of the current year or volume—for example, "C.A. 12345–46." *Science Abstracts* and *Biological Abstracts* already employ approximately this system. It makes the abstract journal indexing slightly more definite and in the proposed procedure eliminates labeling of each item.

Punch Cards for Indexing Scientific Data

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Files containing large volumes of scientific data can, and often do, become unwieldy and cumbersome to use. The principal reason is that in the preparation of such files emphasis is usually placed on the manner of putting data *into* them rather than on ease and facility of getting information *out* of them. The result is that maximum utility either is not realized or at best is attained at the expense of unnecessarily great time and effort.

In the indexing and analysis of chemical subjects, we have, through the use of punch cards, avoided the difficulties which are inherent in ordinary filing systems, since these cards stress the matter of prime importance—ease and versatility of obtaining any desired information from the file. In most instances only one card is required for each reference, even though it may deal with multiple phases of the subject under consideration. All of those cards pertaining to a specific phase may readily be sorted from the file. The cards need not be filed in any particular order; indeed, there is little loss of efficiency when they are placed at random in the file.

Success with the new system led us to report our experiences in our fields of research (*1, 2, 3*). The experiences of a few workers in physiology (*5*), metallurgy (*6, 7, 9*), and pharmacology (*4*) are also recorded in the literature, and a spectroscopist has made an oral report (*8*). In addition, through correspondence and conversation we have learned of a few others who have adapted punch cards to their problems. We feel, however, that this powerful indexing tool has not been publicized as widely as it deserves.

The cards[1] may be obtained in different sizes, although the five- by eight-inch size is probably best suited to most applications. Holes one-eighth inch in diameter are punched one-fourth inch apart along the edges, one-sixteenth inch from the margin. The upper right corners are cut diagonally, so that it can quickly be noted whether all the cards are right side up and facing the same way. Since the holes occupy but a small amount of marginal space, ample room is left for the recording of references, abstracts, experimental data, or other desired information.

A general idea of the purpose of the holes can be conveyed by quoting from one of the above literature citations (*2*): "Meanings are assigned to individual holes, and on each reference card at the appropriate holes the portion of the card between hole and margin is clipped open with an adaptation of a ticket punch, changing the hole to a notch. When the sorting needle, resembling a single-tine ice pick, is inserted into a given hole in a group of cards and lifted, the cards, on which that hole has been clipped, drop out and the others stay on the needle."

In this necessarily brief description we make no attempt to give any of the details which should be understood before the punch-card system can be put into operation, since they have been discussed at length in the chemical literature (*1, 2*). Bulletins published by the card manufacturers are also valuable in furnishing instruction in methods and technique.

Although a number of suggestions could be made to those planning to adopt the indexing system which we have found so satisfactory, we shall confine ourselves to two of fundamental importance. First, the problem at hand must be carefully analyzed, in order to make certain just what kind of information it is desired that the file shall be capable of furnishing. Second, an outline must be prepared to serve as a framework into which all the reference material can be fitted for coding purposes; it is obvious that this step cannot be taken effectively until a considerable familiarity with the field has been acquired. In most cases the outline for a specific investigation can be printed on the card, but for diverse purposes the use of relatively blank cards with separate outlines is advisable.

[1] The cards and necessary inexpensive accessory equipment are manufactured by the McBee Company ("Keysort"), Athens, Ohio, and the Charles R. Hadley Company ("Rocket"), Los Angeles, California.

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A Simple System for Reprint Filing

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The organization of a reprint collection is a problem which must be faced by every serious research worker. Initially there is the accumulation of reprints, but ultimately, if this collection is to retain value, some system must be developed. The desiderata are obvious. The system must be one in which any reprint can be located without waste of time or effort in search. It must be equally possible to return any reprint to its proper place. The system must be capable of continuous extension. The system must be simple and require a minimum of effort to develop and keep in order. Less obvious,