselling and Stationery.
198. Steam and Gas. Societies	Periodicals
and Periodicals	272. General
200. History	274. Chemical Trades. Societies
202. Theory	and Periodicals
204. Systematic, General	276. General
206. Stationery Engines	278. Chemicals (Acids, Alkalies,
208. Marine Engines	Drugs, etc.)
210. Locomotive Engines	280. Dyeing and Bleaching
212. Gas Engines	282. Explosives, Fireworks. Fuel
214. Other Engines	284. Perfumes
216. Metallurgy. Societies and	
Periodicals	288. Distilling
218. General	290. Wine-making
220. Assaying	292. Oils, Colours, etc.
222. Alloys	294. Soap and Candles
224. Casting and Founding	296. Varnishes, Glues, Rubber,
226. Iron and Steel	etc.
228. Gold	298. Clothing and Hosiery Trades
230. Silver	300. Coach and Carriage Building,
232. Lead	General
234. Copper	302. Special
236. Other	304. Motor-cars
238. Electro-Metallurgy	306. Fisheries. Societies and
240. Manufactures and	Periodicals
Trades. Societies and	308. History
Periodicals	310. General
242. General	812. Special
244. Book Production, General	314. Food Production, General
246. Paper Manufacture. Societies	
and Periodicals	318. Gas. Societies and Periodi-
248. General	cals
250. Typefounding, General	320. History
252. Typefounder's Catalogues	322. General

B 324. Special	394. Cotton. Spinning and Weav-
326. Glass, General	ing
328. Special	396. Lace
330. Leather. Periodicals	398. Linen
332. General	400. Silk
334. Boot and Shoemaking, Saddlery	402. Wool Spinning and Weaving
336. Metal-working, General	404. Wood-working. Societies
338. Blacksmithing	and Periodicals
340. Brass-working	406. General
349. Gold-working	408. Carpentry and Joinery, General
344. Silver-working	410. Special
346. Jewellery Manufacture. See	412. Furniture and Upholstery,
also Costume, 504	General
348. Lead and Copper-working	414. Special
350. Sheet Metal-working	416. Pattern-making
352. Cutlery	418. Picture-framing, Toys, etc.
354. Gunsmithing	420. Other Branches
356. Locks and Safes	422. Shopkeepers' Manuals
358. Cycles and Sewing Machines.	
Periodicals	and Periodicals
360. General	426. History
362 Watch and Clock-making	488. General
(Horology). Periodicals,	430. Medicine, Allopathic
General	432. Homoropathic
364. Special	439. Homoropathic 434. Hydropathic
366. Dialling and Dials	436. Domestic
368. Bells	438. Diseases, General
870. Scientific Instrument-making.	440. Special and Local
Periodicals	448. Obstetrics. Diseases of Women
372. General	444. Diseases of Children
374. Other Trades	446. Pathology
376. Musical Instruments,	448. Materia Medica, Therapeutics,
General	Pharmacy
878. Special	450. Medical Jurisprudence and
880. Pottery. Societies and Perio-	Toxicology
dicals	452, Surgery, General
382, History	454. Dental
384. General	456. Special and Local
386. Special	458, Nursing. Periodicals
388. Textiles. Societies and Perio-	460. General
dicals	462. Special
390. General	464. Hospitals and Asylums
392, Carpets. Tapestry, Rope and	466. Ambulance, First Aid, Life-
Twine	saving
	

B 468. Hygiene and Demography.	22,	General	
Societies and Periodicals	24	History, General	
470, General		Theory and Criticism	
472. Public Health, General		Galleries and Collections	
474. Special	30.	National Schools	
476. Personal Health, General	32	Practice, General	
478. Special	34.	Artistic Anatomy	
480. Physical Training	36.	Figure Painting	
482. Veterinary Medicine and	38.	Portrait Painting	
Farriery. Societies and	40.	Miniature Painting	
Periodicals	42.	Landscape Painting	
484. General	44.	Marine Painting	
486. Special	46.	Flower Painting	
488. Household Arts. Perio-	48.	Oil Painting	
dicals	50.	Water-colour Painting	
490. General	52.	Glass and China	
493. Furnishing	54.	Special Varieties	
494. Domestic Economy. Laundry	56. Drawing, Freehand. General		
Work	58. Special		
496. Foods, Dining, Beverages	60. For Reproduction		
498. Cookery, Confectionery	62.	Geometrical, General	
500. Needlework	64. Perspective, Model, Shadows		
502. Dressmaking, Millinery	66. Technical, General		
504. Costume and Dress [including	68. Machines, Trades		
Historical, National, and	70. Decoration. Societies		
Fancy Costume, Jewellery,	73.	Periodicals	
Rings, Regalia, Insignia]	74	General	
506. Toilet	76.	Practice and Examples,	
508. Domestic Servants, Daties, etc.		General	
	78.	Special	
	80.	Alphabets, Monograms	
C. FINE AND RECREA-	82.	Illumination	
TIVE ARTS, General	84.	Applied to Arts and Crafts,	
2. Fine Art: History	86.	General Ceramics and Glass.	
4. Theory and Criticism	-	General	
6. National Art, General	88. Special		
8. Ancient	90. Leather		
10. Modern	92. Metal-work, General		
12. Special Countries	94. Special		
14. Societies, Exhibitions	96. Textiles, General		
16. Periodicals	98. Special		
18. Painting. Societies	100. Wood-work, General		
20. Periodicals	102	Special	
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C 104. Engraving. Societies	188. Architecture. Societies	
106. Periodicals	190. Periodicals	
108. General	192. History, General	
110. History, General	194. Special	
112. Special	196. Theory and Criticism	
114. Practice, General	198. Practice, General	
116. Special	200. Ancient, General	
118. Collected Examples	202. Special	
120. Etching. Societies	204. Modern, General	
122. Periodicals	206. Special	
124. General	208. Ecclesiastical Buildings	
126. Special	210. State and Municipal Build-	
128. Collected Examples	ings	
130. Lithography. Periodi-	212. Hospitals and Schools	
cals	214. Theatres	
132. General	216. Farms, Mills, etc.218. Residential Buildings	
134. Special	218. Residential Buildings	
136. Collected Examples	220. Military 222. Drawing and Design	
138. Process Work, General	•	
140. Special 142. Photography. Societies		
142. Priotography: Societies 144. Periodicals	228. Special 228. Antiquities, General	
146. General	230. Ecclesiology	
148. Scientific	232. Monumental Brasses	
150. Artistic	234. Crosses, Streets	
152. Processes and Printing	236. Special	
154. Collected Examples	238. Sculpture, General	
156. Writing, General	240. History, General	
158. History	242. Special	
160. Special Treatises	244. Practice, General	
162. Shorthand. Periodicals	246. Special	
164. General	248. Carving and Modelling	
166. Special	250. Bronzes, Monuments,	
168. Collecting, Art Objects,	etc.	
General	252. Music. Societies	
170. Autographs	254. Periodicals	
172. Book Plates	256. General	
174. Crests	258. Criticism, Æsthetics	
176. Postmarks	260. History, General	
178. Prints [other than C 118]	262. Special	
180. Stamps. Societies	264. Scientific Basis	
182. Periodicals	266. Nomenclature	
184. General	268. Elements, General	
186. Special	270. Special	

