San Jose State University
SJSU ScholarWorks

Special Libraries, 1943

Special Libraries, 1940s

1-1-1943

Special Libraries, January 1943

Special Libraries Association

Follow this and additional works at: https://scholarworks.sjsu.edu/sla_sl_1943

Part of the Cataloging and Metadata Commons, Collection Development and Management Commons, Information Literacy Commons, and the Scholarly Communication Commons

Recommended Citation

Special Libraries Association, "Special Libraries, January 1943" (1943). *Special Libraries, 1943*. 1. https://scholarworks.sjsu.edu/sla_sl_1943/1

This Magazine is brought to you for free and open access by the Special Libraries, 1940s at SJSU ScholarWorks. It has been accepted for inclusion in Special Libraries, 1943 by an authorized administrator of SJSU ScholarWorks. For more information, please contact scholarworks@sjsu.edu.

SPECIAL LIBRARIES

Official Journal of the Special Libraries Association

VOLUME M January 1943 NUMBER 1 Organization and Personnel in Federal Libraries Francis E. Fitzgerald Index Numbers, New and Revised Mory Ethel Jameson **Microfilm Reading Machines** D. H. Luchheid and M. A. Bennett Greetings for the New Year Eleanor S. Cavanaugh **Choosing Our Officers** Howard L. Stebbins

Published by SPECIAL LIBRARIES ASSOCIATION

AUTHORITATIVE BOOKS ON THE WAR

-

Writing in the September issue of SPECIAL LIBRARIES on the importance of a more widespread knowledge of military affairs, S. L. A. Marshall made this pertinent point:

"There are being published today perhaps ten times as many books on military affairs as were ever published before in our history and for every 100 books so published, there will be only three or four that add anything to public enlightenment or to public grasp of military principles or those policies upon which the safety of this republic rests."

In the same issue of this magazine the "Book List On Military Science", compiled by Willard Kelso Dennis, contained three titles published under the imprint of this company: TACTICS AND TECHNIQUE OF INFANTRY; ROOTS OF STRATEGY, by Lieut. Col. Thomas R. Phillips; and MANEUVER IN WAR, by Col. Charles A. Willoughby.

HALLMARK OF AUTHENTICITY

"Military Service" books are prominent on every list of this character because the Military Service Publishing Company is the only publishing company that has been specializing exclusively in military books for many years. More than 300,000 copies of THE OFFICERS' GUIDE have been sold; COMPANY ADMINISTRATION has passed the 200,000 mark and sales of these and other "Military Service" books are mounting steadily.

> WRITE FOR OUR NEW CATALOG. It contains the largest, most up-to-date and most accurate group of books on military science, approaching this out, many-sided subject from both technical and popular standpaints.

NEW, BUT OF PERMANENT VALUE

Among our just-off-the-press books, we're especially proud of these titles of general interest:

PRINCIPLES OF WAR, by Gen. Carl won Chusewer, first complexe English translation of the filtery-making "memorandum" which drew the blue print for Nazi warfare (with special hiographcal introduction). \$1.05. WINGED MARS, by John R. Connect complete-mained from volume of the only submittative history of the air weapon, tracing the latter's development from the pioneer days of inar-imputing kites and captive observation balloons, \$2,30. WAR IN THE WEST by Daniel Villton A French wall affects first-hand account of the political social and military collapse of France, \$2.10.

MILITARY SERVICE PUBLISHING CO. Harrisburg, pennsylvania

Special Libraries

CONTENTS FOR JANUARY 1943

Organization and Personnel in Federal Libraries . FRANCIS E. FITZGERALD	3
Index Numbers, New and Revised MARY ETHEL JAMESON	9
Microfilm Reading Machines D. H. LITCHFIELD and M. A. BENNETT	15
"Men of Science-Prisoners of War" Service of the Y M. C. A.	
Josephine E. Raeppel	20
Greetings for the New Year! ELEANOR S. CAVANAUGH	22
Choosing Our Officers Howard L. Stebbins	24
New Libraries Formed Since June 1942	25
Events and Publications	2 6
January Forecasts of Forthcoming Books	2 9
Announcements	

Indexed in Industrial Arts Index and Public Affairs Information Service

THE STAFF

ALMA CLARVOE MITCHILL Editor

JEAN MACALISTER

Associate Editors

BETTINA PETERSON

KATHLEEN BROWN STEBBINS Advertising Manager

The articles which appear in SPECIAL LIBRARIES express the views of the authors, and do not necessarily represent the opinion or the policy of the editorial staff and publisher

SPECIAL LIBRARIES published monthly September to April, with bi-monthly issues May to August, by The Special Libraries Association. Publication Office, 71 Clinton Street, Newark, N. J. Address all communications for publication to editorial offices at 31 East Tenth Street, New York, N. Y. Subscription price: \$5.00 a year; foreign \$5.50; single copies, 50 cents. Entered as second-class matter at the Post Office at Newark, N. J., under the act of March 3, 1879, and at the special rate of postage as provided for in the Act of February 28, 1925

Effective first aids for your MANPOWER PROBLEMS

PRINCIPLES OF EMPLOYMENT PSYCHOLOGY (Revised)

By HAROLD E. BURTT

A definitive manual on the use of psychological pre-employment tests. Brought completely up to date, this volume has long been the first choice of industrial psychologists and is today basic and indispensable to placing "the right man in the right job." \$4.50

HOW TO TRAIN WORKERS FOR WAR INDUSTRIES

By ALVIN E. DODD and JAMES O. RICE

The sum total of all that the American Management Association has learned about this subject, boiled down into specific directions for quick training of employees at every level. \$3.00

HOW TO TRAIN SUPERVISORS

By R. O. BECKMAN

A course of thirty-two lessons with detailed procedures for conducting classes. Based on tested methods used in training more than 50,000 foremen in commercial, public and industrial organizations. \$3.00

