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A GUIDE FOR THE USE OF THE TEXTILE INFORMATION SYSTEM

A THESIS

Presented to

the Faculty of the Graduate Division

by

Joanne Butterworth

In Partial Fulfillment

of the Requirements for the Degree

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SUMMARY

An information system is defined in this study as the complex of tools, sources, and techniques employed to organize information. Because information systems have grown to be so complicated, they require a guide to show the methods of organization employed and to direct the user to their component parts. Information systems in fields such as biology, chemistry, mathematics, and physics are well delineated; the scientists and engineers working in these fields have at their command several good guides to the literature. The textile investigator, on the other hand is not so fortunate. The existing textile guides are not comprehensive, nor do they facilitate a quick and effective approach to textile information.

The objective of this work is to furnish a guide which identifies and describes the component parts of the information system in the fields of textile science and technology. Emphasis is placed on information needs and uses of research workers, technologists, and graduate students in the field.

In this study, textile literature sources are divided into primary, secondary, and tertiary groups. The primary groups (periodicals, U.S. government publications, technical reports, patents, theses, trade association and manufacturers' literature) contain essentially unorganized information. The secondary sources (abstracting and indexing journals, review literature, bibliographies, reference books, monographs, and textbooks) contain organized information and are tools for
the use of primary sources. The tertiary sources (guides, directories and manufacturers' catalogs, biographies, language dictionaries, and bibliographies of bibliographies) also contain organized information and are tools for the use of primary and secondary sources. The last part of this work is devoted to suggested procedures in searching the textile information system previously identified and described.

An extensive Table of Contents is offered in lieu of a comprehensive subject and title index. A major portion of the appended material is an alphabetical index to the journal literature of textile and related fields. Publisher's information and comments on scope and viewpoint are given for each journal. These journals were selected by means of a citation survey and questionnaires sent by the author to textile professionals.
CHAPTER I

INTRODUCTION

Statement of Problem

Scientific and technological knowledge, acquired by means of experimentation, is transmitted by verbal or written communication. Although new methods of written communication and documentation have developed in the twentieth century, scientists and engineers, nevertheless, find themselves confronted with vast amounts of information contained in many kinds of publications. More than ever before, they need to be able to find and use information quickly and effectively. For this reason, information must be organized to show meaningful relationships and to facilitate the process of finding it.

The complex of tools, sources, and techniques employed to organize information is defined in this study as an information system. Through the arrangement of information into such a system, organized knowledge is derived. As J. E. Holmstrom points out, "Science means organized knowledge: knowledge deriving value not from the mere accumulation of facts but from their arrangement in systems."¹

Information systems have grown to be so complex that they themselves require a guide which shows the methods of organization employed and directs the user to their component parts. Information systems in fields such as biology, chemistry, mathematics, and physics are well delineated. The scientists and engineers working in these fields have
at their command several good guides to the literature. The textile investigator, on the other hand, is not so fortunate.

The objective of this work is to identify and describe the information system in the fields of textile science and technology, with emphasis upon the information needs and uses of research workers, technologists, and graduate students in the field.

Historical Background Leading to Problem

Comments on Growth of Textile Field

Until the mid-eighteenth century the manufacture of textiles was still considered a handicraft much as it had been for approximately 4000 years. The industrial revolution quickly transformed the textile industry. In rapid succession came such technological developments as: Kay's "flying shuttle," (1760); Hargreaves' "spinning jenny," (1764); Arkwright's water-frame spinning machine (1775); and Crompton's "mule," (1779) which was to be driven by Watt's perfected steam-engine (1790). The technological improvements in weaving provided the basis for a standard power loom by 1823, and in the 1830's Jacquard power looms began to be used extensively. Other inventions after the 1830's helped improve the strength of yarn and woven fabrics. Chemists in the late 1700's improved textile finishing by discovering how natural color can be oxidized with chemicals. Sunlight was no longer the only means of bleaching cloth. Before 1856, when W. H. Perkin discovered mauve—the first synthetic dye, dyeing of fabrics was done by coloring matter of plant or animal origin, often with the assistance of metal mordants.

The science of textile fibers was much slower in beginning than
the technology. For thousands of years, natural fibers originating from plants and animals were individually extracted from their surroundings, spun, and woven into cloth. During the nineteenth century a few scientists began investigating the use of cellulose in producing an artificial silk fiber. Viscose rayon (1892) was such a fiber of regenerated cellulose. It was not until 1939, however, that Carothers developed the first man-made polymer fiber, nylon. Nylon being made of carbon, hydrogen, nitrogen, and oxygen introduced the field of organic chemistry into the field of fibers, as Perkin's mauve dye did into the field of dyeing. The number of new man-made fibers grows each year and likewise the technological and scientific problems involved in their processing and applications.

Textile Field as Allied to Other Fields

Early records show that the chemical and textile industries have been closely related. Dyeing with natural dyes was a complex craft relying on chemical processes. The discovery of synthetic dyes, chemical modifications of natural fibers, and man-made fibers are other examples of the chemical industry's contributions. Other engineering fields have greatly affected progress in the textile industry: mechanical and electrical engineering in design and construction of textile machinery; industrial engineering, computer technology, and quality control in analysis of textile processes; and sanitary engineering in helping prevent air and water pollution.

Likewise, textile science has been directly advanced by chemists and physicists who study the chemical and physical properties and applications of natural and man-made fibers. Much of this research is spon-
sored by industry. However, some is done in research institutions out of scholarly interest in the chemical, physical, and physico-chemical mechanisms involved in processes such as polymerization, dyeing, and finishing of fibers. Advanced studies into the structure of nucleo-proteins and cellulosic products have been very important to the textile scientist.

Clearly, the fields of textile science and technology are interdisciplinary, and adequate communication involves current awareness of the advances in such areas as chemistry, physics, polymer science, chemical engineering, mechanical engineering, electrical engineering, industrial engineering, and sanitary engineering. The broad field and abundant information to be covered necessitates a systematic approach in the use of information. A familiarity with the information sources is likewise necessary in a systematic approach to the literature.

\textbf{Review of Literature}

The guides to the chemical literature, in particular, are comprehensive in coverage of the sources available to the research chemist, chemistry student, and chemical information specialist. Although the chemical guides by M. G. Mellon\textsuperscript{8} and E. J. Crane\textsuperscript{9} differ somewhat in their approach, both succeed in organizing the different literature sources and critically examining them, carefully pointing out difficulties and obstacles in their use. A 1963 guide by R. T. Bottle\textsuperscript{10} approaches the chemical literature from a British viewpoint.

The existing guides to the textile literature, however, are not as comprehensive, critical, and current as those for chemistry. The
American Chemical Society's *Advances in Chemistry Series* No. 10 contains a good guide for only the "Literature of Textile Chemistry."\(^{11}\) Short guides to British sources can be found in articles in *Aslib Proceedings*\(^{12}\) and *Skinner's Record*.\(^{13}\) The U. S. Department of Commerce, Business and Defense Services Administration published in the 1950's several *Business Service Bulletins*.\(^{14},^{15},^{16}\) These are basic guides to government publications on vegetable fibers, man-made fibers, and cotton, respectively. None of these is designed so that a textile scientist and technologist can easily discover what information sources are available and then quickly determine how they may be used in obtaining specific information. The purpose of this work is to develop such a reference tool. Emphasis is primarily placed on U. S. sources. However, foreign sources, when appropriate, are included.
CHAPTER II

PROCEDURE IN THE STUDY OF THE TEXTILE INFORMATION SYSTEM

Both E. J. Crane and M. G. Mellon classify the chemical literature sources according to type of publication in which information is contained. This classification proves to be helpful for those using information systems. Mellon further divides the publications into three groups: primary sources, secondary sources, and tertiary sources. He defines the primary sources as being essentially unorganized information found in such publications as periodicals, patents, and industrial literature. The secondary and tertiary sources are defined as organized according to a plan, the secondary sources such as abstracting journals and bibliographies being tools for the use of the primary sources, and the tertiary sources such as guides and directories being tools for the use of primary and secondary sources.

A classification similar to Mellon's seems appropriate for the literature of the textile field. This guide will also divide the sources into the three groups. In accordance with this plan, Chapters III-V identify and describe the primary, secondary, and tertiary sources for science and technology of fibers. The primary sources include periodicals, government publications, technical reports, standards, patents, theses, and manufacturers' literature. The secondary sources consist of abstracting and indexing journals, review literature, bibliographies, reference books, monographs, and textbooks. Certain spe-
cialized abstracting and indexing publications are discussed along with the primary sources (government publications, standards, technical reports, and theses) they cover. The tertiary sources include guides, directories and manufacturers' catalogs, biographies, language dictionaries, and bibliographies of bibliographies.

Chapter VI is devoted to suggested uses of the textile information system whose elements were discussed in Chapters III-V. Some information questions may be answered simply by referring to one page in a handbook; others may require several months of careful searching and recording. The state-of-the-art literature search falls into the latter category. The art of accomplishing this is strategic in all research work, because often faulty searching leads to faulty conclusions and wasted resources. A systematic method of working from tertiary to secondary and then to primary sources is advantageous.

Because the outline of this work is by type of publication, displaying the various degrees of organization in the textile information system, an optimum subject approach would be accomplished through a comprehensive subject index. The extensive amount of work involved in the indexing of each title discussed in the text and the preparation of a subject index were considered beyond the scope of a master's thesis.

However, due to the fact that the journal literature is considered a critical element in information systems, a select number of journals in textile and related fields have been alphabetically indexed and described in Appendix A. The following information is given for each journal in Appendix A: publisher's information (date of first publication, frequency of publication, publisher or where it can be
purchased, and cost), information on the kinds of indexes it contains and journals which abstract it, and specific comments on the viewpoint and scope of the information it contains. These journals (approximately 100) have been chosen by means of a citation study conducted by the author and questionnaires sent to professionals in the textile field. A copy of the questionnaire is presented in Appendix B.

A useful tool in searching the journal literature is a chronology chart, such as that in Literature Sources in the Biological Sciences. It arranges the important biological journals chronologically for easy reference. This type of arrangement is employed in Appendix C for those journals indexed in Appendix A. Some of these journals contain patent abstracts. This is indicated on the chronology chart.

Appendix D contains the organizational charts of the Departments of Agriculture and Commerce. Some of the bureaus and agencies issuing textile information are marked.

A copy of a U. S. patent is given in Appendix E. Along with the drawing, an abstract of the patent from the Textile Technology Digest and an extract of it from the Official Gazette are included.

Finally, Appendix F offers 18 steps in making a literature search. These are discussed in Chapter VI.
CHAPTER III

PRIMARY SOURCES FOR SCIENCE AND TECHNOLOGY OF FIBERS

Introduction

The primary sources—periodicals, institutional publications (including U.S. government publications, standards, and technical reports), patent literature, dissertations, and industrial literature—comprise the essentially new and unorganized information. The secondary and tertiary sources have evolved, in order that this original information might be filtered and organized in a way more easily accessible for the investigator.

The secondary and tertiary sources for textile investigators are analyzed in the fourth and fifth chapters. However, additional specialized reference tools for the patent literature, institutional publications, and dissertations will be examined along with these sources of primary information. Much of the information contained in patents, theses, manufacturers' literature, and government publications is never published for extensive public distribution in journals and monographs. Therefore, the indexes to them are valuable for direct access. Periodicals are abstracted and indexed to a greater extent than any other literature. In addition, many editors are developing helpful ways or organizing information in periodicals. These will be discussed with the general characteristics of textile and related journals.

Patents are rich in information of interest to the textile in-
dustrialist and scientist. A general approach is taken to information available in the patent literature. The complexity of other types of institutional publications (government and otherwise) may bewilder the investigator. Several U. S. government departments publish information of particular interest to the textile researcher. The discussion will be limited to publications of these departments and to those of the standardizing bodies publishing information, e.g., American Society for Testing and Materials and National Bureau of Standards. Theses, industrial, and trade association literature are also covered.

Periodicals

Periodicals, however they may be named--bulletins, journals, proceedings, or transactions--are described by M. G. Mellon as "The publications which contain new material relating to current technological practice and which are issued, in general, at regular intervals." D. A. Kronick feels that periodicals have been characterized through their history by the miscellaneous content and periodicity of issue. He places periodicals in between the book and newspaper, the periodical not as restricted to the events of the day and addressed to a more limited audience than the newspaper. At the same time it resembles the book more than the newspaper in the range of ideas covered. As D. A. Kronick has indicated, the periodical has led dual and conflicting roles. It is expected to disseminate and, at the same time, store information. Forcing both roles on periodicals has often resulted in publications which fail in one or both purposes.

Most textile periodicals can be divided into one of three main
types:

1. Society publications for primary research.

2. Commercial publications which are organs of societies featuring summary and news articles.

3. Trade publications.

Scientific societies were the first to publish their written communications in periodical form. The Transactions of the Royal Society (England), which still appear regularly, were begun in 1665. The first periodicals were devoted to the pure sciences, such as chemistry, physics, etc.; however, gradually the industrial or technical branches of these fields developed periodicals of more limited scope. Scientific societies (also institutions and associations) publish many of the original papers presented by members at meetings. These periodicals have the backing of the societies publishing them, and usually, contribute much of the important advances in their respective fields.

**Society Type**

The textile researcher has several society periodicals at his command. The *Journal* of the Society of Dyers and Colorists (1884-) is valuable in studying dyes and the dyeing of fibers (both man-made and natural). Unlike many society research publications, this journal contains manufacturers' advertisements which can be useful for product awareness purposes. The *Journal* of the Textile Institute (1910-) is a British publication, which was divided into two monthly issues in 1949. These issues are the *Transactions* and the *Proceedings and Standardization*. Both contain research papers on the chemistry of fibers. The latter publishes British Tentative Textile Standards as well as
manufacturers' advertisements of general interest to the textile industry. The *Textile Research Journal* (1930-) published by the Textile Research Institute is a good American source for fundamental research on man-made and natural fibers. The Technical Association of the Pulp and Paper Industry publishes *Tappi* (1918-), a journal covering the research on cellulose and paper chemistry. Several foreign societies likewise publish important textile journals. The *Bulletin* of the French Textile Institute (1947-) and *Magyar Textiltechnika* (1953-) are good examples. The *Journal* of the Textile Machinery Society of Japan contributes to new knowledge and techniques in textiles and textile machinery.

**Commercial Type Sponsored by Societies**

Many foreign and some domestic journals published by commercial interests are organs of associations conducting research. Textile societies in Germany and Switzerland rely on commercial firms to publish results of their research. The *American Dyestuff Reporter* (1917-) is sponsored by the American Association of Textile Chemists and Colorists, and has included, since 1921, the Official Proceedings of that group. It absorbed in 1949 the *Textile Colorist and Converter* (1879-1949) which can be consulted for earlier dye research in America. The *Modern Textiles Magazine* (1925-) has incorporated the Papers of the American Association of the Textile Technologists (1945-57). This journal is important to the technologist and plant executive. The British journal, *Textile Recorder*, (1883-) is the U. K. member of CERITEX (European Community of Textile Industry Journals); it contains research papers on mill technology. *Chemiefasern*, which is published in Frank-
furt, Germany, (1919-) contains research on fiber technology and is the organ of the Comité International de la Rayonne et des Fibres Synthétiques (CIRFS), Paris; it also contains reports of the VDJ-Fachgruppe Textiltechnik (ADT). The Melliand Textilberichte\textsuperscript{34} (1920-) is the official organ of the Verein der Textil-Chemiker und-Coloristen, and it cooperates with other German technical organizations and institutions. It contains research papers on textile engineering, processing, and industry. The Textil-Praxis\textsuperscript{35} (1946-) is the official organ of the Vereins Deutscher Färber and the Vereinigung der Textil-Ingenieure; it also contains reports of ADT. The Faserforschung Und Textiltechnik\textsuperscript{36} (1950-) contains scientific and technical reports of the man-made fiber and textile industry. Likewise the Textil-Rundschau\textsuperscript{37} (1946-) is a good Swiss journal cooperating with the Schweizerischen Vereins der Chemiker-Coloristen (S.V.C.C.) and the Schweizerischen Verbandes für die Materialprüfung der Technik (S.V.M.T.). The Textilis\textsuperscript{38} (1945-), published in Belgium, is affiliated with "Unitex," National Organization for Textile Engineers and Directors. The Netherlands journal, De Tex\textsuperscript{39}, (1942-) is the official organ of the Nederlandse Vereniging voor Textieltechniek (N.V.T.T.) and the Nederlandse Vereniging voor Textielchemie (N.V.T.C.). The Canadian Textile Journal\textsuperscript{40} is sponsored by the Canadian Association of Textile Chemists and Colourists and the Textile Society of Canada. It is valuable for studying advances in Canadian textile technology.

**Trade Type**

The various trade journals, because they are published by commercial firms for industry, emphasize trade news and product advertising.
In general, these journals resemble the newspaper, not accomplishing the role of permanency. They contain little initial reporting of scientific and technical research. Industry and trade news and business statistics are emphasized in trade journals, so that the reader may have current information on general trends in fabric and fashion, developments in machinery and fiber technology, new dyes and fibers, auxiliaries, finishing agents, and market movements.

The textile trade journals are published by commercial publishing houses or by firms to promote their own products (house organs). American examples of the former are: America's Textile Reporter (1887-); Paper Trade Journal (1872-); Textile Industries (1899-); Textile Organon (1930-); and Textile World (1888-). Some similar British journals are: Skinner's Record (1928-); Textile Manufacturer (1875-); Textile Mercury International (1889-); Textile Weekly (1928-). Two French examples are the L'Industrie Textile (1883-) and Teintex (1936-). The Indian Textile Journal (1890-) is another one of this type of trade journal and there are many more reflecting textile news of interest.

"House organs" are primarily prestige publications. Many times specific information on a particular piece of processing equipment is provided. Some house organs do publish semi-technical papers and interesting historical studies of products, companies, and people. Ciba Review has good background material on textiles and related fields. Du Pont publishes the Du Pont Magazine and Dyes and Chemicals Technical Bulletin which includes articles based on work carried out in the Dyes and Chemicals Technical Laboratory and other Du Pont Company

Other Types

A few textile journals differ slightly from the three types discussed. There are some official publications which reflect respective government interests. Two important official Russian journals, Tekhnologiiia Tekstil'noi Promyshlennosti (1957-) and Tekstil'naia Promyshlennost (1941-), are published by the Union of Soviet Socialist Republic. The Indian Cotton Growing Review (1947-), a research oriented journal, is published by the Indian Central Cotton Committee, a national technological laboratory. Another type of journal is that published by textile schools. A good example is the Textile Forum of the School of Textiles, North Carolina State College.

Although the trade journals closely resemble newspapers in content, there are several true newspapers published for the textile professional. The Daily News Record and the Southern Textile News are both frequently read for the wide spectrum of industry news covered. The Southern Textile News, a weekly publication, is obviously more regional in outlook and is less current than the Daily News Record.

Periodicals in Related Fields

A small number of the journals in the fields allied to textile science and technology have been mentioned, such as the paper industry and agricultural journals. Many more exist in these and other areas. Women's Wear Daily (1910-), a newspaper, and American Fabrics
focus upon the current fashion trends in textiles. Many pure science and engineering journals contain information pertinent to textile researchers. *Nature* (1869-), *Science* (1880-), British and American journals, are devoted to the dissemination of information about research activities in all branches of science. The British Faraday Society which promotes the study of sciences lying between chemistry, physics, and biology publishes its *Transactions* (1905-) and the Indian Council of Scientific and Industrial Research its *Journal of Scientific and Industrial Research* (1942-).

American chemical and physical, and polymer science journals are valuable in the study of synthetic fibers and fiber forming polymers. The *Journal* of the American Chemical Society (1879-), *Journal of Applied Physics* (1930-), *Journal of Applied Polymer Science* (1959-), *Journal of Chemical Physics* (1933-), and *Journal of Polymer Science* (1945-) are a few. The British *Journal of Applied Chemistry* (1951-) has research articles on fibers and *Die Makromolekulare Chemie* (1947-) is the German counterpart of the *Journal of Polymer Science*.

Information on the industrial and engineering aspects of chemistry is found in the following ACS publications: *Chemical and Engineering News* (1923-), and *Industrial and Engineering Chemistry* (1909-). *Angewandte Chemie* (1888-) is published under the auspices of the German Chemical Society.

Standardization, quality control, sanitation, and instrumentation are subjects of potential interest to the textile researcher. Some journals in these fields are: *Materials Research and Standards* (1961-) published by the American Society for Testing and Materials; *Industrial
Quality Control\textsuperscript{83} (1944-), published by the American Society of Quality Control, which also publishes Textile Quality Control Papers\textsuperscript{84} (1954-); National Bureau of Standards' Journal of Research\textsuperscript{85}; Review of Scientific Instruments\textsuperscript{86} (1930-) published by the American Institute of Physics; and the Journal\textsuperscript{87} of the Water Pollution Control Federation (1928-).

The business and financial aspects of textiles are reviewed in many journals such as Forbes\textsuperscript{88} (1917-), Business Week\textsuperscript{89} (1929-), and more general newspapers as the Wall Street Journal\textsuperscript{90} (1882-) and the Oil, Paint, and Drug Reporter\textsuperscript{91} (1871-).

Brief reports on patents issued are published weekly in the Official Gazette\textsuperscript{92} (1872-) of the U. S. Patent Office. It also contains reports on trade-marks, designs, and selected decisions on patent, trade-mark, and design cases. These are obviously of interest to the textile industrialist.

There are, of course, many other journals in fields which are of potential interest, such as psychology, industrial management, advertising, documentation for textile literature specialists, and engineering fields.

Organization of Information in Periodicals

In general the information found in textile and allied journals is either that of initial reporting of research activities or data of current awareness value useful to the more casual reader. However, there is not a sharp dividing line, and many journals contain both kinds of information. These are the dual purpose journals which disseminate and also store information. For example, it is not correct
to say that all textile journals are either similar to the Transactions of the Textile Institute containing pure research or to the Textile Bulletin (1911-) containing current awareness data, because journals, such as the American Dyestuff Reporter combine both kinds of information.

The editors of the growing number of the textile journals have begun organizing the scientific and technical information found in them, to make it more easily retrievable. Many journal editors are systematically indexing the information in each published volume. Some indexes are merely expanded contents for the year, whereas others are products of deeper subject analysis. An example of the former is the index of the Canadian Textile Journal and of the latter is Tappi's subject index. Another form of index used very often is the advertiser's index which usually appears in each issue of the journal for easy reference. The description of the select journals in Appendix A indicates what indexes each has and how often the indexes are published.

Another useful means of organization is the Buyers' Guide section, which is an alphabetical list of products. By referring to the product, one can easily find what companies market it and their addresses. America's Textile Reporter, Textile Industries, and Textile World have a Buyers' Guide section in one issue each year. Likewise, Oil, Paint, and Drug Reporter and Chemical Week have an annual Buyers' Guide issue. Textil-Praxis has a yearly textile machinery catalog and Angewandte Chemie has a "Markets" Section, which lists raw material for the chemical industry, followed by companies producing them.
Many journals contain sections which list and possibly review some of the recent company literature being circulated. Key numbers provide means for easy ordering of desired literature. *Man-Made Textiles* provides such a "Reader's Information Service" for company literature.

For those interested in statistical compilations, the *Textile Organon* provides monthly and annual figures on fiber end use and man-made fibers of the world market. *Chemical and Engineering News* (1923-) has an annual "Facts and Figures" issue, which is a comprehensive study of the American Chemical Industry, including data on production, foreign trade and financial profiles of about 130 companies.

Fiber information is summarized and consolidated frequently into fiber data charts by *America's Textile Reporter*, *Modern Textiles Magazine*, *Textile World*, and *Textile Industries*.

Several journals publish review issues which briefly sketch the past year's industrial developments. The *Paper Trade Journal* and *Skinner's Record* both have an "Annual Review" issue.

One of the major problems of the professional is staying knowledgeable of what is being published in his field. To alleviate this problem, to some extent, many journals publish abstracts of journal articles and patents, as well as book reviews and bibliographies. The journals which specialize in abstracts only will be discussed in Chapter IV. However, many textile and related journals contain a considerable number of abstracts in addition to the other material. The following textile journals contain abstracts (or reviews) of periodical articles and patents: *American Dyestuff Reporter*, *Faserforschung und Textiltechnik*, *Bulletin* of the Institut Textile de France, *Melliand*
Textilberichte, Das Papier, Journal of the Society of Dyers and Colourists, Teintex, Textil-Praxis, and Textil-Rundschau. There are many more which feature one or the other.

Two of these journals listed above furnish additional services of value. Faserforschung und Textiltechnik publishes cards containing abstracts of patents and periodical articles for those who wish to maintain their own information files. The Melliand Textilberichte attempts to keep ahead of the abstracting journals by printing, in each number, the contents of the previous months' issues of the more important continental, British, and American textile periodicals.

Remarks on Questionnaire and Citation Surveys

Two methods were used to determine what journals textile professionals read and use and what kind of information they find most valuable. First, a citation survey was made of the 1962 Volume of Textile Research Journal (approximately 650 citations), in order to determine the journals most used in research. Secondly, the author, in 1964, sent a questionnaire (a copy is given in Appendix B) to approximately 50 persons outstanding in the textile and related fields. The positions held by those questioned were those of executives, educators, technical salesmen, scientists, librarians, engineers, and plant operators. This questionnaire listed approximately 50 well-known journals of the textile and related fields. Out of these 50 journals the professionals chose the ten most useful to them and indicated the kinds of information of importance to them, from the following:


b. Engineering data.
c. Product advertising.
d. Research material.
e. Book reviews.
g. Journal article abstracts.
h. Other (Specify).

The citation survey placed the following journals in the top 12 positions in descending order:

<table>
<thead>
<tr>
<th>Number</th>
<th>Journal Name</th>
<th>Number of Citations</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Textile Research Journal $^{24}$</td>
<td>223</td>
</tr>
<tr>
<td>2</td>
<td>Textile Institute, Journal $^{23}$</td>
<td>73</td>
</tr>
<tr>
<td>3</td>
<td>Society of Dyers and Colourists, Journal $^{22}$</td>
<td>48</td>
</tr>
<tr>
<td>4</td>
<td>Journal of Polymer Science $^{76}$</td>
<td>37</td>
</tr>
<tr>
<td>5</td>
<td>American Chemical Society, Journal $^{72}$</td>
<td>35</td>
</tr>
<tr>
<td></td>
<td>American Dyestuff Reporter</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Industrial and Engineering Chemistry $^{80}$</td>
<td>28</td>
</tr>
<tr>
<td>7</td>
<td>National Bureau of Standards, Journal of Research $^{85}$</td>
<td>16</td>
</tr>
<tr>
<td>8</td>
<td>Analytical Chemistry $^{97}$</td>
<td>15</td>
</tr>
<tr>
<td>9</td>
<td>Journal of Applied Physics $^{73}$</td>
<td>13</td>
</tr>
<tr>
<td>10</td>
<td>Nature $^{68}$</td>
<td>12</td>
</tr>
<tr>
<td>11</td>
<td>Faraday Society, Transactions $^{70}$</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td>Institut Textile de France, Bulletin $^{26}$</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Melland Textilberichte</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>Journal of Chemical Physics $^{75}$</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>Textile Industries $^{43}$</td>
<td></td>
</tr>
</tbody>
</table>

The questionnaire results placed the following journals and newspapers
in the top 12 positions:

<table>
<thead>
<tr>
<th>Rank</th>
<th>Journal Title</th>
<th>Number of Times Voted Most Useful</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Textile World</td>
<td>27</td>
</tr>
<tr>
<td>2</td>
<td>Daily News Record</td>
<td>26</td>
</tr>
<tr>
<td>3</td>
<td>Textile Industries</td>
<td>22</td>
</tr>
<tr>
<td></td>
<td>Wall Street Journal</td>
<td>22</td>
</tr>
<tr>
<td>4</td>
<td>American Dyestuff Reporter</td>
<td>21</td>
</tr>
<tr>
<td>5</td>
<td>America's Textile Reporter</td>
<td>18</td>
</tr>
<tr>
<td>6</td>
<td>Modern Textiles Magazine</td>
<td>17</td>
</tr>
<tr>
<td>7</td>
<td>Textile Research Journal</td>
<td>16</td>
</tr>
<tr>
<td>8</td>
<td>Textile Orienton</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>Southern Textile News</td>
<td>15</td>
</tr>
<tr>
<td>9</td>
<td>Textile Technology Digest</td>
<td>10</td>
</tr>
<tr>
<td>10</td>
<td>Textile Institute, Journal, Proceedings</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>Chemical and Engineering News</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>Textile Institute, Journal Abstracts</td>
<td>8</td>
</tr>
<tr>
<td>11</td>
<td>Society of Dyers and Colourists, Journal</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>Forbes</td>
<td>7</td>
</tr>
<tr>
<td>12</td>
<td>American Fabrics</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>Ciba Review</td>
<td>6</td>
</tr>
</tbody>
</table>

The results indicate that research investigators use the research oriented journals, and the trade journals are read by the industrially oriented people. Moreover, the journals read by both groups are the ones which combine both roles: *American Dyestuff Reporter*, *Proceedings* of the Textile Institute, and the *Journal* of the Society of Dyers and Colourists. No foreign journals were ranked in the ten chosen by each
individual. Only a few responders read foreign journals. Many other journals which were not included on the questionnaire were listed as also useful. A technical literature analyst for Du Pont listed documentation journals as most useful in her work. Two librarians felt it was difficult to single out ten as the most useful. On the other hand, several executives and a plant operator did not feel it possible to read and absorb ten journals in the field. The engineering viewpoint was not adequately obtained. One engineer indicated he did not have the opportunity to read the more "glamorous" journals included. Another engineer was mainly interested in research activities in the area of management and data processing applications.

In the journals selected, current awareness and research material were the important kinds of information for editors, educators, librarians, and scientists. Current awareness and engineering data were important to the executives and plant operators. The technical salesmen and engineers were interested primarily in current awareness and product advertisements. In general, however, the kinds of information were ranked as follows:

<table>
<thead>
<tr>
<th>Kind of Information</th>
<th>Votes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current awareness</td>
<td>179</td>
</tr>
<tr>
<td>Product advertisements</td>
<td>64</td>
</tr>
<tr>
<td>Research material</td>
<td>54</td>
</tr>
<tr>
<td>Engineering data</td>
<td>52</td>
</tr>
<tr>
<td>Journal article abstracts</td>
<td>25</td>
</tr>
<tr>
<td>Patent abstracts</td>
<td>15</td>
</tr>
<tr>
<td>Book reviews</td>
<td>8</td>
</tr>
</tbody>
</table>

In addition to the above, the following kinds of information were felt useful by some: market news, prices, sales, statistics, plant operation, and personnel news. The author meant for "current awareness" to include all these, except statistics and plant operation which could
be included under engineering data. However, various interpretations led to some confusion.

Other Studies of Periodicals

There have been a few earlier studies made on the use of journals in the textile field. F. S. Boig did a statistical analysis on the chemical periodicals in the dye and textile industries. The Association of College and Reference Libraries' Monograph No. 9 has a list of 50 journals of special interest in textile engineering. This list was compiled after examining the literature and questioning professionals. Documentation Periodicals (Seminar No. 1 at the Documentation Research and Training Center in Bangalore, 1963) covers journals on man-made fibers in Chemical Abstracts. These three studies attempt to show the relative importance of journals published in the U. S. and other countries. In the man-made fiber field American journals are rated first, followed by German, British, Japanese, and Russian journals, respectively.

Translations

These journal studies clearly indicate the value of being informed about the activities of foreign countries. Many trade journal editors realize this need and include international industrial news. Much can be gleaned from journals written in English such as the Canadian Textile Journal and the Indian Textile Journal, in addition to many British publications. Journals, such as Makromolekulare Chemie publish abstracts of their research papers in English, French, and German. Knowledge of foreign languages is very worthwhile and becoming increasingly essential for scientific investigations. Several foreign textile jour-
nals, however, have their counterpart in English journals. Some are cover-to-cover translations, others are only translations of select articles. *Melliand Textile Reports*103 (1920-) is the English edition of *Melliand Textilberichte*34 (1920-) and *Technology of the Textile Industry, USSR*104 (1960-) is the cover-to-cover translation of *Tekhnologija Tekstil'noi Promyshlennosti*60 (1957-). Some examples of the more select-ed translations are: *Angewandte Chemie*105 (1962-) International edition of *Angewandte Chemie*81 (1888-); *Textil-Praxis*35 and its International edition106 (1946-); and the *Journal*28 of Japanese Textile Machinery Society (1948-) and its English edition107 (1955-).