C 272. Tonic Sol-fa, General	344. Harmonium. Instruction
274. Special	346. Music
276. Other Notations	348. Harp. Instruction
278. Harmony	350. Music
280. Counterpoint and Fugue	352. Harpsichord. Instruction
282. Composition and Form	854. Music
284. Instrumentation (Orchestras	356. Lute. Instruction
and Bands). Periodicals	358. Music
286. General Text-books	360. Mandoline. Instruction
288. Instruments, General, History,	362. Music
etc.	364. Oboe. Instruction
290. Orchestral Music [Full Scores	366. Music
of Symphonies, Overtures,	368. Ophicleide
String Quartets, etc.]	870. Organ. Periodicals and So-
Instruments, Indivi-	cieties
dual:	872. General
292. American or Reed Organ.	
Instruction	374. History 376. Instruction
294. Music	378. Music
296. Bagpipe. Instruction	880. Pianoforte. Periodicals
298. Music	382. General
300. Banjo. Instruction	384. History
302. Music	386. Instruction
304. Bassoon. Instruction	388. Music
306. Music	390. Saxophone
308. Bombardon	392. Serpent
310. Bugle	394. Trombone. Instruction
312. Clarinet. Instruction	396. Music
314. Music	398. Trumpet. Instruction
316. Concertina, Accordion, Melo-	400. Music
deon. Instruction	402. Tuba
318. Music	404. Viola. Instruction
320. Cornet. Instruction	406. Music
322. Music	408. Violin. Periodicals
324. Double Bass. Instruction	410. General
326. Music	412. History
328. Euphonium	414. Instruction
330. Flageolet	414. Instruction 416. Music
332. Flute, Fife, Piccolo. Instruction	418. Violoncello. Instruction
334. Music	420. Music
336. French Horn. Instruction	422. Zither
338. Music	424. Other Instruments
340. Guitar. Instruction	426. Vocal Practice, General
342. Music	428. Special
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0	430.	Singing, General	512.	Athletica, Special
	432.		514.	Backgammon
	434.	Choir Training, Choral So-	516.	Baseball, Rounders
		cieties	518,	Billiards, Bagatelle
	436.	Operas and Dramatic Music	520.	Boating. Periodicals
		Oratorios	522.	General
	440.	Cantatas	524.	Special
	442,	Church Music. Periodicals	526.	Bowling
	444,	General		Boxing (Prize-fighting), General
	446.	Services	530.	Special
	448.	Masses	532.	Camping-out
	450.	Anthems	584.	Card Games, General
	452.	Psalmody, General	536.	Whist
	454,	Psalmody, General Denominational	588.	Whist Ecarté
	456.	Hymns, General	548.	Others
	458.	Denominational		Chess, Periodicals
	460.	Denominational Chants and Chanting	552.	General
	462.	Carols	884.	Special
	464	Part Music, General	556.	Cock-fighting, Bull-baiting, etc.
	466.	Glees and Madrigals	558.	Conjuring
	468.			Coursing, Harriers
	470.	Rounds and Catches	562.	Cricket. Periodicals
	479.	Trios and Duets	564.	General
	474.	Songs. Periodicals		Special
	476.	General National	568.	Croquet
	478.	National	570 .	Curling
	4 80.	Sacred	572.	Cycling. Periodicals
	482.	Comic Nursery Songs		General
	484,	Nursery Songs	576.	Special
	488.	Special	578.	Dancing, General
	488.	Individual Composers	580.	
	490.	Recreative Arts, General		Dice
	492.	History		Dominoes
		Games and Sports, Indi-		Draughts or Checkers
		vidual :		Driving
		Periodicals, General		Fencing, General
	4 96.	Angling. Periodicals		Special
	498.	General		Football, General
	500.			Special
		Archery		Golf
		Athletics. Periodicals		Gymnastics, Acrobats
		General		Hawking
	508.			Hockey or Shinty (Hurling)
	510.	Walking	606.	Horse-racing. Periodicals

