1895 will be ready for the printer shortly after its close.

It is divided into two parts: a bibliography and an index. The bibliography is arranged alphabetically by authors' names and contains the titles of each paper, place of publication, references to abstracts and reviews, and a brief summary of the contents. The entries are numbered from 1 to something over 1100 and are used for index reference. The index of the four subjects is published as a whole and is arranged alphabetically. Its geographic arrangement is by States and Territories of the United States and the other political divisions of North America. The geologic subdivisions are those of the different geologic periods and dynamic, economic, glacial and physiographic geology. The papers relating to economic geology are arranged by condensed titles of papers under the different geographic subdivisions which they describe, and there is also given a list of the useful minerals and ores described. Under mineralogy is given the condensed titles of papers and a list of minerals described. Petrology is divided geographically by the States and countries in which the rocks described occur and by a list of rocks described. Paleontology is subdivided by the different geologic periods and a list of genera and species described. In each of the lists of ores, minerals, rocks and genera and species the paper in which they are described is referred to by author's name and number of the entry in the bibliography. These represent the main features of the index.

In making up the bibliography the library catalogue card is used (size $4\frac{1}{2}$x$6\frac{1}{2}$ inches). On one side is written the entry that appears in the bibliography, and on the other the subdivisions of the index under which the paper is to be listed. In this manner all the information in regard to each paper is assembled on one card. Thus the indexing can be determined on while the paper is still in hand, and, as soon as the bibliography is complete, the task of making up the index can be easily and rapidly accomplished.

The following specimen card illustrates the plan:

FACE OF CARD.

HILL (Robert T.), Geology of parts of Texas, Indian Territory and Arkansas adjacent to the Red River. Geol. Soc. Am., Bull., vol. 5, pp. 297–338, pls. 12–13, figs. 1–4.

Describes the physiography of the region. Gives a list of the Cretaceous, Tertiary and Pleistocene formations and their subdivisions, whose outcrops at different localities are described. Gives lists of fossils found at certain horizons, discusses the oscillations of land and sea, and includes the author's conclusions as to the Cretaceous section of the region. Plate 12 contains a geologic map and cross sections.

BACK OF CARD.

Texas, Arkansas, Indian Territory, Cretaceous, Eocene, Pleistocene, Paleontology (Cretaceous), Physiographic geology.

The work has been conducted along with other office work, and hence only an approximation as to the length of time required to complete a year's bibliography of this kind can be made. It is believed that from four to five months' time of one person will be required to examine the literature, prepare the manuscript and read the proof. With skilled clerical assistance much more could be accomplished in the same time.

F. B. WEEKS.
U. S. GEOLOGICAL SURVEY.

VOLCANIC DUST.

SEVERAL notices of volcanic dust have appeared recently in SCIENCE. It may be interesting, perhaps, to some of the readers of SCIENCE to learn that a large deposit of of volcanic dust occurs in central Kansas, in McPherson Co., just north of the watershed between the Smoky Hill and Little Arkansas, and in the great depression extending from Salina to the Little Arkansas.

The deposit has been noted by J. A. Udden, in the *American Geologist*, June, 1891.

I have examined the deposit at various points of exposure, the extreme points being about fifteen miles apart. The deposit where noted is from two to four feet in thickness. It rests on a bed of clay and is overlaid by a bed of yellow marl. The altitude of the exposures varies perhaps forty or fifty feet. At the lowest point the dust is well assorted and stratified; at the higher points it shows signs of having been deposited in shallow water.

During the past winter I had Mr. Jas. Gilbert, a candidate for a higher degree at the Kansas State University, and former pupil of mine, make an analysis of some samples of the volcanic dust. The following is the result:

$Si\ O_2$ and insoluble residue .....92.32—
Fe_2O_3, Al_2O_3 ..... 2.66—
CaO..... .60—
Mg O..... 2.88—
H_2 O..... 1.22—
Traces of P, CO_2, Cl, Na, K.

Under the microscope it is found to consist almost wholly of microscopic, transparent, silicious flakes of various irregular forms. The most common forms being curved and nearly triangular. How did so large a deposit of volcanic dust reach central Kansas?

H. J. Harnly.

McPherson, Kansas.

SCIENTIFIC LITERATURE.

Zur Psychologie des Schreibens mit besonderer Rücksicht auf individuelle Verschiedenheiten der Handschriften. Von W. Preyer. Mit mehr als 200 Schriftproben im Text nebst 8 Diagrammen und 9 Tafeln. Hamburg und Leipzig, Leopold Voss. 1895. 230 pp. with index.

The writer of the following lines approached the object of reviewing this book with German seriousness and with a determination to do justice. It is not always easy to do justice to a German book written with a serious purpose, because one is invariably entangled in a maze of details from which it is impossible to be free without incurring the reproval of neglecting some part of the argument. Yet the details are multiplied, like the testimony in the Roger Tichborne case, until one is simply drowned in them without being convinced of their relevancy. These remarks apply rather to those cases where German perseverance and German accuracy are enlisted in trancendental or speculative philosophy than to the discussions of exact science, where these Teutonic virtues evolve models of correct procedure. German 'Genauigkeit' applied to chimeras is like the application of the Lick telescope to the determination of the longitude of a cloud, or the application of the fine grinding mill, to which Huxley compared mathematics, to the reduction of worthless material. His apothegm, it will be remembered, was that however perfect the treatment, the value of what you got out depended upon the value of what you put in. Let us examine the book before us more attentively.

The work consists of 223 pages of text divided into five chapters and an appendix of three pages (of which more presently) on the relations of Goethe, Lavater and graphology reciprocally.

The subjects treated are as follows:

Chapter I. Wherein do handwritings differ from each other?

Chapter II. How do differences of handwriting arise?

Chapter III. Analysis and synthesis of handwriting.

Chapter IV. The significance of individual characteristics of writing.

Chapter V. Concerning the pathology of writing.

Appendix. The beginnings of graphology with Goethe and Lavater.