**Institutional Publications**

The United States Government is a most important publisher of scientific information. Very few of the bulletins, pamphlets, annual re-
ports, and leaflets produced later appear in journals, books, or ab-
stracting services. Much of the scientific and engineering research and development is carried on by the government and its sponsored contracts. There are a number of departments and bureaus which produce information sources of particular interest to the textile industry. The functions and scope of these departments and bureaus are outlined, and examples of the publications of each are given. Basic reference tools for their use are reviewed. Government technical reports and standards, specifi-
cations, and codes published by the government and other institutions are studied in some detail. While the latter are not really primary sources of information, the author has seen fit to incorporate the dis-
cussion of these with that of other government publications.
U. S. Government Publications

The Textile Forum\textsuperscript{108} contains an outline of the various offices of the Federal Government which publish scientific information. This was written by Dorothy B. Skau, Southern Utilization Research and Development Division, U. S. Department of Agriculture, who points out agencies which are represented by the textile industry. The U. S. Government Organization Manual,\textsuperscript{109} the official organization handbook of the Federal Government, is useful for descriptions of the scope of existing agencies in the legislative, judicial, and executive branches.

The Executive Branch of the Government has more agencies of interest to textile personnel than the other two branches of the government. Discussions of particular phases of the Departments of Agriculture, Commerce, Defense, Federal Trade Commission, and the Tariff Commission follow.

**Department of Agriculture.** (See chart in Appendix D.) Since 1862, the Department of Agriculture has been directed to obtain and distribute useful information on agricultural subjects. It conducts research in such areas as agricultural and industrial chemistry, industrial uses of farm products, agricultural economics, and home economics. The Department has published bulletins and reports on the cultivation and processing of vegetable fibers since 1880. Ruby K. Worner and Dorothy B. Skau\textsuperscript{110} in "Literature of Natural Fibers" (Advances in Chemistry Series, No. 10) point out the Department of Agriculture's Fiber Investigations Reports\textsuperscript{111} (1890-8). The Farmers' Bulletins\textsuperscript{112} of the Department of Agriculture carry production information on specific natural fibers.
A. Agricultural Marketing Service (1953-). The purpose of Agricultural Marketing Service is to increase the marketing efficiency of agricultural commodities with the use of improved marketing practices, methods, facilities, and equipment. An example of a paper done by this agency in cooperation with the Florida Agricultural Experiment Station is "Filling Polyethylene Film Bags with Citrus Fruit."\(^{113}\) The Cotton Division of this agency produces each year results of a cotton quality survey; it is a summary of results of fiber and processing tests from selected production areas.\(^{114}\)

B. Economics Research Service (1961-). This agency is under the direction of the Director of Agricultural Economics. It promotes and administers to research programs in agricultural economics and marketing, domestic and foreign. It has published since 1951 an annual, *The Jute and Hard Fibers Situation*.\(^{115}\) Two recent statistical studies by this agency are "Statistics on Cotton and Related Data, 1925-62"\(^{116}\) and "Charges for Ginning Cotton, Costs of Selected Service Incident to Marketing and Related Information, Season 1962-3."\(^{117}\)

C. Agricultural Research Service (1953-). The research done in this agency is related to the production and utilization of agricultural products. One of the areas of consumer-use research is the development of effective consumer use of food, clothing, and textiles. The Federal and State Extension Services are designed to assist in coordinating work done by the State Experiment Stations and Land Grant Colleges. The State Experiment Stations publish bulletins and reports on current undertakings.

D. Southern Utilization Research and Development Division
This is one of the four regional laboratories established by the U. S. Department of Agriculture and is located at New Orleans, Louisiana. About one-half of its budget each year is spent on cotton research. Its laboratories do research on: cotton finishes, cotton chemical reactions, cotton mechanical and physical properties, engineering and development, and plant fibers. Many industrial people and machine manufacturers visit the southern laboratory. It issues reports and other publications concerning its research. A good view of the importance of its research is shown by "An Annotated Bibliography of Cotton Research at the Southern Utilization Research and Development Division," published in 1962.

Department of Commerce. (See chart in Appendix D.) This Department is one of the most important ones to the textile field. The following bureaus and agencies will be discussed: Bureau of Census, Business and Defense Services Administration, Office of Business Economics, National Bureau of Standards, Patent Office, and Office of Technical Services.

A. Bureau of Census (1902-). This is the fact-finding and statistical service agency for the Federal Government. Statistics are furnished to the government, to business, to research groups, and to individuals. The current industrial statistics program conducts a census survey on manufactures, mineral industries, business (retail and wholesale trade), selected services and transportation, every five years (covering years ending with "3" and "8"). An Annual Survey of Manufactures is made during intercensal years. There are about 80 series of monthly, quarterly, and annual Current Industrial Reports (for-
merly *Facts for Industry*) covering such topics, as current output, shipment, consumption, and stocks of the more noteworthy manufactured products. Many valuable annual reports are also issued, such as "Cotton Production in the U. S., Crop of 1962." The Bureau also publishes an annual *Statistical Abstract of the U. S.* and supplements covering production, employment, wages, foreign trade, etc., for a number of years. Special tabulations for private individuals and organizations are made at service cost. The Bureau publishes a quarterly (cumulative-to-annual) *Catalog of U. S. Census Publications.*

B. **Business and Defense Services Administration (1953-)**. The program activities of this agency are designed to promote and develop U. S. industrial and commercial growth. Moreover, it performs industrial mobilization functions to ensure national security. Twenty-four industrial divisions are grouped into the following categories: Office of Distribution Services, Chemicals and Consumer Products, Industrial Equipment, Metals and Minerals, Scientific and Technical Equipment, Constructions and Materials Industries, and Textiles. Inventories on the textile cycle and basic research for new uses of textiles, are examples of textile topics studied by this agency. The group collects and interprets data on textile and fiber imports and exports. Among its *Business Service Bulletins,* Nos. 109, 111, 115, 131 list sources (government and nongovernment) on vegetable, man-made, and cotton fibers, respectively.

C. **Office of Business Economics (1953-)**. This agency analyzes the current economic situation, business outlook, etc., and does general economic research on the functioning of the U. S. economy. The

D. National Bureau of Standards (1901-). The function of this Bureau is to be a national leader in the utilization of accurate and uniform techniques for physical measurement. The scientific and technical program of the Bureau is conducted by several divisions, some of which are: Analytical and Inorganic Chemistry; Instrumentation: Office of Weights and Measures; Polymers; Physical Chemistry. The principal part of the research is immediately involved with accurate measurement of pure substances and the properties of materials of concern to industry and commerce. The work contributes much to physical measurement techniques used on fibers, development of test methods, evaluation and calibration services on textile products, and accumulation of data for developing commercial and scientific standards in the textile field. At present, the Bureau has been working on techniques for characterizing polymers, the underlying components of textiles (man-made or natural). The *Journal of Research*, which is discussed with the journal literature covers some of the research work done by the Bureau. The National Bureau of Standards in its Institute of Applied Technology is now administering the "Civilian Industrial Technology Program in Textiles" (1964-). This program results from the instigation of the late President Kennedy (1961) in his seven-point program for the textile industry and from the subsequent report of the Ad Hoc Textile Research Committee of the National Academy of Sciences-National Research Council entitled, "Current Needs in Research Relevant to the Interests of the U. S. Textile Industry." The functions of the
program, in the words of the Acting Director, are:

First, the strengthening of universities and research institutions which serve the industry by financial support of technical projects which will benefit the textile and apparel industries directly and assist in the professional training of technical people for the industry; second, to disseminate information, both technical and economic, to the industry; third, to develop performance standards; and fourth, to analyze the technical and economic problems of the industry so as to help it compete more effectively both domestically and internationally.

E. Patent Office (1836-). The responsibility for formulating and administering policies, programs, operations, and research on patents lies within this Office. The publications of this Office are discussed in the section on Patent Literature.

F. Office of Technical Services (1945-). The Office of Technical Services acts as a clearinghouse for unclassified Government research reports (Army, Navy, Air Force, Atomic Energy Commission, and other Federal agencies). These reports are collected, organized, and distributed by OTS to private scientific and industrial firms and organizations which are developing new processes and products and making technological improvements. The reports are described in more detail later. The Office of Technical Services, along with the Special Libraries Association Translations Center, publishes, Technical Translations. OTS's responsibility is that of collecting translations of technical literature (journal article and reports) from U. S. and foreign government sources since 1940. The "materials" section in this publication contains translations of articles and reports on leather and textiles, rubber and elastomers, wood and paper.
Department of Defense.

A. Army (1789-). The Quartermaster Research and Engineering Center, Clothing and Organic Materials Division, in Natick, Massachusetts, does textile research work. It publishes a series of technical reports on such topics as wear resistance of military textiles and techniques for salvage analysis of clothing, footwear and textile equipage.

B. Navy (1798-). Of prime interest here is the Office of Naval Research (1946-) which sponsors some research contracts in the textile field.

Federal Trade Commission (1915-). Maintenance of a free competitive enterprise in the U. S. is the purpose of this Commission. The Wool Products Labeling Act, the Textile Fiber Products Identification Act, which established generic categories for man-made fibers and rayons, and the Fur Products Labeling Act are all administered by the Commission. It deals with compliance investigations, inspections, and industry counseling. Rules and regulations under these statutes have been published by the Commission, containing illustrations of acceptable labeling and full information concerning their requirements. The flammable fabrics Act of 1953 allows the Commission to prohibit interstate marketing of wearing apparel and fabrics which, upon standard flammability testing, are found to be so flammable as to be dangerous when worn.

Tariff Commission (1916-). This Commission is required primarily to investigate and report upon tariff and foreign trade matters. An industry, firm, or individual may initiate investigations into the effects on domestic industries due to increased imports resulting from
trade agreements. *Summaries of Tariff Information*\(^{128}\) comprises many volumes on various natural and man-made fiber products.

**Senate and House of Representatives.** The Legislative Branch of the Government, both the Senate and House, publish all Congressional Hearings, many of which are of value to those working in the textile industry. Because the textile industry is the second largest in America, Congress necessarily finds itself involved in various phases of it. Both the Library of Congress and the Government Printing Office are Congressional agencies of extreme importance to the information seeker; they are referred to later as sources for information. The *Congressional Record*\(^ {129}\) (1873-) is a good source for a daily look at legislative activity. Indexes are issued every two weeks and at the end of each session.

**General Indexes to Government Publications.** Only a part of the information producing government departments and agencies have been mentioned. Because of the complexity and number of government publications, indexing services must offer control devices for handling the information. A few of the more well known indexes are:

1. *Monthly Catalog of U. S. Government Publications*\(^ {130}\) (1895-). The Superintendent of Documents produces this fairly comprehensive list of government publications each month. By means of this index, the textile man can keep in touch with what is being published by the Government agencies. Entries in the monthly publications and yearly indexes are made under "Textiles" and specific fiber names, as well as under agency names.

2. *Checklist of State Publications*\(^ {131}\) (1910-). This is compiled
by the Processing Department of the Library of Congress. It is a listing of the state documents received by the Library and issued within the last five years. Periodicals and monographs are listed separately, and entries are by state and issuing agency. There is a yearly subject index.

3. **Bibliography of Agriculture**\(^{132}\) (1942-). Published by the U. S. Department of Agriculture, this attempts to be international in scope. It covers journals and some technical reports. The annual index includes entries under "Fibers and Textiles."

4. **Business Service Checklist**\(^{133}\) (1946-). Current releases and publications of the U. S. Department of Commerce are listed.

5. **Guide to U. S. Government Serials and Periodicals**\(^{134}\) (1959-). The important periodicals and serials published are arranged by issuing departments and agencies in this loose-leaf service.

6. **Public Affairs Information Service, Bulletin**\(^{135}\) (1915-). The Public Affairs Information Service publishes this weekly Bulletin and the annual cumulative indexes. The books, pamphlets, periodical articles, and government documents listed provide material in the field of economics and public affairs. Emphasis is placed on factual and statistical information. There are numerous entries for the subjects of paper and textile industries.

The **Monthly Catalog**\(^{130}\) and the **Checklist**\(^{133}\) both include bibliographic information about the publications, prices, and instructions for obtaining them. All publications handled by the Government Printing Office can be purchased from there. The others can be obtained from the issuing agency. Often members of Congress are helpful in obtaining needed publications which have limited circulations.
Technical Reports and Indexes to Them

A new form of publication, the technical report, arose to meet the need for rapid transmission of security information during World War II. Publication through the normal channels in books and journals was too slow and did not provide for national security protection. The technical reports could be copied economically and quickly and distributed to a limited number of persons and agencies who could establish a "need-to-know." Some immediate post-War reports were captured enemy documents or reports resulting from interrogation of German and Japanese scientists, manufacturers, etc. Flat Reports (Field Information Agency Technical) are a good source for German dye research during the war years. Since the war, government and government contract reports, both classified and unclassified, have become an important segment of technical publications. As they have increased in number, the problems of handling and indexing them have also multiplied. Some of the information problems are caused by the following factors: the reports have numerous authors, in addition to the originating agency; the publications are serial in nature and have multiple serial numbers; they are issued in soft paper bindings which cannot stand alone. Consequently, microfilm and microcard reports are being issued more frequently.

Office of Technical Services and Department of Defense. The Office of Technical Services, in 1950, was designated a clearinghouse for technical reports useful to American industry and business. These reports have been known as PB publications until recently. Almost all of these PB reports are for sale from OTS for the cost of reproduction. The technical reports of primary interest to national defense (Army,
Navy, and Air Force) designated AD reports are collected by the Defense Documentation Center of the Department of Defense. DDC furnishes the Department of Defense agencies and contractors with military information. At present, the U. S. Government Research Reports announces the publication of new reports issued by the Department of Defense and other Federal agencies. It lists and abstracts new military reports and also lists new reports of civilian agencies of the government and older military reports acquired by OTS in responses to the requests of industry.

The government does a considerable amount of research on non-metallic materials. The Quartermaster Corps series have been mentioned. By examining the semi-annual and annual cumulative indexes of U.S.G.R.R. under the appropriate descriptors and sources, it is possible to keep informed of research activity in the fields of polymers and textiles. Some of the AD subject divisions which are of possible textile interest are: 3--Chemical warfare equipment and materials; 4--Chemistry; 14--Materials (non-metallic); 25--Physics; 29--Quartermaster equipment and supplies; 30--Research and research equipment. A Keywords Index to U. S. Government Technical Reports was published for about a year. Of special importance to the industrialist is the OTS Selective Bibliography CTR 1-(1953-). Reports on textile fabrics and related research are included. They cover general fabrics, wool, man-made fibers, parachute fabrics and webbing textile finishes, dyes, textile machinery, and bibliographies containing patent abstracts on textile fabrics and machinery.

Atomic Energy Commission and National Aeronautics and Space Ad-
ministration. Two other abstracting services are also valuable sources for technical report coverage. These are Nuclear Science Abstracts\(^{140}\) (1948-) and Scientific and Technical Aerospace Reports\(^ {141}\) (1963-). The former abstracts Atomic Energy Commission Reports and the latter National Aeronautics and Space Administration Reports. AEC does research on radiation effects on textiles and NASA does research on particular fibers.

There are many government contract laboratories issuing reports, and each laboratory has a different means of report identification (letters and series numbers). When the Government agencies collect them, it assigns its own particular letters and numbers. Some kind of correlation index is needed to clear up the confusion resulting. The Special Libraries Association published the Correlation Index: Document Series and PB Reports\(^ {142}\) (1953), which is helpful in solving part of the problem, but additional correlation indexes are needed to cover reports issued subsequently.

**Standards, Specifications and Indexes to Them**

Standards and specifications, both non-government and government, are extremely important to the textile industry. As A. J. Fitzgerald states in his article, "A Guide to Technical Specifications,"\(^ {143}\) "A specification provides a scientific approach to evaluation of materials, components, and processes . . . . Specifications and standards insure the ability to reproduce results." The development of specifications stems from three main needs:

1. Engineering requirements for end-products.
2. Assurance of the reproducibility of end-products, properties, and requirements.

Specifications and standards allow the scientist and engineer to select the best of available materials, because of years of research experience of others. Most company operations involve some kind of specifications. However, standards are those specifications which have been accepted by a recognized body which determines quantitatively which ones are the best solutions to a problem. The recognized bodies may be non-government (technical societies and trade associations) or government. A few of the non-government sources of standards will be discussed first, followed by the government sources.

American Society for Testing and Materials. For material standards, the American Society for Testing and Materials is considered the authoritative source. It was organized in 1898, and has at present about 75 main technical committees and many more subcommittees. The Book of A.S.T.M. Standards is issued every three years with supplements in between. In 1958 the standards were divided into ten parts. The 1962 edition has 32 parts. In addition to standards, the Book contains ASTM Tentative Specifications, Methods of Test, and definitions. The ASTM standards provide accepted methods for evaluating the chemical, physical, and microbiological properties of fibers and their products. Technical Committee D-13 covers textile materials. The following parts from the 1964 Book of A.S.T.M. Standards contain standards which should be reviewed by those in the textile profession: Pt. 15—paper, packaging, cellulose, casein; Pt. 24—textile materials—methods and definitions, general; Pt. 25—textile materials—fibers and products, leather; Pt. 26—plastics—specifications (with closely
related tests); Pt. 27—plastics—general methods of testing. Each of these parts has an index and there is an annual cumulative index, also. The Society publishes its annual Proceedings which has reports, papers, and discussions of them. An author and subject index is included in each volume. Materials Research and Standards (formerly ASTM Bulletin) is a monthly journal with technical papers, society news, and actions on standards. The ASTM standards are kept up-to-date by revision if the development of a particular material necessitates progressive changes in techniques. However, some standards for older materials may continue for years with no change.


American Standards Association. ASTM, TAPPI, and 138 other national organizations and 2,100 company members make up the American Standards Association, founded in 1918, which is a coordinating agency for these bodies. The ASA does not initiate standardization projects. This is done by member bodies. It approves standards if they meet ASA requirements. The Standards Council, composed of 138 national member bodies, determines the policies and standardization procedures. The American standards have been published since 1928. The Index (1923-) has a catalog of American standards. This is a good organizational cross-referencing index. A number of ASA standards are identical to the member body standards. For example, approximately one-fourth of the ASTM standards are ASA standards. The index indicates which ASTM
standards are ASA standards. Other standards (TAPPI, AATCC, National Bureau of Standards, etc.) are also cross-referenced. The index also shows whether the standard is available at ASA or through the member body. The ASA is the American representative to the International Standards Organization, and operates a library of standards of the members of ISO.

**Textile Standardizing Bodies.** The American Association of Textile Chemists and Colorists, the Society of Dyers and Colourists, and the Deutsche Normen are all especially important bodies for issuing standard color-fastness tests. The ratings given in these methods are considered a basis for description of characteristics. The AATCC publishes its fastness tests in the *Technical Manual*;¹⁴⁸ the Society of Dyers and Colourists in its *Journal*;²² and the Deutsche Normen in the *Melland Textilberichte.*³⁴ The AATCC covers much more than color-fastness methods; it issues standards for identification and analysis, physical properties, and biological properties. A comparable British body is the British Standards Institute. Tentative Standards of that Institute are published in the *Journal of the Textile Institute, Proceedings and Standardization*²³ section. The Textile Institute *Year Book*³⁶³ lists all tentatives each year and indicates which ones became standards. The British Standards Institute also publishes all its standards in its *Yearbook.*¹⁴⁹

In addition to the journals mentioned above, some others list standards periodically. The *Textil-Rundschau*³⁷ (Swiss standards) and the *Deutsche Textiltechnik*¹⁵⁰ (German standards) are examples. The *Dyes and Chemicals Technical Bulletin*⁵⁵ of DuPont uses the color-fastness
ratings of the AATCC tests. The AATCC and Society of Dyers and Colourists' Colour Index also includes color-fastness tests of dyes on various fibers.

U. S. Government Standardizing Bodies. Specifications and standards issued by Government agencies should likewise be considered. The Federal Trade Commission, Department of Commerce's Commodity Standards Division in cooperation with the National Bureau of Standards, and the Federal Specifications Board all issue standards for special reasons. The Federal Trade Commission has established the standard definitions under the Textile Fiber Products Identification Act, the Wool and Fur Products Labeling Acts, and the Flammability Fabrics Act for use in enforcing them. The Commodity Standards Division of OTS and National Bureau of Standards jointly publish both simplified-practice recommendations and commercial standards. These originate with industrial sponsors. The function of the simplified-practice recommendations is the elimination of avoidable waste by establishing standards of practice. The function of commercial standards is to establish quality standards (in test methods, rating, certification, and labeling of commodities) and to insure uniform bases for fair competition. The commercial standards cover a wide variety of commodities. Some in the textile field include: colors and color materials, and textiles and textile products. Industries may make use of these standards on a voluntary basis. The Business and Defense Services Administration distributes these commodity standards. The General Services Administration, Federal Supply Service issues Federal Specifications and Standards. Pamphlets are included in Federal specifications; these have detailed specifications adopted
by the government for use in purchasing the articles listed. Bidders
of government contracts find these useful, and firms or individuals may
want to purchase supplies of an established standard commodity. The
Federal Supply Service also issues an Index of Federal Specifications
and Standards, a loose-leaf index which contains lists of federal
and interim federal specifications and standards and general services
administration specifications. Subdivisions, CCC (textiles—yardage)
and DDD (textile products) may be of interest to those working in the
textile field. The Standardization Division of the Department of
Defense is another body to mention. There is also a loose-leaf Index
of Specifications and Standards to help in discovering what is avail­
able from that source.

Codes

Codes are standardized rules of conduct and performance. These
may be given the force of law, if found necessary for the protection of
public health and safety. Some of the many types of nationally known
codes which are regulated by state and local organizations are: building
codes, codes for industrial safety, and sanitation codes. Two important
national codification organizations are the Underwriters' Laboratories
and the National Fire Protection Association. The former maintains a
laboratory for examining and testing devices, systems, and materials.
Standards on the following materials are issued: electrical con­
struction materials, electrical appliance and utilization equipment,
hazardous location equipment, fire protection equipment, building mater­
ials, gas and oil equipment, accident, automotive, and burglary protec­
tion equipment. The National Fire Protection Association publishes
volumes of codes on combustible materials and chemicals, building construction and equipment, fire extinguishing equipment, electric, etc. The first two categories listed have information on the storage of combustible fibers, flammability of wearing apparel, and flameproofed textiles. The National Electric Code of N.F.P.A. has achieved wide U.S. Acceptance. It has been approved by ASA and adopted as a Standard of the National Boards of Fire Underwriters. Current technological advances are reflected in the frequent revisions of this and other codes. They are representative of the consensus of opinions of people who are members of trade associations and technical societies and experts in their fields.

Trade Association Literature

In the previous section on institutional publications, the textile standardizing bodies are discussed. The standardizing associations, such as AATCC and TAPPI, along with many textile trade associations, compile much valuable information, in addition to standards. A trade association is defined in the National Associations of the United States (1949)

... as a nonprofit, cooperative, voluntarily-joined, organization of business competitors designed to assist its members and its industry in dealing with mutual business problems in several of the following areas: accounting practices, business ethics, commercial and industrial research, standardization, statistics, trade promotion, and relations with government, employees, and the general public.

From this definition it is obvious that trade associations and societies or institutes have similar functions, and it is often hard to differentiate between the two. The journals, yearbooks, and abstracting serv-
ICES published by societies are described in Chapters III and IV along with those published by commercial firms. The society publications tend to be oriented toward research activities of interest to professional members, whereas the trade association publications are oriented toward the business activities of the industry. Trade associations may be national or local, consisting of company or individual members. Much of the information published by associations is found in their journals and yearbooks. However, associations often issue useful information which is less well-known.

*Davison's Textile Blue Book* and the *National Associations of the United States* are good sources for listings of textile associations. The latter source indicates that the National Associations of Cotton and Wool Manufacturers were among the first trade associations in the United States (begun during the period 1860-5). The article, "Trade Associations as a Source of Market Data," by Teresa G. Labov, cites a few examples of trade associations issuing statistical information in the textile, apparel, and leather fields. The *Textile Organon* published by the Textile Economics Bureau, Inc., is a well-known trade association journal which presents valuable statistical information for industry. Regional associations, such as the Georgia Textile Manufacturers Association, provide news releases of local events. A number of trade associations issue booklets and pamphlets of wide textile interest. *Profit Life of Textile Machinery* (1958) is an example of a booklet by the American Textile Machinery Association.
Patent Literature

Nature of Patents

The patent system, as the United States uses it, dates back to the reign of King James I in 1624. The British Parliament passed the "Statute of Monopolies," limiting patent grants to things which were new and not yet known. The U. S. Federal Patent Law (1790) was provided for in our Constitution (Article 1, Section 8, Clause 8), which states: "The Congress shall have the Power . . . to promote the progress of science and useful arts by securing for limited times to authors and inventors the exclusive rights to their respective writings and discoveries." Basic democratic ideas did not allow awarding exclusive rights as personal favors. They did produce an incentive for inventors to invent, manufacturers to manufacture new products, and investors to invest in the resulting new and better products and processes. By adding fuel of interest to the fire of genius, as Lincoln describes the system, it was and still is a major factor in the development of modern technology.

The primary function of the U. S. Patent Office (established in 1836) is to examine patent and trade-mark applications and to grant registrations in each when justified. The registered patents both disclose new technical information to the government and public and, at the same time, exclude everyone, except the inventor, from making use of the invention for 17 years.

Kinds of Patents

The six distinct kinds of items patentable are:

2. A process, a particular way of doing something.

3. A composition of matter, either a new compound, or a combination of substances not characterized by the sum of the properties of the components.

4. A manufacture, a useable article produced from raw materials of new combinations, forms, qualities, and properties.

5. A plant, including botanical plants.

6. A design, which covers new, unique, and ornamental features of articles of commerce.

All of these, with the exception of plant patents are applicable to the textile field. A shuttleless loom, a different way of applying an acid dye, a new reactive dye, a new bonded (unwoven) fabric, and a Jacquard pattern which is the product of weaving with a unique combination of punched cards are all examples of items which might be patented. The U. S. Patent Office requires that the invention be novel (not patented before or ideas concerning it published prior to application), useful, and must be described in the patent so that a skilled specialist might make or use the item.

Sources for Patents

Copies of registered U. S. patents are available through the U. S. Patent Office for anyone to read. Official publications, such as "How to Obtain Information from U. S. Patents," have lists of United States libraries holding collections of patents. Both the guides to the chemical literature by Crane and Mellon also include lists of libraries. Abstracts, excerpts, and listings of pertinent
patents are found in such sources as abstracting journals, specialized journals, patent indexes, and reference books containing bibliographical notes. The abstracting journals' coverage of patents will be discussed in Chapter IV. The chronology chart (Appendix C) and descriptions of textile journals (Appendix A) indicate which ones carry patent abstracts or reviews. Encyclopedias, reviews, handbooks, and monographs frequently refer to patents. For example, Kirk-Othmer's *Encyclopedia of Chemical Technology* (1947-56 and present edition being published) covers many patents pertinent to subjects being studied. Patent indexes, such as the *Uniterm Index to Chemical Patents* (1955-9), Worden's *Chemical Patents Index* (1927-34) and Doyle's *Digest of Patents Relating to Coal-Tar Dyes and Allied Compounds* (1926) attempt to organize the subject matter of a part of the chemical and dye patents published during a small interval of time.

**Parts of a Patent**

It is important for scientists, as well as technologists, to realize what kind of information can be revealed to him in patents. Although the monopoly might still be applicable, many different and fresh viewpoints can be stimulated to grow, by the reading of patent information. Usually the patent consists of a drawing and specifications disclosing the invention and making definite claims to cover the inventor's rights. The patent specification format corresponds to the body of a scientific paper. One significant difference between the two is that patent validity is not dependent upon scientific understanding; it may have been the result of empirical observations only.

The specifications consist of the following parts:
1. A general introductory statement concerning the nature of the invention and field in which it lies.

2. A discussion of the prior art, usually pointing out the need for the present invention.

3. Objects of the invention, which indicate the inventor's objectives in accomplishing the invention.

4. Explanation of drawing, if there is one.

5. Descriptions of specific examples of the invention (such as each element of the drawings pertinent to the invention) and descriptions of the operation of the device, process, or chemical reaction—designed to give the public a complete understanding of how the invention functions.

6. Claims, which are the numbered paragraphs setting forth the limits of the inventor's protection.

Appendix E presents a complete patent which illustrates most of the above parts.

The descriptions of specific examples (No. 5) are very often taken from the written reports of the inventor. This part is almost identical to that in the scientific paper. The claims section differs from the summary of scientific papers. Its purpose is to define the new technological area in which the exclusive rights of the inventor exist. The legal formalities of expression encumber the claims, not allowing them to be good summaries of the specification. The disclosure is often much more extensive than the claims, and it is here that new leads can be made into channels unused by the inventor.

The bibliographies following scientific papers have a likeness
in the references cited at the end of a patent. Beginning in 1947 all references (to patents and technical literature) cited during the Patent Office prosecution of the application are included at the end of the patent.

Classification of Patents (See Patent Given in Appendix E.)

The following information always precedes the patent itself: patent number, title of patent, inventor's name and address, company to which assigned (if any) and address, application date, application serial number, issue date, number of claims and classification and subclassification numbers. The U. S. Patent Office uses these class and subclass numbers to arrange all the patents issued. The basic characteristic used for classification "is that of essential function or effect. Arts or instruments having like functions, providing like products, or achieving like effects are brought together..." states the Manual of Classification of patents. There are 300 main classes at present, each one further divided into subclasses. The Manual groups these classes into five main headings: I. Chemical and Related Arts; II. Communications, Radiant Energy, and Electrical Arts; III. Mechanical Manufacturing and Machine Elements Arts; IV. Transportation, Material Handling and Treating, Motor and Pump, and Weapon Arts; V. Instruments of Precision, Body Treatment and Care, Heating and Cooling, Static Arts, Designs, Miscellaneous. I and III have classes of particular interest to the textile man:

I. --Class 8--Bleaching and Dyeing; Fluid Treatment and Chemical Modification of Textiles.
III. --Textiles

Classes 245  Wire fabrics and structures
  28  Textiles
  26  Cloth finishing
  57  Spinning, twisting, and twining
  66  Knitting
  87  Braiding, netting, and lacing
  139  Weaving
  19  Fiber preparation

Changes can be made after a patent is issued if there is due cause.
A reissued patent is granted when additions, different wording, and the
like, must be made, the reissued patent expiring at same time as origi­
nal. Disclaimers exclude certain of the numbered claims in a patent.
Typographical errors in original and reissued patents are corrected by
Certificates of Correction issued by the Patent Office.

Searching Patent Literature and Patent Indexes

The researcher surveys the patent literature to determine patent­
ability, state-of-the-art, infringement, or validity. The last two in­
volve patent litigation, and usually a lawyer's advice and help is
necessary. The patentability and state-of-the-art surveys can be made
in a specialized library which has U. S. patents in addition to the
reference sources to be described. Some specialized libraries and in­
formation centers are developing new methods of retrieving patent
material by means of coordinate indexing and mechanization. One of
Du Pont's information centers, for example, stores information on every
new compound mentioned in patents. Many researchers as yet do not have
a pertinent system at their disposal. For this reason, it is helpful to be knowledgeable on how to make a basic survey of the patent literature. The following method, when done systematically, can conserve much time and energy.