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C	608.	Horse-racing, General	24.	Women, General
	610.		26.	
	612.	Hunting, General	28.	Sex Questions
	614.	Special	30.	Population, General
	616.	Lacrosse	82.	Special
	618.	Mountaineering	94	Vital Statistics
	620	Polo	36	Temperance Question. So-
		Puzzles, Riddles, Conundrums	00,	cieties
	694	Quoits Conuncians	38.	
	628	Racquets	40.	
	628	Riding, Horsemanship	42.	Special
	630	Shooting, General		Emigration, General
	632.	Special	46.	Special
		Skating and Rinking, General		Pauperism
	636.		EO.	Charities. Societies and Perio-
		Skittles	υ.	dicals
		Solitaire	52.	
		Swimming, General		
	GAA	Special	54. Special	
	CAR.	Tennis	56. Slavery, General	
			58. Special	
	650	Theatricals, Private Charades, etc.	60. Juvenile Delinquency	
	250.	Wrestling	62. Crime and Punishment	
	65A	Vachting Consent	64. Capital Punishment	
	656	Yachting, General Special	66. Police, General	
		Other Amusements	68. Special 70. Prisons, General	
	000.	Other Amusements	70.	Crossel
			TA.	Special
			78	Secret Societies, General Special
	D.	SOCIAL SCIENCE,	70.	Socialism, General
		General	80.	
	۰	Societies		Special Communism, Anarchy, Nihi-
		Periodicals	0.0.	lism, etc.
	O.	History of Sociology Theories	86. Freemasonry. Societies	
			88. Periodicals	
	10.	Manners and Customs, General		
	10	National		General
				Special
	14. Games 94. Political Economy, Gen			
	16. Special ral			
	18. Marriage, General 96. Societies			
	20. Special 98. Periodicals.		- -	
	22. Women. Societies and Perio- dicals 102. Labour Questions. General			
		unais	TUX	Labour Questions, General

B 404 G 1: 1 1 1 1	444 5 1 11 1 1 1 1 1 1
D 104. Capital and Labour	184. Public Meetings, Procedure
106. Factory System	186. Civil Liberty, Citizenship
108. Trades Unions. Societies and	188. National Character, General
Periodicals	190. State Administration, General
110. General	192. British, General
112. Special	194. Crown, Privileges, etc.
114. Wages Questions	196. Parliament, General
116. Profit Sharing	198. House of Lords, Powers,
118. Hours Question	Duties, etc.
120. Co-operation. Societies and	200. Reform
Periodicals	202. Papers and Proceedings
122. General	204. History
124. Special	206. House of Commons, Consti-
126. Friendly Societies	tution
128. Periodicals	208. Laws and Procedure
130. General	210. History
132. Special	212. Papers, Reports, Proceed-
134. Land Laws	ings
136. Nationalisation	214. Statutes
138. Tenures, Transfers, Rent	216. Journals
136. Nationalisation 138. Tenures, Transfers, Rent 140. Allotments and Commons	218. Debates
142. Mining Royalties	220. Reform
144. Free Trade. Societies and	222. Elections
Periodicals	224. Suffrage
146. General	226. Government Departments
148. Special	228. Foreign Policy, Treaties,
150. Protection, Tariffs, etc.	Diplomatics
152. Government and Poli-	230. Taxation
tics, General	232. Other Questions
154. Constitutional History, General	234. United States, General
156. British	236. Special
158. Other Nationalities	238. France
160. Law, General	240. Germany
162. British	242. Other Countries
164. Other Nations	244. Local Administration, General
166. Theories, General	248. Britain, General
168. Special	248. Special (Local Rating, etc.)
170. Monarchy	250. England, General
172. Democracy	252. Special (Counties, Par-
174. Other Forms of Government	ishes, Municipalities, etc.)
176. Science of Politics	254. Scotland, General
178. Political Parties, General	256. Special
180. Special	258. Ireland, General
182. National	260. Special

-	969 Total Administration Wales	850. Court Procedure and Practice
U	262. Local Administration, Wales, General	852. Trials, General
	264. Special	
	266. United States	354. Special 356. Commerce and Industry,
	268. Other Nations	General
	270. Church Establishments, Gene-	358. Societies
	ral	860. Periodicals
	272. Disestablishment	362. History
	274. Law (Jurisprudence), General	364. Guilds
	276. Societies	366. Finance, Public
•	278. Periodicals	368. National Debt
	280. Reports of Cases	870. Prices
	282. History	872. Exchange
	284. Philosophy	374. Cambistry
	286. Theories	376. Speculation and Stocks, Gene-
	288. National, General	ral
	290. British	878. Periodicals
	292. English (Codes, Commen-	380. Money and Credit
	taries, etc., General)	382. Bimetallism
	294. Scottish (Codes, Commen-	384. Banking. Societies and Perio-
	taries, etc., General)	dicals
	296. Irish (Codes, Commentaries,	886. General
	etc., General)	388. Special
	298. Welsh (Codes, Commen-	390. Insurance. Societies and Perio-
	taries, etc., General)	dicals
	300. Colonies (Codes, Commen-	392. General
	taries, etc., General)	394. Life
	802. India (Codes, Commen-	896. Thrift and Saving
	taries, etc., General)	898. Pensions, Old Age, etc.
	304. United States	400. Communications, General
	306. France	402. Special 404. Post Office. Periodicals
	308. Germany 310. Other Countries	
	312. Roman	406. General 408. Special
	314. International	410. Telegraphs
	316. Common (British)	412. Industrial and Commercial
	318. Commercial and Maritime	Undertakings
	320. Poor	414. Business Methods, General
	322. Military	416. Indexing and Précis
	324. Canon	418. Commercial Correspondence
	326. Criminal	420. Advertising
	328-348 Special Subjects (Patents,	422. Typewriting
	Property, etc., as repre-	424. Other Departments
	sented)	426. Education, General
		•

D 428. Societies 430. Periodicals 432. History, General 434 Special 436. Theories and Systems 438. School Management, General 440. Teachers 442. Hygiene 444. **Buildings and Fittings** 446. Methods of Instruction. Selfculture 448. Home 450. Kindergarten 452. Primary 454 Special Subjects 456. Technical and Manual 458. Ragged Schools 460. Reformatory and Industrial Schools 462. Blind 464 Deaf and Dumb 468 Other 468. Colleges and 48. Universities, General 50. Theism Societies and Periodicals 472 History, General 474 Special 476. University Organisation and Teaching 80. 478. Calendars and Year Books 480. Degrees 482. Theological Colleges 484. Other Colleges 70.