MANUAL OF JOB EVALUATION

By BENGE, BURK and HAY

Definitive reference manual on how to do the whole job of classifying, evaluating and stabilizing job titles, duties and rates of pay by the new Factor Comparison method. Grows out of the authors' successful application of this method to jobs at all levels in large and small organizations. \$3.00

WARTIME SUPERVISION OF WORKERS

By RICHARD S. SCHULTZ

Discusses by the question and answer method the 100 leading human problems affecting morale and production. The specific results of a nation-wide survey keyed to quick use to help train foremen. \$2.25

APTITUDE AND APTITUDE TESTING

By WALTER V. D. BINGHAM

Another standard work brought up to date with all the latest information about aptitude tests and how to use them to improve your selection of new workers. \$3.00

HOW TO INTERVIEW (Revised)

By BINGHAM & MOORE

This standard work, the only one devoted to effective interviewing techniques, is now expanded and brought up to date to meet continued demand. Here is specific help for interviewers in every field of business and vocational work—who hire, examine, advise or evaluate people to find out accurately what they can do and how well they can do it. \$3.00

Order these books at your bookstore or direct from

HARPER & BROTHERS • 49 East 33rd Street • NEW YORK

ORGANIZATION AND PERSONNEL IN FEDERAL LIBRARIES¹

By FRANCIS E. FITZGERALD

Director of Quartermaster and Signal Corps Libraries, War Department, Washington, D. C.

HE principal contribution of librarians is the organization of knowledge for use. Today when war is spread over the world, we are realizing more than ever the value of these organized centers of knowledge. In the War Department any effort or expense is worthwhile if the results have a bearing on the successful prosecution of the war. There is such a demand for information that coordination of effort is necessary to put first things first within our libraries. War is a taskmaster admitting no compromise or delay. With the whole world as the arena, the search for information is both extensive and intensive. This test of our ability to organize knowledge and produce information is severe and unvielding. We should constantly re-examine our personnel and methods for effectiveness and value.

Examples of fearless courage in undertaking tremendous tasks in organizational changes to whip problems of production and supply, strategy and tactics, are rampant in both business and government. While mere change does not always mean progress, there can be no progress without change. Let us, therefore, be critical of ourselves and of our organizations and re-examine them each day in the light of the work we are doing. If changes are needed, now is the time to build a more effective service.

Libraries in the Federal government have received little support for the work they could and should perform. Overall policy on library functions has few examples, one of which, however, is the recent reorganization of libraries in the Departent of Agriculture. Some of our libraries are trying to accomplish in a few months what should have been in process over years. In fact libraries of some of the Departments are less organized than they were in 1891. Our Commander-in-Chief has summed up the whole program and policy for adequate libraries in three words, "Books are weapons." Indeed books are weapons and God help the soldier, sailor, marine or civilian defense or production worker whose leader has never read a book.

I have little patience for the top executive who does not understand and appreciate the contribution a well organized and competently administered library has to play in a business or governmental agency. But I have less patience with the so-called "librarian" who fails to measure up to his opportunity to make his library part and parcel of his agency and to demonstrate to his top executive that he holds a solution to part of their problems. Any lack of appreciation on the part of executives frequently can be laid at our own door.

¹ Presented on November 10, 1942 at a meeting of the Washington Chapter of Special Libraries Association.

SPECIAL LIBRARIES

Today is a time for action. "Praise the Lord and pass the ammunition" is our battle cry and it is not a far cry from books to battles. Some of the very men whom we have served have already died for our country and others whom we are now serving will soon be fighting. All of us who are doing our job of providing vital information to soldier, sailor, marine or war worker are also in this fight to win this war.

LIBRARIES MUST BE AWAKE

Our libraries must be awake to every opening to increase our contribution and to take on new responsibilities. To do that every staff member must be re-appraised for his worth to the organization and every part of the library must be tested for its usefulness. New avenues of service should be developed over-night and put into operation the next day. Every activity should be inspected for possible addition or subtraction, separation and re-grouping. What one person carried on as a part-time activity might better be his total function. Intensification and specialization of personnel speed service and improve quality.

A stock-taking analysis of our libraries, activities and personnel along functional patterns should disclose inadequacies. As a whole, librarians seem to tend towards vegetation. It is a comfortable existence, and is not likely to disturb the digestion. In fact innovators have not been particularly welcome in the library field. Developing as we have from the community and public library pattern, we have continued to build a long and impressive entrance to our buildings and have made the patrons come in on the second floor. But in many instances today, we are using the first floor entrance from the sidewalk. We have our cataloging and book order departments, reference and periodical rooms, but our librarian's office is carefully shielded from the teeming populace. However, I have noticed in the past few years, that even bank presidents can often be seen from the front door of our more progressive banking institutions.

Then, of course, our staffs are manned by catalogers and classifiers, book order and circulation librarians and an occasional bibliographer who is usually a jackof-all-trades who is expected to turn out bibliographies like a butcher might turn out sausage. He often seems to know less about his bibliography than the butcher knows about his sausages. The bibliographer may hide his lack of knowledge quite neatly by producing a huge checklist. It may not occur to him that he is neither a chemist nor an electrical engineer but that by consulting such experts he could produce a better list of references with their help. A list of ten or so references carefully selected, fully annotated and abstracted, would be of real service to those ultimately using the bibliography and perhaps save days or weeks in searching and reading. Quality counts in library work, not quantity. As handmaidens of research we can increase tremendously the value of the efforts of others.

The traditional library terminology and job-descriptions hold little value for the alert special librarian. If we are to increase our usefulness, we should narrow and deepen the task of each staff member. The time honored separation of library staffs into two classes, the sheep and the goats, the professional and the clerical workers, is over-simple for special libraries. Into our library staffs should enter more subject and other specialists as full or part-time professionally recognized library workers. They are needed to bridge the gap between the book and the reader. The action of the Library of Congress in this direction is most important. Librarians will gain, not lose, by efforts in this direction. They will always have their main importance in organizing and administering collections for use with the subject-specialists as the interpreters of these collections for particular users. Originally in book selection and later in correlating knowledge and users, the librarian has the greatest need for subject-specialists.