First, it is important to both identify the idea and verify the class and subclass into which similar inventions have been placed. The U. S. Patent Office publications, *Index to Classification*\(^{171}\) and *Manual of Classification*,\(^ {170}\) should be used in conjunction to identify the idea. The *Index* is an alphabetical subject approach to classes and subclasses. The *Manual* is a listing of the classes and subclasses. It is helpful in displaying the relationship of a particular idea to its classification. If difficulty arises in identifying the class, the U. S. Patent Office classification bulletins are sometimes good for clarifying the scope of each class and subclass. The *Manual* refers to the bulletin number relevant for each class. Two other class identification approaches are through patentee indexes, containing names of persons or companies holding similar patents, and through invention indexes. The patentee indexes are published in the *Index of Patents*\(^{172}\) (1920–), which was preceded by the *Annual Report of the Commissioner of Patents*\(^{173}\) (1836-1919). These volumes and the *Official Gazette*\(^ {92}\) contain indexes to inventions through 1953. The patent numbers obtained from these indexes can be transformed into class and subclass numbers by referring to the numerically arranged *Official Gazette* or to patent files. After 1955 the class and subclass numbers are given after the personal name in the *Index of Patents*. Once the class and subclass numbers have been identified, it is important to verify these by scan-
ning a few patents or their extracts which are classified the same way. The *Index of Patents*, since 1955, contains a section on "Classification of Patents," which provides yearly lists of patents granted in each class and subclass. Then it is possible to go to the patent itself or to extracts of it in the *Official Gazette* and *National Catalog of Patents*\(^\text{174}\) (1961-), or abstracts in the *Annual Report of the Commissioner of Patents* (1836-71). If the idea cannot be identified or verified, the Patent Office offers a free service for those who fully explain the nature and extent of the idea. A list of classes and subclasses can be requested.

Once the class and subclass numbers have been identified and verified, the survey can be started. For more general surveys (state-of-the-art), it is wise to look at both the "originals" and "cross-references" in cumulative listings of patents. The "originals" are the patents classified according to like ideas, and the "cross-references" introduce patents of related ideas as do "see also" references in library catalogs. The class and subclass of the cross-referenced patents, if pertinent, can be surveyed as well as the original class and subclass. There are a variety of cumulative indexes for making surveys. The U. S. Patent Office *Index of Patents*\(^\text{172}\) (1920-) has already been mentioned. Some others include: Rowman and Littlefield *Index of Patents*\(^\text{175}\) (1790-1960), Rowman and Littlefield *National Catalog of Patents*\(^\text{174}\) (1961-), and *Index of Patents*\(^\text{176}\) (1836-1962 (microfilm)) issued from U. S. Patent Office. All, except the Patent Office *Index of Patents*,\(^\text{172}\) contain cross-references for broader searching. The references cited at the end of patents (since 1947) are also helpful
for broadening the survey. One drawback in making cumulative surveys
is that changes occur in class and subclass designations over a period
of time. Lists of replacement pages are published for the basic
Manual\textsuperscript{170} which was completely revised in 1956 and again in 1960. How­
ever, only the Patent Office has full records on changes, and these can
be purchased upon request.

Information on government-owned patents is available through
the Department of Commerce's Office of Technical Services' Patent
Abstract Series\textsuperscript{177} and the Small Business Administration's Products
List Circular,\textsuperscript{178} which contain abstracts of patents available for
sale or licensing. The former has a section on "Ceramic, Paper, Rubber,
Textile, Wood, etc.," which is directed to the textile patent inquirer,
among others.

\textbf{Design Patents}

Design patents are classified separately from other patents.
Classifications D-3--Clothing and D-92--Fabric are noteworthy ones
for the textile specialist. The Patent Office Index of Patents\textsuperscript{172}
contains lists of the yearly design patents granted, and the Official
Gazette\textsuperscript{92} has a section on design patents. The format of these is
different from the regular patents and not as many are granted. The
design patent covers only the outer appearance of an item and not the
function or mechanical features. The inventor chooses how long he
wants the patent term to last (3-1/2, 7, or 14 years).

\textbf{Foreign Patents}

So far the discussion has been centered around the use of U. S.
patents. The form and content of foreign patents are generally similar
to U. S. patents. They have a tendency to be more concise and usually carry fewer claims. Most countries have their own classification system(s) which differ from others. Systems similar to the German system have been adopted by nine countries. There are searching aids for each system similar to those described for the U. S. patents. Joseph Fleischer in the *Advances in Chemistry Series*\(^{173}\) No. 30 discusses the British, French, German, and Swiss patent systems, giving much reference material. Current addresses of foreign patent offices are listed in the first January issue of *Chemical Abstracts*.\(^{189}\) *Chemical Abstracts'* coverage of foreign patents is one of the most complete of all services. Its coverage, along with that in the textile abstracting services, will be discussed in Chapter IV.

**Trade-Marks and Copyrights**

Two other forms of federal protection are trade-marks and copyrights. The registration of a trade-mark by the Patent Office allows the owner exclusive rights to the use of the name, not the item as in patent protection. New trade-marks are covered in the *Official Gazette*\(^{92}\) and the *Index of Trademarks*\(^{180}\) (1928-). Trade journals often indicate whether product names are registered. Several reference books have lists of chemical trade-marks, compositions, uses, and suppliers. *Trade-Marks*\(^{181}\) by H. Bennett, *Scientific and Technical Abbreviations, Signs, and Symbols*\(^{182}\) by O. T. Zimmerman, and *Directory of Fiber Trade Names*\(^{183}\) by Alice Laubach are excellent examples. Trade directories and manufacturers' catalogs are other sources for trade names and trade-marks. Another form of federal protection, the copyright, is granted
by the Register of Copyrights of the Library of Congress for written work of artistic value. The U. S. Copyright Office's publication, *Catalog of Copyright Entries*, enters the greater part of all new productions. It is issued in 13 Parts, some of which may be ordered separately from the Superintendent of Documents, Government Printing Office.

**THESES AND DISSERTATIONS**

Few United States graduate schools require students to publish master's theses and doctoral dissertations. D. A. Kronick states:

> It is suggested that the dissertation, produced largely as a by-product of the activities of the 17th and 18th century university, represents a type of ceremonial literature whose purpose may not be essentially to instruct but serve as an act of public or formal observance of an event.

The idea seems to be correct, because there have been only small and infrequent attempts to organize this type of primary information.

**General Indexes**

The largest American attempt at dissertation abstracting is *Dissertation Abstracts* (1938-), published monthly by University Microfilms. This, however, covers only those dissertations done by students in a number of cooperating institutions. The dissertations are available in microform from University Microfilms. The subject coverage in this service does not yet extend to textile engineering. A very small number of theses done in fields related to textiles were included in the 1962 volumes. These were in the categories of physical chemistry, physics, and economics. The Aslib *Index to Theses Accepted for Higher Degrees in Universities of Great Britain and Ireland* (1950-) includes
both master's and Ph.D. theses. This source lists a small number of theses on paper and textile technology. For those in the textile field, it is a more valuable source than Dissertation Abstracts. Master's theses in the United States are now being indexed in Master's Theses in the Pure and Applied Sciences (1955-), published by the Thermophysical Properties Research Center at Purdue University. A small number of theses are covered in the areas of textile chemistry and engineering. However, the university coverage is again limited. Chemical Abstracts started abstracting in 1938 those dissertations covered in Dissertation Abstracts, and some of the textile abstracting and indexing services, such as Textile Technology Digest are planning to improve coverage of thesis literature. The ACS Advances in Chemistry Series No. 30 has a good article, "Searching for Theses, Dissertations, and Unpublished Data." Sources for finding theses done in the United States and foreign countries are listed.

Often it is valuable to know what kind of research is being done by the faculties at particular graduate schools. This is obviously an important factor in what the graduate students will be doing. The American Chemical Society's Directory of Graduate Research (1953-) gives an idea of what the professors in departments of chemistry, biochemistry and chemical engineering are interested in, what doctoral theses they have sponsored, and what papers they have done. A valuable source for textile research is Scientific Research in British Universities (1950-) done by the Department of Scientific and Industrial Research and the British Council. The theses are listed under the university from which they come. All aspects of the textile industry are
covered (occupational health, textile testing, machinery, structure of textile fibers, etc.).

The best method, so far, for the textile researcher to discover what theses have been written is to inquire at the textile schools offering higher degrees. *Davison's Textile Blue Book* lists the present textile schools. It describes the facilities at each school (amount of equipment, testing laboratories, etc.). However, it does not indicate what kind of degrees are offered. Graduate catalogs will show what degrees are offered and the curricula. The *World of Learning* (1947-) is an aid in discovering which technological schools, institutes, and associations, in all countries, offer courses in textiles. It lists the administrative staff, number of students, and publications of the schools.

**Textile Schools Offering Master's Degrees**

Only one United States textile school offers a Ph.D. degree, the Textile Research Institute. A small number offer master's degrees. These are: Clemson (1899); Georgia Tech (1888); Institute of Textile Technology; Lowell Technological Institute (1895); Massachusetts Institute of Technology (1861); North Carolina State College (1887); and Philadelphia College of Textiles and Science (1884). All of these schools infrequently publish indexes or abstracts of their theses. Clemson published *Faculty Publications and Research* June 1954-July 1962 and *Abstracts of Doctoral Dissertations and Master's Theses*. Georgia Tech theses are well indexed. The Anniversary Edition of *Theses and Dissertations Accepted in Partial Fulfillment of the Requirements for Graduate Degrees* lists by departments all theses written from...
1925 to 1963 at Georgia Tech. A textile graduate student compiled *Abstracts of Graduate Textile Theses* (1930-1963), with an appendix containing abstracts of theses done by graduate students in related fields. Lowell Technological Institute has published lists of graduate theses in the graduate school catalog. An interesting thing to remember about Massachusetts Institute of Technology's curriculum of textile technology is that it is within the Mechanical Engineering Department and is a branch of the Materials Division. In 1961 and 1963 North Carolina State published *Faculty Publications and Research*, which includes abstracts of doctoral dissertations and master's theses, for the years 1958-9 and lists for the years 1960-61, respectively. Interlibrary loan services are frequently at the service of users seeking copies of theses.

**Textile Schools Offering Ph.D. Degrees**

The original purposes of the Textile Research Institute were "to promote, cultivate, and facilitate scientific research in connection with the production of textile raw materials and their utilization in the textile manufacturing industries of the United States." Several of its publications, *Institute News*, *Notes on Research*, and annual reports, are useful for research awareness. The *Notes on Research* is a serial publication containing reports, and is circulated only to company members. The *Annual Report* lists the doctoral dissertations done within the previous year.

Universities of Great Britain and Scotland do much of the doctoral dissertations in textiles. Some important ones are: University of Leeds, Manchester College of Science and Technology, and the Uni-
versity of Glasgow. Leeds is wool oriented in its research. The theses done are included in its *Publications and Titles of Theses.* Manchester's research is cotton and man-made fiber oriented. Its *Annual Report* is a valuable guide to research there.

**Manufacturers' Literature**

Company literature plays several valuable roles in the textile field. First, it portrays the history, policies, and activity of a company. Second, it depicts the progress of the company by announcing and describing new products; and third, it demonstrates in detail how specific products can be used. The "house organs" referred to in the periodical section mainly play the first and second roles. Most of these publications are periodical in nature and have attention-drawing formats, cover, and illustrations. The third role is enacted by loose-leaf technical bulletins and equipment manuals. Most of the information in such bulletins and manuals is published in no other form.

**Technical Bulletins**

The company technical bulletins and equipment manuals are written with the assumption that the reader has purchased and is using the product described. The information usually comes along with the product, or the firm using it is placed on a regular mailing list. However, the manuals and bulletins are available to other people who are interested in specific products. New products, trade-marks, and their producers are well covered in trade journals. Some of these same journals furnish a reader's information service which lists new company literature and distributes it to those interested. There are several catalogs which
cover textile products and their manufacturers. These will be described more thoroughly in Chapter V. To illustrate, however, the Fact-File issue of *Textile World* has an extensive textile product catalog. Listed under "dyes," for example, are all the chemical companies producing textile dyes and also an indication of which kinds of dyes they manufacture. Likewise, all companies making looms and the specific types each produces are listed. The addresses of the companies are given, so that direct requests can be made for information on particular products.

Most of the more recent company technical bulletins are in loose-leaf form, so that revised information can easily be inserted. Textile chemical companies producing man-made fibers and dyestuffs are the major distributors of these bulletins. The customer service and applications research departments are necessarily involved with developing better processes and techniques to handle their end-products. All the man-made fiber producers provide technical information of some kind. Some examples follow.

American Cyanamid Company distributes technical information on its products, such as Creslan, and the Textile Resin Department compiles information on identification of textile finishes. The Dyes Department of American Cyanamid has published a booklet on Calco dyes for printing, among others. Celanese Corporation of America has a *Technical Bulletin* on the processing of Arnel which covers the topics of dyeing, printing, finishing, and heat treating of fabrics and blends. Chemstrand, a division of Monsanto, is maintaining a new series of *Technical Information on Chemstrand Products*. The bulle-
tins available fall into the following subject areas: "Acrilan," "Chemstrand Nylon," "Instrumentation," "Chemstrand Spandex," and "Miscellaneous." The instrumentation section frequently has specially dyed shade cards for inspection. Chemstrand's bulletins are indexed as are most technical bulletins. The bulletins are first listed in the index as they appear in the manuals, then products are listed serially. Another valuable highlight is a list of the more important reprints by Chemstrand employees. Du Pont's Textile Fibers Technical Information Bulletins include technical information on dacron, nylon, orlon, rayon, teflon, and multi-fibers, etc. Eastman Chemical Products, Inc., a subsidiary of Eastman Kodak Co., also issues technical bulletins on its products. A typical example is the technical information bulletin, "Blending Characteristics of Kodel Polyester Fiber." The dyestuffs companies also produce information manuals of value to textile laboratories. Most include colored fiber swatches representing varying intensities of particular dyes. Many also rate the dyes according to AATCC or by their own modified standards. The information serves mainly as an aid, and proper results are not guaranteed by the companies. Ciba Company, Inc., Geigy Dyestuffs, General Dyestuff Corporation, Imperial Chemical Industries of England, Pfister, and Sandoz all distribute information in technical bulletins and books on the uses of specific dyes. Imperial Chemical Industries has done much with the new procion and procinyl fiber reactive dyes for synthetic fibers. Other textile chemical companies send out information on various chemicals used in fabric processing, such as Solvay Process Division of Allied Chemical Corporation and Union Carbide Chemicals Company, Division of
Union Carbide Corporation. Solvay\textsuperscript{212} has bulletins on chlorine bleach solutions, hydrogen peroxide, and others. Union Carbide has issued useful booklets on "Chemicals for the Textile Industry,"\textsuperscript{213} and "Physical Properties of Synthetic Organic Chemicals."\textsuperscript{214} Rohn and Haas Company has Technical Bulletins\textsuperscript{215} which cover all the textile finishes it produces. Du Pont has written much on the textile processes using its Albone hydrogen peroxide bleach. These bulletins previously discussed are some of the best sources for complete lists of a company's products.

Many of the companies make available less technical booklets, leaflets, and brochures on the history and care of their products. Fourteen well-known fiber producers are members of the Man-Made Fiber Producers Association, Inc. This Association has published, \textit{Man-Made Fibers}\textsuperscript{216} (A summary of origins, characteristics and uses) and an \textit{Index} to educational material on man-made fibers which covers brochures, slide film, motion pictures, teaching and selling aids and also technical information available from producers of man-made fibers. Burlington Industries, Inc., Research and Development Center has published a booklet, \textit{Textile Fibers and Their Properties},\textsuperscript{217} and Du Pont and American Viscose Corporation produce handy reference booklets, both entitled \textit{Fiber Facts}.\textsuperscript{218,219} Most producers of textile fibers also issue material on care and cleaning of their fabrics. A good example is a leaflet distributed by Du Pont entitled, "Home Cleaning Guide for Articles Containing Du Pont Textile Fibers."\textsuperscript{220}

**Equipment Manuals**

Textile equipment manuals are likewise quite numerous. Companies who sell textile equipment often have service representatives who ex-
plain the mechanisms and the peculiarities of particular equipment when purchased. Sometimes there are regional textile expositions which display latest equipment and demonstrate its use. The manuals are used mainly by people who have a good basic knowledge of what machines do and why. The manuals are generally specific and detailed.

In the textile testing area, some important companies producing manuals are: Instron, Leeds and Northrup Company, Special Instruments Laboratory, Inc. (Spinlab), and Zellweger Uster. The Instron tensile testing instruments come with maintenance instruction manuals. These normally contain a list of users. Leeds and Northrup issues information on the theory, design and directions for use of its equipment. The Leeds and Northrup Recorders are often used along with other textile testing equipment. Spinlap has information on its products, such as the Digital Fibrograph and Fibrosampler. Uster equipment used for yarn strength, elongation, and evenness testing is well described in manuals which provide good reference material for mill and laboratory personnel. Manuals for specific textile mill equipment are also numerous. Saco-Lowell and Whitin have part-by-part descriptions of their spinning machines; likewise, Crompton and Knowles and Draper cover looms. There are, of course, different manuals for each specific loom. Draper's new shuttleless loom is amply discussed in the manual provided with it.
CHAPTER IV

SECONDARY SOURCES FOR SCIENCE AND TECHNOLOGY OF FIBERS

Introduction

The main purpose of secondary sources of information is to organize and arrange the material scattered throughout the primary sources described in Chapter III. Abstracting and indexing journals store information found in periodicals. Review literature, bibliographies, reference books, monographs, and textbooks play a part in organizing primary information.

It is sometimes difficult to distinguish between kinds of reference books--dictionaries, encyclopedias, and handbooks--as it is to distinguish between treatises, monographs, and textbooks. However, in the discussions to follow, each type of secondary source will be examined. The textile abstracting and indexing journals are covered. The role of the textile review literature and bibliographies and some examples of each are examined. It is important to remember that book bibliographies are good sources for lists of reference books as well as textbooks and monographs. Finally, the data found in reference books, textbooks and monographs are discussed, and again, examples of each are given.

Abstracting and Indexing Journals

The periodical's role of storing information, referred to in Chapter III, has been assumed in large part by the abstracting and in-
dexing services. Although it is possible to search the literature in a field by examining the yearly indexes of all journals of interest, it is not practical nor necessary, if there is a good abstracting service covering the field and years desired. Abstracting and indexing journals should guide the investigator to primary sources of information. Rarely are they adequate sources in searching for particular information. Well-done informative abstracts frequently rule out the need to go further, because they show that a particular paper is not pertinent. Indexes are not as valuable in this respect, because titles to papers in general have little if any information content.

Characteristics of Abstracting and Indexing

There are numerous definitions of abstracts and as many kinds. Essentially an abstract may be considered an abridgment of the original. R. A. Jensen in his paper, "Science Abstracting and Indexing," refers to the many kinds of abstracts. Three of the most common ones are: informative, descriptive, and annotative. The informative abstract is the most complete of the three. It communicates the knowledge of the original in a condensed form which relates the scope, findings, arguments, and applications. The descriptive and annotative abstracts have no original information. The descriptive abstract usually indicates the contents, and the annotative abstract merely expands the information in the title by means of a few words. The kind of abstracting varies with the people doing it. Professionals in a field are capable of analyzing the information in their subject area and often make good informative abstracts. Documentalists, with no subject background in a field, know the form an abstract should have, but are limited in ability to deter-
mine what are the important points.

The value of abstracting and indexing services is limited or increased by the quality of indexing. Title indexing merely pulls words out of context with the resulting loss of meaning. Good analytical subject indexing attempts to treat the ideas involved. The needs and interests of the majority of people to use the indexing system are often considered in determining the indexing terminology.

An abstracting or indexing service can usually be judged by the kind of abstracting and indexing it does and the coverage. M. G. Mellon and E. J. Crane both mention four criteria for ideal abstract journals: 1. "covers its field completely; 2. publishes good annual and collective indexes; 3. maintains a high quality in its abstracts; 4. keeps its service prompt." (Two months to one year.) The first two points are considered the more important criteria of the four. The coverage of an abstracting journal is usually listed once a year. However, there may be a distinction between a list of journals received and journals abstracted. Some services do not make this distinction, and if the truth were known, they do not examine some of the journals included. Good indexing means good subject analysis of the information, and the quality of annual and collective indexing in abstracting journals is determined, to a large extent, by the quality of the abstract. Improvements in the promptness of service is much needed by many abstracting journals. Often, promptness is affected by the slow acquisition of foreign journals and their translations by abstractors. In any case, this criteria is many times waived in favor of completeness of coverage of field. Keyword-in-Context indexing as used in Chemical Titles and
and \textit{B.A.S.I.C.} \textsuperscript{223} (Biological Abstracts Subjects in Context) has helped in rapid title distribution.

\textbf{National Federation of Science Abstracting and Indexing Services}

The rapid development of abstracting and indexing services in all fields caused people concerned with scientific communication to organize the National Federation of Science Abstracting and Indexing Services in 1958. Some of the major abstracting and indexing organizations are members. The goal of \textit{N.F.S.A.I.S.} is to improve scientific communication through the better documentation of international scientific literature. The United States Library of Congress, Science and Technology Division, under the auspices of the National Federation of Science Abstracting and Indexing Services, published two valuable tools: \textit{A Guide to United States Indexing and Abstracting Services in Science and Technology} \textsuperscript{224} (Report 101, 1960) and \textit{A Guide to the World's Abstracting and Indexing Services in Science and Technology} \textsuperscript{225} (Report 102, 1963). The latter supersedes the former. The 1,855 titles covered represent 40 countries, 365 of which are United States entries. The services are arranged by the Universal Decimal Classification, then alphabetically. There are also subject and country indexes. A modified list of the abstracting journals covered in the following divisions are the ones to be described subsequently: 667--color industries; 676--pulp and paper industries; 677--textile and cordage industries; 678--macromolecular materials, rubber, plastics.

\textbf{Textile Journals Carrying Abstracts}

As was pointed out in Chapter III, numerous textile journals contain abstracts of papers in other journals and abstracts of patents,
as well as articles and other regular features. The following journals have journal article abstracts:

I. DYE JOURNALS

1. *American Dyestuff Reporter* 29
2. *International Dyer* 226
4. *Teintex* 51

II. FIBER SCIENCE AND TECHNOLOGY JOURNALS

5. *Chemiefasern* 33
6. *Deutsche Textiltechnik* 150
7. *Faserforschung und Textiltechnik* 36
8. *Industrie Textile* 50
9. *Bulletin* of the Institut Textile de France
10. *Melliand Textilberichte* 34
11. *Tekstil'naia Promyshlennost* 61
12. *De Tex* 39
13. *Textil-Praxis* 35

III. JOURNALS OF ALLIED FIELDS

14. *Das Papier* 96
15. Water Pollution Control Federation, *Journal* 87

The abstracts in these journals are mainly descriptive and annotative. Journals Nos. 1, 3, 7, 10, 12, 13, and 14 have some informative type abstracts. Subject listings of journal articles are published annually in the *Technical Manual*. Both *Textil-Rundschau* 37 and *Textilis* 38 have monthly listings of periodical articles. The difference between these and bibliographies to be discussed in Chapter V is the periodical nature of their appearance.

Research departments in large textile fiber companies often have abstracting services for their own particular needs, especially for
their internal unpublished company reports. However, for finding published papers and patent information in the field of textiles, the textile man has many valuable abstracting and indexing services available to him. The abstracting services for fiber science and technology are compared and contrasted. Next, the general technology indexing journals are discussed. Other services in related areas are mentioned. The principal ones are included in the appendix with the other journals.

**Fiber Science Abstracting Journals**

The following five abstracting services are leaders in covering the research on the chemistry and physics of fibers:

1. *Chemical Abstracts*[^189] 1907- (United States)
2. *Chemisches Zentralblatt*[^227] 1830- (Germany)
3. *Referativnyi Zhurnal Khimiya*[^228] 1953- (Russia)
4. *Physics Abstracts, Section A of Science Abstracts*[^229] 1898- (Great Britain)
5. *Journal of Applied Chemistry, Abstracts Section*[^230] 1954- (Great Britain), which was preceded by *British Abstracts*[^231] (1926-53).

The first two services have perhaps done the most in developing the coverage, use of informative abstracts, and good indexes. For a thorough discussion of these, both W. G. Mellon[^8] and E. J. Crane[^9] are good sources. An important point to consider in making literature searches is the date the abstract service began publishing. *Chemisches Zentralblatt* is valuable for older references not covered in *Chemical Abstracts*. Some of the textile journals carrying abstracts may be used also. The chronology chart in Appendix C shows those which began before *Chemical Abstracts*. The chemical services Nos. 1, 2, 3 and 5 abstract patents as well as papers. They also have patent indexes along with
the subject and author indexes. In addition to annual indexes, *Chemical Abstracts* and *Chemisches Zentralblatt* are publishing cumulative indexes every five years.

**Fiber Technology Abstracting Journals**

The following five abstracting services are especially valuable for reviewing progress in fiber technology:

1. *Textile Technology Digest*¹⁹⁸ 1944- (United States)
2. *Natural and Synthetic Fibers Yearbook*²³² 1954- (United States)
3. *Textile Institute, Journal, Abstracts Section* 1910- (Great Britain)
4. *Shirley Institute Summary of Current Literature*²³³ 1921- (Great Britain)
5. *Coton et Fibres Tropicales: Bulletin Bibliographique*²³⁴ 1946- (France)

Of the five services, the *Textile Technology Digest* has the largest coverage of journals of interest to the United States, however, the annotated abstracts somewhat limit its usefulness. The annual indexes to the *Textile Technology Digest* appear more promptly than those in the British sources. For example, the 1963 indexes for sources Nos. 3 and 4 have not appeared yet (November, 1964), making these services difficult and time consuming to use for that year. Service No. 5 has no indexes. The abstracts are arranged in some kind of accession order for each year. This is a tremendous hindrance for using the source except for current awareness information. The abstracting service No. 3 is being reorganized this year (1964). The following associations do the abstracting for this service: C = Cotton Silk and Man-Made Fibres Research Association; W = Wool Industries Research Association; H = Hosiery and Allied Trades Research Association, and others. Abstracts from each of
these associations constitute a separate section collected in a loose cover. The Shirley Institute Summary of Current Literature published by the Cotton Silk and Man-Made Fibres Research Association is the principal source of abstracts. They usually appear in the Textile Institute abstracting service within two months after being issued in the Shirley Institute Summary of Current Literature. At the end of the year, the indexes used by the Shirley Institute Summary of Current Literature are to be included along with separate indexes for the other abstract sections. The advantages of a more up-to-date and comprehensive service to be offered by the new system are expected to outweigh the disadvantage of loss of consolidation. The Natural and Synthetic Fibers Abstracting Service has the most complete abstracts of all five of these sources. The class and subclass divisions and loose-leaf form allow easy handling of the material. Services Nos. 1-4 abstract textile patents (mainly non-chemical). These are good supplements to the science abstracting services which cover textile chemical patents.

Comments on Coverage of Abstracting Services

Of the 79 journals included in the Appendix A, the Textile Technology Digest abstracts 97 per cent, Chemical Abstracts 85 per cent, and the Journal of the Textile Institute 80 per cent. Several abstracts of the same paper found in the Textile Technology Digest and Chemical Abstracts illustrate the type of abstracts found in each.

The shape of the cells in a foam is thought to be determined by the interplay between viscosity and surface tension. In order to assess the relative importance of the two, a simplified model is set up which considers only surface tension. 2 refs. (3318)

Shapes of cells in polymer foams. George Gioumousis (Shell Develop. Co., Emeryville, Calif.). J. Appl. Polymer Sci. 7, 947-57 (1963). The relative importance of viscosity and surface tension in detg. the shape of foam cells was detd. in a model that considered only surface tension. The assumption that the cells were of uniform cross section in 1 direction and were based on a regular hexagonal lattice in the other 2 directions gave a 2-dimen­sional problem solved by the calculus of variations. For high-d. foams, the voids take the form of circles centered within each hexagonal cell. For ds. <9% solids, the solid part is concd. at the vertices, between tangential circular areas, connected by straight segments of zero thickness. This illustrates the imp­or­tance of viscosity, since in real foams the cell walls will break if too thin, while the thinner the walls become, the greater is the effect of viscosity in opposing further thinning.

John H. Dittmar


The use of emulsions of organic liquids in which the dyes (Kubosols, Indigosols, etc.) are insoluble, is discussed. (2117)

Emulsion method of dyeing wool and artificial synthetic fibers. V. A. Blinov, L. V. Basova, K. N. Anishehuk, I. F. Knyaginina, L. P. Ramyutseva, and K. D. Pudshyutina. Tekstil'n. Prom 22, No. 10, 57-60 (1963). Textiles are treated during dyeing with 3-4% emulsions of org. solvents. The consumption of sol­vents is thus reduced 40-50 times. The emulsifiers used include mono- and polyglycol ethers of aliphatic acids and long-chain alcohols, and their polyglycol ethers. These increase the speed of sorption of the dyes. The emulsion displaces air bubbles in the fiber, which in turn are replaced by the solvent. The dyes in emulsion pass into the solvent. Surface-active substances in the emulsion facilitate the process. A variety of org. liquids were studied as solvents. This method is used in dyeing and printing woolen fabrics with acid dyes, and for dyeing viscose, cotton, and synthetic fibers with vat dyes and Indigosols. Uniform, clean, and impregnated colors are obtained in most cases. Polyamide and polyacrylonitrile fibers are dyed by methods lasting 1 min.

A. S. Keller

One of the advantages of the Textile Technology Digest is that it covers some trade journals and newspapers not abstracted anywhere else. For instance, it abstracts information in American Fabrics, Daily News Record, Southern Textile News, and Textile Forum. Related Abstracting Journals

Several abstracting services have already been discussed in con­nec­tion with the primary sources they serve. The abstracting services for technical reports--Scientific and Technical Aerospace Reports, United States Government Research Reports, and Nuclear Science Ab­stracts (see section on technical reports and indexes to them)--and the Department of Agriculture's Bibliography of Agriculture are a few which are useful to the textile investigator.
stracts are also of potential interest. The Battelle Memorial Institute, which does research in many fields, some of which are directly and indirectly related to textiles, publishes the monthly Battelle Technical Review, and has an annual index to the abstracts covered.

**General Technology Indexing Journals**

The indexing journals are usually periodical compilations (by subject and sometimes author) of the literature in a certain field. The remaining indexes to be discussed are general in scope and are not limited to one area of technology. 1. The *Engineering Index* (1885-); 2. *Applied Science and Technology Index* (1913-); and 3. *British Technology Index* (1962-) are well-known general technology indexes. The *Engineering Index* is really more than a simple index in that it has abstracts as well. The journals it covers are from world literature, whereas the *Applied Science and Technology Index* covers American and a few British journals, and the *British Technology Index* is limited to journals published in Great Britain only. However, sources Nos. 2 and 3 have more entries under the subject area of textiles. The *Engineering Index* is a good source for finding advances in equipment which is used by textile industries. For example, the subject of dielectric drying has had many entries. Of the 79 journals in Appendix A, *Engineering Index* abstracts 33 per cent of them and *Applied Science and Technology Index* indexes 23 per cent. These sources can supplement the fiber technology abstracting services when extensive literature searches are made.
General Indexing Journals

Other indexes are of particular interest to the textile man. The *Business Periodicals Index*\(^{241}\) has information on the textile industry and its business aspects. *Reader's Guide to Periodical Literature*\(^{242}\) covers the more general journals which have information on textile fabrics and industry. The Public Affairs Information Service's *Bulletin*\(^{135}\) was mentioned in connection with government publications. It provides a good coverage of the international economic and social conditions, which, of course, affect any large world-wide industry, such as textiles. The *Science Citation Index*\(^{243}\) is a new experiment in indexing practices. The research work of scientists is grouped into like areas. All the work building onto one man's initial research is indexed under that man's name. This is a quick way to observe the growth patterns of science.

Review Literature

Annual reviews display the whole panorama of activities in a given field. When written by knowledgeable persons, they are instrumental in focusing on the general trends and developments occurring in a field each year. Primary sources, such as periodical articles, patents, standards, company literature, government reports, and conference papers, are critically reviewed. These are judged by the writer as being the more influential of the crop of literature published the preceding year. Although any specialist could probably write a review on the progress in his professional field, it is to his advantage to be able to refer to critical reviews which show relations among scientific
works and activities and give quick orientation into fields related to one's own.