E. PHILOSOPHY AND RELIGION, General

2. Philosophy. Societies 4. Periodicals

6. History, General 8. Ancient

10. Modern

12. Ancient Systems or Schools, General

Special

16. Modern Systems or Schools, General

Special, by Authors as represented

20. Logic, General

22. Special

24. Metaphysics

26. Mental Physiology,

General 28. Sleep and Dreams

30. Memory, Mnemonics

32. Phrenology

Physiognomy

Psychology

Ethics, General

40. Special (Amusements, etc.)

42. Religion, General

44. Theology, General 46. Natural, General

Special

52. Atheism and Deism 54. Science and Religion

Philosophy of Religion

58. Systematic Theology, General

History of Doctrine

Creeds

64. Eschatology. Future State

66. Special Treatises

68. Pastoral Theology, General

Clerical Profession

72. Homiletics

74. Sermons

76. Missions, General

78. Comparative Religion, General

Special

82. Bible, Texts, Polyglot

84. Hebrew

86. Greek

88. Latin

E 00 100 72 11 1 137 117 75 1.1	170 TI: C1
E 90-108. English [Wycliffe, Tyndal,	176. History, General
Coverdale, Matthew, Ta-	178. Christian Evidences
verner, Cranmer, Geneva,	180. Christian Churches,
Bishops', Rheims, Douay]	General (Doctrine, etc.)
110. Authorised Versions, 1611,	182. Eastern and Greek, General
etc.	184. Special
112. Revised Versions, 1885	186. Roman Catholic, General
114. French	(Ritual, Doctrine, etc.)
116. German	188. National
118. Dutch	190. Monastic and Religious
120. Italian	Orders
122. Other European Versions	192. Inquisition
124. Oriental Versions	194. Confession
126. African Versions	196. Church Polity
128. American and Polynesian	198. Reformation, Controversial
Versions	Works
130. Old Testament, Separate	200. Protestantism, General
Texts, Whole or Part	202. Special
132. New Testament, Separate	204. Lutheran Church
Texts, Whole or Part	208. Calvinism
134. Apocrypha, Separate Texts	208. Episcopalianism, English,
136. Aids, Geography, Natural	General
History	210. Creed and Doctrine
138. Dictionaries	212. Church Polity
140. Concordances	214. Liturgies
142. Commentaries, Complete Bible	216. Hymnology
144. Old Testament, Whole	218. Scotch
146. Separate Books	220. United States
148. New Testament, Whole	222. Sects and Heresies
150. Separate Books	224. Presbyterianism, English
152. Apocrypha	226. Scottish
154. Fathers (Patristics), General	228. Other
156. Collections	230. Sects and Heresies
158. Individual	232. Polity
160. Councils, General	234. Liturgies
162. Special	236. Hymnology
164. Religious Beliefs and Systems,	/
General General	238. Congregationalism, General 240. Special
166. Dictionaries of Faiths, Sects,	
etc.	
168. Lives of Christ	
	248. Methodism, General
170. Christianity, General	248. Special
172. Philosophy	250. Polity
174. Ethics	252. Liturgies

392.

394.

396.

Special

Sacred Books

Doctrine and Worship

E	254. Methodism, Hymnology	898. Brahminism, General
	256. Baptists, General	400 Special
	258. Special	402. Doctrine and Worship
	260. Polity	404. Buddhism, General
	262. Liturgies and Hymnology	406. Special
	264. Friends, Society of (Quakers),	408. Sacred Books
	General	408. Sacred Books 410. Doctrine and Worship
•	266. Special	412. Confucianism, General
	268. Polity	414. Special
	270. Liturgies and Hymnology	416. Sacred Books
	272. Reformed (Dutch) Church	418. Mahometanism, General
	274. Moravians	420. Special
	278. Swedenborgians	422. Sacred Books
	280. Unitarians	424 Parsism and Zoroastrian
	282. Mormons	General
	284. Other Christian Sects	426. Special
	286. Christian Theology,	428. Other Oriental Religions
	General	430. African Religions
	288. Trinity	432. Polynesian Religions
	290. Lord's Prayer	434. Other Ethnic Religions
	292. Sacraments, Lord's Supper	436. Agnosticism
	294. Baptism	438. Positivism, Materialism
	296. Atonement	440. Rationalism
	298. Faith	442. Other Beliefs
	300. Justification	444. Mythology and F
	302. Sanctification	Lore, General
	304. Predestination	446. Societies
	306. Free Will	448. Periodicals
	308. Judgment	450. Philosophy and Theory
	310. Heaven, Angels	452. Comparative
	312. Hell, Devil	454. National
	314. Other Topics	456. Demonology
	316. Collected Sermons	458. Witchcraft
	318. Sermons of Individuals	460. Fairies, Elves, etc.
	320-384. Reserved	462. Phallic and Serpent Worsh
	386. Non-Christian Reli-	464. Divination, Fortune Tel
	gions, General	Second Sight, Palmist
	388. Ancient Religions: Egyptian,	466. Spiritualism
	Chaldæan, etc.	468. Monsters: Dragons, Giant
	390. Judaism, General	470. Other Departments
	800 0 11	-

nism, General Books ind Zoroastrianism. al ental Religions eligions Religions nic Religions **Materialism** efs gy and Folk-General y and Theory ve gy. ves, etc. 1 Serpent Worship , Fortune Telling, I Sight, Palmistry Dragons, Giants 470. Other Departments

F.	HISTORY	AND	GEO-
	GRAPH	V. Gar	neral

- 2. Historical Societies
- 4. Historical Periodicals
- 6. General. and Archæology (Ancient)
- 8. Chronology
- 10. Numismatics (Coins, Medals, Seals). General
- 12. National
- 14. Special
- Societies and Periodicals
- 18. Military History, General
- 20. Naval History, General
- 22. Ecclesiastical History, General
- 24. Crusades and Chivalry
- 26. Philosophy and Study of History. Civilisation
- 28. Ancient and Dispersed Nations, General
- 80. Phœnicia
- 32. Judæa
- 34. Modern Jews, General
- 36. Societies
- 38. Periodicals
- 40: Special
- 42. Medo-Persia, General
- 44. Chaldæa
- 46. Assyria
- 48. Babylonia
- 50. Media
- 52. Lydia
- 54. Persia
- Other Divisions
- 58. Minor Nationalities: Carthage, etc.
- 60. Gipsies, General
- Special
- 64. Modern History and Archæology, General
- Special
- 68. Geography, General
- 70. Societies
- 72. Periodicals

- 74. Historical Atlases
- 76. Geographical Atlases
- 78. Gazetteers and Dictionaries
- 80. Ancient and Classical Geography
- 82. Modern Political Geography
- 84. Voyages and Travels [Circumnavigation and two or more large areas], General Collections
- 86. Individual Travellers (alphabetically)
- 88. AFRICA, General [Travels, Atlases, etc.]
- 90. North Africa, General
- 92. Egypt, Ancient, General
- 94 History 96.
 - Church
 - Geography
- 100. Modern, General
 - History
- 104 Geography
- 106. Nubia

98.