ORGANIZATION AND USEFULNESS OF LIBRARIES

A narrow view of the organization and usefulness of libraries precludes effective use of the advantages of position classification. Proper use of position classification under a broad policy of library development for the fullest uses of its agency should result in daily contact between the key workers in the agency and in the library. Position classification in the Federal service provides the basis for the most effective organization and use of special skills in a library structure based on functional lines. Instead of a single reference librarian swinging from A to Z in the subject interest scale, closer analysis of activities will bring more members of the staff into contact with the workers of an agency by separation of task and integration of personnel on special lines.

Development of specialization calls for a closer inspection of our activities and sharp focus on their effectiveness in meeting specific needs of our agencies. Librarians frequently proclaim against a tendency within agencies to set up "special collections". It is a fever mark which should be correctly diagnosed and treated with better service. Do we expect to learn by "remote control" what is going on in our agencies? How many of us get out into our departments to meet workers on their own ground? In one instance, I accompanied two officers on a field trip during which I took the opportunity to point out how the library could serve the organization. One officer was deep in a problem, but it had not occurred to him that the library could help. Upon our return this same officer put the library to work on it. I can assure you that we are still working with him and we have produced material which has considerably helped him. If we have saved just two of his valuable hours, we have accomplished a worthwhile task.

Among library activities, from an administrative standpoint, in which position classification can be utilized in effecting closer relationships to key workers of an agency, the front desk is most apparent. Here, instead of the traditional all-purpose reference librarian flanked by a circulation assistant, it appears that a good deal of division of duties can be carried out. The chief reference librarian, serving as assistant librarian in smaller libraries, should be primarily a coordinator of the library's resources, sending the staff off in new directions as need is evidenced. Grouped under the chief reference librarian, whom I would designate as chief of readers' services, would be a variety of positions depending upon the degree of specialization required.

There may be need of a document librarian to concentrate on building up and utilizing pertinent federal and state publications. Perhaps the handling of periodicals will require one or more clerks to check in all serials, follow-up on missing numbers, perform routine distribution and gather files including title pages and indexes unless the volume of work might require passing this work to a binding librarian. Immediate and fuller usage of current periodicals and proceedings may warrant professional analysis

5

for the subject interests of key personnel. This may take the form of specialized personnel trained in indexing and abstracting in selected fields for reproduction and circulation for rapid review by such personnel, or as reader for the subject interests of a small group of scientists or research workers. Such assignments call for closer position classification where subject knowledge in the fields of analysis are the most important elements. Library training may or may not be pertinent to such assignments. The higher the degree of subject specialization required, I should say, the less do formal library training requirements enter into position classification, if at all.

Preparing in highly digested form important information for the attention of research workers is in itself an activity which needs more emphasis in special libraries, particularly where large research staffs are served. The necessary increase in library staff is balanced very favorably by the assurance to these experts that no material of value is overlooked. Coupled with the most careful subject bibliography this service may not only compensate but economize by increased efficiency of research staffs. The whole area of research can be coordinated most effectively through the library of the agency itself and between the libraries of various related agencies. Register and clearance of research projects through a central agency would lead to a greater efficiency in prosecuting studies and serve as a check on duplication of efforts as between agencies. In the war endeavor, probably no other field has such a crying need for coordination as research. In this connection, I want to call your attention to the excellent treatise on Modern Government in Action by Dr. Griffith, Director of Legislative Reference Service of the Library of Congress, in which he nicely

expresses the problem as follows: "The specialist must think of his activity, not as an isolated phenomenon but as the *function* in an integrated or organic community pattern."²

Pursuit of a vigorous study of personnel needs and functional organization and preparation of a finished library program for the agency, will in most cases lend itself by its very thoroughness and logic to top-management acceptance. The average able executive will pounce upon any worthwhile improvement in his agency. If you cannot influence his thinking, blame yourself and keep digging. A vitalized program of library service can be "sold upwards" instead of downwards if you stick to it. Efforts to get library service across in your agency are a definite obligation and not a matter of running with the hounds. The formation of a definite library policy and a stated program, officially endorsed, and published for the information and guidance of all concerned is the foundation of library service. Without it you will wilt and fade away into the limbo of forgotten things with about as much life blood as a hopeless invalid. If you mean business and your executives do too, then have a meeting of minds and "put it on the line".

Such a program of service forms the basis of an organized plan of action. Objectives are clearly understood and the ability of a staff to translate words into deeds can be measured in statistical terms. At the same time, a real plan of recruitment and staff training can be inaugurated which will eventually result in a well-rounded, efficient staff whose work will cement the bond of respect and confidence between the library and all elements of the agency it serves. This is not an ideal, but a proper atmosphere in

² Griffith, Ernest S.: The Modern Government in Action. New York; Macmillan, 1942, p. 17.

1943]

which the library should normally function. Library personnel, carefully chosen, for specific tasks and trained on the job each is to do, form the nucleus of service. Without them the greatest collection of print in the world would not furnish library service.

LIBRARY JOB SPECIFICATIONS

Just what you need in library personnel for adequate service can be clearly analyzed and set up in an organizational chart together with a full set of job specifications for each position involved. The drafting of such a total plan is in itself the first step towards the provision of better library service. It should originate in the office of the librarian and, I assure you, it affords one a liberal education. Be original and calculating in such an endeavor. Forget so far as possible yourself and the people you now have. Think entirely in terms of work units and combinations of them into duties and responsibilities as the basis of a full-time activity for one person. Add the label and your estimate of the class and grade after you have completed your study of a group of related activities which you feel constitutes a single job to be done in your library. When you are all through, see where your present staff members fit in, if they do. This matter of job classification holds the key to library service. It takes the right people at the right spot to get the job done well.