**Annual Review Books**

Annual reviews for the textile industry appear in a number of books and also as papers in or as supplements to journals. Two good British annual reviews covering the textile industry are: the Textile Institute and Society of Dyers and Colourists' *Review of Textile Progress* (1949-) and *Reports on the Progress of Applied Chemistry* (1916-) published by the Society of Chemistry Industry. The *Review of Textile Progress* is written by both American and European scientists. Some of the British organizations represented by the writers are: Courtaulds, University of Leeds, Cotton Silk and Man-Made Fibres Research Association, and the Society of Dyers and Colourists. Copious references are made to a world-wide selection of journals, patents, standards, papers given at symposiums and conferences, Ph.D. theses, and books. The following are some of the topics reviewed: (1) Production and properties of fibers; (2) Conversion of fibers into finished yarns; (3) Fabric production; (4) Chemicals for the textile industry; (5) Chemical and other processes; (6) Analysis and testing; (7) Industrial applications; (8) Building and engineering. The text is indexed by name and subject. The *Reports on the Progress of Applied Chemistry* reviews the same kinds of primary information as does the *Review of Textile Progress*. Experts from such companies as Imperial Chemical Industries, Fibres and Dyestuffs Divisions, write reviews on the organic chemistry of dyestuffs and their intermediates, protein and synthetic fibers, and the chemical engineering problems of industrial hazards.
and water treatment.

A good American annual review of textile processing, *Advances in Textile Processing*, was published by the Textile Book Publishers, Inc. in 1961 (Vol. 1). It has since been discontinued. However, an annual of this type which reviews the whole textile industry from fiber to fabric is greatly needed in the United States. In addition to the usual primary information covered, this volume referred to many company technical bulletins and a few government reports. American reviewers represented such organizations as: Du Pont Textile Fibers, Rohn and Haas Company, Dyeing and Finishing Laboratories of Celanese, and the Southern Research Laboratory. Some topics covered were: (1) Nonwoven fabrics (history, manufacture, engineering, standard test methods, uses, and economic aspects), (2) Processing of synthetic fibers into wash-and-wear apparel (dyeing and finishing processes, fabrication of wash-and-wear apparel), and (3) Processes for dyeing hydrophobic fibers with the disperse dyes (general aspects, chemical and physical properties of disperse dyes, accelerant dyeing phenomena, high temperature dyeing equipment for hydrophobic fibers). There is a subject index to the material.

The German yearbook, *Jahrbuch der Textilveredlung* (1953-), is an excellent source for world-wide literature on textile processing. The yearly volumes are slow in appearing (last volume was 1959), however they are very comprehensive. There is a small amount of text and an enormous amount of references to journals, patents, standards, and books. The topics reviewed are: (1) Fibrous materials (production, structure, properties, and use), yarns, and textile fabric; (2) General textile processing; (3) Fiber and yarn treatments before weaving; (4)
Finishing processes before dyeing; (5) Dyestuffs, dyeing, and printing; (6) Finishing; (7) Tests; (8) Laundering the dyed cloth; (9) Miscellaneous. Pictured machinery and new product names (e.g., dyes) are discussed.

Annual Review Papers

The annual reviews appearing in journal papers can be found through the abstracting services. For example, *Textile Technology Digest* (1963 index) lists some of the following references under "Annual Reviews": "Recent Developments in Dyeing and Finishing Machinery," by E. Moss; "Review of Research Work in India During 1962 in the Field of Dyestuffs and Textiles, Pt. 1," by E. H. Daruwalla; and "1963 Annual Review of Tufted Textiles." Most of these refer to journal literature. *Industrial and Engineering Chemistry* publishes progress reviews yearly of interest to the textile industry. In 1961, "Fibers," by C. S. Grove, Jr., etc., and "Elastomers," by B. S. Garvey, Jr. were published. Each year *Industrial and Engineering Chemistry* also publishes a "New Chemicals and Materials" section which discusses new products, modification of older ones, and marketing trends. Cards are available for ordering further information from companies producing such material as resins, coatings, adhesives, and latexes, surfactants, elastomers, dyes, lubricants, etc. Beginning in 1962, *Skinner's Record* published a supplement, *Annual Review of the Man-Made Fibres Industry*. The progress of British man-made fibers is reviewed. Some of the fibers discussed in the 1964 edition were: acetate, acrilan, Bri-nylon, courlene, courtelle, Enkalon, Rayon, Sarille, Spanzelle, Terylene, Tricel, Vincel, and Vyrene. Also, professionals oc-
cupying well-known positions in the man-made fiber industry give their views about trends and forecasts for the months to come.

**Bibliographies**

The term bibliography has been defined in the book, *The Rise of Current Complete National Bibliography*, as a complete and definitive list of recorded items within limits set by the compiler, usually geographical, chronological, or topical. The recorded sources may be primary, secondary, or tertiary information, which can be arranged chronologically, geographically, or by author, title, subject, and other ways. The scope may cover a whole field or one small aspect. It may be comprehensive or selective. There may be critical comments, uncritical statements or no discussion at all about the sources. Bibliographies may be written or published separately or be included at the end of papers and chapters of books. One characteristic all lists have in common is the reference to the source. The form of the reference may vary, but generally, it includes the author's name, title of the publication, and, if necessary, an indication of where the material is found within the publication. The location of periodical articles is given by the title of the article, volume number, issue number, pages, and year of the periodical. The information needed for location of a patent is the country issuing it, the patent number, and the date of issue. The volume, pages, year, and edition number of a book are needed. Government documents are located by the name of the issuing body and such designations, as series number and date.

There are several sources for finding separately published bib-
Bibliographies. Bibliographies of bibliographies, such as *A World Bibliography of Bibliographies*, compiled by Theodore Besterman, and the *Bibliographic Index*, published by H. W. Wilson Company, are described with the tertiary sources in Chapter V. Abstracting and indexing journals often cover bibliographies which have been published as papers in journals. The *Textile Technology Digest* has entries referring to bibliographies under "Bibliographies," and also under the specific subjects.

A discussion of some of the bibliographies of importance to the textile investigator will follow. The bibliographies covering many kinds of primary information, those covering only journals, and then those covering only books will be reviewed in that order.

**Textile Bibliographies of Primary Sources**

Few published textile bibliographies include more than one kind of primary and secondary information. The American Chemical Society Symposium on the Literature of Textile Chemistry, published in the *Advances in Chemistry Series* No. 10 (1954), is a well-known source of bibliographies on the literature of natural fibers, man-made fibers, dyes, mordants, and bleaches, and textile processing and chemicals. Periodical articles, technical reports, company literature, books, reviews, other bibliographies, abstracts, indexes, and reference books are discussed and listed in these bibliographies. This publication will be further described in Chapter V along with the tertiary sources. Mary E. Emerson, the Librarian of the Institute of Textile Technology, compiled "Textile Literature: A Selected Bibliography for 1961." This bibliography refers to journal literature, government publications, abstracts, indexes, outstanding 1961 books, and reference books of par-
ticular interest to textile information specialists for answering research questions. F. W. Howitt compiled a Bibliography of the Technical Literature on Silk in 1947. It is a comprehensive survey of research literature through 1944, and at the end of each chapter there are bibliographies containing many references to journal articles, patents, books, and symposium papers. M. A. Jones compiled An Annotated Bibliography of Cotton Research at the Southern Utilization Research and Development Division in 1962. This was mentioned in Chapter III as being published by the Agriculture Research Service of the U. S. Department of Agriculture. It contains about 800 abstracts of publications which report findings of the Southern Regional Research Laboratory from 1941 through 1959. It has subject and author indexes.

The lists of references at the end of published papers and chapters in monographs and reference books are sources which should be consulted. The Textile Research Journal and both sections of the Journal of the Textile Institute publish papers which always include bibliographies referring to journal articles, patents, theses, government literature, company literature, and some secondary sources.

Bibliographies of Periodicals

In the abstracting and indexing section of this Chapter it was stated that these services frequently published lists of journals received or abstracted. These lists can serve as bibliographies of journals covering a particular field and allied fields of interest. The Technical Manual has a bibliography section which was mentioned with the abstracting services. It has a subject classified list of references to journal articles.
Several general sources have fairly comprehensive lists of journals and serials. The World List of Scientific Periodicals, \textsuperscript{258} 4th edition, published by Butterworths, lists the journals alphabetically by title for the years 1900-60 and indicates which British libraries hold them. The year of beginning publication and the place of publication are also given. The Ulrich's Periodicals Directory, \textsuperscript{259} 10th edition (1963), has compiled a comprehensive list of foreign and domestic periodicals which are arranged by subject and by title. The date of beginning publication, frequency, cost, name of editor, publisher and address, and comments on special features and circulation are given for each journal. Subject divisions which specially concern textiles are: "Textile Industries and Fabrics," "Cleaning and Dyeing," and "Clothing Trade." The British Association of Special Libraries and Information Bureaux (Aslib), Textile Group, publishes a Union list of holdings of textile periodicals. The New Serial Titles \textsuperscript{260} (1953-) with supplements and its predecessor, the Union List of Serials in Libraries of the United States and Canada, \textsuperscript{261} give the serial resources of North America. These are especially useful when there is a need for determining what libraries have certain journals, in order that they may be borrowed through inter-library loan services.

**General Bibliographies of Books**

Bibliographies of books are numerous. The general book trade tools will be described, followed by a few specialized textile book lists. These will again be referred to in connection with the section on books.

The major United States sources for lists of books, periodicals,
textile book publishers are currently publishing can be gained by scan-
ning the catalogs of the Textile Book Service, Reinhold, Wiley (Inter-
science), Davison Publishing Company, Van Nostrand, McGraw-Hill Pub-
lishing Co., Academic Press, and others in the Publishers' Trade List
Annual or by looking under the entries for the textile books in the
Subject Guide to Books in Print. The Publishers' Weekly has a "Weekly
Record" section which aims at prompt listing of every book published
in the United States during the current calendar year. The books are
arranged by author. The American Book Publishing Record\textsuperscript{269} is a monthly
cumulation of the "Weekly Record." Entries are arranged by the Dewey
Decimal classification, and there is a title index.

Two descriptive bibliographies are the Aslib Book List\textsuperscript{270} and the
Technical Book Review Index.\textsuperscript{271} The former is a monthly annotated list
of recommended scientific and technical books, arranged by the Universal
Decimal classification. The Technical Book Review Index is published
monthly by the Special Libraries Association as an evaluation source.
Critical statements written about books in journal review sections are
provided for those books indexed. When not much is known about a book,
these sources are sometimes helpful.

Textile Book Lists

Textile book lists may either be separately published or be papers
within a journal. Two published bibliographies in book form are: Law-
rie's \textit{A Bibliography of Dyeing and Textile Printing}\textsuperscript{272} (1949) and
Scott's \textit{Textile Bibliography} (1951), which appeared earlier in the Tex-
tile World.\textsuperscript{273} Lawrie's bibliography lists alphabetically by author
and chronologically a select group of books printed from 1500 to 1946.
The number of pages, place of publication, and date are given for each entry, and there is a subject index. Scott attempted to list every book on textile processing ever published in the English language. He arranges the books into 20 groups, some of which are: "Analyses and Calculations," "Chemistry and Dyes," "Design," "Engineering and Management," "Rayon and Synthetics," etc. There is also a directory of publishers.


Reference Literature

**Dictionaries**

Written and oral communication is dependent upon the use of words. More effective communication in any given field of knowledge is partly achieved through the use of a common terminology. As the field of knowledge advances, the terminology changes. Current dictionaries attempt to show present usages and meanings of words. The arrangement of most dictionaries is alphabetical by word with brief definitions, although some come very close to the subject coverage given by encyclopedias. The
discussion in this section will not be extended to foreign language dictionaries. These will be discussed in Chapter V.

Textile dictionaries are usually found listed with other books in the bibliographies described in the sections on books and bibliographies. Glossaries and dictionaries are often found within other sources of information. For example, the American Fabrics Magazine's Encyclopedia of Textiles and the Man-Made Textile Encyclopedia both have glossaries of terms used in the texts; in addition, the former has a 90-page dictionary of textile definitions.

**Standardized Terms.** The usage of textile terminology varies considerably from one country to another. British and American researchers often use the same word, each with their own special meaning. And, different words are used to express the same meaning. The terms, "weft" and "filling," are examples of the latter cases. Standardized United States definitions of textile terms are established under the jurisdiction of the American Society for Testing and Materials, Committee D-13 on Textile Materials. The Book of A.S.T.M. Standards on textiles and supplements has a section entitled, "Standard Definitions of Terms Relating to Textile Materials." The 1963 Supplement to Part 10 of the 1961 Book of A.S.T.M. Standards also has an appendix containing fabric defeat terminology and a list of terms relating to hand of fibers. The 1960 Federal Trade Commission's definitions of manufactured fibers are included. An authoritative British source published by the Textile Institute is Textile Terms and Definitions (1960). It has the support of the British Standards Institution, Retail Trading Standards Association,
representatives of industry, research associations, and textile departments of the universities.

Other Textile Dictionaries. Two older textile dictionaries often referred to are the American Callaway Textile Dictionary\textsuperscript{278} (1947) and the British Mercury Dictionary of Textile Terms\textsuperscript{279} (1950). The terms contained in the Callaway Textile Dictionary apply to yarns and woven fabrics (of natural and man-made fibers), including the dyeing and finishing processes and steps involved in production of the completed articles. Of more current interest are two American dictionaries covering the terminology of the textile industry: Fairchild's Dictionary of Textiles\textsuperscript{280} (1959) and The Modern Textile Dictionary\textsuperscript{281} (1963) by George Linton. Both sources include trade-marks and trade names of importance to the textile industry. Linton's dictionary has some illustrations. Excerpts from the Federal Trade Commission's definitions are given for manufactured fibers. A British dyeing and printing dictionary, Dictionary of Dyeing and Textile Printing\textsuperscript{282} (1961) by H. Blackshaw and R. Brightman has drawn freely on the definitions and terms made known by the Society of Dyers and Colourists.

Encyclopedias

Encyclopedias, like monographs, contain good background material on subjects. Some have references to primary and secondary information, which are useful when making a literature survey. Again, as with the other book sources, encyclopedias are included in the book bibliographies discussed previously and in the book section.
General. There are several general encyclopedias which can be of use to the textile investigator. The *Encyclopaedia Britannica* has much valuable historical information. Broad summaries of dyes, dyeing, textile printing, and textiles are included. The *McGraw-Hill Encyclopedia of Science and Technology* (1960 ed.) offers basic information covering the important topics in the textile field.

Textile. An historical approach to textiles is presented by the American Fabrics Magazine's *Encyclopedia of Textiles* (1960). This attractively illustrated source offers information in the following areas: "The Textile Fibers"--including man-made and natural--; "Textile Design," "Textiles in the Americas," "Manufacturing Processes," "Fabric Finishing," and "Specialty Uses of Textiles." There is an index to the volume and a 90-page dictionary of textile terms, as well as glossaries following many sections. The man-made fiber field is served with two good encyclopedias: *Man-Made Textile Encyclopedia* (1959) edited by J. J. Press and the *Encyclopedia of Polymer Science and Technology* (1964-). The *Man-Made Textile Encyclopedia* examines the fibers from their raw stage to the manufacture, marketing, and apparel renovation stages. The articles are written by professionals from important textile companies: American Viscose, American Cyanamid, Dow Chemical Company, Imperial Chemical Industries, Draper Corporation, British Nylon Spinners, etc. The writers refer to patent, journal, and some standards. Interscience, the publisher of the first volume of the *Encyclopedia of Polymer Science and Technology* plans to give full descriptions of the preparation, properties, processing, and uses of polymers. There is to be international coverage by writers who are outstanding authori-
ties.

**Others Related to Textiles.** Encyclopedias in fields related to textiles are also useful. The *Encyclopedia of Chemical Technology* (1947-56, revised 1963-) has much technical information on dyes, their application and evaluation, textile fibers, technology, and testing. The bibliographies refer to primary and secondary information. The patent literature is especially well represented. A similar German approach to fiber and dye technology is the *Encyklopadie Der Technischen Chemie*. The *Encyclopedia of Surface-Active Agents* (V. 1, 1952; V. 2, 1964) is an attempt by J. P. Sisley to record systematically the surface-active agents manufactured in all industrial countries. There is a section in V. 1, Part 1 on the uses of nonionic compounds in the textile industry. References are made to journal articles, patents, government literature, company literature, and monographs.

**Handbooks**

Tables of data compilations and short factual statements are found in handbooks. Normally, original references to the literature are not given. However, there are a few so-called handbooks which closely approximate the treatment given by specialized encyclopedias. Book lists and bibliographies, discussed in sections on books and bibliographies, often include references to handbooks.

**Chemical.** The Chemical Rubber Company's *Handbook of Chemistry and Physics* is a typical handbook. Among other entries, it has atomic weights and molecular weights of compounds, as well as physical and chemical properties of compounds (including commercial plastics and pigments). The textile fiber investigator may find specific data
in this source to be helpful. Another chemical handbook, *Handbook of Chemical Microscopy*[^1] has information on the methods of discovering molecular arrangement of high polymers and textiles by means of polarized light. This source is more encyclopedic in its coverage and format with literature references given. Volume I of the 3d ed. (1958) deals with the basic principles and use of microscopes and with the physical methods for studying chemical problems.

**Fiber.** The textile fiber handbooks are frequently limited to one kind of fiber. The handbooks for wool and cotton, *Wool Handbook*[^2] (1963) by W. Von Bergen and *American Cotton Handbook*[^3] (3d ed. in preparation) by G. R. Merrill and others, provide data on these fibers. The *American Cotton Handbook* offers information on the history, economics, processing, and testing of cotton. There is a bibliography which lists all kinds of primary and secondary information, as well as catalogs and directories. The two volumes of the *Wool Handbook* provide current data on all phases of wool production, manufacturing, and marketing. It also includes references to the literature. The format of the *American Handbook of Synthetic Textiles*[^4] (1952) by H. Mauersberger and others resembles that of the *American Cotton Handbook*. Both have advertisements and an advertisement index. The topics covered are similar, and they both have bibliographies referring to the literature. A more general source is the *Handbook of Textile Fibers*[^5] by Milton Harris. This handbook offers information on the structure, chemical properties, and identification of both natural and man-made fibers. Economic production data and chemical and engineering tables are included, as well as some references to the literature.
Textile Processing. A British author, A. J. Hall, has compiled several handbooks on certain areas of textile processing: *A Handbook of Textile Dyeing and Printing* (1955) and *A Handbook of Textile Finishing* (1957). They are designed to give the reader an idea of how these processes are carried on and some of the basic principles involved.

Textile Industry. There are textile handbooks which are more industrially oriented. The *Wellington Sears Handbook of Industrial Textiles* by E. R. Kaswell (1963) is a good example of a comprehensive textile handbook. There are chapters on the classification and preparation of natural fibers, classification and manufacture of man-made fibers, yarn manufacture, industrial fabric end uses, physical and chemical test methods. The appendix has a list of United States generic names and trade-marks of man-made fibers, as well as trade-marks of foreign fibers. There is an extensive bibliography referring to journal articles, monographs, and other kinds of literature. The Textile Book Publishers published two books in 1960 which contain data of importance to the textile industry: *Time Study Manual for the Textile Industry* by N. L. Enrich and *Handbook of Textile Testing and Quality Control* by E. B. Grover and D. S. Hamby. Mr. Enrich, as Associate Director and Head of Operations Research Division of the Institute of Textile Technology, has directed his attention to the problems of continuous and semi-continuous processing and the complex operator-machine cycles to be found in the textile industry. There is a bibliography of literature references at the end of the text. Both of the authors of the *Handbook of Textile Testing and Quality Control* are professors in the
North Carolina State College School of Textiles. The text, which is encyclopedic in nature, contains a discussion of the importance, factors influencing results, and techniques in making each test. There are chapters on fiber and yarn strengths, twist testing, evenness testers, and others. References are made to the literature, and there are numerous tables in the appendices.

Treatises

For the most comprehensive treatment of a subject, treatises are the best sources. Treatises resemble handbooks in that they are compilations of fact, and they are similar to monographs, but broader in scope. Indeed, several of the treatises to be examined are sets of monographs. Like monographs, treatises contain good background material and refer to much primary and secondary information. The large task of compiling treatises inevitably makes it difficult to keep them up-to-date, and it is wise to examine the preface of such publications to determine issue date and period of time covered. The size of treatises tends to make them more difficult to use than small monographs. The plan of organization, usually found in introductory notes, should be studied before attempting to find information. Treatises are listed with other books in most bibliographies. For a discussion of book bibliographies, see sections on bibliographies and books.

Exemplary treatises have been selected from those in the subject area of textiles. The organization of the information in these will be considered, along with other outstanding points.

Science of Fibers. A very comprehensive series of monographs entitled, *High Polymers*, published by Interscience, is one of the most
extensive treatises on the chemistry, physics, and technology of polymers. The first volume, *Collected Papers of W. H. Carothers on High Polymeric Substances*, was published in 1940. At present there are 20 volumes which examine all aspects of natural and man-made polymers. Polymers of particular current interest, such as polyethylenes and polyurethanes, were recently studied. Each volume has an index. References are made to journal, patent, government, and company literature, as well as monographs and reference books. Part II of Vol. 16, *Polyurethanes: Chemistry and Technology*, has an annotated bibliography of patents. United States patents relating to isocyanates and products derived from them are listed chronologically through 1961. This volume also contains a list of generic and trade names, the manufacturer, and short descriptions of the product.

**Technology of Fibers.** Two German sources for textile technology of natural fibers are: *Technologie der Textilfasern* edited by R. O. Herzog (1926-38) and a beginning treatise on cotton spinning, *Handbuch der Baumwollepinnerei*, by Otto Johannsen (1962-). Herzog's treatise in eight Volumes (26 Parts). The cultivation, processing, and economics of cotton, silk, and wool are described. In addition, there is one volume on jute, hemp, and hard fibers and one on rayon. Name and subject indexes are in each volume and there are references to journal and monographic literature. At present two Volumes of Johannsen's work have been published. They deal with the historical development of cotton spinning, raw cotton production, cotton fiber properties, and pre-spinning processes, such as carding, combing, drawing, etc.
Dyes and Dyeing. There are several treatises on textile dyes and dyeing. The Colour Index\textsuperscript{151} and the Technical Manual\textsuperscript{148} are two of the best sources on dyes. The second edition of the Colour Index was published by the Society of Dyers and Colourists and the American Association of Textile Chemists and Colorists in 1956. Prior to the first edition (1924) of Colour Index, the only comprehensive source list of dyes was a German publication, \textit{Farbstofftabellen},\textsuperscript{303} (1888, 1st ed.) edited by G. Schultz. The coloring matters were classified solely by their chemical constitutions. The editors of the first edition of Colour Index felt the need to classify dyes in terms of the methods of application, as well as that of the chemical constitutions. This approach has helped to make Colour Index one of the standard sources for the dye chemist as well as the dye plant operator. The second edition consists of three parts. The first part classifies the dyes and pigments according to the following usages: acid, mordant, basic, disperse, natural, food, leather, direct, sulphur, vat, ingrain, azoic, oxidation, pigments, solvent, fluorescent, brightening agents, developers, and reducing agents. At the beginning of each of these sections, literature references are given for further information. Each dye is given a usage number, and all known commercial names under which a dye is sold are given. Other information, such as methods of applying, fibers used upon, and the more important fastness properties are also listed. Part II classifies the dyes according to chemical constitutions and each constitution is given a five figure number. A list of these classes follows:
The colouring matters are grouped in the following classes and they appear in this order in Part II.

<table>
<thead>
<tr>
<th>Class</th>
<th>C.I. Numbers</th>
<th>Class</th>
<th>C.I. Numbers</th>
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<tbody>
<tr>
<td>Nitroso</td>
<td>10000-10299</td>
<td>Indamine</td>
<td>49400-49699</td>
</tr>
<tr>
<td>Nitro</td>
<td>10300-10999</td>
<td>Indophenol</td>
<td>49700-49999</td>
</tr>
<tr>
<td>Monoazo</td>
<td>11000-19999</td>
<td>Azine</td>
<td>50000-50999</td>
</tr>
<tr>
<td>Disazo</td>
<td>20000-29999</td>
<td>Oxazine</td>
<td>51000-51999</td>
</tr>
<tr>
<td>Trisazo</td>
<td>30000-34999</td>
<td>Thiazine</td>
<td>52000-52999</td>
</tr>
<tr>
<td>Polyazo</td>
<td>35000-39999</td>
<td>Sulfur</td>
<td>53000-54999</td>
</tr>
<tr>
<td>Azoic</td>
<td>37000-39999</td>
<td>Lactone</td>
<td>55000-55999</td>
</tr>
<tr>
<td>Stilbene</td>
<td>40000-40999</td>
<td>Aminoketone</td>
<td>56000-56999</td>
</tr>
<tr>
<td>Diphenylmethane</td>
<td>41000-41999</td>
<td>Hydroxyketone</td>
<td>57000-57999</td>
</tr>
<tr>
<td>Triarylmethane</td>
<td>42000-44999</td>
<td>Anthraquinone</td>
<td>58000-72999</td>
</tr>
<tr>
<td>Xanthene</td>
<td>45000-45999</td>
<td>Indigoid</td>
<td>73000-73999</td>
</tr>
<tr>
<td>Acridine</td>
<td>46000-46999</td>
<td>Phthalocyanine</td>
<td>74000-74999</td>
</tr>
<tr>
<td>Quinoline</td>
<td>47000-47999</td>
<td>Natural</td>
<td>75000-75999</td>
</tr>
<tr>
<td>Methine</td>
<td>48000-48999</td>
<td>Oxidation Bases</td>
<td>76000-76999</td>
</tr>
<tr>
<td>Thiazole</td>
<td>49000-49399</td>
<td>Inorganic Pigments</td>
<td>77000-77999</td>
</tr>
</tbody>
</table>

The system of nomenclature is that employed in Chemical Abstracts. A structural formula is shown for each dye, as well as methods of preparation, the inventor, if known, and literature references to patents, some standards, and journal articles. Part II also has an intermediate index to the compounds referred to in the previous preparation information. Part III contains fastness test data, produced by the American Association of Textile Chemists and Colorists, Society of Dyers and Colourists, and Deutsche Normen. There is a patent index to British, United States, German, French, etc. patents relating to the manufacture of dyes and pigments. The Conversion Tables equate the Part I and II numbers with those of the first edition of Colour Index. The commercial names of dyes and pigments are indexed. Finally, there is a Hue Indication Chart which aids in standardizing descriptions given by dye and pigment manufacturers. Quarterly "Additions and Amendments"
and supplementary volumes are published to keep the work current. The 1963 supplement follows closely the arrangement of the second edition. The usage of "reactive dyes" has been added to Part I, and both the section on sulphur dyes and the commercial names index have been completely rewritten. The Technical Manual is published yearly by the American Association of Textile Chemists and Colorists. This source is not as comprehensive as the Colour Index, serving more as an association yearbook than as a treatise on textile dyes. Parts I and VII have information on organization, activities, and membership of the American Association of Textile Chemists and Colorists. Part II lists test methods alphabetically and numerically. These tests deal with identification and analysis, colorfastness, physical and biological properties. Part III, the Bibliography section, has been referred to before. Journal articles on dyes and dyeing are arranged by author and subject, and there are lists of books published over a period of years. The 1963 edition has a book list covering the years 1943 to 1963. Part IV contains an alphabetical list of American-made dyes and pigments. These same dyes are then arranged into the Colour Index usage classifications. Whereas the Technical Manual seeks the cooperation of United States dye and pigment manufacturers, the Colour Index sought and obtained world-wide cooperation. Part V consists of a trade name index, use index, and directory to textile chemical specialties, such as adhesives, bleaching agents, curing assistants, etc. Part VI is an advertising section with advertisement index included. There is a subject index to the volume.

The German treatise on dyeing by Ludwig Diserens, Nueste Fort-

Books

Monographs and textbooks are to be considered separately from the reference literature previously described. Most books are compilations of primary and secondary information, and often there is a fine line of distinction between the different kinds. For example, a set of monographs on a subject could be called a treatise. And some handbooks are very much like textbooks. For the purposes of discussion, the
characteristics M. G. Mellon assigns to monographs and textbooks will be used in studying these textile sources. According to his concept, monographs generally present a state-of-the-art survey of a subject field. Often they are written, as are the American Chemical Society Monographs, for the purposes of stimulating further research in the special field. Textbooks, on the other hand, are primarily manuals of instruction which place the emphasis on the basic principles and are not as inclusive as monographs.

Some of the bibliographies of books were reviewed earlier in this Chapter with other kinds of bibliographies. These are all good sources for textile book lists. Current issues of most textile journals have book review or new books sections. Deutsche Textiltechnik, Industrie Textile, Indian Textile Journal, Man-Made Textiles, Southern Textile News, Textile Institute and Industry, Textile Recorder, and Textile Weekly are a few periodicals having these sections. The textile abstracting and indexing journals cover limited numbers of books. Reference literature—handbooks, encyclopedias, and treatises—and review literature include books in the chapter bibliographies.

Upon request, publishers will send out pamphlets and leaflets describing their books. The book review sources often help evaluate a book.

**Monographs**

Books are good background sources. Monographs are especially valuable in supplying needed bibliographic references to journal literature, patent literature, other monographs, and reference books. The investigators in the textile field have many monographs available for their use. It is beyond the scope of this work to make a comprehensive
list of these; instead, a small number will be selected to serve as illustrations. Recently, more and more monographs have been written on polymers and man-made fibers. R. W. Moncrieff's fourth edition (1963) of Man-Made Fibres\(^9\) gives detailed chemical and physical descriptions of the structure of man-made and natural polymers and their processing. There are further reading lists at the end of the chapters and a subject index to the book. A fairly thorough coverage of dyeing of polymers is Preparation and Dyeing of Synthetic Fibres\(^\)\(^{10}\) (1963) by H. V. Schmidlin. It deals with the pretreatment of synthetic fibers, their dyeing, and the dyeing of blends. There are many literature references and subject index. A Russian translation, The Technology of Polyester Fibres\(^\)\(^{11}\) (1963) by B. V. Petukhov, studies the theory involved in producing polyester from polyethylene terephthalate, properties of the fiber, and its applications and refers to journal and patent literature. For coverage of every available fiber—of animal, plant, or man-made origin—, Mauersberger's Matthews' Textile Fibres, Their Physical, Microscopic, and Chemical Properties\(^\)\(^{12}\) (1954) is a good source. The history, chemical and physical properties, microscopy, testing, applications, and economics are given for the fibers with large bibliographies. At the time of publication (1952), The Chemistry of Synthetic Dyes\(^\)\(^{13}\) (Vols. 1 and 2) by K. Venkataraman was a comprehensive survey from the standpoint of organic chemistry. The kinds of synthetic dyes, their application, identification, and testing were topics examined. Patents were cited very frequently, in addition to other kinds of literature. Monographs surveying a chemical product can be of interest to the textile field. For example, the American
Chemical Society Monograph, *Hydrogen Peroxide* (1955), by Walter C. Schumb, reports on the formation, physical and chemical properties, and uses of hydrogen peroxide. References are made to journal and patent literature, government publications, and other monographs. There are name and subject indexes. The special interest in nonwoven textiles has prompted the writing of *Nonwoven Fabrics* by Francis M. Buressh (1962). Information concerning the production, appraisal and merchandising of nonwoven fabrics is included. In addition to an index, there is an appendix listing nonwoven fabric producers.

**Textbooks**

The 1962 report of the Ad Hoc Textile Research Committee of the National Academy of Sciences-National Research Council stressed the need for textile textbooks. Only a few modern textbooks are written on textiles. These are largely written by British authors on the chemistry and physics of fibers. Little has been written on the principles of textile engineering. Most textile schools in the United States feel that a basic engineering knowledge can be applied to the engineering problems in textiles. Therefore, the textile student needs to turn to the mechanical, electrical, and chemical engineering textbooks for basic engineering principles.