102.

- 108. Abyssinia
- 110. Somaliland
- 112. Barbary States, General
- 114. Tripoli
- 116. Algeria
- 118. Tunis
- 120. Morocco
- 122. Soudan, East
- 124. Sahara
- 126. Central, General
- 128. British East Africa (Ibea)
- 130. German East Africa
- 132. Congo Free State
- 134. French Congo
- 136. Angola
- 138. British Central Africa
- 140. Portuguese East Africa
- 142. West, General
- 144. Ashanti
- 146. Cameroons
- 148. Dahomey

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150. French Guinea	228. Q
152. Gold Coast	230. O
154. Guinea Coast	232.
156. Liberia	234. M
158. Senegambia	236. B
160. Sierra Leone	238. N
162. Sokoto	240. N
164. West Soudan	242.
166. South, General, History	244. L
168. Geography	246. U
170. Cape Colony	248. H
179. Natal and Zululand	250.
174. Orange Free State	252.
176. South African Republic	254.
(Transvaal)	256.
178. German South-West Africa	258.
180. British South Africa	260.
182. Bechuanaland and Other	262.
Territories	264. G
184. African Islands, General	266. Sc
186. Socotra, Seychelles	268. St
188. Zanzibar	
190. Madagascar	
192. Mauritius	
194. St. Helena, Ascension	27
196. Cape Verde Islands: Canary	27
Islands, Madeira	28
198. AMERICA (N. and S.),	W
General	bia
200. History	29
202. Geography	In
204. North, General	30
206. History	K
208. Geography	80
210. Canada, General	31:
212. History, Civil and Church,	M
General	81
214. Geography, General	Mi
216. Social State, General	Ne
218. Nova Scotia, History	Ne
220. Geography	Jei
223. Prince Edward Island	88
224. New Brunswick	Ca

226, Quebec, History

uebec, Geography ntario, History Geography fanitoba ritish Columbia orth-West Territories ewfoundland, History Geography abrador Inited States, General listory, Civil, General Church Military and Naval, General Pre-Republican Republican Civil War, General Confederate View Federal View eography, General ocial State, General tates and Territories: History and Geography, General Divisions 270. Alabama: 272. Alaska: 74. Arizona : 276. Arkansas : 78. California; 280. Colorado; B2. Connecticut; 284. Delaare; 286. District of Columa; 288. Florida; 290. Georgia; 92. Idaho; 294. Illinois; 296. idian Territory; 298. Indiana; 00. Iowa ; 802. Kansas ; 804. entucky; 306. Louisiana; 8. Maine; 810. Maryland; Massachusetts; ichigan; 316. Minnesota; Mississippi : issouri : 822. Montana : 324. ebraska ; 326. Nevada ; 328. ew Hampshire; \$30. New rsey; 332. New Mexico; 4. New York; 336. North arolina; 838. North Dakota;

340, Ohio; 342, Oklahoma;

F	344. Oregon; 346. Penn-	436. Guianas, General		
	sylvania; 348. Rhode Island;	438. British		
	850. South Carolina; 852.	440. Dutch		
	South Dakota: 354. Ten-	442. French		
	nessee: 356. Texas: 358.	444. Paraguay		
	Utah; 360. Vermont; 362.	446. Peru		
	Virginia; 364. Washington;	448. Uruguay		
	366. West Virginia; 368.	450. Venezuela		
	Wisconsin; 370. Wyoming	452. Falkland Islands		
970	Mexico, General	454. ASIA, General		
	History, Ancient	456. Afghanistan		
876.		458. Arabia, History (Saracens		
	Geography	or Moors, etc.)		
	Central America and West	460. Geography		
300.	Indian Islands, General	462. Baluchistan		
989				
384.	Central America, History Geography	464. Ceylon		
	British Honduras	466. Chinese Empire, General		
900.	British Honduras Costa Rica	468. History, General		
900.	Guatemala	470. Geography, General		
909	Uanduma	472. Mongolia 474. Tibet		
904	Honduras Nicaragua	476. Korea		
902	San Salvador	478. Social State		
		· · · · · · · · · · · · · · · · · · ·		
	West Indies, General History	480. India, General		
		482. Ancient History		
	Geography Bahamas and Bermudas	484. Modern History, General		
	Cuba	486. Mutiny		
	Jamaica	488. Geography, General		
	Hayti and San Domingo	490. Special		
	Porto Rico	492. Farther India, General 494. Burma		
	Lesser Antilles (St. Thomas,	496. Siam		
414	Barbadoes, Trinidad, etc.)			
416		498. Annam and Tonkin		
		500. Malay Peninsula 502. Andaman and Nicobar Islands		
	Geography	504. Japan, General 506. History		
AOA	Argentina (including Pata-	508. Geography		
72/7.		510. Formosa		
498	gonia) Bolivia	512. Social State		
	Brazil			
	Chili	514. Persia, General		
	Colombia	516. Modern History		
	Ecuador	518. Geography		
702,	Echanol	520. Social State		