STATUS OF LIBRARIANS

It may be interesting to examine into the status of Librarians in the Federal service. A glance at the Government Manual³ shows very few librarians listed, with here and there a description of a particular library. Only four departments list the librarian: Agriculture, Commerce, Justice, and Labor. A scattering of nine others are shown for other agencies in the Executive Branch of the Federal Government. This publication could be greatly improved by additional descriptions of the library service in the Federal agencies. In this respect Special Libraries Association has blazed the trail with the publication of Special Library Resources⁴ and it has been suggested that the Service Division of the Bureau of Public Inquiries in the Office of War Information could produce a handbook of library resources in Federal Agencies in Washington which could become a reference manual of great value. An inspection of the Official Register of the United States⁵ reveals only five chief librarians as receiving \$3,800 or more, with the highest at \$5,600. There are, of course, a few other librarians receiving \$4,600, \$3,800 and \$3,200, but apparently anything above \$2,600 is unusual.

The question of relative rating of positions has not been improved although the problem was pointed out in the Closing Report of Wage and Personnel Survey published in 1931.6 For librarians there is apparently no equality between comparable positions in departments and agencies nor at the various bureau levels. What is more serious is the lack of any "floor" for professional librarians' salaries and the fact that the "ceiling" is low for most responsible positions. At bureau level, the Office of Education lists the Chief of the Library Division at \$4,600 and the Chief of the Library Service Division at \$5,600, while at the same time the Department Librarian of the greatest agricultural library in the world

United States Government Manual, Fall, 1942; Bureau of Public Inquiries of the Office of War Information. Government Printing Office, Wash-ington, D. C. \$1.00. 3 United States Government Manual.

A Special Library Resources, V. I. Special Libraries Association, New York, N. Y., 1941. \$6.00.
 5 Official Register of the United States: U. S. Civil Service Commission. Government Printing Office, Washington, D. C. \$1.00.
 6 Closing Report of Wage and Personnel Survey: Personnel Classification Board, 1931. Government Printing Office, Washington, D. C.

in the Department of Agriculture is listed at \$5,600. If the salary for the bureau position is worth \$5,600, then, by comparison, I should say that the Chief Librarian of the Department of Agriculture should rate not less than \$9,000 per annum.

To further illustrate discrepancies, a clerk rose from \$1,440 (CAF-2) to \$2,000 (P-1) in some four months just about as casually as you might wipe your glasses. Of course, the employee could have been underpaid in the beginning, but was the first job classification at fault? Or was it a case of the right promotional technique being used? Most of us have key personnel drawing \$1,620 and \$1,800. Head librarians of important bureau and agency libraries usually rate no higher than \$2,600 and most key positions go no higher than \$2,000.

It is a real question as to whether the value of all types of labor, technical and managerial jobs can be evaluated. We lack common denominators equally applicable in rating. Is social significance to be a factor? The value of a librarian to society may be apparent, but what comparison can we make between our social significance and that of doctors, bricklavers, engineers or statisticians, let alone the "information specialists". I sometimes think we better change our names from librarian and library to such a resounding title as Chief, Technical Information Service. Such a classification would insure a grade paying \$4,000 or \$5,000. You may recall the recent cartoon depicting a line of laborers at a pay window. One said to another: "I used to be the president of this company until I found out about this." Perhaps we librarians should become more "wage conscious". As grading affects staff structure and recruitment, we should be

interested in getting the ceiling raised for the chief librarian so that a few key positions at \$2,600 and \$3,200 could be established in bureau libraries.

CONCLUSION

My remarks are chiefly intended to stimulate discussion and are offered largely as discursive comment. Some of you more thoroughly conversant with and perhaps longer exposed to Federal personnel and administrative procedure might help others of us needing guidance. Finally, it appears here as in other institutions that administrators will accept and welcome the advantages of good library service but do not always appreciate the implications of their acceptance. Some of these are a regular and sufficient budget for the library and adequate personnel in quality and quantity. Likewise the administrator should assist in the integration of the library with the agency as one of its vital organs, and in recognition and acceptance of an able librarian as an operating official in charge of the library, granting freedom to plan and execute his functions under a general policy; the necessity for letting this librarian in on the ground floor in knowledge of present and future plans for the agency. In the field of publishing, the library should be a leading influence and consultant.

By and large, it is a fair estimate of the situation to say, that there is no adequate and sustained policy with respect to libraries in the Federal government. That there is duplication of resources and lack of strong, centrallyadministered libraries in Departments and agencies of the Executive Branch. That further attention to the creation of over-all policy for the control, financing, functioning, development and administration of Federal libraries within the Executive Branch is essential for economical and effective operation. That the libraries of the Executive Branch need integration within themselves and between themselves for effective use during the present war and for postwar planning.

Further, that the creation of emergency boards and commissions should not lead to the establishment of more and more libraries, but that by relationship to existing library resources and by strengthening such libraries their needs should be met. That the practice of such boards in commandeering quantities of books and other material from organized libraries such as the Library of Congress leads to confusion and frustration for all concerned. In such a case it is better for Mahomet to go to the mountain.

That a special committee comparable

to the President's Committee on Personnel would, if formed, offer a basis for initial and continuing planning policy with respect to departmental libraries. That our Federal libraries form a logical frame-work within which could be developed promptly, coordination and integration of the research and information activities as a staff service. That in this frame-work registration and clearance of research projects could be centralized at progressive levels with final pyramiding in a central agency related to the Bureau of the Budget for executive control at one spot.

We are all looking forward to a better day in America and the entire world. The vital contribution of libraries is essential for the conduct of a successful war and the culmination in a lasting peace.

INDEX NUMBERS, NEW AND REVISED¹

By MARY ETHEL JAMESON

Librarian, National Industrial Conference Board, New York, New York

R ECENT changes in the bases of index numbers issued by the Government were begun after the Bureau of the Budget issued the release of June 3, 1940, as follows:

"The Central Statistical Board has recommended that all government agencies adopt the years 1935-39 as a uniform base period for general-purpose index numbers. Adoption of a uniform base period will make it easier to compare the changes shown by various statistical indexes. At present a multiplicity of base periods prevails. The Department of Agriculture publishes some index numbers on a pre-war base and others on a 1924-29 base; the Department of Labor a 1923-25, a 1926 and a 1929-31 base... A more recent base period has been urgently needed for index numbers for two chief reasons: (1) Many statistical series are not available before 1935. It is awkward to include such series in index numbers having earlier base periods. (2) Important economic changes have made it increasingly difficult to interpret the significance of index numbers calculated on pre-depression base periods.