_A Student's Textbook of Textile Science* (1963) by A. J. Hall, *Textile Chemistry* (Vol. 1, 1963) by R. H. Peters, and *Dyeing with Coal-Tar Dye stuffs* (1964) by C. M. Whittaker, are typical examples of modern textile science textbooks. Peters, who is Professor of textile chemistry at Manchester College of Science and Technology, gives a good discussion of the formation of man-made polymers and the struc-
ture of man-made and natural polymers. There are a large number of references to journal articles, symposium papers, and other monographs and a subject index to the volume. A valuable introduction to the principles of textile test methods, *Principles of Textile Testing*, was written by J. E. Booth (1961). This textbook was prepared to be used in conjunction with the *British Standards Handbook* No. 11, "Methods of Test for Textiles," and there are many references to journal articles, standards, and patents. Two British publications, *Mechanics for Textile Students* (1954) by W. A. Hanton and *Textile Engineering Processes* (1959) edited by A. H. Nissan, present the mechanical aspects and engineering principles for the machine user. The staff of the International Correspondence Schools and the International Textbook Company have put out a series of books (1905-48) which discuss such topics as: cotton opening and picking, winding and twisting, drawing and roving processes, weave construction and cloth analysis, fancy looms and attachments, warping and slashing, and many others. These assume some engineering background and are written to be used in conjunction with equipment manuals in operating machines.

**Laboratory Manuals**

Another form of instructional source is the laboratory manual, used mainly in textile chemical subjects. A manual by Bruce E. Hartsuch, *Textile Chemistry in the Laboratory* (1950), outlines experiments illustrating chemical reactions involved in the preparation, manufacture, processing, and maintenance of textile materials. It accompanies the textbook, *Introduction to Textile Chemistry*, also written by Hartsuch. Arthur C. Hayes, Associate Professor in textile
chemistry at North Carolina State College, wrote a manual in 1961 entitled, *Experiments in Wet Processing Textile Fibers*. Its purpose is to familiarize the student with various fibers' behavior towards dyestuffs and other chemicals used in plant processing. Mr. Hayes also devised a course outline, *Some Aspects of Textile Finishing*, which is designed for the use of non-textile chemistry majors.
CHAPTER V

TERtiary SOURCES FOR SCIENCE AND TECHNOLOGY OF FIBERS

Introduction

The tertiary sources aid in searching the primary and secondary sources of information. Guides show the kinds of information sources published in a subject area. Directories and trade catalogs are the only complete sources for lists of manufacturers, their addresses, and products (descriptions and prices). Biographies offer needed details about well-known men working in different occupations. Language dictionaries show equivalent words among languages, and are helpful in reading information written in foreign languages. Before the work of an extensive literature search is begun, it is wise to check whether any kind of bibliography has been prepared on a specific subject. Bibliographies of bibliographies offer subject lists of such compilations.

Guides

Reference was made in the "Introduction" of this work to the existing studies of the textile literature sources. All of these, with the exception of the Business Service Bulletins Nos. 109, 111, and 131, are papers within a larger published work. The textile guides can be divided into four groups:

1. General guides to textile literature.

2. Guides to the literature of natural fibers.

3. Guides to the literature of man-made fibers.
4. Guides to the literature of textile chemical processing (including dyeing and bleaching).

Each of these will be described and compared. Following this material will be a discussion of other guides which can be of help to the person seeking textile information.

Textile

The paper, "Textile Information: How and Where to Find It,"12 by Vernon D. Freedland, is a general guide to the textile information sources. It covers many of the textile sources of information available, however, the arrangement leaves much to be desired by the American user. It is written from the British point of view and has a more thorough coverage of British sources than do the American guides. Guides to the literature of natural fibers are: "Literature of the Natural Fibers,"327 by Ruby K. Worner and Dorothy B. Skau and Business Service Bulletins No. 109, "Miscellaneous Vegetable Fibers,"14 and No. 131, "Cotton and Cotton Manufacturers."16 The paper by Worner and Skau was delivered at the 1954 American Chemical Society Symposium on the Literature of Textile Chemistry. The sources for fiber classification, nomenclature, and background information are first reviewed, followed by specific sources for the individual fibers: cotton, wool, silk, and long vegetable fibers. The abstracting and indexing services, periodicals, and bibliographies are covered. The extensive bibliography at the end is very useful. The Business Service Bulletins list United States Government publications and some non-government publications. They are both prepared by the staff in the Textiles and Clothing Division of the Business and Defense Services Administration of the United States Department of
Commerce. Information on cotton and miscellaneous vegetable fibers is listed as issued by various bureaus of the Department of Commerce, Department of Agriculture, Labor, Federal Trade Commission, U. S. Tariff Commission, and Congress. Non-government publications include some books, trade journals, and directories. Trade associations of interest are also listed. There is no discussion of the sources other than a few brief annotated comments. The guides to the man-made fiber literature are: "Finding the Facts on Man-Made Fibres,"¹³ by Mary Dean, "Literature of Man-Made Fibers,"³²⁶ by C. C. Conrad and P. M. Levin, and the Business Service Bulletin, No. III, "Man-Made Fibers, Yarns, and Fabrics."¹⁵ The first section of Miss Dean's paper covers some of the abstracting services, journals, review literature, monographs, handbooks, and company literature dealing with the chemistry and physics of man-made fibers. The second section handles the sources for production of man-made fibers--yarn preparation, conversion of yarns to fabrics, dyeing, and finishing--and economics. Conrad's paper, another part of the 1954 American Chemical Society Symposium, deals with topics similar to the ones used by Miss Dean. Again, the bibliography at the end of the paper is a good source of information. The format of the Business Service Bulletin No. III is like that of the other two on natural fibers, however, the introductory matter is more extensive. There are tables showing the amount of man-made fiber production and location of plants producing the fibers. Two more American Chemical Society Symposium papers on textile chemical processing literature are: "Literature of Dyes, Mordants, and Bleaches,"³²⁹ by Dorothy M. Crosland and W. H. Cady and "Literature of Processing and Textile Chemicals,"³³⁰ by
S. Jack Davis. Mrs. Crosland's paper consists of a brief discussion of the different types of sources available and then a large bibliography covering other bibliographies, directories, dye company literature, journals on dyeing or related subjects (research and trade), journals abstracting patents, and books on bleaching, dyeing, and printing.

The paper by Jack Davis discusses the chemicals and processes in yarn manufacture and fabric finishing. Included with his paper is a "Selected Bibliography of Textile Literature on Processing and Textile Chemicals." This contains information sources for general processing, sizing materials, general and specific proofing, soaps and detergents, processing oils, special processing chemicals, and twist setting agents.

There is a large number of guides to many other kinds of literature sources which may be helpful to the textile searcher. A great majority of these are published in book or pamphlet form for use by literature searchers.

Others

A guide to reference sources, *Reference Books; A Brief Guide for Students and Other Users of the Library*, compiled by Mary Neill Barton, is instrumental in giving a broad picture of what kind of general sources there are and what they contain. A small section lists reference books in the sciences (physical, biological, and applied). The field of science and technology are covered by general and specialized guides. The publication, *A Guide to the World's Abstracting and Indexing Services in Science and Technology* was described in Chapter IV. A compilation by Frances Jenkins, *Science Reference Sources*, is designed to present to non-science students a survey of the information
sources for science and technology. Sources for the following divisions are examined: general science, mathematics, physics, chemistry, astronomy, geological sciences, biological sciences, psychology, engineering sciences, agricultural and medical sciences. A guide by J. E. Holmstrom entitled, Records and Research in Engineering and Industrial Sciences,¹ is aimed at industrialists. The following specialized guides to the chemical literature have been referred to before: Guide to the Literature of Chemistry,⁹ by E. J. Crane and others; Chemical Publications,⁸ by M. G. Mellon; and Use of the Chemical Literature,¹⁰ by R. T. Bottle. Both Mellon and Crane include literature sources for textile chemistry. Mellon's study is much more condensed than Crane's. A section on library problems is found in Mellon's guide. The problems are a good test of whether a student knows what kind of information is found in each of the chemical sources. Other specialized guides have also been published for such fields as biology, mathematics, and physics.

Directories and Manufacturers' Catalogs

The large part played by manufacturers' literature has been pointed out in Chapter III. It was stated that information found in the technical bulletins and equipment manuals, concerning the use of specific products, is rarely published in any other form. For those interested in acquiring this technical information or in buying and selling specific products, directories and trade catalogs serve as invaluable guides to manufacturers, their addresses, and products.

A few of the general business directories are first discussed. The textile field is fairly well covered by its own directories which
are also considered, along with buyers' guides. The types of manufacturers' catalogs of interest to the textile investigator and the kind of information found in them are the last topic presented in this section.

General Business Directories

Two annual directories, *Thomas' Register of American Manufacturers*\(^{333}\) (1905-) and *Kelly's Directory of Merchants, Manufacturers and Shippers*\(^{334}\) (1887-), are well-known to American and British businessmen. *Thomas' Register* proposes to list the products of all known American manufacturers who sell their products or services nationally or internationally. The first three volumes are classified product directories, and the fourth volume contains an alphabetical list of manufacturers and trade-marks. The Thomas Publishing Company also has a micro-catalog service which offers microfilm catalogs of many of the companies included in *Thomas' Register*. *Kelly's* has a classified directory and an alphabetical list also. In addition to including manufacturers of Great Britain, Northern Ireland, and the Republic of Ireland, there is a representative amount from continental Europe, overseas Commonwealth nations, Africa, America, and Asia. A United States directory of industrial equipment, products, and materials, *MacRae's Bluebook*\(^{335}\) is compiled for engineering, production, and purchasing executives. The classified volume has entries under "Textile equipment and supplies," and "Textile machines and supplies," etc. A chemical company directory, *Directory of Chemical Producers*\(^{336}\) (1961-), published by Stanford Research Institute, is a loose-leaf publication. The product section includes dyes, elastomers, plasticizers, surface active agents, and others of
textile interest. There are three more sections: company (alphabetical list of plants and products), region (producers arranged by state and city), and new plants and expansion sections.

Textile Directories

The Davison Publishing Company is the major annual producer of United States textile directories. Some of the directories published by the company are:

1. *Davison's Cordage, Twine, and Duck Trade*[^337] (1901-)
2. *Davison's Knit Goods Trade*[^338] (1906-)
3. *Davison's Synthetic and Silk Red Book*[^339] (1896-)
5. *Davison's Textile Directory for Executives and Salesmen*[^340] (1911/12-)

Numbers 3 and 4 are comparable to the British publications, *Skinner's Wool Trade Directory*[^341] (1927-) and *Skinner's Cotton and Man-Made Fibres Directory of the World*[^342] (1923-). However, the Thomas Skinner and Company Publishers claim to publish guides to the world's textile manufacturers, whereas the Davison's publications are primarily directories to United States and Canadian manufacturers. Skinner's directories contain German, French, and Spanish indexes aimed at the European industrialist. Classified directories or buyers' guide sections are generally included in all of these publications. The Davison's directories usually also list manufacturers by state and city. Available information on each company is given: county in which located and population, number of railroads accessible, names of company executives and their positions, kinds of textile work being done, amount of equipment, phone number, and capital, if known. Both Davison's and Skinner's
directories have alphabetical indexes to firms or mills, in addition to other kinds of indexes. Most of the directories have indexes to the advertisements which they contain. Both Davison’s Synthetic and Silk Red Book and Skinner’s Cotton and Man-Made Fibres Directory have alphabetical lists of fiber trade-marks. The Davison publication No. 5 is a handy little pocket edition, in which the textile plants are arranged geographically. Special textile mill maps and a railroad list are provided. A similar pocket directory by Clark Publishing Company is Clark’s Directory of Southern Textile Mills. A British directory, Textile Machinery Index (3d ed., 1961), was compiled in cooperation with the Textile Machinery and Accessory Manufacturers’ Association of England. It includes firms engaged in textile machinery, accessories, mill supplies, and services. There is a buyers’ guide section to the products and services.

**Buyers' Guides**

Buyers' guide sections or classified product lists are found in the directories previously examined. In addition, buyers' guides to textile manufacturers can be located in special annual issues of trade journals, some of which were mentioned in Chapter III. The following is a more complete list: America’s Textile Reporter, Textile Statistics Section (July 20, 1964); Chemical Week Buyers’ Guide Issue (October 24, 1964); Oil, Paint, and Drug Reporter Buyers’ Directory Issue (September, 1964); Textile Industries Buyers’ Guide (mid-September, 1964); Textile Mercury International (directory of machinery makers, supplies, and services each issue); Textile Organon (a directory of U. S. man-made fiber producers in September, 1964, issue);
"Fact File Issue" (July, 1964). Some of these have special features. For example, the issue of America's Textile Reporter has a directory of textile mills which are arranged geographically. Information about each company, similar to that in the Davison's directories, is given. The Chemical Week Buyers' Guide Issue is divided into three sections: chemicals, packaging/shipping, and equipment. Small company catalogs are included in each section as well as lists of trade names.

The issue of Textile Industries has a new product review section as well as a classified product directory. All areas of the textile industry are reviewed. Pictures are given for some products and available free literature is described. Buyers' guides are also included in the Technical Manual of the American Association of Textile Chemists and Colorists and in the Manual of the Textile Industry of Canada (1928-) published by the Canadian Textile Journal Publishing Company, Ltd.

Each manual has a textile chemical specialties section in addition to a buyers' guide section. The Technical Manual has an alphabetical, a classified, and a company name index to the chemical specialties. The company list includes information on use and chemical nature of the product. Similar information is given in the Canadian manual. In addition, it contains a Canadian mill directory section. The mills are arranged alphabetically with information on each one similar to that given in the Davison's directories.

For comprehensive listings of an individual company's products, it is necessary to turn to the manufacturers' catalogs. Reference is often made to these in trade journals, either in advertisements or in company literature review sections. The manufacturers' catalogs, in most
cases, can be acquired by request to the company, whose address can be found in the directories described above.

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**Chemical Materials Catalogs**

Chemical materials catalogs are good sources for information on the availability, price, grade, properties, and uses of particular chemicals. Equipment catalogs include drawings and precise specifications. E. J. Crane states that old catalogs have value in case of patent litigation or in state-of-the-art literature searches. Also, manufacturers' catalogs are good sources for lists of new products and trade-marks.

The *Thomas' Register* micro-catalogs have already been mentioned as a collective source for company catalogs. Two sources for chemical company catalogs of interest to the textile industry are: *Chemical Materials Catalog* (15th ed., 1964) and the Buyers' Guide Issue of *Chemical Week*. Condensed catalogs of such companies as, Allied Chemical Corporation, American Cyanamid Company, Celanese Chemicals Company, Du Pont, Eastman Chemical Products, Inc., Monsanta, and Rohm and Haas Company, are included. More complete catalogs can be ordered through the pertinent company divisions. To illustrate, the polymer products of Du Pont are handled through the Electrochemicals Department. The "Du Pont Product Information Guide" and other chemical company catalogs give product and shipping data, description of the chemicals, and major uses. Most chemical companies have separately published catalogs. For instance, the Ciba Co., Inc., has compiled a list of all its chemical specialties for the textile, paper, metal, and leather industries. The trade name, uses, properties, and amount re-
quired of each product is given. Du Pont publishes a products index which has brief chemical descriptions of each product. There are also trade-mark, industry and geographical sections.

**Equipment Catalogs**

The textile researcher and technologist at one time or other is interested in laboratory apparatus or textile equipment catalogs. Again, the companies can be written directly for equipment catalogs. Scientific apparatus companies, such as Arthur H. Thomas Company, Will Corporation, and E. H. Sargent and Company, have large bound catalogs describing laboratory equipment. Textile equipment manufacturers likewise have product catalogs.

**Biographies**

Often, there is a need for biographical data about workers in one's particular field. The general and specialized sources for biographical material usually include present occupation, birth information, education, family information, work history, and home address. Some give club and society affiliations and publications. It must be remembered that each kind of biographical source has its own criteria for inclusion of individuals. The introduction usually establishes the bases for qualification. Personnel and obituary information can be found in trade journals, and organization yearbooks publish membership lists. Specific examples of each of these biographical sources of value to the textile investigator will be considered.

**General Indexes**

The *Biography Index* (1946-) published by the H. W. Wilson
Company is a cumulative index to biographical material found in books and journals. The textile industry has some coverage in this index.

Two more American biographical sources are the *Dictionary of American Biography* for deceased individuals and the *Current Biography*. The *Current Biography* provides lengthy sketches on well-known people of all nationalities in the fields of "engineering," "industry," "science," "technology," and others. The individual's publications and references to biographical information in other publications are both listed. The British *Who's Who*, the *Who's Who in America* (1899-), and the *Who's Who in the South and Southwest* (1947-) contain biographical information on renowned people in many fields.

**Industrial Indexes**

Two sources having biographical data on businessmen are: *Poor's Register of Corporations, Directors, and Executives* (1928-) and the *World Who's Who in Commerce and Industry* (1936-). *Poor's* has information on individuals serving as officers, directors, trustees, partners, etc., in business and professional organizations. It also has an obituary section which has some biographical data on individuals who have died within the past year. Part I of the *World Who's Who in Commerce and Industry* consists of biographical information on executives, and Part II is a business index to these executives. The executives are listed alphabetically under each business.

**Science and Technology Indexes**

The biographical sources for scientists and technologists are especially helpful in listing the researcher's publications and field
of interest. The *American Men of Science* (1906-) and the *Directory of British Scientists* (1963-) contain information on scientific researchers. The *American Men of Science* has volumes on individuals in the physical and biological sciences and the social and behavioral sciences. The Lewis Historical Publishing Company with the guidance of the Committee of Engineers Joint Council publishes *Who's Who in Engineering* (1922-23). The names of the individuals are arranged alphabetically, and there is a geographical index. A very good and thorough German source for biographies on famous scientists is Pogendorff's *Biographisch-Literarisches Handwörterbuch* (1863-1904, 1926-40, 1955-) for the years from 1857 to 1955. This work contains brief biographical information and lists of a man's publications.

**Yearbooks**

Membership lists of associations and societies may be found in yearbooks and annual reports of these organizations. To illustrate, the *Tappi Year Book*, *ASTM Yearbook*, and the *Technical Manual* of the American Association of Textile Chemists and Colorists have complete membership lists each year. The *Year Book* of the Textile Institute and the *Annual Report* of the Textile Research Institute include committee lists each year, and the Textile Institute publishes occasional lists of members in the *Year Book*.

**Sections in Journals**

Many trade journals report on personnel and obituary news. The personnel news usually covers promotions, resignations, transfers, appointments, and honors. The biographical data is restricted to job histories and educational training. Sometimes pictures of individuals
are given. The obituaries state the date of death, if known, in addition to job histories. Examples of textile trade journals carrying monthly and weekly personnel and obituary information are: *American Dyestuff Reporter*\(^\text{29}\) ("Personalities in the News," and "Obituaries"), *America's Textile Reporter*\(^\text{41}\) ("Who's Who," and "Obituaries"), *Canadian Textile Journal*\(^\text{40}\) ("Personnel News in Brief"), *Textile Bulletin*\(^\text{93}\) ("Personnel News" and "Obituaries"), and *Textile World*\(^\text{45}\) ("News About Men").

**Language Dictionaries**

Examples of translations of foreign textile journals were given in Chapter III (periodical section), and the Department of Commerce publication, *Technical Translations*,\(^\text{127}\) was referred to in that chapter (institutional publications section). Even with these kinds of sources available, as well as competent translators, there are times when a researcher needs to undertake his own translating of information in foreign languages. The purposes of bilingual and polylingual dictionaries are to give equivalent words or phrases in the different languages; they do not define words, as do the dictionaries discussed in Chapter IV.

**Bibliographies of Language Dictionaries**

The book bibliographies, which were studied in Chapter IV, usually include language dictionaries with the other books listed. A special kind of bibliography published by UNESCO entitled, *Bibliography of Interlingual Scientific and Technical Dictionaries*\(^\text{364}\) (1951, 1953, 1961) by J. E. Holmstrom, has fairly extensive lists of diction-
aries. The entries are arranged according to the Universal Decimal Classification. In the 1961 edition, listed under classification "677--Textile Industries," there is a compilation of textile dictionaries. The National Bureau of Standards has recently issued (July, 1964) a similar type of publication, Foreign-Language and English Dictionaries in the Physical Sciences and Engineering: A Selected Bibliography 1952 to 1963, by Tibor W. Marton. This bibliography, which is English-language oriented, includes 2,800 dictionaries (unilingual, bilingual, and polyglot) in the physical sciences, engineering, and technology, published in the past 12 years. The subject area of particular interest to textile investigators is "Textile chemistry, engineering, and industry." The chemical and engineering foreign language dictionaries are often useful for finding many technical terms found in textile publications. The chemical guides by Crane and Mellon both include lists of foreign language dictionaries.

The textile foreign language dictionaries are almost as scarce as the textbooks and about as out-of-date. Examples of some textile bilingual and polylingual dictionaries are briefly described. Most of these were included in the Bibliography of Interlingual Scientific and Technical Dictionaries.

Bilingual Textile Dictionaries

Of the bilingual textile dictionaries, the German-English ones are more abundant and current. Some of the bilingual German dictionaries are: Dictionary of Textile Terms by Michael Polanyi (1956); Wörterbuch der Textilindustrie, Vols. 1 and 2 by Louis De Vries (1959-60); Textilveredelung und Angrenzende Gebiete by Rudolf Kret-
... and the *Fachwörterbuch für Die Farbstoffe und Textilhilfsmittel Industrien* compiled by Interessengemeinschaft Farbenindustrie Aktiengesellschaft (1947). The first two include terms used in all areas of textiles. The last two cover terms used mainly in the dyeing of textiles. All of these sources have English-German and German-English sections. The *English-Russian Textile Dictionary* by Zelikh Rabinovich (1961, 2d ed.) is limited in its use, because there is no Russian to English part. A Latin American bilingual dictionary, *Diccionario Textil Panamericano* (1949) by Rodríguez Ontiveros, has both Spanish-English and English-Spanish parts. A Swedish source, *Swedish-English Textile Glossary* by Frances Cohn (1944) has a somewhat different format than most foreign language dictionaries. The textile vocabulary is listed in Part II, and glossaries are given for weaving equipment (Part I), colors (Part III), and art weaves (Part IV). Again, this source is limited, because it offers only a Swedish to English approach.

**Polylingual Textile Dictionaries**

Two textile dictionaries in 5 languages are: *Podręczny Słownik Włókienniczy* by Wacław Fabierkiewicz (1955) and *Piccolo Dizionario Tessile in Cinque Lingue* by Paul Puppinck (1956). The Polish dictionary also includes Russian, English, French, and German terms. The Polish terms are listed in alphabetical order followed by equivalent terms of the other four languages. In addition, there are Russian, English, French, and German indexes to the Polish terms. The Italian source has only entries for the Italian terms followed by the corresponding French, German, English, and Spanish terms. Mr. Freedland...
refers in his paper, "Textile Information: How and Where to Find It," to the textile sections in the *Schloman-Oldenbourg Technical Dictionaries in Six Languages*—English, German, French, Russian, Italian, and Spanish. Volumes 14-16 (1923-5) handle terms used for textile raw materials, spinning, weaving, and woven fabrics.

**Bibliographies of Bibliographies**

Bibliographies of bibliographies were mentioned in Chapter IV as being source lists for bibliographies. Two of these were cited: *A World Bibliography of Bibliographies*, four volumes (3d ed., 1955-6), and *Bibliographic Index* (1937-). The former is especially useful in locating older separately published bibliographies, international in origin. Emphasis is placed on the humanities, but there is a small number of entries under the subjects, "Textiles, Textile Technology," and "Fabrics and Weaving." The H. W. Wilson publication, *Bibliographic Index*, is a quarterly with annual cumulations. About 1,500 periodicals are examined for material. The abstracting and indexing services for textiles, as well as a limited number of other bibliographies, are listed under the headings, "Dyes and Dyeing," "Textile Design," "Textile Fabrics," "Textile Fibers, Synthetics," "Textile Industry," etc.
CHAPTER VI
PROCEDURES IN SEARCHING THE LITERATURE
OF FIBER SCIENCE AND TECHNOLOGY

The proof of an investigator's knowledge of and familiarity with the information sources pertaining to his field of study is his ability to make an accurate and efficient search of the literature. Searching the literature has been called an art and is many times given the same respect and recognition as work carried on in a scientific laboratory. In fact, a comprehensive search prior to research undertakings often makes it unnecessary to reconstruct laboratory work already done and recorded and also provides new ideas for further research investigations.

The three kinds of literature searches--current awareness, data, and state-of-the-art--are reviewed in this last Chapter. In Chapters III-V the author has attempted to give a fairly complete coverage of the sources of information available to the textile scientists and technologists. The purpose of this last chapter is to demonstrate how the information sources described in Chapters III-V can be used in making the three kinds of literature searches. However, it must be remembered that the information sources for any field of knowledge are not complete within themselves. This is especially true with fiber science and technology. Not only is a familiarity with textile sources necessary, but, also those in many allied fields.
Current Awareness Searches

A current awareness search is less time consuming than the other two and is accomplished by day-to-day journal reading. The large problem faced by professionals is the decision of which ones to consult out of the mass of journals published in his field. For example, the Institute of Textile Technology subscribes to approximately 300 journals in the textile and allied fields. The task of scanning ten journals a day in an hour or so, allotted for reading, is indeed strenuous. An interesting study of this problem is the paper, "Deciding What to Read to Keep Informed," by C. W. Hanson. The results of five surveys made on the reading habits of scientists and technologists showed that from two to six hours a week were spent reading. The findings state that keeping up-to-date involves scanning regularly and sometimes reading fully about six selected journals and also scanning regularly an abstract journal in one's field. The selection of journals to scan often appears to be an arbitrary one. The choices made by the professionals answering the questionnaire (p. 22, Chapter III) place trade journals and papers in most of the top 12 positions. The Textile Technology Digest and, secondly, the Abstracts section of the Journal of the Textile Institute are considered useful abstracting journals to scan. The journals containing research articles—American Dyestuff Reporter, Textile Research Journal, Journal of the Society of Dyers and Colourists, and Proceedings of the Journal of the Textile Institute—achieved positions in the top twelve, also. Many of the people answering the questionnaire indicated that the company for which they worked subscribed to and made available the journals they use.
One mill executive limited his journal reading to four trade publications. His system involves scanning these journals and checking the articles of particular importance to him, often reading these entirely, and, upon discussion with his fellow workers, he often refers back to articles he has missed. Another executive stated that he depends on only three trade journals for current awareness in the textile industry. A textile engineer found six trade journals to be useful in his work. Most of the others he does not have the opportunity to use. The paper by C. W. Hanson advocates scanning at least one journal which is less specialized than those covering one's own field of work. In this respect, the business sources, Wall Street Journal and Forbes, were the most useful to the people answering the questionnaire.

**Data Searches**

Data searches involve the location of specific facts. As Lucy O. Lewton indicates in her paper, "The Art of Searching the Literature: I. Search for On-the-Spot Information," data searches are concerned with such questions as: "What is it? What is it like? What is it for? Who makes it? How much does it cost? How much is there of it? What does it mean? Who is he and where to address him? How safe is it?" This paper consists of discussion and lists of reference literature, directories, biographical material, etc., which can be used to answer the above questions. Miss Lewton, who was employed with Celanese Corporation of America, is especially familiar with textile sources, some of which are included. M. G. Mellon has a list of types of specific questions which are asked in the chemical field. The following is a
similar list of textile data questions. Almost all of these can be answered by reference literature, monographs, directories, and biographical material. Beside each question is an example of a source which can be used to answer it.

Types of Specific Data Questions

1. **HISTORY AND BIOGRAPHY:**
   - a. Perkin's life and publications
     - Biography in Poggendorff's *Biographisch-Literarisches Handwörterbuch*
   - b. History of rayon
     - *Man-Made Textile Encyclopedia* 276

2. **USES:**
   - a. Methods of application of vat dyes
     - *Encyclopedia of Chemical Technology* 165
   - c. Industrial uses of nylon fiber
     - *Man-Made Fibres* 309 by Moncrieff

3. **TRADE-MARKS AND TRADE NAMES:**
   - a. List of foreign trade names for nylon
     - *Wellington Sears Handbook of Industrial Textiles* 296 by Kaswell
   - b. What is Zantrel?
     - *Davisson's Synthetic and Silk Red Book* 339

4. **PRODUCERS AND PRODUCT LISTS:**
   - a. Who produces Albone?
     - Textile chemical specialties section of *Technical Manual* 148
   - b. What polymer resins does the Chemstrand Company produce?
     - *Chemical Week* 94 Buyers' Guide issue

5. **COSTS:**
   - a. Current price of hydrogen peroxide
     - *Oil, Paint, and Drug Reporter* 91
b. List price of Kodel staple

6. **PRODUCTION AND PREPARATION**
   a. Process of dyeing nylon with acid dyes
   b. How is cotton mercerized?

7. **CHEMICAL AND PHYSICAL STRUCTURES AND PROPERTIES**
   a. Chemical structure of a particular acid dye
   b. Birefringence of saran

8. **ECONOMIC DATA**
   a. Statistics on production of nylon
   b. U. S. consumption of cotton fabrics

9. **TESTING AND IDENTIFICATION**
   a. Tests for identification of dacron
   b. Colorfastness tests for rayon

10. **DEFINITIONS AND TRANSLATIONS OF TERMS**
    a. What is stock dyeing?
    b. What does the German word, "dauerappreturen," mean?

Source

- Eastman Kodak Co. price list
- *Preparation and Dyeing of Synthetic Fibres* by Schmidlin
- *Handbook of Textile Finishing* by Hall
- *Colour Index*
- *Wellington Sears Handbook* by Kaswell
- *Textile Organon*
- *Current Industrial Reports* (Bureau of Census)
- *Book of A.S.T.M. Standards*
- *Technical Manual of AATCC*
- *Dictionary of Dyeing and Textile Printing* by Blackshaw
- *Wörterbuch der Textilindustrie* by De Vries
State-of-the-Art Searches

Of all three kinds, the state-of-the-art search is the most comprehensive and time consuming. Numerous papers and books have been written on the methods for making an extensive search. The guides to the chemical literature--Crane, Mellon, and Bottle--all have chapters on state-of-the-art searching. The American Chemical Society Advances in Chemistry Series No. 30, entitled, Searching the Chemical Literature (1961), has many papers on specific search procedures employed by chemists and chemical companies. An article by H. E. Voress, "Searching Techniques in the Literature of the Sciences," sets down 15 steps to be followed in making a systematic survey of the literature. It is worthwhile for an investigator to follow a procedure similar to this one, in order that he can proceed effectively from tertiary, to secondary, to primary sources and cover as much of the information as needed. Included in Appendix F is a list of steps the author considers useful. The following discussion will refer to these steps, which are flexible and can be modified according to the purposes and kinds of searches. For example, the procedure in patent searching referred to in Chapter III differs somewhat from other kinds.