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F	522. Russia (Siberia, etc.), General	600. Geography, Transylvania	
	524. History	602. Other Divisions	
	526. Geography	604. Social State	
	528. Social State	606. Balkan States, General	
	530. Turkey, General	608. History, General	
	532. History	610. Geography, General	
	534. Geography, General	612. Bulgaria	
	536. Social State	614. Montenegro	
	538. Armenia	616. Roumania	
	540. Palestine	618. Servia	
	542. Sinai	620. Social State	
	544. Asia Minor and Levant,	622. British Islands, General	
	General	624. Societies	
	546. Malay Archipelago, Gene-	626. Periodicals	
	ral	628. History and Archæology,	
	548. Borneo	General	
	550. Celebes	630. Civil, General	
	552. Java	632. History, Church	
	554. Moluccas	634. Military History	
	556. Philippines	636. Regimental Histories	
	558. Sumatra, Sunda Islands	638. Naval History	
	560 EUROPE, General	640. British Empire, General	
	562. History, Civil, General	642. History, General	
	564. Church and Reformation,	644. Geography, General	
	General	646. Colonies, General	
	566. Military and Naval, General	648. Polity, etc.	
	568. Dispersed and Merged	650. British Islands, Geo-	
	Nations, General	graphy, General	
	570. Goths, Vandals, Huns, Franks,	652. Social State	
	Gauls	654. England, General	
	572. Moors or Saracens	656. History and Archaeology,	
	574. Bohemia	General	
	576. Poland	658. Early Times	
	578. Geography, General	660. Anglo-Saxons	
	-580. Atlases, Gazetteers, etc.	662. Normans	
	582. Social State, General	664-670. Later Periods (chronologi-	
	584. Austria-Hungary, General	cally)	
	586. Civil History	672. Church	
	588. Church History	674. Military	
	590. Military History	676. Naval	
	592. Geography, General	678. Social State	
	594. Bohemia	680. Geography, General	
	596. Bosnia and Herzegovina	682. Borders and North England,	
	598. Hungary	General	

F 684. Geography, Lake District, General 686. East England, General 688. West England, General 690. Midlands, General 692. South England, General 694. Thames, General Local History and Topography: 696. Bedford; 698. Berkshire; 700. Buckingham; 702. Cambridge; 704. Cheshire; 706. Cornwall (708. Scilly Isles); 710. Cumberland; 712. Derby; 714. Devon; 716. Dorset; 718. Durham; 720. Essex; 722. Gloucester; 724. Hampshire (726. Isle of Wight); 728. Hereford; 730. Hertford; 732. Huntingdon; 734. Kent; 736. Lancashire; 738. Leicester; 740. Lincoln; 742. London; 744. Middlesex; 746. Monmouth; 748. Norfolk; 750. Northampton; 752. Northumberland: 754. Nottingham; 756. Oxford; 758. Rutland: 760. Shropshire; 762. Somerset; 764. Stafford; 766. Suffolk; 768. Surrey; 770. Sussex; 772. Warwick; 774. Westmoreland; 776. Wiltshire; 778. Worcester; 780. York; 782. Isle of Man; 784. Channel Islands 786. Wales, General 788. History, Civil 790. Church 792. Social State 794. Geography, General 796. North Wales 798, South Wales 800. Anglesey; 802. Breck-

nock; 804. Cardigan; 806. Carmarthen: 808, Carnarvon: 810. Denbigh; 812. Flint; 814. Glamorgan; 816. Merioneth; 818. Montgomery; 820. Pembroke; 822. Radnor 824. Ireland, General 826. History, Civil 828. Church 830. Social State 832. Geography, General 834. Connaught; 836. Leinster; 838. Munster; Ulster; 842. Antrim; 844. Armagh; 846. Carlow; 848. Cavan; 850. Clare; 852. Cork; 854. Donegal; 856. Down; 858. Dublin; 860. Fermanagh; 862. Galway; 864. Kerry; 866. Kildare; 868. Kilkenny; 870. King's County; 872. Leitrim; 874. Limerick; 876. Londonderry; 878. Longford; 880. Louth; 882. Mayo; 884. Meath; 886. Monaghan; 888. Queen's County; 890. Roscommon; 892, Sligo; 894, Tipperary; 896. Tyrone; 898. Waterford; 900. Westmeath; 902. Wexford; 904. Wicklow 906. Scotland, General 908. History, Civil 910. Church 912. Military and Clans 914. Social State 916. Geography, General 918. Borders; 920. Low lands; 922. Galloway; 924. Hebrides; 926. Highlands; 928. Aberdeen; 930. Argyle; 932. Ayr: 934. Banff: 936. Berwick; 938. Bute; 940.

Caithness; 942. Clackmannan;

944. Dumbarton: 946. Dum-

fries; 948. Edinburgh; 950,	1060. Modern, General
Elgin or Moray; 952. Fife;	1062. History, General
954. Forfar; 956. Hadding-	1064. Byzantine Empire
ton; 958. Inverness; 960.	1066. Church
Kincardine; 962, Kinross;	1068. Geography, General
964. Kirkcudbright; 966. La-	1070. Special
nark; 968. Linlithgow; 970.	1072. Social State
Nairn; 972. Orkney; 974.	1074. Italy, General
Peebles; 976. Perth; 978.	1076. History, Modern, General
Renfrew; 980, Ross and	1078. Church
Cromarty; 982. Roxburgh;	1080. Military and Naval
984. Selkirk; 986. Shetland;	1082. Social State
988. Stirling; 990. Suther-	1084. Geography, General
land; 992. Wigtown	1086. Lombardy
994. France, General	1088. Piedmont
996. History, Civil, General	1090. Venice 1093. Tuscany
998. Great Revolution	1093. Tuscany
1000. Church, General	1094. Rome
1002. Huguenots	1098. Sicily 1098. Sardinia
1001. Military and Naval	1098, Sardinia
1006. Social State	1100. Other Divisions
1008. Geography, General	1102 Rome, Ancient, General
1010. Brittany; 1012. Nor-	1104. History, General
mandy; 1014. Paris; 1016.	1106. Early History
Corsica; 1018. Other Districts	1108. Republic
1020. Germany, General	1110. Empire
1022. History, Civil	1112. Eastern Empire
1024. Church	1114 Western Empire
1026. Military and Naval	1116. Geography, General
1028. Social State	1118. Special
1030. Geography, General	1120. Social State
1032. Bavaria	1122. Netherlands, General
1034. Prussia	1124. History, General
1036. Saxony	1126. Geography, General
1038. Other States	1128. Social State
1040. Greece, Ancient, General	1130. Belgium, General
1042. History, General	1132. History, Civil
1044. Athens; 1048. Cor-	1134. Church
inth; 1048. Lacedæmonia;	1136. Geography
1050. Macedonia; 1052,	1138. Holland, General
Other Divisions	1140. History, Civil
1054. Geography, General	1149. Church
1056. Special	1144. Geography
1058, Social State	1146. Portugal, General