"The five-year period, 1935 through 1939, is regarded as the most suitable recent period for adoption as a standard base. It is neither a period of very high business activity nor of very low business activity. It is long enough to meet the special needs of agricultural indexes. It is recent. It includes

¹ A revision of an article appearing in the S. L. A. Financial Group Bulletin, February, 1942.

1939 for decennial census of manufactures, one census of agriculture. two census of business, one census of electrical industries. Because of its recency, there are far more benchmark data available (in addition to those from the census) than for any earlier period.

"It is recognized by the Central Statistical Board that the need for adopting a new and recent base will recur periodically, although too frequent changes in base periods are not desir-The Board recommends that able the question of base period be again re-examined before the end of the decade of the '40's and that consideration then be given to shifting the standard base period forward to a more recent series of years."

Following this recommendation the Government indexes were revised, including the cost of living, employment and payrolls, prices, retail sales, inventories, production and many others. Other organizations issuing systematic indexes have revised the bases of their indexes to render the information more comparable with government sources and to measure more accurately the picture which the indexes are designed to represent

The recent rulings of the Director of the Office of War Information, Mr. Elmer Davis, limiting the distribution of government releases and publications, will undoubtedly interrupt for the duration many of the indexes which have emanated from the Government as well as those issued by private sources, many of which were based on government information. It is to be hoped that much of the information will continue to be collected even though not released to the public, so that the series may be resumed when peace is restored to the world.

Building construction-Costs Engineering News-Record E. H. Boeckh and Associates, Inc. Weightings of new index:

Steel	51.69
Lumber	47.60
Cement	13.14
Labor	155.20
Index	267.63

Description :- Engineering News-Record. April 23 1942

Business activity

Business week

The revision was completed in November, 1941. "This . . . is in line with customary policy of periodically altering the Index to keep up with changing business and economic conditions" "This year national defense has radically altered the nation's economy and indexes must be adjusted accordingly . . . A defense component has been introduced into the index."

Description :- Business week. November 1, 1941. p. 14. Index continued weekly.

Consumer expenditures for goods and services for selected periods

U. S. Bureau of Foreign and Domestic Commerce

The index of monthly expenditures covering the period 1935-date with annual averages.

The eight major groups are: household utilities, personal services, transportation, medical care and death expenses, and recreation.

Description :- Survey of Current Business, October 1942, pp. 8-14, 22.

Cost of living

U. S. Bureau of Labor Statistics

These indexes were first issued in 1917 for shipbuilding centers but were extended to a larger number of cities in 1919. In 1921 they were made nation-wide, continuing in that form until 1935. In 1935 a revision was made of cost of goods purchased by wage earners and low-salaried workers.

Following the recommendation of the Central Statistical Board, a complete revision was made in 1939. The new index is based on prices of 198 goods and services, rents, fuel, electricity and ice, and housefurnishings.

Weights:

Food	33.9
Clothing	10.5
Rent	18.1
Fuel, etc	6.4
Housefurnishings	4.2
Misc.	26.9
	100.0

Description:--Monthly Labor Review. March 1939, pp. 648-651; Monthly Labor Review. August 1940, pp. 367-404; Monthly Labor Review. August 1942, pp. 268-277. New index numbers of cost of living. Published quarterly in Monthly Labor Review and monthly in releases, (quarterly henceforth).

Cost of living, Canada

Dominion Bureau of Statistics

Methods of construction:—Weights are applicable to expenditures of typical urban wage earner families, whereas the old index weights were based mainly upon national consumption. Base:—1935-1939=100.

Period covered: - 1913 - 1940 and continued monthly.

Weight:

Food	31.3
Fuel & Light	6.4
Shelter	19.1
Clothing	11.7
Home furnishings	8.9
Misc	22.6
	100.0

Description:—Canada. Dominion Bureau of Statistics: An official cost of living index for Canada. Ottawa, 1940. 5 p. mimeographed. Issued monthly in releases and in *The Labour Gazette* of Canada.

Cost of living, United States

National Industrial Conference Board

The Conference Board has collected and published information on the cost of living in the United States for over 24 years. In February 1940, its indexes for 30 cities were released for the first time and since that date, 10 additional cities have been added to the survey, thus bringing the total up to 60.

Base :--- January 1939=100.

Period covered:-Indexes for 50 cities available since January, 1939. Indexes for New York City available since January 1926.

Description:—The Conference Board Economic Record, December 11, 1941, pp. 514-519. Published monthly in The Economic Record and in The Management Record, and News Releases since January, 1942; also in The Economic Almanac.

Electrical appliances

National Electrical Manufacturers Association Shipments of electrical household appliances, excluding refrigerators. Includes electrical water heaters and electrical ranges, electrical ironers and washers, vacuum cleaners.

For each item an index is prepared and link relatives are used—coverage is 80% to 90% of industries.

Weights: Retail values and relative importance of product are adjusted each year. Discontinued for duration of war.

Employment and payrolls

U. S. Bureau of Labor Statistics

"These indexes are computed from reports supplied by cooperating firms which . . . employ 55 per cent of the factory wage earners of the country" . . . The method used in adjusting the indexes to 1937 Census data is similar to that used in adjusting to the 1935 Census except for a variation in adjusting the canning and preserving indexes to account for the highly seasonal character of the industry.

Description:--U. S. Bureau of Labor Statistics. Release 8108. September, 1939. Published monthly in Monthly Labor Review and in releases; also in separate Bulletins published monthly. Tabulation on revised basis available 1919-date in Monthly Labor Review, December 1940.