Steps in Searching

Degree of success or failure of the final product depends upon the preliminary work done in a search (steps Nos. 1-11). At this point, it is necessary to define the subject to be surveyed, determine period of time to be covered, and the final form of the literature search findings. The textile field is, as has been indicated, a prime example of a highly interrelated field. Advances in other fields can
have an impact on many aspects of fiber science and technology, therefore, the definition of the scope must include a statement of the scope or fields to be covered and their completeness. If the search is being done at the request of someone else, discussions should be arranged, so that the subject to be searched and needs of the requester can be clarified. The time coverage is important, because this places limits on the sources to be examined. The final arrangement must be determined at the outset, in order to prevent unnecessary work at the end, due to recopying of notes, etc. Background material found in monographs and encyclopedias is especially valuable for orienting a searcher on a subject about which he is not familiar. Histories in such sources often give landmarks which can have important bearing on searching. For example, information on the study of high polymer fiber technology goes back only about 30 years, and searching for information before that time would be fruitless. The guides to literature sources, described in Chapter V, are useful in approaching the literature (step No. 5), and union and card catalogs to library collections are also helpful. Most textile schools and companies have their own collections of journals, serials, reports, and books. Much information on what sources are available can be found in the catalogs of these collections. The Union List of Serials in Libraries of the United States and Canada, mentioned in Chapter IV, and the "List of Periodicals Abstracted by Chemical Abstracts," (issued every five years) give names of libraries holding serials and periodicals. Special collections often have sources which cannot be found anywhere else. To illustrate, the Basic Data Section of the Industrial Development Division of Georgia Institute of
Technology offers essential basic information on Georgia's cities, counties, resources, and industries, many of these being textile. Much of this information has been clipped from numerous newspapers and arranged in a vertical file. Bibliographies, because they are the results of other literature searches, can often make literature searching much easier by supplying a great deal of the information needed. Review literature, as was emphasized in Chapter IV, is very instrumental in showing trends in research over yearly periods. It also provides references to primary and other secondary information. Upon accomplishing steps Nos. 4-8 and examining the literature sources, it is possible to select a workable list of basic sources which are mainly secondary sources and pertinent journals. The last two steps in the preliminary work involve becoming familiar with the abstracting and indexing services and making a list of subject headings for the search proper. A familiarity with the indexing and abstracting services consists of learning the journal coverage, years published, and type of abstracting or indexing. The descriptions of the textile and related journals in Appendix A indicate which important abstracting and indexing services cover the journals. Most all of the services have lists of journals abstracted and indexed. The older an abstracting and indexing service is, the better source it is for searching the earlier literature. The chronology chart in Appendix C lists the important textile and related abstracting and indexing journals, along with the regular journals. This gives an idea of which services to consult for definite periods of time. Informative abstracts, discussed in Chapter IV, are useful in making literature searches. By examining abstracts in Chemical Ab-
abstracts, for example, it is often possible to eliminate irrelevant references without consulting the original articles. The list of subject headings are the terms which might offer needed information when used in searching the indexes. The preliminary subject heading list can be refined during the search process, when additional subject headings are found to be pertinent. Step No. 12 is the beginning of the search. A good procedure is to begin with the most recent abstract indexes and work backwards in time. Whenever possible, time is saved by using cumulative indexes, covering more than one year's period.

The methods of recording references varies with the purposes of the search and plan of final arrangement. Often separate index cards are used for each reference. The abstracts should be examined, and any references considered irrelevant should be withdrawn. However, in many cases, it is wise to go to the original article, because valuable information may not have been included in the abstract. The names of authors of the recorded abstract and index references are also means for finding more information. By searching the author indexes of the abstract and index services, more pertinent references may be found. Step No. 15 consists of examining all the primary sources which have been recorded from abstracting and indexing services and from basic sources compiled in step No. 9 (periodical articles, theses, government literature, patent literature, and standards). Those which are considered pertinent are retained. Bibliographies cited at the end of pertinent primary publications can offer additional valuable references. By scanning current research and trade journals, sometimes information can be found which is not indexed. Trade journals carry data on
company literature which can be ordered, if needed. The last two steps, No. 17 and 18, are editorial in nature. The reference citations should all be in a standard form and arranged according to the original purpose.
APPENDICES
APPENDIX A

DESCRIPTIONS OF 100 JOURNALS
Foreword

Approximately 100 journal titles are alphabetically indexed in this Appendix. Cross-references are made from 50 additional titles which have been superseded by the present titles.

The information given for each journal has been compiled from the following sources:

1. Ulrich's Periodicals Directory \(^{259}\) (1963 ed.).

2. "List of Journals Received" (January, 1963 issue of Textile Technology Digest \(^{98}\)).

3. Lists of journals abstracted and indexed by other abstracting and indexing services (listed below).

4. National Federation of Science Abstracting and Indexing Services' Report No. 102. \(^{225}\)


6. Examination of journals.

The following abbreviations are employed for the titles of the abstracting and indexing journals:

\[
\begin{align*}
\text{A.S.T.} & = \text{Applied Science and Technology Index}^{239} \\
\text{B.A.} & = \text{Biological Abstracts}^{235} \\
\text{B.P.I.} & = \text{Business Periodicals Index}^{241} \\
\text{B.T.I.} & = \text{British Technology Index}^{240} \\
\text{C.A.} & = \text{Chemical Abstracts}^{189} \\
\text{E.I.} & = \text{Engineering Index}^{238} \\
\text{P.A.I.S.} & = \text{Bulletin}^{135} \text{ of the Public Affairs Information Service} \\
\text{S.A.} & = \text{Science Abstracts, Section A of Physics Abstracts}^{229}
\end{align*}
\]
S.I. = Shirley Institute Summary of Current Literature
T.I.A. = Journal of Textile Institute, Abstracts section
T.T.D. = Textile Technology Digest

When appropriate, cross-references are made from the journal titles to page numbers in the text for further discussions of the journals.

**American Association for Textile Technologists, Papers**

See Modern Textiles Magazine

<table>
<thead>
<tr>
<th><strong>American Chemical Society, Journal</strong> (see pp. 16, 21)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>First published</strong>- 1879-</td>
</tr>
<tr>
<td><strong>Frequency of publication</strong>- Semimonthly</td>
</tr>
<tr>
<td><strong>Publisher</strong>- American Chemical Society</td>
</tr>
<tr>
<td>1155 16th Street, N. W.</td>
</tr>
<tr>
<td>Washington 6, D. C.</td>
</tr>
<tr>
<td><strong>Cost</strong>- $13/yr. to members, $26/yr. to nonmembers</td>
</tr>
<tr>
<td><strong>Indexes</strong>- Author each issue, yearly author and subject, cumulative index V. 1-20 (1879-98)</td>
</tr>
<tr>
<td><strong>Indexed by</strong>- A.S.T., E.I., T.T.D.</td>
</tr>
<tr>
<td><strong>Type of publication</strong>- Society</td>
</tr>
<tr>
<td><strong>Scope</strong>- Entirely research in all areas of chemistry</td>
</tr>
<tr>
<td><strong>Description of contents</strong>- Has research papers and communications to the editor on physical, inorganic, organic, and biological chemistry</td>
</tr>
<tr>
<td><strong>Special features</strong>- Book reviews</td>
</tr>
</tbody>
</table>

**American Dyestuff Reporter** (see pp. 12, 18-19, 21-22, 68)

| **First published**- 1917- |
| **Frequency of publication**- Semimonthly |
| **Publisher**- Howes Publishing Co., Inc. |
| 44 East 23rd Street |
| New York 10, New York |
| **Cost**- $7.50/yr. |
| **Indexes**- Advertising each issue, yearly author and title (January) |
| **Abstracted by**- C.A., S.I., T.I.A. |
| **Indexed by**- A.S.T., E.I., T.T.D. |
| **Title changes**- Absorbed Textile Colorist and Converter in 1949 |
| **Type of publication**- Trade organ of the American Association of Textile Chemists and Colorists |
| **Scope**- Devoted to textile wet-processing, dyeing,
Description of contents-
finishing, bleaching, new product information, and news of industry

American Fabrics (see pp. 15–16, 22, 72)
First published-
1946-
Frequency of publication-
Quarterly
Publisher-
Doric Publishing Company, Inc.  
24 E. 38th Street  
New York 16, New York
Cost-
$15/yr.
Indexes-
Cumulative index every five years:  
V. 1-28 (1946-54), V. 1-42 (1946-58)
Indexed by-
T.T.D.
Type of publication-
Trade
Scope-
Primarily concerned with fabric fashion trends
Description of contents-
Has articles on current trends in fabric fashions; swatches and comments on new textiles; fiber, dye, and some equipment advertisements; other trade information

American Society for Testing and Materials, ASTM Bulletin
See Materials Research and Standards

American Wool and Cotton Reporter
See America's Textile Reporter

American Wool, Cotton and Financial Reporter
See America's Textile Reporter

America's Textile Reporter (see pp. 14, 18-19, 22)
First published-
1887-
Frequency of publication-
Weekly
Publisher-
Frank P. Bennett and Co., Inc.  
286 Congress Street  
Boston 10, Massachusetts
Cost-
$5/yr.
Indexes-
Advertising each issue
Abstracted by-
C.A. (in 1956 list, but not 1961), T.I.A.
Indexed by-
T.T.D.
<table>
<thead>
<tr>
<th>Title changes-</th>
<th>American Wool, Cotton and Financial Reporter; American Wool and Cotton Reporter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type of publication-</td>
<td>Trade</td>
</tr>
<tr>
<td>Scope-</td>
<td>Business developments in the textile industry</td>
</tr>
<tr>
<td>Description of contents-</td>
<td>Contains market forecast and review of week; reports on weekly range of textile stocks; some equipment and product advertisements</td>
</tr>
<tr>
<td>Special features-</td>
<td>&quot;Textile Statistics Section&quot; (July issue) which has textile mill profits section, information on major textile schools, index of textile industries by state, statistics of mills, textile machinery and supplies, and buyers' guide</td>
</tr>
</tbody>
</table>

**Angewandte Chemie** (see pp. 16, 25)

| First published- | 1888- |
| Frequency of publication- | Semimonthly |
| Publisher- | Verlag Chemie, GmbH |
| 694 Weinheim/Bergstr. |
| Germany |
| Cost- | 98 DM/yr. |
| Indexes- | Author, subject, patent number index each issue, yearly author and subject, cumulative index V. 21-40 (1908-27) |
| Abstracted by- | B.A., C.A. |
| Indexed by- | E.I. |
| Title changes- | Zeitschrift fur Angewandte Chemie (1888-1931) |
| Type of publication- | Organ of German Chemical Society |
| Scope- | Research and news of the chemical industry |
| Description of contents- | Contains research papers; news of chemistry and industry; equipment and chemical product advertisements; other trade information |
| Special features- | Has "markets" section each issue which has classified list of raw materials of the chemical industry and companies producing them; there are news summaries in English, French, Italian, and Spanish; book reviews; patent and periodical article abstracts until 1918 (taken over by Chemisches Zentralblatt) |

**Angewandte Chemie** (International Edition in English) (see p. 25)

| First published- | 1962- |
| Frequency of publication- | Monthly |
| Publisher- | Academic Press, Inc. |
| 111 Fifth Avenue |
| New York, New York |
Cost-
Indexes-
Abstracted by-
Indexed by-
Type of publication-
Scope-
Description of contents-
Special features-

80 DM/yr. ($20)
None
C.A., S.I., T.I.A.
T.T.D.
Organ of German Chemical Society
Similar to German edition
Similar to German edition
Book reviews; selected abstracts

Applied Science and Technology Index  (see p. 73)
First published-
Frequency of publication-
Publisher-

1913-
Monthly, except August
H. W. Wilson Co.
950 University Avenue
New York, New York

Cost-
Indexes-
Title changes-
Coverage-
Scope-

$24/yr.
Alphabetical subject (quarterly and annual cumulations)
Industrial Arts Index (1913-57)
77,000 references/yr. to 200 English language journals
Science and technology in general, including aeronautics, chemistry, construction, electricity and electrical communication, engineering, geology, industrial and mechanical arts, machinery, metallurgy, physics, transportation, and related subjects; has considerable amount of entries under "textiles"

British Abstracts  (see p. 69)
Publication dates-
Frequency of publication-
Publisher-
(in 1953)

1926-53
Semimonthly (1926-9); weekly (1930-6); monthly (1937-)
Bureau of Abstracts
Colquhoun House
Broadwick Street
London W. 1, England

Indexes-
Title changes-
Scope-

Subject and author (Series A-C)
British Chemical Abstracts (1926-37);
British Chemical and Physiological Abstracts (1938-44); after 1953, Series B superseded by Journal of Applied Chemistry and Journal of Science of Food and Agriculture
Series A--Pure chemistry and physiology;
Series B--Applied chemistry; Series C--Analysis and apparatus

British Chemical Abstracts
See British Abstracts
British Chemical and Physiological Abstracts
See British Abstracts

British Cotton Industry Research Association Summary of Current Literature
See Shirley Institute Summary of Current Literature

British Rayon and Silk Journal
See Man-Made Textiles

British Technology Index (See p. 73)
First published- 1962-
Frequency of publication- Monthly
Publisher- Library Association
Chaucer House, Malet Place
London W.C. 1, England
Cost- £15, 15s/yr. ($50)
Indexes- Alphabetical subject each issue, annual cumulation
Coverage- Analysis of approximately 400 British technological journals
Scope- The journals indexed cover the following subject fields: engineering, chemical technology, mining, metallurgy, wood manufactures, textiles, clothing, paper-making, packaging, works management, economics of technical processes, industrial health and safety, and technical education

Canadian Journal of Fabrics
See Canadian Textile Journal

Canadian Textile Journal (See pp. 13, 18, 24)
First published- 1883-
Frequency of publication- Semimonthly
Publisher- Canadian Textile Journal Publishing Co., Ltd.
4795 St. Catherine Street W., Westmount
Montreal 6, Quebec, Canada
Cost- $5/yr. in Canada, U. S., and U. K.
Indexes' Advertising each issue, yearly contents index
Abstracted by- C.A., S.I., T.I.A.
Indexed by- T.T.D.
Title changes- Canadian Journal of Fabrics (1883-1907)
Type of publication- Trade organ of Canadian Association of Textile Chemists and Colourists and Textile Society of Canada
Scope- Coverage of whole textile industry in Canada
Description of contents- Contains technical section of papers on processing of textiles, news of industry
Chemical Abstracts (See pp. 69-70)

First published- 1907-
Frequency of publication- Semimonthly
Publisher- American Chemical Society
1155 16th Street, N. W.
Washington 6, D. C.
Cost- $500/yr. to ACS members, colleges, and universities; $1,000/yr. to others
Indexes- Semimonthly author index, keyword index, patent concordance, numerical patent index; annual author, subject, numerical patent, formula, ring; decennial and quinquennial formula, author, subject, numerical patent
Coverage- 165,000 informative abstracts/yr. from world literature including patents
Scope- Complete coverage of chemistry and allied fields; has 74 sections, some of which are of interest to textile investigators: 46—Dyes, optical bleaches, and photosensitizers; 47—Textiles; 51—Cellulose, lignin, paper, and other wood products; 53. Surface-active agents and detergents

Chemical and Engineering News (See pp. 16, 19, 22)

First published- 1923-
Frequency of publication- Weekly
Publisher- American Chemical Society
1155 16th Street, N. W.
Washington 6, D. C.
Cost- $6/yr. to nonmembers
Indexes- Advertising each issue, quarterly subject index
Indexed by- A.S.T., T.T.D.
Title changes- Industrial and Engineering Chemistry
News edition (1923-39)
Type of publication- Trade organ of American Chemical Society
Scope- News of chemical industry
Description of contents- Contains condensed news of industry; reports on research, education, technology, equipment; chemicals and chemical product advertisements
Special features- Book reviews; has annual "Facts and Figures" issue (September), which proposes to be a comprehensive study of the American chemical industry and includes the finan-
Chemical Industries
See Chemical Week

Chemical Markets
See Chemical Week

Chemical Week (See p. 18)
First published- 1914-
Frequency of publication- Weekly
Publisher- McGraw-Hill Publishing Co.
330 West 42nd Street
New York, New York

Cost- $3/yr.
Indexes- Advertising each issue, semiannual subject indexes
Abstracted by- C.A. (in 1956 list, but not 1961)
Indexed by- B.P.I., T.T.D.
Title changes- Chemical Markets (1926-33); Chemical Industries (1933-50)
Type of publication- Trade
Scope- Business developments in chemical industry
Description of contents- Contains news digests and editorials on week's events in business, technology, marketing, etc.; chemical and chemical product advertisements
Special features- Annual Buyers' Guide issue (September) and Forecast issue (December)

Chemiefaser (See pp. 12-13, 68)
First published- 1919-
Frequency of publication- Monthly
Publisher- Deutscher Fachverlag GmbH
Freiherr-vom-Stein-Strasse 7
Frankfurt/Main, Germany

Cost- 48 DM/yr.
Indexes- Yearly author, subject, and title
Abstracted by- C.A., S.I., T.I.A.
Indexed by- T.T.D.
Title changes- Reyon Zellwolle und Andere Chemiefasern (1952-60)
Type of publication- Trade organ of the International Committee of Rayon and Synthetic Fibers (CIRFS) in Paris
Scope- News of fiber technology
Description of contents- Has industrial news; section on news of the world; chemical product and engineering equipment advertisements
Special features- Small amount of periodical article abstracts; book reviews
### Chemisches Central-Blatt

See Chemisches Zentralblatt

<table>
<thead>
<tr>
<th>Chemisches Zentralblatt</th>
<th>(See p. 69-70)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>First published-</strong></td>
<td>1830-</td>
</tr>
<tr>
<td><strong>Frequency of publication-</strong></td>
<td>Weekly</td>
</tr>
<tr>
<td><strong>Publisher-</strong></td>
<td>Akademie-Verlag GmbH</td>
</tr>
<tr>
<td></td>
<td>Leipziger Strasse 3-4</td>
</tr>
<tr>
<td></td>
<td>Berlin W 8, Germany</td>
</tr>
<tr>
<td><strong>Cost-</strong></td>
<td>1200 DM/yr.</td>
</tr>
<tr>
<td><strong>Indexes-</strong></td>
<td>Weekly author and numerical patent indexes; annual and quinquennial author, subject, numerical patent, and formula indexes</td>
</tr>
<tr>
<td><strong>Title changes-</strong></td>
<td>Chemisches Central-Blatt (1856-1906)</td>
</tr>
<tr>
<td><strong>Coverage-</strong></td>
<td>90,000 informative and descriptive abstracts/yr. and 3,000-4,000 references/yr. from world literature</td>
</tr>
<tr>
<td><strong>Scope-</strong></td>
<td>Complete coverage of chemistry and allied fields; expanded in 1919 to include applied as well as pure chemistry (took over abstract section of Angewandte Chemie)</td>
</tr>
</tbody>
</table>

### Ciba Review

(See pp. 14, 22)

<table>
<thead>
<tr>
<th>Ciba Review</th>
<th>(See pp. 14, 22)</th>
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<tr>
<td><strong>First published-</strong></td>
<td>1937-</td>
</tr>
<tr>
<td><strong>Frequency of publication-</strong></td>
<td>Monthly</td>
</tr>
<tr>
<td><strong>Publisher-</strong></td>
<td>Ciba Ltd.</td>
</tr>
<tr>
<td></td>
<td>Basle, Switzerland</td>
</tr>
<tr>
<td><strong>Cost-</strong></td>
<td>Not available</td>
</tr>
<tr>
<td><strong>Indexes-</strong></td>
<td>Author, subject, and title for V. 1-2 (1937-9), V. 3-6 (1939-49)</td>
</tr>
<tr>
<td><strong>Abstracted by-</strong></td>
<td>C.A. (1961 list), S.I., T.I.A.</td>
</tr>
<tr>
<td><strong>Indexed by-</strong></td>
<td>T.T.D.</td>
</tr>
<tr>
<td><strong>Type of publication-</strong></td>
<td>House organ of Ciba Ltd.</td>
</tr>
<tr>
<td><strong>Scope-</strong></td>
<td>Ciba product awareness</td>
</tr>
<tr>
<td><strong>Description of Contents-</strong></td>
<td>Some historical information on various aspects of the textile industry; Ciba product advertisements</td>
</tr>
</tbody>
</table>

### Coton et Fibres Tropicales: Bulletin Analytique

See Coton et Fibres Tropicales: Bulletin Bibliographique

<table>
<thead>
<tr>
<th>Coton et Fibres Tropicales: Bulletin Bibliographique</th>
<th>(See p. 70)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>First published-</strong></td>
<td>1946-</td>
</tr>
<tr>
<td><strong>Frequency of publication-</strong></td>
<td>3 Issues/yr.</td>
</tr>
<tr>
<td><strong>Publisher-</strong></td>
<td>Société d'Éditions Techniques Continentales</td>
</tr>
<tr>
<td></td>
<td>3 Square Petrarque</td>
</tr>
<tr>
<td></td>
<td>Paris 6e, France</td>
</tr>
<tr>
<td><strong>Cost-</strong></td>
<td>10 NF domestic, 15 NF foreign</td>
</tr>
<tr>
<td><strong>Indexes-</strong></td>
<td>None</td>
</tr>
<tr>
<td><strong>Title changes-</strong></td>
<td>Coton et Fibres Tropicales: Bulletin Analytique (1947-61)</td>
</tr>
<tr>
<td>Publication</td>
<td>Coverage</td>
</tr>
<tr>
<td>-----------------------------</td>
<td>---------------------------------------------</td>
</tr>
<tr>
<td></td>
<td>450 Descriptive and annotative abstracts/yr. from world journals</td>
</tr>
<tr>
<td><em>Cotton</em></td>
<td>(See Textile Industries)</td>
</tr>
<tr>
<td><em>Daily News Record</em></td>
<td>(See pp. 15, 22, 72)</td>
</tr>
<tr>
<td>First published</td>
<td>1892-</td>
</tr>
<tr>
<td>Frequency of publication</td>
<td>Daily</td>
</tr>
<tr>
<td>Publisher</td>
<td>Fairchild Publications, Inc.</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Cost</td>
<td>$20/yr.</td>
</tr>
<tr>
<td>Indexes</td>
<td>None</td>
</tr>
<tr>
<td>Indexed by</td>
<td>T.T.D.</td>
</tr>
<tr>
<td>Type of publication</td>
<td>Trade newspaper</td>
</tr>
<tr>
<td>Scope</td>
<td>National textile news</td>
</tr>
<tr>
<td>Description of contents</td>
<td>News on cotton goods, man-made textiles, woolens and worsteds, financial news; trade information</td>
</tr>
<tr>
<td><em>Deutsche Textiltechnik</em></td>
<td>(See p. 70)</td>
</tr>
<tr>
<td>First published</td>
<td>1951-</td>
</tr>
<tr>
<td>Frequency of publication</td>
<td>Monthly</td>
</tr>
<tr>
<td>Publisher</td>
<td>VEB Verlag Technik</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Cost</td>
<td>7.50 DM/3 months</td>
</tr>
<tr>
<td>Indexes</td>
<td>Yearly author and subject</td>
</tr>
<tr>
<td>Abstracted by</td>
<td>C.A., S.I., T.I.A.</td>
</tr>
<tr>
<td>Indexed by</td>
<td>T.T.D.</td>
</tr>
<tr>
<td>Title changes</td>
<td>Textil- und Faserstofftechnik (1951-56)</td>
</tr>
<tr>
<td>Type of publication</td>
<td>Trade</td>
</tr>
<tr>
<td>Scope</td>
<td>Research in textile technology</td>
</tr>
<tr>
<td>Description of contents</td>
<td>Contains research and technical articles; news; chemical product and equipment advertisements</td>
</tr>
<tr>
<td>Special features</td>
<td>Book reviews; indicative periodical abstracts; changes in standard specifications</td>
</tr>
<tr>
<td><em>Du Pont Magazine</em></td>
<td>(See p. 14)</td>
</tr>
<tr>
<td>First published</td>
<td>1913-</td>
</tr>
<tr>
<td>Frequency of publication</td>
<td>Bimonthly</td>
</tr>
<tr>
<td>Publisher</td>
<td>DuPont Magazine</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Cost</td>
<td>Not available</td>
</tr>
<tr>
<td>Magazine/Book</td>
<td>Scope</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>-------------------------------------------</td>
</tr>
<tr>
<td>The Dyer</td>
<td>House organ of Du Pont</td>
</tr>
<tr>
<td>Dyes and Chemicals Technical Bulletin</td>
<td>Based on work carried out in the Du Pont Dyes and Chemicals Technical Laboratory and other Company laboratories; intended to be of help to users of dyes and chemicals in textile and other fields</td>
</tr>
<tr>
<td>Dyestuffs</td>
<td>House organ of Allied Chemical Corporation</td>
</tr>
</tbody>
</table>

**Indexes**
- None

**Abstracted by**
- S.I., T.I.A.

**Indexed by**
- T.T.D.

**Type of publication**
- House organ of Du Pont

**Scope**
- Du Pont product awareness

**Description of contents**
- Non-technical articles on Du Pont products and their use
<table>
<thead>
<tr>
<th><strong>Engineering Index</strong> (See p. 73)</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>First published</strong></td>
<td>1885-</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Frequency of publication</strong></td>
<td>Monthly</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Publisher</strong></td>
<td>Engineering Index, Inc. 345 E. 47th Street New York 17, New York</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Cost</strong></td>
<td>$75/annual Volume; $12-$45/Division</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Indexes</strong></td>
<td>Alphabetical subject and author each issue; annual cumulations</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Coverage</strong></td>
<td>Over 34,000 informative and descriptive abstracts/yr. from world literature</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Scope</strong></td>
<td>Abstracts are given for the following engineering divisions: aerospace sciences, civil engineering, computers, electrical engineering, engineering materials, geology, geophysics, industrial economics, instrumentation, marine and naval engineering, mechanical engineering, metallography, metallurgy, mining, nuclear technology, petroleum technology, rockets and missiles, shipbuilding</td>
<td></td>
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</table>

<table>
<thead>
<tr>
<th><strong>Faraday Society, Transactions</strong> (See pp. 16, 21)</th>
<th></th>
<th></th>
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</thead>
<tbody>
<tr>
<td><strong>First published</strong></td>
<td>1905-</td>
<td></td>
<td></td>
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<tr>
<td><strong>Frequency of publication</strong></td>
<td>Monthly</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Publisher</strong></td>
<td>Faraday Society 6 Gray's Inn Square London W.C. 1, England</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Cost</strong></td>
<td>£6/yr. to members; £6, 4s to non-members</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Indexes</strong></td>
<td>Annual author, subject, and review</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Indexed by</strong></td>
<td>T.T.D.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Type of publication</strong></td>
<td>Society</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Scope</strong></td>
<td>Faraday Society founded in 1903 to promote the study of sciences lying between chemistry, physics, and biology</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Description of contents</strong></td>
<td>Contains pure research papers</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Special features</strong></td>
<td>Book reviews</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Faserforschung und Textiltechnik</strong> (See pp. 13, 19-20, 68)</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>First published</strong></td>
<td>1950-</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Frequency of publication</strong></td>
<td>Monthly</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Publisher</strong></td>
<td>Akademie-Verlag GmbH Leipziger Strasse 3-4 Berlin 1, Germany</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Cost</strong></td>
<td>72 DM/yr. ($17)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Indexes</strong></td>
<td>Yearly author and title</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Abstracted by</strong></td>
<td>C.A., S.I., T.I.A.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Indexed by</strong></td>
<td>T.T.D.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Type of publication</strong></td>
<td>Trade</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Scope</strong></td>
<td>Scientific and technical reports of man-made fiber and textile industry</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Description of contents</strong></td>
<td>Has technical research papers; few advertisements</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Special features</strong></td>
<td>Journal article and patent abstracts; new books section; publishes, semimonthly, cards containing the journal article and patent abstracts for easy handling by German readers</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Type and number of abstracts</strong></td>
<td>40 Descriptive and informative abstracts and 4,000 references/yr. to European, English language, and Slavic literature, including patents</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Forbes** *(See pp. 17, 22)*
- **First published**: 1917-
- **Frequency of publication**: Semimonthly
- **Publisher**: Forbes Inc.
- **Cost**: $7.50/yr.
- **Indexes**: Advertising each issue; semiannual subject and company index (separate release)
- **Indexed by**: B.P.I.
- **Type of publication**: Trade
- **Scope**: Business and finance
- **Description of contents**: Business news; columnists' comments on companies

**The Indian Cotton Growing Review** *(See p. 15)*
- **First published**: 1890-
- **Frequency of publication**: Monthly
- **Publisher**: Indian Central Cotton Committee
- **Cost**: Rs. 20.00/yr. (India), Rs. 30.00/yr. (Foreign)
- **Indexes**: Yearly author and contents
- **Indexed by**: T.T.D.
- **Type of publication**: National technological laboratory publication
- **Scope**: Research on cotton
- **Description of contents**: Only research papers
- **Special features**: Has summary of current literature

**Indian Textile Journal** *(See pp. 14, 24)*
- **First published**: 1890-
- **Frequency of publication**: Monthly
- **Publisher**: Indian Textile Journal Private, Ltd.
### Military Square

**Bombay 1, India**

| Cost- | Rs. 36.00/yr. (India), Rs. 48.00/yr. (Foreign) or $10.00 |
| Indexes- | Advertising each issue, yearly contents |
| Abstracted by- | C.A., S.I., T.I.A. |
| Indexed by- | T.T.D. |
| Type of publication- | Trade |
| Scope- | Information on Indian textile industry |
| Description of contents- | Contains few technical papers; editorials; chemicals, chemical products, and equipment advertisements; other trade information. |
| Special features- | Book reviews |

**Industrial and Engineering Chemistry** *(See pp. 16, 21)*

| First published- | 1909- |
| Frequency of publication- | Monthly |
| Publisher- | American Chemical Society 1155 Sixteenth Street, N. W. Washington 6, D. C. |
| Cost- | $2/yr. to ACS members, $2.20/yr. to non-members (sold only in combination with Industrial and Engineering Chemistry Fundamentals, Process Design and Development, and Product Research and Development) |
| Indexes- | Advertising each issue, yearly author, subject, and title index |
| Abstracted by- | C.A., S.A., S.I., T.I.A. |
| Title changes- | Journal of Industrial and Engineering Chemistry (1909-22) |
| Type of publication- | Society |
| Scope- | Research developments in industrial and engineering chemistry |
| Description of contents- | Has research papers; new products and instruments section; summary of papers published in the same month’s research quarterly, Industrial and Engineering Chemistry Process Design and Development; chemical products and equipment advertisements |

**Industrial and Engineering Chemistry** *(See pp. 16, 21)*


| First published- | 1962- |
| Frequency of publication- | Quarterly |
| Publisher- | American Chemical Society 1155 Sixteenth Street, N. W. Washington 6, D. C. |
Cost-

$1.00/yr. to ACS members, $1.10/yr. to non-members (same cost for each of the three publications)

Indexes-

Yearly author, subject, and title (in each one)

Abstracted by-

C.A., S.I., T.I.A.

Indexed by-

A.S.T., E.I., T.T.D.

Type of publication-

Society

Scope-

1. Publishes papers in the broad field of chemical engineering research
2. Reports on design methods and concepts and their application to the development of processes and process equipment
3. Published papers reporting on findings on the preparation of new or improved chemical products, as well as findings on improved methods for the preparation of existing products

Description of contents-

All research papers

Industrial and Engineering Chemistry News Edition
See Chemical and Engineering News

Industrial Arts Index
See Applied Science and Technology Index

Industrial Quality Control (See pp. 16-17)
First published-
1944-
Frequency of publication-
Monthly
Publisher-
American Society for Quality Control, Inc.
Room 6185, Plankinton Building
161 West Wisconsin Avenue
Milwaukee 3, Wisconsin

Cost-
$4.50/yr. to members, $9.00/yr. to others

Indexes-
Cumulative indexes V. 1-10 (1944-54), V. 11-15

Abstracted by-
S.I., T.I.A.

Indexed by-
A.S.T., E.I., T.T.D.