F 1148. History, Civil	1236. Geography, Alpine Books
1150. Church	1238. Social State
1152. Social State	1240. Turkey, General
1154. Geography	1242. Ottoman Empire, History
1156. Azores	1244. Modern History
1158. Russia, General	1246. Geography
1160. History, Civil	1248. Social State
1162. Church	1250. Mediterranean, Shores
1164. Military	and Islands, General
1166. Social State	1252. Gibraltar
1168. Geography, General	1254. Malta
1170. Special	1256. Crete or Candia
1172. Empire, General	1258. Cyprus
1174. History	1260. Oceania, General
1176. Geography	1262. Geography
1178. Scandinavia, General	1264. AUSTRALASIA, General
1180. History, General	1266. History
1182. Geography, General	1268. Geography
1184. Social State	1270. Social State
1186. Denmark, General	1272. Australia, General
1188. History	1274. History
1190. Geography	1276. Geography
1192. Social State	1278. Social State
1194. Iceland and Faroë Islands	1280. New South Wales,
1196. Danish Greenland	General
1198. Norway, General	1282. History
1200. History	1284. Geography
1202. Geography	1286. Queensland, General
1204. Social State	1288. Histo ry
1206. Sweden, General	1290. Geography
1208. History	1292. South Australia, General
1210. Geography	1294. History
1212. Social State	1296. Geography
1214. Spain, General	1298. Victoria, General
1216. History, Civil	1300. History
1218. Church	1302. Geography
1220. Military and Naval	1304. West Australia, General
1222. Geography	1308. History
1224. Balearic Islands	1308. Geography
1226. Social State	1310. New Zealand, General
1228. Switzerland, General	1312. History
1230. History, Civil	1314. Geography
1232. Church	1316. Social State
1234. Geography, General	1318. Tasmania, General

F 1320. History 1322. Geography 1324. Social State 1326. New Guinea, History 1328. Geography 1330. Solomon Islands 1332. Polynesia, General 1334. History 1336. Geography 1338. Fiji 1340. Hawaii or Sandwich Islands 1342. Pitcairn

1344. Marquesas

1346. Samoa

1348. Tahiti

1350. Other Islands

1352. POLAR REGIONS.

General 1354. Antarctic

1356. Arctic, General 1358. North European

1360. American, Eskimos

1362. Asian

1364. Franklin Searches

G. BIOGRAPHY AND CORRESPOND. ENCE, General, Collective

2. Periodicals and Societies

4. National, Collective, Ameri-

6. British

8. English

Irish

12. Scottish

14. Welsh

16. French

18. German

20. Greek

22. Italian

24. Roman

26. Spanish

28. Other Nationalities

30. Class, Collective, Actors and

Entertainers

32. Artists

84. Authors 36. Bible Characters

38. Clergy

40. Criminals: Robbers, Pirates,

42. Eccentrics: Misers. Fools. Jesters, Characters, etc.

44. Educationists

46. Engineers

48. Industrial and Commercial

50. Legal

Medical

54. Military

56. Missionaries

58. Monarchs

60. Musicians

62. Naval

64. Nobility

66. Philanthropists

68. Philosophers

70. Politicians and Statesmen

72. Popes 74. Religion

76. Saints and Martyrs

78. Scientists

80. Sportsmen

82. Travellers, Geographers, Antiquaries

84. Women

86. Other Classes

88. Individual Biography and (alphabetically Criticism

arranged)

90. Genealogy and Family History, General

92. Societies and Periodicals

94. Families, General

Individual

G	98.	Peerages, Baronetages, etc.
	100.	Dignities, General. Official
		Year Books
	102.	Orders of Knighthood
	104.	Heraldry, General
	106.	Societies and Periodicals
	108.	Special
	110.	National
	112.	Epitaphs
	114	Portraits, Collections
	116.	Individual

H. LANGUAGE AND LITERATURE, General

- 2. Language, Societies
- 4. Periodicals
- 6. History, General
- 8. Theories 10. Comparative Philology
- 12. Phonetics, Phonology
- 14. Alphabets
- 16. Polyglot Dictionaries and Glossaries
- 18. African, General
- 20. Tribal Dialects
- 22. Egyptian, General
- 24. Coptic
- Ethiopic
- 28. American, General
- North, Aboriginal Dialects
- Societies and Periodicals
- 34. South and Central, Ancient
- 36. Asia, General
- Societies and Periodicals
- 40. History
- 42. Theories
- 44. Arabic. Dictionaries
- Grammars
- General Treatises
- 50. Chinese. Dictionaries

- 52. Chinese, Grammars General Treatises
- Indian, General
- 58. Sanskrit. Dictionaries
- 60. Grammars
- 62. General Treatises
- 64. Hindustani. Dictionaries
- 66. Grammars
- 68. General Treatises
- 70. Bengali 72. Tamil
- 74. Dravidian
- 76.
- Indo-Chinese Other Languages
- 80. Japanese. Dictionaries 82. Grammars
- 84. General Treatises
- 86. Persian. Dictionaries
- 88. Grammars
- 90. General Treatises
- 92. Semitic, General
- 94. Hebrew. Dictionaries
- 96. Grammars
- 98. General Treatises
- 100. Syriac and Other Forms
- 102. Turkish. Dictionaries
- 106. Grammars
- General Treatises 108.
- 110. Europe. General
- 112. Societies and Periodicals
- 114. History
- 116. Theories
- 118. Celtic, General
- 120. Societies and Periodicals
- 122. Dictionaries
- 124. Grammars
- 126. Gaelic. Dictionaries
- 128. Grammars and General
- 130. Irish. Dictionaries
- 132. Grammars and General
- 134. Welsh. Dictionaries
- 136. Grammars and General
- 138. Cornish
- 140. Manx