Employment and unemployment, World

International Labour Office

The index covers selected countries where comparable statistics of unemployment were available since 1929. Percentages of unemployed are used.

Weights :---

"The question of weights is without great practical importance, as any reasonable system of weights tends to give approximately the same results". Four different systems of weighting:

A-Total gainfully occupied

- B-Total gainfully occupied in mining, manufacturing, transportation and commerce
- C-Total number of employable persons (wage earners and salaried employees)
- D—Total industrial population (gainfully occupied in mining, manufacturing, including construction).

Description:—International Labour Review. January 1939. p. 118-129.

Federal net contribution

Federal Reserve System

Revised monthly estimates for the statistical series entitled The Net Contribution of the Federal Government to National Buying Power for the years 1932-1940 . . ." The revision was made in order to take into account new source material which had become available recently.

Description:—Release No. R & S 160. May, 1941. This material is for limited distribution.

Freight car loadings

Federal Reserve System

This index differs from the earlier index in that it has seasonal adjustments for each class of freight.

Period covered :---1919-1941, monthly.

Description:—Federal Reserve Bulletin, June, 1941—date. Continued monthly in the Bulletin.

Inventories

National Industrial Conference Board. Inventories, shipments, orders

The revised indexes are based on confidential reports made to the Conference Board by manufacturers and trade associations. "New material presented here for the first time includes the breakdown of shipments and inventories into those for manufacturers of durable and nondurable goods, and the publication of separate indexes for industries producing boots and shoes, chemicals, electrical equipment, machinery, and machine tools, metal products and paper."

Period covered:-1929-1940 monthly.

Description:—The Conference Board Economic Record, December 26, 1940. Supplement.

Inventories

U. S. Bureau of Foreign and Domestic Commerce

"These indexes have been revised in order to secure a more accurate measure of month-tomonth changes in the value of stocks held by manufacturers as well as to secure estimates of their total dollar value . . . The new indexes were computed using average monthly inventory values in 1939 as bases. Census of Manufactures data for 1939 were used as benchmarks in arriving at the base value figures."

Durable and nondurable goods are reported separately and combined in tables.

Period covered:-December 1938 to date.

Description:—Survey of Current Business, September 1940, pp. 7-12. Continued monthly in Survey.

Prices, Canada

Dominion Bureau of Statistics

City index numbers of retail food prices based on 8 cities. Base :---1935-1939=100.

Period covered :- January 1935-date

Weights:—Average purchases per week for family of 4.6 persons of 46 food items.

Description:-Canada. Dominion Bureau of Statistics. Ottawa, 1941. 4 p. mimeograph.

Prices, Great Britain

Economist

A sensitive price index based on ten products —wheat, maize, sugar, cocoa, cotton, copper, tin, lead, spelter and rubber.

Base:--1935=100.

Weights:-The index is unweighted, a geometric average.

Description:—(New index) Economist, October 26, 1940. p. 522; Monthly Labor Review. February 1941. p. 484.

Prices, United States-Machine tools

U. S. Bureau of Labor Statistics

"Basis is a recent survey conducted by the Bureau at the request of the National Defense Advisory Commission covering 11 standard or non-specialty types of machine tools . . ." . . . "The report shows that various machine tools have been quite differently affected by price changes during the past year."

Base:--1939=100.

Period covered :- April 1937 to date.

Description:-U. S. Bureau of Labor Statistics. Machine tool prices, January 1937-January 1941. Washington, 1941; Release No. 11130. March 1941, and subsequent releases issued monthly.

Prices, United States-Retail food

U. S. Bureau of Labor Statistics

Revised indexes are based on the distribution of expenditures as shown by a study made in 1934-38. Expenditures of wage earners and workers' families of the lowered salary class. This revision was made in compliance with the recommendations of the Central Statistical Board. "The change in retail food costs as shown by the revised index from April to May is approximately the same as that shown by the unrevised index".

Base:-1935-1939=100.

Description:—Revision of Index of retail food prices. *Monthly Labor Review*, July 1940. pp. 227-229; also *Pamphlet Serial No. R1123*, May 1940. Published monthly in releases and in *Monthly Labor Review*.

Prices, United States-Strategic and critical materials

U. S. Bureau of Labor Statistics

Prepared for use in connection with the National Defense program. The market prices of 29 commodities are included, in the two groups. These items were announced by the Army and Navy Munitions Board on January 30, 1940. The indexes are released each Tuesday by the Bureau of Labor Statistics.

Description:-U. S. Bureau of Labor Statistics. *Release No. 11049*, March 12, 1941. Washington, 1941.

Prices, United States-Wholesale, daily

U. S. Bureau of Labor Statistics

The daily index was inaugurated in 1940 with August 1939 as base. 28 commodities are used and are not weighted—a geometric mean of price quotations.

The index is published weekly in release form.

Prices, World

General Motors-Cornell. World price index

The index is based on 40 important commodities. The prices were collected by the agents of General Motors Company in 27 countries. Since the outbreak of the war in September 1939 this European information has not been available. However the index is carried on for the same commodities but for countries where it is possible to obtain information.

Base:-August 1939=100.

Description:—Cornell University and General Motors. Inaugurating the General Motors— Cornell World price index. November, 1938. Correspondence. Index is issued monthly.

Production, Great Britain

Period covered :---1924-1938.

Description:-Stone, Richard and Winifred Stone. Indices of industrial output. *Economic Journal*. September 1939. p. 476-485.

Production, United States

Federal Reserve System—Industrial production

Revision was conducted by Maxwell B. Conklin under the supervision of Woodlief Thomas and Frank R. Garfield. "Purpose of the revision was to provide broader and more accurate changes in the physical volume of industrial output . . . Index is limited to production of manufactures and minerals, including machinery, rayon, textiles, manufactured food, chemical industries. Base:—Shifted from 1923-1925=100 to 1935-1939=100.

Period covered:-1919 to date.