Type of publication-
Society

Description of contents-
Developments in industrial quality control
Contains semitechnical papers; industrial and society news; equipment advertisements

Special features-
Book reviews

L'Industrie Textile (See p. 14)
First published-
1883-
Frequency of publication-
Monthly
Publisher-
Le Edition de l'Industrie Textile
36 Rue Ballu
Paris 9, France

Cost-
55 F/yr. (France), 65 F/yr. (Foreign)
<table>
<thead>
<tr>
<th>Title</th>
<th>First published</th>
<th>Frequency of publication</th>
<th>Publisher</th>
<th>Cost</th>
<th>Indexes-</th>
<th>Abstracted by-</th>
<th>Indexed by-</th>
<th>Type of publication-</th>
<th>Scope-</th>
<th>Description of contents-</th>
<th>Special features-</th>
<th>Type and number of abstracts-</th>
</tr>
</thead>
<tbody>
<tr>
<td>L'Institut Textile de France, Bulletin</td>
<td>1947</td>
<td>Bimonthly</td>
<td>Institut Textile de France</td>
<td>85 F/yr. (France), 95 F/yr. (Foreign)</td>
<td>Yearly author and subject</td>
<td>S.I., T.I.A.</td>
<td>T.T.D.</td>
<td>Institute</td>
<td>Advances in textile research</td>
<td>Has research papers; news of the Institute; advertisements</td>
<td>Abstracts patents and periodical articles</td>
<td>1,900 Descriptive abstracts/yr. from world literature</td>
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<tr>
<td>International Dyer</td>
<td>1879</td>
<td>Semimonthly</td>
<td>Harlequin Press Ltd.</td>
<td>60 s/yr.</td>
<td>Advertising each issue, contents index every six months</td>
<td>C.A., S.I., T.I.A.</td>
<td>E.T.I., T.T.D.</td>
<td>Trade</td>
<td>International reports about dyeing, textile printing, and finishing</td>
<td>Has articles pertaining to dyeing, textile printing, and finishing; international in-</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Special features—

- International digest in French and German;
- Book reviews;
- Some journal article abstracts

Izvestiia Vysshikh Uchebnykh Zavedenii
See Tekhnologii Tekstil'noi Promyshlennosti

<table>
<thead>
<tr>
<th>Journal of Applied Chemistry (See p. 16)</th>
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</tr>
<tr>
<td>Frequency-</td>
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<td></td>
</tr>
<tr>
<td>Cost-</td>
</tr>
<tr>
<td>Indexes-</td>
</tr>
<tr>
<td>Abstracted by-</td>
</tr>
<tr>
<td>Type of publication-</td>
</tr>
<tr>
<td>Scope-</td>
</tr>
</tbody>
</table>

Description of contents—

- All research

Journal of Applied Chemistry Abstracts Section (See p. 69)

| First published- | 1954- |
| Frequency of publication- | Monthly |
| Publisher- | Society of Chemical Industry |
| | 14 Belgrave Square |
| | London S.W. 1, England |
| Cost- | $300 s/yr. |
| Indexes- | Author each issue, semiannual author and subject indexes |
| Title changes- | Superseded, in part, series B of British Abstracts |
| Coverage- | 10,000 Informative and descriptive abstracts/yr. from world literature including patents |
| Scope- | Subjects covered are the same as those listed for the Journal of Applied Chemistry |

Journal of Applied Physics (See pp. 16, 21)

| First published- | 1930- |
| Frequency of publication- | Monthly |
| Publisher- | American Institute of Physics |
| | Prince and Lemon Streets |
| | Lancaster, Pennsylvania |
| Cost- | $15.00/yr. to members, $20/yr. to others |
| Indexes- | Advertising each issue, yearly author, sub- |
**Journal of Applied Polymer Science** (See p. 16)

- **First published:** 1959
- **Frequency of publication:** Bimonthly
- **Publisher:** Interscience Publishers
  20th and Northampton Streets
  Easton, Pennsylvania
- **Cost:** $85/yr.
- **Indexes:** Yearly author and subject
- **Abstracted by:** C.A., S.I., T.I.A.
- **Indexed by:** E.I., T.T.D.
- **Type of publication:** Trade
- **Scope:** Covers research on industrial use of polymers; supersedes part of the *Journal of Polymer Science*
- **Description of contents:** Has research papers; industrial polymer news
- **Special features:** Summaries of papers in French and German; book reviews

**Journal of Chemical Physics** (See pp. 16, 21)

- **First published:** 1933
- **Frequency of publication:** Semimonthly
- **Publisher:** American Institute of Physics
  335 East 45th Street
  New York, New York
- **Cost:** $22/yr. to members, $35/yr. to nonmembers
- **Indexes:** Yearly author and subject
- **Abstracted by:** B.A., C.A., S.A., S.I., T.I.A.
- **Indexed by:** T.T.D.
- **Type of publication:** Institute
- **Scope:** Its purpose is to bridge a gap between journals of physics and chemistry. The research is carried on by both chemists and physicists.
- **Description of contents:** Contains research papers and communications

**Journal of Industrial and Engineering Chemistry**

See *Industrial and Engineering Chemistry*
Journal of Polymer Research
See Journal of Polymer Science

Journal of Polymer Science (See pp. 16, 21)
Part A. General Papers
Part B. Polymer Letters
Part C. Polymer Symposia
First published- 1945-
Frequency of publication- Monthly (Parts A and B), Part C is irregular
Publisher- Interscience Publishers
20th and Northampton Streets
Easton, Pennsylvania
Cost- $225/yr. for all parts
Indexes- Annual author and subject in Parts A and B, author and subject each issue in Part C
Abstracted by- C.A., S.I., T.I.A.
Indexed by- T.T.D.
Title changes- Journal of Polymer Research; Journal of Polymer Science (split into 3 parts in 1962)
Type of publication- Trade
Scope- Research on polymer science
Description of contents- Part A has all research papers
Part B has research letters
Part C has research articles from symposia topics
Special features- Part A has some book reviews

Journal of Scientific and Industrial Research (See p. 16)
A. General B. Physical Sciences C. Biological Sciences
D. Technology
First published- 1942-
Frequency of publication- Monthly
Publisher- Council of Scientific and Industrial Research
Hillside Road
New Delhi 12, India
Cost- Rs. 15.00/yr. (India), $11.25/yr. (Foreign)
Indexes- Advertising each issue, yearly subject index
Indexed by- T.T.D.
Type of publication- Indian government publication (the Council of Scientific and Industrial Research is the head of 26 national research laboratories)
Scope- Indian research in pure and applied sciences
Description of contents- Contains research papers; progress reports; chemical product and equipment advertisements
Special features- Book reviews; Part A has an abstract section
and author index to published research papers from the national laboratories and sponsored research projects of the Council.

**Magyar Textiltechnika** (See p. 12)

- **First published:** 1953-
- **Frequency of publication:** Monthly
- **Publisher:** Bajcsy-Zsilinszky ut, 22 Budapest, Hungary
- **Cost:** 60 Ft/yr. ($5/yr.)
- **Indexes:** Yearly author and subject index
- **Abstracted by:** C.A., S.I., T.I.A.
- **Indexed by:** T.T.D.
- **Type of publication:** Organ of Textilpari Müszaki és Tudományos Egyesület
- **Scope:** Research in Hungarian textile science and technology
- **Description of contents:** Contains technical articles
- **Special features:** Book reviews

**Die Makromolekulare Chemie** (See p. 15, 24)

- **First published:** 1947-
- **Frequency of publication:** Monthly
- **Publisher:** Eds. Dr. H. C. Staudinger and Dr. Alfred Huthig Verlag Wilckensstrasse 3-5 Heidelberg, Germany
- **Cost:** 36 DM/yr. ($9/yr.)
- **Abstracted by:** B.A., C.A., S.I., T.I.A.
- **Type of publication:** Trade
- **Scope:** Research on polymer science
- **Description of contents:** Contains research papers; few advertisements
- **Special features:** Summaries in French and English

**Man-Made Textiles** (See p. 19)

- **First published:** 1924-
- **Frequency of publication:** Monthly
- **Publisher:** Harlequin Press Ltd. Old Colony House, South King Street Manchester 2, England
- **Cost:** 32 s 6 d/yr. (Inland), 40 s (Overseas)
- **Indexes:** Advertising each issue, yearly subject index
- **Abstracted by:** C.A., S.I., T.I.A.
- **Indexed by:** B.T.I., E.I., T.T.D.
- **Title changes:** *Silk Journal* (June 1924-April 1928); *Silk
**Journal and Rayon World** (May 1928-Feb. 1949); *British Rayon and Silk Journal* (Mar. 1940-April 1955)

**Type of publication** - Trade  
**Scope** - Covers progress in man-made fiber industry  
**Description of contents** - Has editorial articles on fibers; fiber and equipment advertisements; textile swatches  
**Special features** - "Reader's Information Service," for Company literature; book reviews

**Materials Research and Standards** (See p. 16)

| First published | 1961-  
| Frequency of publication | Monthly  
| Publisher | American Society for Testing and Materials  
| 1916 Race Street  
| Philadelphia 3, Pennsylvania  
| Cost | $5/yr.  
| Indexes | Advertising each issue, yearly author, subject, title, and materials review indexes  
| Indexed by | A.S.T., E.I., T.T.D.  
| Title changes | Supersedes *ASTM Bulletin* (1921-50)  
| Type of publication | Society  
| Scope | Covers activities of ASTM  
| Description of contents | Has technical papers; actions on standards; society news; equipment advertisements  
| Special features | Lists new company literature and ASTM publications; book shelf

**Melliand Textilberichte** (See pp. 13, 19-21, 25, 68)

| First published | 1920-  
| Frequency of publication | Monthly  
| Publisher | Melliand Textilberichte KG.  
| 76 Rohrbacher Strasse  
| Heidelberg 69, Germany  
| Cost | 72 DM/yr. ($18)  
| Indexes | Advertising each issue, yearly author and subject  
| Abstractions by | C.A., S.I., T.I.A.  
| Indexed by | T.T.D.  
| Type of publication | Organ of the German and Austrian Societies of Textile Chemists and Colorists  
| Scope | Covers technical developments and industrial news in textile engineering, processing, and industry  
| Description of contents | Contains technical papers; company news; chemical product and equipment advertisements  
| Special features | Patent and periodical abstracts; book and company literature reviews
<table>
<thead>
<tr>
<th><strong>Type and number of abstracts</strong></th>
<th>1,000 References and 600 descriptive and informative abstracts/yr. from European, English language, and Slavic literature</th>
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<tr>
<td><strong>Melliand Textile Reports</strong> (See p. 25)</td>
<td><em>(English edition of Melliand Textilberichte)</em></td>
</tr>
<tr>
<td>First published-</td>
<td>Date not available</td>
</tr>
<tr>
<td>Frequency of publication-</td>
<td>Quarterly</td>
</tr>
</tbody>
</table>
| Publisher- | Melliand Textilberichte KG.  
76 Rohrbacher Strasse  
Heidelberg 59, Germany |
| Cost- | 16 DM/yr. ($4) |
| Indexes- | Advertising each issue, yearly subject index |
| Abstracted by- | C.A., S.I., T.I.A. |
| Indexed by- | T.T.D. |
| Type of publication- | Organ of the German and Austrian Societies of Textile Chemists and Colorists |
| Scope- | Latest information on technical developments and practical experience in spinning, twisting, weaving, knitting, hosiery, bleaching, dyeing, printing, finishing, including reports on textile industry |
| Description of contents- | Has technical papers; chemical product and equipment advertisements |

| **Modern Textiles Magazine** (See pp. 12, 19, 22) |
|---------------------------------|--------------------------------------------------------------------------------------------------|
| First published- | 1925- |
| Frequency of publication- | Monthly |
| Publisher- | Rayon Publishing Corporation  
303 Fifth Avenue  
New York, New York |
| Cost- | $5/yr. |
| Indexes- | Advertising each issue, yearly author and subject index |
| Title changes- | Rayon (1925-June 1928); Rayon and the Rayon Journal (June 1928-Aug. 1930); Rayon and Synthetic Yarn Journal (Sept. 1930-Nov. 1933); Rayon and Melliand Textile Monthly (Dec. 1933-June 1936); Rayon Textile Monthly (June 1936-Aug. 1948); Rayon and Synthetic Textiles (Sept. 1948-Aug. 1952); incorporated the Papers of the American Association of Textile Technologists (1945-57) |
| Type of publication- | Trade |
| Scope- | Covers progress in man-made fiber industry |
| Description of contents- | Has AATI papers; man-made fiber and yarn prices; news; trade information; chemical product and equipment advertisements |
Monsanto Magazine  (See p. 15)
First published- Date not available (V. 18 was published in 1939)
Frequency of publication- Bimonthly
Publisher- Monsanto Chemical Co.
St. Louis 66, Missouri
Cost- Not available
Indexes- None
Abstracted by- S.I., T.I.A.
Indexed by- T.T.D.
Type of publication- House organ of Monsanto Chemical Co.
Scope- Monsanto product awareness
Description of contents- Nontechnical articles on Monsanto's products and their uses

Natural and Synthetic Fibers Yearbook  (See pp. 70-1)
First published- 1954-
Frequency of publication- Monthly
Publisher- Interscience Publishers
440 Park Avenue South
New York, New York
Cost- $90 (for 1962 service)
Indexes- Annual author and subject indexes
Coverage- 300 Informative abstracts/yr. from world literature, including patents
Scope- Covers research on properties and behavior of natural and man-made fibers

Nature  (See pp. 16, 21)
First published- 1869-
Frequency of publication- Weekly
Publisher- MacMillan and Co. Ltd.
St. Martin's Street
London W.C. 2, England
Cost- £ 13 (Inland), £ 13, 15 s (Overseas)
Indexes- Yearly combined author, subject, and title index
Indexed by- B.T.I., E.I., T.T.D.
Type of publication- Trade
Scope- Covers developments in the following fields of science: Physics, Geophysics, Geology, Chemistry, Biophysics, Biochemistry, Physiology, Histochemistry, Pathology, Immunology, Radiobiology, Biology, Veterinary Science, Entomology, Microbiology, Cytology, Virology, Genetics, Psychology
Description of contents- Has research papers and letters to the editor on the above subjects; news and views; equipment advertisements
Special features- Book reviews and bibliographies
Official Gazette  (See p. 17)
First published- 1872-
Frequency of publication- Weekly (trade-mark section issued weekly, also)
Publisher- Superintendent of Documents
U. S. Government Printing Office
Washington 25, D. C.
Cost- $35/yr. (trade-mark section is $12/yr.; decision leaflets are $4.50/yr.)
Indexes- Alphabetical patentee, classification, trade-mark registrants indexes each issue, monthly and yearly patentee indexes
Indexed by- T.T.D.
Type of publication- U. S. Government
Scope- Covers U. S. Patents, designs, and trade-marks issued each week
Description of contents- Lists excerpts from patents issued each week; new applications received; decisions in patent and trade-mark cases; reissue patents granted; design patents granted; trade-mark applications filed; marks; condition of trade-mark applications

Oil, Paint and Drug Reporter  (See pp. 17-8)
First published- 1871-
Frequency of publication- Weekly
Publisher- Schnell Publishing Co., Inc.
100 Church Street
New York, New York
Cost- $6/yr.
Indexes- Advertising each issue, subject index two times a year (separate release in March and August)
Abstracted by- C.A. (in 1956 list and 1962 supplement to 1961 list)
Indexed by- B.P.I., T.T.D.
Type of publication- Trade
Scope- Covers market prices on chemicals and related materials
Description of contents- Has weekly current market quotations; world-wide news items; chemical product advertisements
Special features- Annual Buyers' Directory issue

Paper Trade Journal  (See pp. 14, 19)
First published- 1872-
Frequency of publication- Weekly
Publisher- Lockwood Trade Journal Co., Inc.
49 West 45th Street
Cost- New York, New York
Indexes- $5/yr. (mills, converters, and personnel)
         $7.50 (Others)
Type of publication- Advertising each issue, yearly author and
                      subject index to feature articles
Scope- Trade
Description of contents- Business trends in the paper industry
                       Has feature articles; new company litera-
                       ture; prices of paper making fibers; other
                       trade information; chemical product and
                       equipment advertisements
Special features- Annual Review and Convention issue

Das Papier  (See pp. 20, 68)
First published- 1947-
Frequency of publication- Monthly
Publisher- Eduard Roether Verlag
           56 Berliner Allee
           Darmstadt 61, Germany
Cost- 78 DM and postage
Indexes- Yearly author, subject, patent, and book
          reviews indexes
Abstracted by- C.A., S.I., T.I.A.
Type of publication- Organ of the West German professional paper
                     association and paper makers occupational
                     association
Scope- Covers production of wood pulp, paper pulp,
       paper, and paper sheet, and the chemical
       technology of cellulose
Description of contents- Has scientific and technical research
                        papers; some trade information
Special features- Patent and periodical article abstracts;
                 book reviews
Type and number of abstracts- 850-1,000 Informative and descriptive ab-
                             structs/yr. of European, English language,
                             and Slavic journal literature and patents

Physics
   See Journal of Applied Physics

Platts Bulletin  (See p. 15)
First published- Date not available (V. 6 was published in
                 1948/9)
Frequency of publication- Approximately six issues/yr. (12 issues/V.)
Publisher- Platt Brothers (Sales) Ltd.
           Oldham, England
Cost- Not available
Indexes- Subject index each volume
Abstracted by- S.I., T.I.A.
Indexed by- T.T.D.
Type of publication- House organ of Platt Brothers
Scope - Platt product awareness
Description of contents - Has semitechnical articles on Platt processes; equipment advertisements

Rayon
See Modern Textiles Magazine

Rayon and Melland Textile Monthly
See Modern Textiles Magazine

Rayon and Synthetic Textiles
See Modern Textiles Magazine

Rayon and Synthetic Yarn Journal
See Modern Textiles Magazine

Rayon and the Rayon Journal
See Modern Textiles Magazine

Rayon Organon
See Textile Organon

Rayon Record
See Skinner's Record

Rayon Textile Monthly
See Modern Textiles Magazine

Referativniy Zhurnal: Khimiya (See p. 69)
First published - 1953-
Frequency of publication - Semimonthly
Publisher - Izdatel'stvo Akademii Nauk, SSSR
(Soviet Institute of Scientific Information)
Shubinskii Per. D. 10,
Moscow G-99, U.S.S.R.

Cost - 151 Rubles, 92 kopecks (organizations),
126 Rubles, 66 kopecks (individuals)

Indexes - Author and patent each issue, annual
author, subject, patent, and formula indexes

Coverage - 70,000 Descriptive and informative ab-
stracts/yr. from world literature

Scope - The following subdivisions for the field
of chemistry are used: I. General chemi-
cal, physical, and inorganic questions;
II. Geochemistry, analytical chemistry,
and laboratory instrumentation; III. Or-
ganic chemistry; IV. General questions
in chemical technology; V. Technology
of inorganic materials; VI. Technology
of organic materials; VII. Chemistry
and treatment of wood pulp, crude gas, and petroleum, etc.; VIII. Chemistry and technology of food preparation, perfume materials, etc.; IX. Chemistry and technology of high molecular compounds

**Reyon Zellwolle und Andere Chemiefasern**

*See Chemiefasern*

**Review of Scientific Instruments** *(See p. 17)*
- First published: 1930-
- Frequency: Monthly
- Publisher: American Institute of Physics
  - 335 East 45th Street
  - New York, New York
- Cost: $11/yr. to members, $13/yr. to nonmembers
- Indexes: Advertising each issue, yearly author and subject indexes
- Indexed by: A.S.T., E.I., T.T.D.
- Type of publication: Institute
- Scope: Devoted to scientific instruments, apparatus, and techniques
- Description of contents: Has technical papers on instrumentation in chemistry, physics, and life sciences; sections on new instruments and materials, manufacturers' literature; equipment advertisements
- Special features: Book reviews

**Science** *(See p. 16)*
- First published: 1880-
- Frequency of publication: Weekly
- Publisher: American Association for Advancement of Science
  - 1515 Massachusetts Avenue, N. W.
  - Washington, D. C.
- Cost: $8.50/yr.
- Indexes: Combined author, subject, and title two times a year
- Indexed by: E.I., T.T.D.
- Type of publication: Association publication
- Scope: Covers development of science
- Description of contents: Has technical reports; news of association; advertising
- Special features: Book reviews; bibliographies

**Science Abstracts Section A. Physics Abstracts** *(See p. 69)*
- First published: 1898-
- Frequency of publication: Monthly
Publisher- Institution of Electrical Engineers
Savoy Place
London W.C. 2, England

Cost- £ 6/yr.

Indexes- Author each issue, annual author and subject indexes

Coverage- 15,000 Informative abstracts/yr. of world literature

Scope- Abstracts are listed under the following subject headings: General physics, Nuclear physics, Solid state physics, Physical chemistry, Geophysics, Biophysics, Atomic and molecular physics, etc.

Sen'i Kikai Gakkaishi

Sewage and Industrial Wastes
See Water Pollution Control Federation, Journal

Sewage Works Journal
See Water Pollution Control Federation, Journal

Shirley Institute Summary of Current Literature (See pp. 70-1)
First published- 1921-
Frequency of publication- Semimonthly
Publisher- Cotton Silk and Man-Made Fibres Research Association
Shirley Institute
Didsbury
Manchester 20, England

Cost- 60 s/yr.

Indexes- Annual author, subject, patent indexes, and numerical British patent list

Title changes- British Cotton Industry Research Association at head of the title until 1960

Coverage- 5,000 Descriptive and informative abstracts/yr. from world literature (now published also in Abstracts section of the Textile Institute Journal)


Silk and Rayon
See Skinner's Record
Silk Journal
See Man-Made Textiles

Silk Journal and Rayon World
See Man-Made Textiles

Skinner's Record (See pp. 14, 19)
First published- 1928-
Frequency of publication- Monthly
Publisher- Thomas Skinner and Co. Ltd.
St. James House
44 Brazenose Street
Manchester 2, England

Cost- £1, 16 s/yr.
Indexes- Advertising each issue, yearly contents index
Abstracted by- C.A., S.I., T.I.A.
Indexed by- B.T.I., T.T.D.
Title changes- The Rayon Record (May 1929-August 1933);
Silk and Rayon (September 1933-June 1950);
Skinner's Silk and Rayon Record (July 1950-September 1962)

Type of publication- Trade
Scope- Covers developments in man-made fiber industry
Description of contents- Has reports on machinery and processing developments; fiber technology; commerce and statistics; fabrics and design; industrial news; chemical product and equipment advertisements
Special features- Annual Review supplement (since 1962)

Skinner's Silk and Rayon Record
See Skinner's Record

Society of Dyers, and Colourists, Journal (See pp. 11, 20-2, 68)
First published- 1884-
Frequency of publication- Monthly
Publisher- Society of Dyers and Colourists
Dean House, Piccadilly
Bradford
Yorkshire, England

Cost- 140 s/yr. to nonmembers
Indexes- Advertising each issue, yearly author and subject indexes
Abstracted by- C.A., S.I., T.I.A.
Indexed by- A.S.T., B.T.I., T.T.D.
Type of publication- Society
Scope- Covers research undertaken by the Society and abstracts periodical and patent literature pertaining to the following subjects:
I. Plant, machinery, buildings; II. Water and effluents; III. Chemicals, auxiliary products, finishing materials; IV. Raw materials, intermediates, coloring matters; V. Paints, enamels, inks; VI. Fibers, yarns, fabrics; VII. Desizing, scouring, carbonising, bleaching; VIII. Dyeing; IX. Printing; X. Finishing; XI. Paper and other cellulosic products; XII. Leather, furs, other protein materials; XIII. Rubber, resins, plastics; XIV. Analysis, testing, apparatus; XV. Color physics and measurement; XVI. Miscellaneous

Description of contents-
Has research papers; communications; lists of manufacturers' publications; chemical product and equipment advertisements

Special features-
Book reviews; abstracts of patents and periodical articles

Type and number of abstracts-
3,000 informative abstracts/yr. from world journal and patent literature

Southern Textile News (See pp. 15, 22, 72)
First published- Date not available
Frequency of publication- Weekly
Publisher- Mullen Publications, Inc.
3619 Wilkinson Boulevard, P. O. Box 1569
Charlotte 1, North Carolina
Cost- $5/yr.
Indexes- None
Indexed by- T.T.D.
Type of publication- Trade newspaper
Scope- News of the textile industry—garment, tufted, hosiery, selling, financing, machinery, spinning, weaving, knitting, finishing, printing, synthetics

Description of contents-
Has stock quotations; leads for exporters; other trade information; chemical product and equipment advertisements

Special features-
Book reviews

Tappi, Association and Technical Sections (See pp. 12, 18)
First published- 1949-
Frequency of publication- Monthly
Publisher- Technical Association of the Pulp and Paper Industry
360 Lexington Avenue
New York, New York
Cost- $15/yr.
Indexes- Advertising each issue, yearly author and subject indexes
Indexed by- A.S.T., E.I., T.T.D.
Title changes- Technical Association Papers of the Technical Association of Pulp and Paper Industry
Type of publication- Association
Scope- Covers activities of the Association
Description of contents- Association section has news and events of the Association; industry notes; TAPPI standards; chemical product advertisements. Technical section has research papers
Special features- Association section has listed patents on papermaking since 1949

Technical Association of Pulp and Paper Industry
Technical Association Papers
See Tappi

Technical Bulletin
See Dyes and Chemicals Technical Bulletin

Technology of the Textile Industry, U.S.S.R. (See p. 25)
(English cover-to-cover translation of Tekhnogia Tekstil'noi Promyshlennosti)
First published- 1960-
Frequency of publication- Bimonthly
Publisher- Textile Institute (with support of Department of Scientific and Industrial Research) Manchester 3, England
Cost- £ 7/yr. ($2.1)
Indexes- None
Abstracted by- C.A., S.I.
Indexed by- T.T.D.
Type of publication- Russian government
Scope- Covers all aspects of textile technology--materials, primary processing, spinning, weaving, dyeing, and finishing, mechanics, power, economics, and management
Description of contents- Contains articles and reports on research and development work

Teintex (See pp. 14, 20, 68)
First published- 1936-
Frequency of publication- Monthly
Publisher- Editions Teintex
60 Rue de Richelieu
Paris 2, France
Cost- 55 F/yr. (France), 65 F/yr. (Foreign)
Indexes- Advertising each issue, yearly author and subject indexes
Abstracted by- C.A., S.I., T.I.A.
Indexed by- T.T.D.
<table>
<thead>
<tr>
<th>Type of publication-</th>
<th>Organ of the Association of Chemists of the Textile Industry in France</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scope-</td>
<td>General review of dyestuffs</td>
</tr>
<tr>
<td>Description of contents-</td>
<td>Has technical papers on dyeing, bleaching, and printing textiles; news of industry; new dyes and processes; chemical product and equipment advertisements</td>
</tr>
<tr>
<td>Special features-</td>
<td>Patent and periodical article abstracts; contents lists of journals of the world</td>
</tr>
<tr>
<td>Type and number of abstracts-</td>
<td>700 Annotative and descriptive abstracts/yr. of patents and journal articles</td>
</tr>
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**Tekhnologija Tekstil'noi Promyshlennosti** (See pp. 15, 25)

(English translation is Technology of the Textile Industry, U.S.S.R)

<table>
<thead>
<tr>
<th>First published-</th>
<th>1957-</th>
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<tr>
<td>Frequency of publication-</td>
<td>Bimonthly</td>
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<tr>
<td>Publisher-</td>
<td>Moscow, U.S.S.R.</td>
</tr>
<tr>
<td>Cost-</td>
<td>Not available</td>
</tr>
<tr>
<td>Indexes-</td>
<td>Yearly subject index</td>
</tr>
<tr>
<td>Abstracted by-</td>
<td>C.A., S.I., T.I.A.</td>
</tr>
<tr>
<td>Indexed by-</td>
<td>T.T.D.</td>
</tr>
<tr>
<td>Type of publication-</td>
<td>Russian government</td>
</tr>
<tr>
<td>Scope-</td>
<td>Same as that of the English translation</td>
</tr>
<tr>
<td>Description of contents-</td>
<td>Has technical articles</td>
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</table>

**Tekstil'naja Promyshlennost** (See pp. 15, 68)

<table>
<thead>
<tr>
<th>First published-</th>
<th>1941-</th>
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<tbody>
<tr>
<td>Frequency of publication-</td>
<td>Monthly</td>
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<tr>
<td>Publisher-</td>
<td>Moscow, U.S.S.R.</td>
</tr>
<tr>
<td>Cost-</td>
<td>6 Rubles/yr.</td>
</tr>
<tr>
<td>Indexes-</td>
<td>Yearly subject index</td>
</tr>
<tr>
<td>Abstracted by-</td>
<td>C.A., S.I., T.I.A.</td>
</tr>
<tr>
<td>Indexed by-</td>
<td>T.T.D.</td>
</tr>
<tr>
<td>Type of publication-</td>
<td>Russian government</td>
</tr>
<tr>
<td>Scope-</td>
<td>The subject divisions for textile technology are: Economy and management of production, Raw material and initial preparation, Spinning, Weaving, Knitted fabric production, Dyeing and finishing, Machinery and engineering</td>
</tr>
<tr>
<td>Description of contents-</td>
<td>Has technical papers; few chemical product and equipment advertisements</td>
</tr>
<tr>
<td>Special features-</td>
<td>Book reviews; periodical abstracts</td>
</tr>
<tr>
<td>Type and number of abstracts-</td>
<td>450 Annotative and descriptive abstracts/yr. from world literature</td>
</tr>
</tbody>
</table>

**De Tex** (See pp. 13, 68)

<table>
<thead>
<tr>
<th>First published-</th>
<th>1942-</th>
</tr>
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<tbody>
<tr>
<td>Frequency-</td>
<td>Monthly</td>
</tr>
<tr>
<td>Publisher-</td>
<td>Uitgeversmaatschappij C. Misset N. V. Doetinchem, Netherlands</td>
</tr>
</tbody>
</table>
**Textil-Praxis** (see pp. 13, 18, 20, 25, 68)

**First published-** 1946-

**Frequency of publication-** Monthly

**Publisher-** Konradin-Verlag Robert Kohlhammer

52 Danneckerstrasse

Stuttgart, Germany

**Cost-** 57.60 DM/yr. (Inland)

60 DM/yr. (Elsewhere)

**Indexes-** Advertising each issue, yearly author, subject, and new books indexes

**Abstracted by-** C.A., S.I.

**Indexed by-** T.T.D.

**Type of publication-** Organ of German Society of Dyers and the Association of Textile Engineers

**Scope-** Advances in textile science and technology

**Description of contents-** Has technical articles; some news of industry; chemical product and equipment advertisements

**Special features-** Summary of articles in Spanish and French; book reviews; patent and journal article abstracts; yearly textile machinery catalog

**Type and number of abstracts-** 1,000-1,500 informative abstracts/yr. from European, English language, and Slavonic literature including patents
Textil-Praxis (International Edition in English) (see p. 25)
First published- 1946-
Frequency of publication- Monthly
Publisher- Konradin-Verlag Robert Kohlhammer
52 Danneckerstrasse
Stuttgart, Germany
Cost- 57.60 DM/yr.
Indexes- Advertising each issue.
Abstracted by- C.A., S.I., T.I.A.
Indexed by- T.T.D.
Type of publication- Organ of German Society of Dyers
and the Association of Textile Engineers
Scope- Advances in textile science and technology
Description of contents- Has surveys of articles covered in the German edition over a period of time; chemical product and equipment advertisements
Special features- Book reviews

Textil-Rundschau (see pp. 13, 20, 68)
First published- 1946-
Frequency of publication- Monthly
Publisher- Zollikofer and Co. AG
Buchdruckerei, 13 Gutenbergstrasse
St. Gallen, Switzerland
Cost- 36 fr./yr.
Indexes- Yearly author, subject, and book review indexes
Abstracted by- C.A., S.I., T.I.A.
Indexed by- T.T.D.
Type of publication- Organ of the Swiss Society of Chemists and Colorists (SVCC) and of the Swiss Federation for the Testing of Material in Engineering (SVMT)
Scope- Advances in textile science and technology
Textil-Und Faserstofftechnik
See Deutsche Textiltechnik

Textile Bulletin (See p. 18)
First published- 1911-
Frequency of publication- Monthly
Publisher- Clark Publishing Co.
218 West Morehead Street
Charlotte 6, North Carolina
Cost- $1.50/yr.
Indexes- Advertising each issue
Abstracted by- B.A., C.A., S.I.
Indexed by- T.T.D.
Type of publication- Trade
Scope- Developments in fiber technology, dyeing, bleaching, and finishing
Description of contents- Has technical articles; industrial news; other trade information; chemical product and equipment advertisements
Special features- "For the Mill Bookshelf" contains annotated lists of company literature available by ordering; "New Patents in the Textile Industry" section

Textile Colorist
See Textile Colorist and Converter

Textile Colorist and Converter (See p. 12)
Publication dates- 1879-1948
Frequency of publication- Monthly
Publisher- Howes Publishing Co.
One Madison Avenue
New York, New York
Indexes- Advertising each issue, yearly subject index up to V. 55 (1943)
Abstracted by- C.A. (1946 list)
Indexed by- T.T.D. (1944-8)
Title changes- Textile Colorist (1879-1944); absorbed by American Dyestuff Reporter in 1949
Type of publication- Trade
Scope- Until 1943 was concerned with trends in dye technology; from 1943-8 was more fashion oriented
### **Textile Economist**

See **Textile Organon**

### **Textile Forum**  (See pp. 15, 72)

<table>
<thead>
<tr>
<th>First published</th>
<th>1942-</th>
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<tbody>
<tr>
<td>Frequency of publication</td>
<td>Five times a year (Feb., Apr., June, Oct., Dec.)</td>
</tr>
<tr>
<td>Publisher</td>
<td>School of Textiles, North Carolina State College</td>
</tr>
<tr>
<td></td>
<td>P. O. Box 5626</td>
</tr>
<tr>
<td></td>
<td>State College Station</td>
</tr>
<tr>
<td></td>
<td>Raleigh, North Carolina</td>
</tr>
<tr>
<td>Cost</td>
<td>$2/yr.</td>
</tr>
<tr>
<td>Indexes</td>
<td>Advertising each issue</td>
</tr>
<tr>
<td>Indexed by</td>
<td>T.T.D.</td>
</tr>
<tr>
<td>Type of publication</td>
<td>Textile school publication</td>
</tr>
<tr>
<td>Scope</td>
<td>Covers news of textile field and activities of North Carolina State School of Textiles</td>
</tr>
<tr>
<td>Description of contents</td>
<td>Has nontechnical articles; news of events at North Carolina State; chemical product and equipment advertisements</td>
</tr>
</tbody>
</table>

### **Textile Industries**  (See pp. 14, 18-19, 22)

<table>
<thead>
<tr>
<th>First published</th>
<th>1899-</th>
</tr>
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<tbody>
<tr>
<td>Frequency of publication</td>
<td>Monthly; semimonthly in September</td>
</tr>
<tr>
<td>Publisher</td>
<td>W. R. C. Smith Publishing Co.</td>
</tr>
<tr>
<td></td>
<td>1760 Peachtree Road, N. W.</td>
</tr>
<tr>
<td></td>
<td>Atlanta, Georgia</td>
</tr>
<tr>
<td>Cost</td>
<td>$2/yr.</td>
</tr>
<tr>
<td>Indexes</td>
<td>Advertising each issue, yearly subject index</td>
</tr>
<tr>
<td>Indexed by</td>
<td>A.S.T., T.T.D.</td>
</tr>
<tr>
<td>Title changes</td>
<td>Cotton (1877-1946)</td>
</tr>
<tr>
<td>Type of publication</td>
<td>Trade</td>
</tr>
<tr>
<td>Scope</td>
<td>Covers mill technology of fiber to fabric and management</td>
</tr>
<tr>
<td>Description of contents</td>
<td>Has articles on mill technology; mill management news; new booklets, brochures, and products sections; chemical product and equipment advertisements</td>
</tr>
<tr>
<td>Special features</td>
<td>Buyers' Guide section (mid-September)</td>
</tr>
</tbody>
</table>

### **Textile Institute, Journal, Abstracts Section**  (See pp. 22, 70-1)

<table>
<thead>
<tr>
<th>First published</th>
<th>1910-</th>
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<tbody>
<tr>
<td>Frequency of publication</td>
<td>Monthly</td>
</tr>
<tr>
<td>Publisher</td>
<td>Textile Institute</td>
</tr>
<tr>
<td></td>
<td>10 Blackfriars Street</td>
</tr>
<tr>
<td></td>
<td>Manchester 3, England</td>
</tr>
<tr>
<td>Cost</td>
<td>£12/yr. to nonmembers (for entire Journal)</td>
</tr>
</tbody>
</table>
Indexes - Annual author, subject, and numerical patent indexes
Coverage - 5,000 Descriptive and annotative abstracts/yr. from world literature
Scope - The Cotton Silk and Man-Made Fibres Research Association, Wool Industries Research Association, Linen Industry Research Association, Hosiery and Allied Trades Research Association, and British Jute Trade Research Association are the sources for abstracts on: (1) Fibers and their production; (2) Conversion of fibers into finished yarns; (3) Conversion of yarns and fibers into fabrics; (4) Chemical and finishing processes; (5) Analysis, testing, grading, and defects; (6) Design; (7) Laundering and drycleaning; (8) Building and engineering; (9) Science (biology, biochemistry, analytical chemistry, inorganic chemistry, organic chemistry, physical chemistry, photochemistry, optics, general physics, mathematics); (10) Sociology; (11) Generalities: conferences, exhibitions, etc.