H 142. Celtic, Basque, Armorican, etc.	226. Teutonic, Dictionaries
144. Anglo-Saxon, General	228. Theories
146 Dictionaries	230. German. Dictionaries
148. Grammars	232. Grammars
150. English, General Treatises	234. General Treatises
152. Societies and Periodicals	236. Dutch. Dictionaries
154. History	238. Grammars
156. Dictionaries, General	240. General Treatises
158. Local Glossaries (Dialects	242. Flemish
alphabetically)	244. Scandinavian, General
160. Special Glossaries (Mining,	246. Dictionaries
etc.)	248. Old Norse
162. Americanisms	250. Icelandic
164. Slang	252, Danish. Dictionaries
166. Rhyme	254. Grammars and General
168. Synonyms, Treasuries, etc.	256. Norwegian. Dictionaries
170. Grammar	258. Grammars and General
172. Composition	260. Swedish. Dictionaries
174. Scottish, General	262. Grammars and General
176. Dictionaries, General	264. Sclavonic, General
178. Local Glossaries	266. Dictionaries
180. Greek (Ancient). Dictionaries	268. Russian. Dictionaries
182. Grammars	270. Grammars
184. General Treatises	272. General Treatises
186. (Modern) Dictionaries	274. Polish. Dictionaries
188. Grammars	276. Grammars and General
190. General Treatises	278. Bohemian. Dictionaries
192, Latin. Dictionaries	280. Grammars and General
194. Grammars	282. Other Sclavonic Languages
196. General Treatises	284. Hungarian. Dictionaries
198. Romance Languages	286. Grammars and General
200. French. Dictionaries	288. Finnish. Dictionaries
202. Grammars	290. Grammars and General
204. General Treatises	292. Gipsy Languages
206. Italian. Dictionaries	294. Other European Languages or
208. Grammars	Dialects
210. General Treatises	296. Polynesia, General
212. Spanish. Dictionaries	298. Dictionaries
214. Grammars	300. Grammars
216. General Treatises	302. Universal Languages
218. Portuguese. Dictionaries	304. Names, General
220. Grammars	306. Personal Names, General
222. General Treatises	308, Surnames
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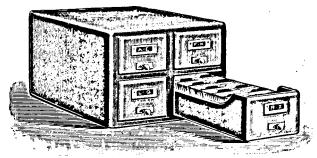
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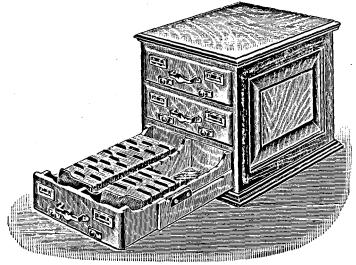
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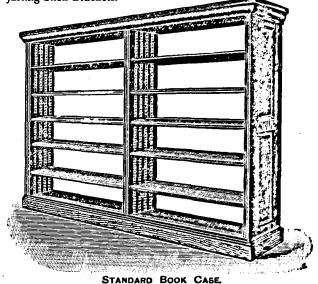
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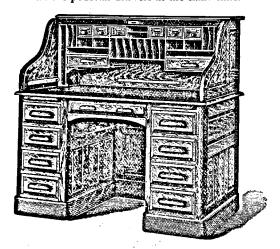
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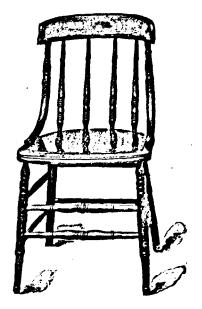


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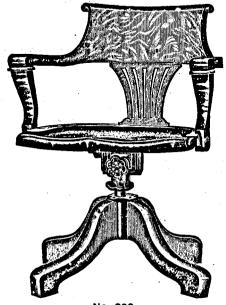


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12 91	×	64	×	81	•••	8	0	1	2310	×	T	×	8	•••	2	0
1310	×	7	×	8	•••	8	0		29.—11	×	8	×	8	•••	2	6
1413	×	9	×	8	***	2	9	1	8015	×	112	×	21		2	9
1513	×	101	×	8	•••	2	10	1	81.—18	×	12	×	4	•••	4	0
16 91	×	7	×	21	•••	8	0	-	8219	×	81	×	81	•••	2	6

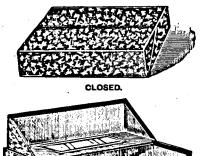
The sizes given are the clear inside measurements of the inner cases.

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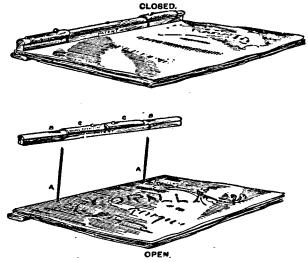
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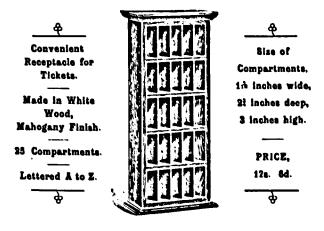
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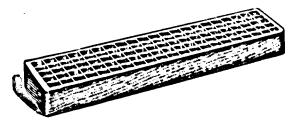
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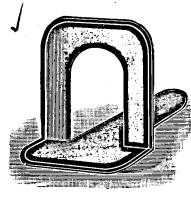
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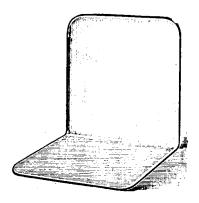
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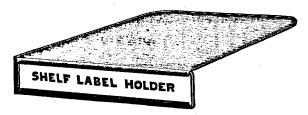
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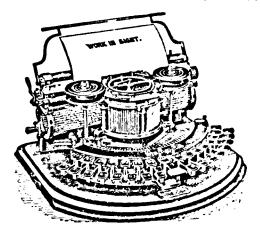
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