

heliograph, or any other signalling apparatus, to the reproduction at distant points of some kinds of drawings, has been recently contrived by Mr. Alexander Glen of England, and is described in the *London Illustrated news* of March 20. It seems likely to be of some utility in military operations, as it is especially suitable for the transmission of small maps or plans of a locality. The design to be transmitted is drawn on ruled paper, divided into little squares by vertical and horizontal lines. The operator at the transmitting-station can thus indicate by alphabetical letters to the receiver any point on the paper falling in the centre of any square; the person at the receiving-station will apply his pencil to that point, and will then be directed to the next point, drawing a line with the pencil, and so on to form a complete outline-drawing. Patches of shading, of the several darker or lighter tints shown in a separate diagram, may be put in by special directions.

BIBLIOGRAPHY OF INDIAN LANGUAGES.

MANY years since, the present director of the bureau of ethnology became interested in Indian tribes of the west, and began to study their languages. The study of the spoken language from the mouths of the speakers naturally led to the study of books containing accounts of languages no longer spoken, or spoken by people not personally visited. As books began to be studied, the desire and the need of examining more books relating to the subject were felt to be necessary for the solution of the problems involved. A card-catalogue was therefore begun, of the books, pamphlets, magazine and other articles, manuscripts, etc., which were needful for an exhaustive study of the relationships of the native tribes as based upon language. This catalogue grew and grew. How great it was or is destined to become, if absolutely completed and perfected, no one yet knows.

Every lover of systematic, complete, and accurate work owes a debt of thankfulness to the bureau of ethnology and the compiler of this formidable volume; and he owes this debt, not because the work is complete (for it is still incomplete), and not because it is free from inaccuracies (for there are inaccuracies, though these are neither important nor numerous), but he is grateful for this monument of systematic, thorough-going research, and for a persistent devotion to a lofty ideal of bibliographic work. Had a less lofty ideal of completeness or excellence been set

up, the book would have been beyond all criticism. The very excellence of the ideal affords ground, and the only ground, for the friendly criticism we beg to offer.

The titlepage of this printed but unpublished book is, and is intended to be, a standing invitation to criticism from all competent judges. We say printed but not published, since a manuscript note informs us, 'one hundred copies printed,' and the printed titlepage informs us that these one hundred volumes are 'distributed only to collaborators,' and also that they are 'proof-sheets.'

It is the fulness of the present catalogue, the time and labor spent upon it, the bibliographic spirit which pervades it, taken together with the titlepage, that bring into the strongest relief the perfect ideal in the author's mind, and at the same time his clear perception of the mode, and the only mode, for the attainment of this ideal. The author has set before him, and kept steadily in view, the purpose, first, of hunting up every scrap of published, printed, and even manuscript information in existence, relating to the subject; second, of recording a description of each work so full and so complete that it need never be recorded more fully or more completely; third, of telling where each work catalogued may be found; fourth, of giving a clear notion of what the document is, and what it contains relative to his subject, telling where, within the work cited, the linguistic material is to be found; and, lastly, of so putting the whole together that whoever has occasion to use this bibliography may learn all that he needs or cares to know about any book catalogued, and its contents, without actually seeing it at all.

The value of any work so broadly conceived and so fully executed as this, can hardly be overstated. With the great increase of knowledge in all directions, it is absolutely essential to progress that the fields to be investigated be first systematically mapped out, to the end that seeming new discoveries may be new, and not rediscoveries, and that energy be not, through ignorance, wasted in repeating work already well done. The sciences are now advanced to that state, that further satisfactory progress is only to be made by ascertaining what has already been done. To this end, and to so exhibit the work already accomplished in any line, is the work of the bibliographer. The general outline of the proposed plan of the bibliography is here shown, and the opinions of competent judges as to its merits and defects are respectfully solicited with a view to their use in the finished book or books, if books should be found necessary to contain the material which shall constitute the work.

Proof-sheets of a bibliography of the languages of the North American Indians. By JAMES CONSTANTINE PILLING. Washington, Government, 1885. 1175 p. 4°.