**Textile Institute, Journal, Proceedings and Standardisation**
(See pp. 11-12, 21-2)

<table>
<thead>
<tr>
<th>First published-</th>
<th>1910-</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency of publication-</td>
<td>Irregular</td>
</tr>
<tr>
<td>Publisher-</td>
<td>Textile Institute</td>
</tr>
<tr>
<td>10 Blackfriars Street</td>
<td></td>
</tr>
<tr>
<td>Manchester 3, England</td>
<td></td>
</tr>
<tr>
<td>Cost-</td>
<td>£12/yr. to nonmembers (for entire Journal)</td>
</tr>
<tr>
<td>Indexes-</td>
<td>Yearly author and subject indexes</td>
</tr>
<tr>
<td>Abstracted by-</td>
<td>C.A., S.I., T.I.A.</td>
</tr>
<tr>
<td>Indexed by-</td>
<td>B.T.I., E.I., T.T.D.</td>
</tr>
<tr>
<td>Title changes-</td>
<td>Part of this Journal is superseded by the Textile Institute and Industry (1963-)</td>
</tr>
<tr>
<td>Type of publication-</td>
<td>Institute</td>
</tr>
<tr>
<td>Scope-</td>
<td>Covers some proceedings of the Institute and British textile standardization</td>
</tr>
<tr>
<td>Description of contents-</td>
<td>Has research papers; tentative textile standards to become British Standards in four months; chemical product and equipment advertisements</td>
</tr>
</tbody>
</table>

**Textile Institute, Journal, Transactions** (See pp. 11, 18)

<table>
<thead>
<tr>
<th>First published-</th>
<th>1910-</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency of publication-</td>
<td>Monthly</td>
</tr>
<tr>
<td>Publisher-</td>
<td>Textile Institute</td>
</tr>
<tr>
<td>10 Blackfriars Street</td>
<td></td>
</tr>
</tbody>
</table>
Manchester 3, England

Cost-
£ 12/yr. to nonmembers (for entire Journal)

Indexes-
Yearly author and subject indexes

Abstracted by-
C.A., S.I., T.I.A.

Indexed by-
B.T.I., E.I., T.T.D.

Type of publication-
Institute

Scope-
Covers research carried on by the Textile Institute

Description of contents-
Has research papers and some letters to the editor

Textile Institute and Industry

First published-
1963-

Frequency-
Monthly

Publisher-
Textile Institute
10 Blackfriars Street
Manchester 3, England

Cost-
Not available

Indexes-
Yearly author and subject indexes

Abstracted by-
S.I.

Indexed by-
B.T.I.

Title changes-
Supersedes a major part of the Proceedings formerly issued in the Journal of the Textile Institute

Type of publication-
Institute

Scope-
Reviews of recent advances in the science and technology of textile fibers, machinery and processes, written for the busy industrialist and non-specialist

Description of contents-
Has some technical writing; industrial and Institute news; chemical product and equipment advertisements

Special features-
Book reviews

Textile Journal of Australia

First Published-
1926-

Frequency of publication-
Monthly

Publisher-
Merchandising Magazine Pty. Ltd.
142 Clarence Street
Sydney, Australia

Cost-
£ 2/yr. (England), £ 3, 3 s/yr. (Overseas)

Indexes-
Advertising each issue

Abstracted by-
S.I., T.I.A.

Indexed by-
T.T.D.

Type of publication-
Organ of the Woolen and Worsted Manufacturers of Australia, the Associated Cotton Textiles Manufacturers of Australia, the Society of Dyers and Colorists of Australia, and others

Scope-
Covers weaving, knitting, dyeing, finishing, and textile printing industries in Australia
Description of contents—Has technical processing articles; industrial news; new dyes; chemical product and equipment advertisements

Special features—Book reviews

**Textile Machinery Society of Japan, Journal** (in Japanese)

(See pp. 12, 25)

First published—1948-
Frequency of publication—Monthly
Publisher—Textile Machinery Society of Japan
Osaka Science and Technology Center Bldg.
Utsubo Park, 118 Utsubo 1-chome, Nishi-ku
Osaka, Japan

Cost—Not available
Indexes—Yearly author, subject, and title indexes
Abstracted by—S.I.
Indexed by—T.T.D.
Title changes—Japanese title is Sen’i Kikai Gakkaishi
Type of publication—Society
Scope—Covers advancement of knowledge and techniques in the textile and textile machinery fields

Description of contents—Has technical papers; research papers; engineering section; information on foreign industries; new products; equipment advertisements.

Special features—Patent abstracts; annual buyers' guide

**Textile Machinery Society of Japan, Journal** (English edition) (See p. 25)

First published—1955-
Frequency of publication—Quarterly (in 1965 to be bimonthly)
Publisher—Textile Machinery Society of Japan
Osaka Science and Technology Center Bldg.
Utsubo Park, 118 Utsubo 1-chome, Nishi-ku
Osaka, Japan

Cost—$7.50/yr.
Indexes—Yearly author, subject, and title indexes
Abstracted by—C.A., S.I., T.I.A.
Indexed by—E.I., T.T.D.
Type of publication—Society
Scope—Same as that of the Japanese edition
Description of contents—The English edition contains translations of those papers in the Japanese edition which the editors believe to be of special international interest; equipment advertisements

**Textile Manufacturer** (See p. 14)

First published—1875-
Frequency of publication—Monthly
Publisher—Emmott and Co. Ltd.
<table>
<thead>
<tr>
<th>Magazine</th>
<th>Address</th>
<th>Cost</th>
<th>Indexes</th>
<th>Abstracted by</th>
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<th>Type of publication</th>
<th>Scope</th>
<th>Description of contents</th>
<th>Special features</th>
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<td>Textile Mercury</td>
<td>Textile World</td>
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<td>Textile Mercury and Argus</td>
<td>Textile Mercury International</td>
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<tr>
<td>Textile Mercury International</td>
<td>Mercury House, Acton Square, Salford 5, Lancaster, England</td>
<td>£2, 12 s/yr.</td>
<td>Advertising each issue</td>
<td>C.A. (in 1956 list, but not 1961), S.I.</td>
<td>T.I.A.</td>
<td>Trade</td>
<td>Covers developments in textile machinery industry</td>
<td>Has textile equipment news; world textile digest; company news; other trade information; chemical product and equipment news; Directory of Machinery Makers, Supplies and Services each issue</td>
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<tr>
<td>Textile Organon</td>
<td>Textile Organon</td>
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</table>
Textile Recorder
First published- 1883-
Frequency of publication- Monthly
Publisher- Harlequin Press Ltd.
Old Colony House, South King Street
Manchester 2, England

Cost- $4/yr.
Indexes- Annual subject index
Abstracted by- S.I., T.I.A.
Indexed by- P.A.I.S., T.T.D.
Title changes- Textile Economist; Rayon Organon (Oct.
1935-51)

Type of publication- Trade
Scope- Arrangement of authentic market data, especially important to U.S. man-made fiber industry
Description of contents- Contains charts and figures from U.S. Census Bureau Reports, etc.

Textile Research
See Textile Research Journal

Textile Research Journal
First published- 1930-
Frequency of publication- Monthly
Publisher- Textile Research Institute
P. O. Box 625
Princeton, New Jersey

Cost- $25/yr.
Indexes- Annual author and title, subject indexes, cumulative indexes every ten years
Indexed by- A.S.T., E.I., T.T.D.
Title changes- Textile Research (Nov. 1932-Jan. 1945)
Type of publication- Institute
Scope- Covers Textile Institute research on fiber science and technology
Description of contents- All research papers
<table>
<thead>
<tr>
<th>Publication</th>
<th>First published</th>
<th>Frequency of publication</th>
<th>Publisher</th>
<th>Cost</th>
<th>Indexes</th>
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</thead>
<tbody>
<tr>
<td>Textile Technology Digest</td>
<td>1944</td>
<td>Monthly</td>
<td>Institute of Textile Technology, Charlottesville, Virginia</td>
<td>Free to ITT members, $25/yr. to others</td>
<td>Author index and patent checklist each issue, annual author, subject, and numerical patent indexes (to U. S. patents only)</td>
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<tr>
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<td></td>
<td></td>
<td>5,900 annotative abstracts/yr. from world literature</td>
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<tr>
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<td>Scope: Abstracts are listed in the following subdivisions: A. Fibers (natural and man-made); B. Yarn production (opening, picking, fiber preparation, carding, combing, drawing, roving, spinning, twisting); C. Fabric production (warping, slashing, yarn preparation, weaving, knitting); D. Finishing (chemical processes, dyeing and printing, mechanical processes, drying, setting, conditioning); E. Testing and measurement (fibers, yarns, fabrics, other); F. Mill management (industrial engineering, plant and equipment); G. Sciences (chemistry, physics, biology); H. Miscellany</td>
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<tr>
<td></td>
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<td></td>
<td>Description of contents: Has industrial (inland and overseas) and market news; chemical product and equipment advertisements</td>
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<td></td>
<td>Special features: Book reviews</td>
</tr>
</tbody>
</table>
330 West 42nd Street
New York, New York

Cost-

Indexes-

Abstracted by-

Indexed by-

Title changes-

Type of publication-

Scope-

Description of contents-

Special features-

Advertising each issue, yearly author and subject indexes (January)

C.A., S.I., T.I.A.

A.S.T., B.P.I., E.I., T.T.D.

Textile Manufacturing World (1888-1894);
Textile World and Industrial Record (1897-Mar. 1903);
Textile World Record (April 1903-Nov. 1915);

Trade

Covers textile mill technology and management

Has articles on manufacturing and management; chemical treatment and finishing, news from mills, statistics; company literature; other trade information; chemical product and equipment advertisements

"Fact File Issue" (July issue) has classified list of U.S. companies supplying products and services, etc.

Textile World and Industrial Record
See Textile World

Textile World Journal
See Textile World

Textile World Record
See Textile World

Textiles (See pp. 13, 69)

First published-

1945-

Frequency of publication-

Monthly

Publisher-

Ed. Drukkerij-Uitgeverij Vyncke
38 Savaanstraat
Ghent, Belgium

300 F/yr. (Belgium), 500 F/yr. (Other countries)

Advertising each issue, yearly subject index

C.A., S.I., T.I.A.

T.T.D.

Trade organ of the National Organization for Textile Engineers and Directors ("Unitex")

Covers progress in Flemish textile industry

Has news articles; new products section; chemical product and equipment advertisements

Bibliographies of periodical articles
United States Bureau of Standards, *Journal of Research* (See pp. 17, 21)

**Section A.** Physics and Chemistry  
**Section B.** Mathematics and Mathematical Physics  
**Section C.** Engineering and Instrumentation  
**Section D.** Radio Science

First published- 1928-  
Frequency of publication- Section A--bimonthly; Section B--quarterly  
Section C--quarterly; Section D--monthly

Publisher- Superintendent of Documents  
U. S. Government Printing Office  
Washington 25, D. C.

Cost-  
Section A-$4/yr.; Section B-$2.25/yr.  
Section C-$2.25/yr.; Section D-$9/yr.

Indexes- Each section has yearly combined author and title index

Abstracted by-  
B.A., C.A. (Sections A,B,C); S.A., S.I.  
(A,B,C); T.I.A. (A,B,C)

Indexed by-  
A.S.T., E.I., T.T.D. (A,C)

Title changes- The *Journal of Research* divided into four sections in 1959

Type of publication- U. S. Government

Scope- Covers research carried on by the National Bureau of Standards in the areas of chemistry, physics, engineering, instrumentation, mathematics, radio science

Description of contents- Each section contains research papers

Special features- Selected abstracts of NBC publications in each section

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**United States Patent Office, Official Gazette** (See Official Gazette)

*Wall Street Journal* (See pp. 17, 22)

First published- 1882-  
Frequency of publication- Weekly

Publisher- Dow Jones and Co., Inc.  
11501 Columbia Pike  
Silver Spring, Maryland

Cost- $24/yr.

Indexes- Monthly subject and title index, with annual cumulations (separate release begun in 1958)

Indexed by- T.T.D.

Type of publication- Trade

Scope- Covers news and world market situation of all industries

<table>
<thead>
<tr>
<th>Water Pollution Control Federation, <em>Journal</em></th>
<th>Water Pollution Control Federation, <em>Journal</em></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>First published-</strong> 1928-</td>
<td><strong>First published-</strong></td>
</tr>
<tr>
<td><strong>Frequency of publication-</strong> Monthly</td>
<td><strong>Frequency of publication-</strong></td>
</tr>
<tr>
<td><strong>Publisher-</strong> Water Pollution Control Federation 4435 Wisconsin Avenue Washington, D.C.</td>
<td><strong>Publisher-</strong></td>
</tr>
<tr>
<td><strong>Cost-</strong> $8/yr. to members, $15/yr. to nonmembers</td>
<td><strong>Cost-</strong></td>
</tr>
<tr>
<td><strong>Indexes-</strong> Advertising each issue, yearly author, subject, and geographical indexes (through 1962), cumulative index every ten years, V. 1-20 (1928-48), V. 21-30 (1949-58)</td>
<td><strong>Indexes-</strong></td>
</tr>
<tr>
<td><strong>Abstracted by-</strong> C.A.</td>
<td><strong>Abstracted by-</strong></td>
</tr>
<tr>
<td><strong>Indexed by-</strong> A.S.T., E.I., T.T.D.</td>
<td><strong>Indexed by-</strong></td>
</tr>
<tr>
<td><strong>Title changes-</strong></td>
<td><strong>Title changes-</strong></td>
</tr>
<tr>
<td><strong>Type of publication-</strong> Federation</td>
<td><strong>Type of publication-</strong></td>
</tr>
<tr>
<td><strong>Scope-</strong> Covers activities of the Federation, which is dedicated to the advancement of practical knowledge concerning the nature, collection, treatment, and disposal of domestic and industrial waste waters, and the design, construction, operation, and management of facilities for these purposes</td>
<td><strong>Scope-</strong></td>
</tr>
<tr>
<td><strong>Description of contents-</strong> Has news about members and meetings of the Federation; chemical product and equipment advertisements</td>
<td><strong>Description of contents-</strong></td>
</tr>
<tr>
<td><strong>Special features-</strong> Yearly review of the literature on wastewater and water pollution control</td>
<td><strong>Special features-</strong></td>
</tr>
</tbody>
</table>

**Whitin Review** (See p. 15)

| **First published-** Date not available (V. 17/18 was published in 1950/51)  | **First published-**  |
| **Frequency-** Irregular  | **Frequency-**  |
| **Publisher-** Whitin Machine Works Whitinsville, Massachusetts  | **Publisher-**  |
| **Cost-** Not available  | **Cost-**  |
| **Indexes-** None  | **Indexes-**  |
| **Abstracted by-** S.I.  | **Abstracted by-**  |
| **Indexed by-** T.T.D.  | **Indexed by-**  |
| **Type of publication-** House organ of Whitin Machine Works  | **Type of publication-**  |
| **Scope-** Whitin product awareness  | **Scope-**  |
| **Description of contents-** Has articles on mill processes, some containing interesting history and background information; Whitin equipment advertisements  | **Description of contents-**  |

**Zeitschrift Für Angewandte Chemie**

*See Angewandte Chemie*
APPENDIX B

QUESTIONNAIRE SENT TO TEXTILE PROFESSIONALS
Instructions:

Approximately 50 journals covering the textile field and allied fields have been listed. Please answer the following questions on the enclosed checklist:

1. Check 10 journals most useful to you. (Questions 2-6 refer to 10 journals checked)

2. Of the 10 journals, check the ones to which you subscribe.

3. Of the 10 journals, check the ones which you read regularly. (as published)

4. Of the 10 journals, check the ones which you read occasionally. (several times a year)

5. Indicate by use of letters (a-h) what kinds of information are of importance to you in these 10 journals:
   a. current awareness
   b. engineering data
   c. product advertising
   d. research material
   e. book reviews
   f. patent abstracts
   g. journal article abstracts
   h. other (specify)

6. Comment on adequacies and inadequacies of these 10 journals.

7. List any journals of special usefulness not included in this list.

8. List foreign journals you read.

Space is provided for your name, company, and position. Return the questionnaire in the enclosed envelope.
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<tr>
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<tbody>
<tr>
<td>American Dyestuff Reporter</td>
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<td>American Fabrics</td>
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<tr>
<td>America's Textile Reporter</td>
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<tr>
<td>Canadian Textile Journal</td>
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<td>Ciba Review</td>
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<td>Indian Textile Journal</td>
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<td>Knitted Outerwear Times</td>
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<td>Man-Made Textiles</td>
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<td>Melland</td>
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<tr>
<td>Modern Textiles Magazine</td>
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<td>Skinner's Record</td>
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<td>Society of Dyers and Colourists, Journal</td>
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<td>Technology of Textile Industry, U.S.S.R.</td>
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<td>Textile Institute, Journal Proceedings</td>
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<td>Textile Machinery Society of Japan</td>
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<td>Textile Manufacturer</td>
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<td>Textile Organon</td>
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<td>Textile Recorder</td>
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<td>Textile Research Journal</td>
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<td>Textile Weekly</td>
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<td>Textile World</td>
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<td>Textile Newspapers:</td>
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<td>Pure Science and Engineering Journals:</td>
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<td>American Chemical Society, Journal</td>
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<td>Angewandte Chemie (Eng. ed.)</td>
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<td>Chemical and Engineering News</td>
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<td>Chemical Week</td>
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<tr>
<td>Industrial and Engineering Chemistry</td>
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<tr>
<td>Journal of Applied Physics</td>
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<tr>
<td>Journal of Applied Polymer Science</td>
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<td>Journal of Polymer Science</td>
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<tr>
<td>Journal of Research, National Bureau of Standards</td>
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<tr>
<td>A. Engineering and Instrumentation</td>
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<tr>
<td>B. Mathematics and Mathematical Physics</td>
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<tr>
<td>C. Physics and Chemistry</td>
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<tr>
<td>Journal of Scientific and Industrial Research Nature</td>
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### Abstract and Index Journals:

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<th>Journal Name</th>
<th>Columns</th>
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<tr>
<td>Applied Science and Technology Index</td>
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<tr>
<td>Bibliography of Agriculture</td>
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<tr>
<td>Chemical Abstracts</td>
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<td>Section 46 - &quot;Dyes&quot;</td>
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<td>Section 47 - &quot;Textiles&quot;</td>
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<td>Section 48 - &quot;Plastics Technology&quot;</td>
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<td>U. S. Patent Office. Official Gazette</td>
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7. List any journals of special usefulness not included in this list.

8. List foreign journals you read.

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### APPENDIX C

#### CHRONOLOGY CHART OF JOURNAL LITERATURE

<table>
<thead>
<tr>
<th>Journal Name</th>
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<tr>
<td>Chemisches Zentralblatt</td>
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<td>Textile Manufacturer</td>
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<td>American Chemical Society Journal</td>
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<td>Science</td>
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<td>Wall Street Journal</td>
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<td>Canadian Textile Journal</td>
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<td>L'Industrie Textile</td>
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<td>Society of Dyers and Colourists</td>
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<td>America's Textile Reporter</td>
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<td>Faraday Society Transactions</td>
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<td>Chemical Abstracts</td>
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<td>Industrial and Engineering Chemistry</td>
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<td>Textile Institute Journal (All Parts)</td>
<td>1910- To Date</td>
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<td>Textile Bulletin</td>
<td>1911- To Date</td>
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<td>Applied Science and Technology Index</td>
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<td>Du Pont Magazine</td>
<td>1913- To Date</td>
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<tr>
<td>Chemical Week</td>
<td>1914- To Date</td>
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<td>American Dyestuff Reporter</td>
<td>1917-1946- To Date</td>
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<td>Forbes</td>
<td>1917- To Date</td>
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<td>Chemiefaser</td>
<td>1919- To Date</td>
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<td>Melland Textilberichte (and English edition)</td>
<td>1920- To Date</td>
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<tr>
<td>American Society for Testing and Materials</td>
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<td>ASTM Bulletin</td>
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Shirley Institute Summary of Current Literature
Chemical and Engineering News
Man-Made Textiles
Modern Textiles Magazine
British Abstracts
Textile Journal of Australia
Skinner's Record
Textile Weekly
U. S. National Bureau of Standards
  Journal of Research
Water Pollution Control Federation
  Journal
  Journal of Applied Physics
  Review of Scientific Instruments
  Textile Organon
  Textile Research Journal
  Journal of Chemical Physics
  Tci
Ciba Review
Tekstil'Naia Promyshlennost
Journal of Scientific and Industrial Research
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Industrial Quality Control
Textile Technology Digest
American Association of Textile Technologists
  Papers
  Dyes and Chemicals Technical Bulletin
  Journal of Polymer Science
  Textilis
  American Fabrics
  Coton et Fibres Tropicales: Bulletin Bibliographique
  Textil-Praxis (and International edition)
  Textil-Rundschau
  L'Institute Textile de France Bulletin
  Makromolekulare Chemie
  Indian Cotton Growing Review
  Das Paper
  Textile Machinery Society of Japan
    Journal (Japanese edition)
    Tappi
    Faserforschung Und Textiltechnik
    Deutsche Textiltechnik
    Journal of Applied Chemistry
    Magyar Textiltechnika'
    Referativnyi Zhurnal: Khimya
    Journal of Applied Chemistry, Abstracts section
    Natural and Synthetic Fibers Yearbook
    Textile Machinery Society of Japan
      Journal (English edition)
Tekhnologiya Tekstil'noi Promyshlennosti
Journal of Applied Polymer Science
Technology of the Textile Industry, U.S.S.R.
Materials Research and Standards
Angewandte Chemie (International edition)
British Technology Index
Textile Institute and Industry

1957---To Date
1959---To Date
1960---To Date
1961---To Date
1962---To Date
1962---To Date
1963---To Date
APPENDIX D

ORGANIZATIONAL CHARTS OF

DEPARTMENTS OF AGRICULTURE AND COMMERCE
*Bureaus and agencies issuing textile information*
APPENDIX E

A UNITED STATES PATENT
Continuous filaments of cellulose acetate and triacetate in adhesive condition are caused to form webs of randomly disposed filaments bonded at spaced intervals by means of an air blast and are subjected to steaming to cause bulking.

6. The process which comprises moving substantially continuous cellulose acetate filaments while they are in adhesive condition to cause them to become substantially randomly directed and bonded to one another at spaced points so as to form a non-woven sheet-like article, and contacting said article with steam at a temperature ranging from about 93 to 180° C. for at least about one minute.

Textile Technology Digest abstract

Official Gazette entry
United States Patent Office

3,100,328

Patented Aug. 13, 1963

BULKED NON-WOVENS


Pld Dec. 4, 1958; Ser. No. 778,549

10 Claims. (CI. 28—76)

In accordance with another aspect of the invention, the non-woven article may comprise a mixture of continuous filamentary materials of a cellulose triester and a secondary cellulose ester, e.g., cellulose triacetate and conventional cellulose acetate. This can be formed by simultaneously extruding a solution of cellulose triacetate in ethylene chloride through one set of orifices and extruding a solution of conventional cellulose acetate through a second set of orifices. The filaments formed by such extrusions are positioned near each other and a blast of air causes them all to swirl and entangle with one another, becoming fused at spaced points. Steaming produces exceptionally high bulk because of the effect on the filaments individually as well as because of the differences in the thermal characteristics of the different types of filaments.

While not wishing to be bound thereby, the change in physical properties upon steaming is believed due to the following effects: Upon drying of freshly formed cellulose ester filaments, especially of substantially continuous filamentary material, the orientation of the cellulose molecules is increased, and the product has increased resilience, insulation and strength as well as a softer hand.

The non-wovens herein described are characterized by high bulk and a soft hand. It is an object of the invention to provide non-woven articles characterized by high bulk and a soft hand.

Objects of the Invention

In accordance with one aspect of the present invention, a non-woven article comprising organic acid ester of cellulose such as cellulose acetate, cellulose propionate, cellulose butyrate, cellulose acetate propionate, cellulose triacetate, etc.

In the event that the filamentary material of the non-woven is initially more or less oriented and the non-woven accordingly much stronger in one direction than another, the steaming decreases the orientation and reduces the differential strength.

The non-woven article may comprise a web, fleece or sheet material composed of staple length fibers either randomly disposed or oriented in a greater or lesser degree by carding, the fibers being bonded to one another at spaced points.

Descriptions of the Invention

The non-woven article may comprise a web, fleece or sheet material composed of staple length fibers either randomly disposed or oriented in a greater or lesser degree as by carding, the fibers being bonded to one another at spaced points.

The denier of the individual filaments of the non-wovens may vary within wide limits, e.g., from less than 1 up to 20 or more, although preferably it ranges from about 2 to 15. The weight per square yard of the non-woven can also vary widely, depending upon its thickness, density, etc.

The filamentary material may comprise an organic acid ester of cellulose such as cellulose acetate, cellulose propionate, cellulose butyrate, cellulose acetate propionate, cellulose triacetate, etc.

The invention will be more fully described with reference to the accompanying drawings, wherein:

FIG. 1 is an elevation of an apparatus for forming a composite non-woven, with the front cover shown in section;

FIG. 2 is an elevation of a steaming apparatus with the front cover shown in section;

FIG. 3 is a plan view of a non-woven sheet prior to steaming;

*In Pl. 1 "General and Mechanical"
Having described our invention what we desire to secure by Letters Patent is:

1. The process which comprises moving filaments of organic acid ester of cellulose to cause them to become randomly directed and to touch at spaced points and bonding said filaments at said points so as to form a non-woven sheet-like article, and contacting said article with steam.

2. The process which comprises moving filaments of a lower alkanoic acid ester of cellulose while they are in adhesive condition to cause them to become randomly directed and bonded to one another at spaced points so as to form a non-woven sheet-like article, and contacting said article with steam at a temperature ranging from about 55 to 180° C.

3. The process set forth in claim 2 wherein the duration of said contact with steam is at least about one minute.

4. The process set forth in claim 2 wherein said non-woven article comprises substantially continuous substantially randomly directed lower alkanoic acid ester of cellulose filaments.

5. The process which comprises moving filaments of a lower alkanoic acid ester of cellulose to cause them to become randomly directed and to touch at spaced points and bonding said filaments at said points so as to form a non-woven sheet-like article, and contacting said article with steam at a temperature ranging from about 110 to 125° C.

6. The process which comprises moving substantially continuous cellulose acetate filaments while they are in adhesive condition to cause them to become substantially randomly directed and bonded to one another at spaced points so as to form a non-woven sheet-like article, and contacting said article with steam at a temperature ranging from about 95 to 180° C.

7. The process set forth in claim 6 wherein said filaments comprise secondary cellulose acetate filaments.

8. The process set forth in claim 6 wherein said filaments comprise a mixture of secondary cellulose acetate filaments and cellulose triacetate filaments.

9. The process which comprises moving substantially continuous filaments of a secondary cellulose acetate of a lower alkanoic acid and substantially continuous filaments of a cellulose triester of a lower alkanoic acid while said filaments are in adhesive condition to cause them to become randomly directed and bonded to one another at spaced points so as to form a non-woven web containing intermixed filaments, and steaming said web.

10. The process which comprises contacting with steam a non-woven sheet-like article of randomly directed filaments of organic acid ester of cellulose bonded at spaced points, and contacting with steam being such that three dimensional, crimplike configurations are formed in said filaments between said bonds and said article increases in thickness.
APPENDIX F

STEPS IN LITERATURE SEARCH

Preliminary Work

1. Identify subject scope.
2. Determine period of time to be covered.
3. Determine final arrangement of references.
4. Study history of subject.
5. Study types of literature on subject.
6. Use card and union catalogs.
7. Find bibliographies.
8. Examine review literature.
9. Select basic sources for search.
10. Become familiar with indexing and abstracting services.
11. Make a list of subject headings.

Search

12. Go through subject indexes of abstracting and indexing services, recording references and refining subject headings when necessary.
13. Examine abstracts of articles.
14. Compile a list of authors from (13) and scan author indexes for more references.
15. Go to the primary publications and examine them (and the bibliographies they cite) for pertinency.
16. Scan the current research and trade journals for information not covered.

17. Edit reference citations into standard form.

18. Present written report of literature search.
LITERATURE CITED
LITERATURE CITED


3. Ibid., pp. 565-6.

4. Ibid., pp. 536-7.


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de l'Industrie Textile.


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