Weights :---"Weights applied to the individual series for combining them into composite indexes were derived from census data for the years 1937 and 1923. The 1937 weights were used in combining the series covering the past ten years, while 1923 weights were used for previous years.

Method of computation:—Same used in former index . . . "New seasonal adjustment factors were computed for all series and allowances for changes in number of working days were compiled for the new series and revised for the old series. All revisions were confined to the period from 1923 to date. For the years 1919-1922 figures of the old index were chained on to the new series.

Description:—Federal Reserve Bulletin, August, 1940. Continued monthly in Bulletin and in releases.

Second revision:—This was occasioned by the National Defense program. "Although the index as published in August 1940 was so constructed that most ordnance and other production originating under the defense program was included, developments in the past year have made desirable and possible the slight further broadening of the coverage of the index". Additions were:—Production of Government arsenals, Ordnance depots, shipyards, output of electric steel automobile series, aircraft series, non-ferrous metal series, also seasonal adjustment factors for a number of items.

Base:-1935-39=100 with and without seasonal variation.

Description:-Federal Reserve Bulletin, September 1941, May 1942, July 1942.

Production and trade

Barron's revised Annual Index of Production and Trade

An index for each of five groups is constructed and these are combined. The five groups comprise manufacturing, mining, transportation, construction and electric power.

The weights of these component parts are as follows:

Manufacturing	65.8
Mining	5.6
Transportation	15.1
Construction	7.5
Electric Power	6.0

13

100.0

Period covered :---1899 to date.

Description:-Barron's National Business and Financial Weekly, September 7, 1942.

Production and trade

Federal Reserve Bank of New York

"The changes that have been introduced do not represent a departure from the original method of computation; they are, rather, an integral part of it, since they correspond to the procedure applied when the indexes were worked up for 1919-1937, which was the 'historical' period at the time that the indexes were first computed. In other words, the changes reflect an effort to keep the composition of the indexes as much as possible in harmony with structural changes in the economy itself, and to make use of new data to increase the coverage of the indexes . . . The use of additional data has permitted further enlargement of the base to 88 series at the beginning of 1941." Weights:

> Producers' durable goods Producers' nondurable goods Consumers' durable goods Consumers' nondurable goods Man-hours of employment Production Primary distribution Distribution to consumer Miscellaneous services

Description:—From an article by Norris O. Johnson. *American Statistical Association Journal*. September, 1941. p. 423-425. Released in limited distribution monthly.

Production, World

U. S. Bureau of Agricultural Economics.

Industrial production.

Covers nine foreign countries, United Kingdom, France, Germany, Italy, Japan, Canada, Belgium, Czechoslovakia and Poland with a composite index of the indexes of the various countries.

Weights:

"The primary consideration was to arrive at some measure of the importance of each country in influencing the world price structure . . . Assignment of weights to each country in proportion to the relative importance of the imports of raw materials and foodstuffs to its imports; the relative value of each country's imports of raw materials and foodstuffs; the relative value of each country's consumption of a selected group of raw materials and foodstuffs of a type, the demand for which would be more or less indicative of the demand for all international commodities as a whole."

Description:-Wall, Norman J. Monthly Index of World Industrial Production 1920-1935. Washington, 1936. Mimeographed report. U. S. Bureau of Agricultural Economics.

Continued in *Demand and Price Situation*, monthly, until the outbreak of the European War II closed all sources of European information.

Profits, Great Britain

Economist, London

"The new figures are presented throughout on a gross basis, and represent the closest estimate that can be made of industrial profits, before deducting any charge for standard income tax.

"The gross profits are shown (a) under periods in which they are published and (b) under periods in which they are earned.

- (a) A four-year comparison of gross profits of companies whose accounts were published in the first quarter of this year, 1942.
- (b) A four-year linked comparison of gross profits arranged by accounting periods is given . . . and is expressed as a quarterly geometric index number of gross profits (four quarters 1938=100).

"The index of net reported profits (i.e., net profits taken from the companies' accounts without adjustment for taxation) has been converted from an arithmetric basis (July, 1935 to June, 1936=100)."

Description:—*Economist,* January 24, 1942, pp. 110-111; May 23, 1942, p. 720; June 6, 1942, pp. 798-799.

Readers of magazines

Reading indices

- 1. How many people saw the item.
- 2. How many people began to read it.
- 3. How many people finished reading it.

Description:-Journal of Marketing. October, 1941. p. 103-111.

Retail sales, United States

U. S. Bureau of Foreign and

Domestic Commerce

The index includes ten kinds of business. It is adjusted for seasonal variations, and the monthly aggregate sales by type of business adjusted to the Census of 1939, divided by the number of working days.

(Continued on page 34)

MICROFILM READING MACHINES¹

By D. H. LITCHFIELD

Supervisor, Periodicals and Microfilms, Columbia University Libraries, New York, New York

and

M. A. BENNETT

Supervisor, Department of Binding and Photography, Columbia University Libraries, New York, New York

ETTER from the Interstate Medical Society", said the factotum. "They want to know the difference between the Spencer Reader and the Recordak, in non-technical terms. And here's a special delivery from the Non-Gravity Aircraft Corporation. Their Librarian says what is the difference between projection prints and photostats. Could you please explain briefly . . . The Librarian of Faraway College is in the building. He'll be back in half an hour and doesn't want to take up your time but would like to talk over reading machines".

Half an hour sped by while we tried to compose a short but clear piece of exposition on projection prints for someone who had never seen either a copying camera or an enlarger. The Librarian of Faraway College appeared and we spent some time talking over reading machines, splicers and rewinders. The discussion was like many others we have had, in person and by letter, with librarians who are starting to use microfilm. The dearth of non-technical reading matter on the care and use of microfilm has forced all of us to learn the new

15

techniques in the most costly and timeconsuming way: by trial and error, correspondence and exchange of experiences.