Preceding the general alphabetical authors' list of books, which constitutes the great bulk of the book, is a list of the bibliographical authorities consulted, this list numbering a hundred and twelve entries, covering twenty-six pages. This list, being one subordinate to the general purpose for which the book is to be used, might go in a subordinate or smaller type, thus saving in two ways; to wit, in the space occupied, and in showing by the type itself that the list was subordinate to the main body of the work. In the very full index at the close of the book, and which constitutes the subject-catalogue, this plan is followed with good effect, and a complete subject-catalogue of Indian linguistics is thus printed on forty-five closely printed pages.

The serial numbers which accompany each title, and which are printed on the left, would interfere less with the catch-word of the title if transferred to the right; and the catch-word, the author's name, might then advantageously be brought to the left, a little beyond the line of the text. These detailed matters of printing here introduced and commented upon, though in general uncalled for, are pertinent to the present notice, since these are proof-sheets, and hence the finally adopted form is presumably not yet settled. Moreover, these questions admit of a more intelligent and satisfactory settlement from the existence in print of this material, which might, perchance, be denominated "Proof-sheets of material collected with a view of constructing an exhaustive bibliography of the languages of the native races of North America." This would seem to be a tolerably precise characterization of both the book and the author's conception of it. The term 'Indian' on the titlepage is of course used to include all native races, Eskimo, Aztecs, etc. Whether the word should be so used, is a matter for the ethnographer rather than the bibliographer.

The size of the work, and the fact that while going through the press two hundred and fifty pages of additions and corrections accumulated, show the importance of considering whether finally it will not be better to break this bibliography up into several subdivisions, so that, instead of having a very large bibliography of North American linguistics, we may have a more useful work, consisting of several parts, each devoted to a special group of languages, such as Algonkin, Eskimo, etc. All bibliographies should provide for growth. In any very comprehensive one, the first part begins to be antiquated before the last part is reached. Moreover, bibliographies, if of comparatively small subjects, can be revised, and kept up to date; but it is a formidable under-

taking to revise, enlarge, and bring up to date, a work so large as this.

As the present tendency is pronouncedly in the direction of full bibliographies of small subjects, the most important question to be considered in the publication of this work would seem to be as to whether it should be one single bibliography of a very large subject, or a series of bibliographies of a number of small subjects.

Would it be better to prepare a bibliography of mathematics, or a series of bibliographies, on the different subdivisions of mathematics? And in meteorology will the signal service best serve the meteorological public by issuing one grand bibliography of meteorology, covering the entire field, or by subdividing into various heads, such as 'observations,' 'instruments,' 'theories,' etc., and issuing smaller bibliographies, covering the more limited fields? It is not our purpose to discuss these questions, but, rather, to sharply draw attention to them for the purpose of having them well considered before a final form is adopted.

The author is, in our opinion, to be congratulated upon selecting the form of an authors' catalogue rather than the subject-catalogue. The authors' catalogue admits practically of but a single arrangement, — the alphabetic, — since in any large list the chronological order proves of far less general utility.

The subject-catalogue, however, admits of several arrangements: it is always subject to radical changes based upon increased knowledge or new and revised systems of classification; and, lastly, to use a subject-catalogue, the system of classification used in that particular catalogue must be studied. It therefore seems far wiser, as Mr. Pilling has done, to make the index serve as the subject-catalogue.

DISEASES OF THE FORE-BRAIN.

THE scope of this work is indicated in its title. It is an attempt to explain both the nature of mental action and the perversions of that action from the data of the anatomist and the pathologist. Professor Meynert has no superior in Europe in the department in which he has written. To him anatomists owe much that is new and important in the knowledge of the structure of the brain. It is to be expected, therefore, that the results of his life-work should be regarded with great interest. In a comparatively small

Psychiatry: a clinical treatise on diseases of the fore-brain, based upon a study of its structure, functions, and nutrition. Part i. By THEODOR MEYNER, M.D. Tr. by B. Sachs, M.D. New York, Putnam, 1885. 8°.