We need a primer on microfilm. A simply written text that will explain reading machines, splicing, rewinding, marking, indexing, cataloging and all the other applications of the librarian's art to this new medium. Some knowledge of the process of microphotography is an immense help to the librarian who is using microfilm. but he seldom has a chance to see microfilm in the making. He has no way of picking up the vocabulary, and so when he sets out to buy the basic piece of equipment, a reading machine, he is plunged into a sea of discussion in the library journals and description in the manufacturers' catalogs. On the crest of every wave is an abstruse technical term that hits him with all the force of a floating spar. Not since the invention of the typewriter in 1876 has a piece of machinery so technical been introduced into the average library. The typewriter revolutionized the form of the catalog card and brought about an upheaval in the manual side of cataloging. But its adoption by libraries was gradual; a librarian could plan to buy a typewriter next year or in five years or he could decide to carry

¹ Copyright 1943 by Dorthy Hale Litchfield and Mary Angela Bennett.

SPECIAL LIBRARIES

on for another decade with handwritten cards.

In more and more specialized libraries the readers are demanding reading machines so that expensive books or those unavailable on inter-library loan can be bought on microfilm. Not a machine next year, or in five years, but now. Their librarians are discovering that few experiences are so destructive to peace of mind as being responsible for the purchase of a costly and unfamiliar piece of equipment. In this article we are going to try to explain the mechanism of the reading machine in language that will be easily understood and at the same time clarify some of the technical terms most often encountered in the journal and advertising literature. We have divided the discussion into four parts:

- I. Evolution of the reading machine and present status of the problem.
- II. Construction and operation.
- III. Description and evaluation of some outstanding models.
- IV. Technical and professional criteria for choosing a reading machine.

I.

By now every librarian who has done a modicum of reading on the microfilm question knows the story of the pigeons. How Paris was besieged in 1870 during the Franco-Prussian war and the French army headquarters at Tours wanted to get messages through the German lines; how the photographer Dagron offered to take microphotographic equipment out of Paris in balloons, escape to Tours, and send messages back on film; how he finally reached the army disguised as a wine merchant with his cameras in hollow wine barrels; and how he sent back to Paris over one hundred thousand messages on microfilm strapped to the quills of homing pigeons. Some of Dagron's

film is preserved today, and there is also an engraving of a group of copyists seated at a table transcribing the messages from the image on a screen.¹ The projection machine is represented as about the size of a Franklin stove, and it is probably the earliest picture of the projection of microfilm on a screen.

In the early nineteen hundreds sporadic articles appeared in French library journals about the possibility of reproducing books on film. One of the objections was the necessity for a reading machine. It was not until 1928 that the reading machine became an object for commercial manufacture. In that year business houses began to copy their records on 16mm. film and machines were needed to read the thousands of feet of microfilm that accumulated in the banks, department stores, railway offices and other commercial establishments of the country. By 1933 the idea of copying books on film was taken up by libraries, and the large research institutions were soon enmeshed in the film and its problems. They began to ask the photographic supply houses to supply new cameras, chemicals and reading machines designed for their specific needs.

Between 1928 and 1933 the manufacturers had been designing equipment to copy checks and other business documents on 16mm. film. These big filming jobs, sometimes running into millions of exposures, were for material all the same size and shape (for example, all the checks that passed through a bank, all the waybills in a freight office, the bills in a department store), in the same position with relation to the camera, and filmed at the same reduction for the lot.

¹ There is a copy of the engraving in the Bettmann Archive, New York. It has been reproduced in the *Technology review* 42(1940):115 and also in *Camera* craft 47(1940):284. The former reproduction is the clearer.

The equipment was soon standardized. One or two of the larger photographic houses began to turn out the camera, the film and the reading machine in quantity.

Now libraries stepped into the picture but they decided that 35mm. film would suit their purpose better than the 16mm. width. The manufacturers drew upon their thirty years of making this size film for the movies. They had evolved gigantic step cameras to meet the exacting demands of the motion picture industry. Compared to these, a copying camera² is far less complex. Its only unique feature is the mechanism built to stop the shutter from opening again after each exposure, until the photographer turns to the next page of the book.

About this time miniature cameras came into popularity with the general public. The best of them, such as the Leica, could be used for copying and in fact several libraries today have no other camera for making microfilm. Fundamentally microphotography posed no insuperable problem for the camera houses. The same situation holds with the firms that made film and chemicals. They had been making 35mm. film for motion pictures. It was on a nitrate base and highly inflammable. Suddenly libraries needed the same width film on an acetate, or safety, base. It was comparatively simple to make the same size film of non-inflammable material, although it is more costly as it is not needed in such great quantities.

The reading machine, however, is quite another problem. It is an application of the projector. One can read microfilm by projecting it on a wall screen. The greatest objection to this is that in all save the most expensive projectors the glass flats do not retract. Flats are two pieces of glass between which the film passes as it is advanced from picture to picture. In order to give a clear image on the screen, these flats must hold the film tightly. As the film advances, the flats should retract or loose their hold on the film so as not to scratch its surface. This retraction feature is not built into the average projector and as a result the film becomes badly scratched as it moves along.

From the point of view of the reader. wall projection has three disadvantages. In the first place, he must work in a darkened room. If he wishes to take notes. he must have a bright reading lamp at his elbow. His eyes focus alternately on the distant screen and on the bright pool of light from the lamp, and this causes severe evestrain. Secondly, he is at some distance from the screen. Unless the projector is a large one with a 250-watt lamp, the screen will not be very bright. If he is reading a difficult manuscript he may have to move toward the screen repeatedly in order to decipher the handwriting. In the third place the reader may find that even when he is at the best reading distance from the screen he is nowhere near the table on which the projector rests. Whenever he wishes to advance the film or focus the lens, he must go back to the projector. This has proved to be a source of great inconvenience and distraction to many scholars. Thus it will be seen how the demand arose for a reading machine and that there was no comparable piece of apparatus already on the market.

The projector, from which the reading machine is evolved, varies from the inexpensive ones used by classroom teachers to those built for the largest motion picture theatres. Compared to type on a book page, the objects shown in pic-

² Copying. Term used by microphotographers in referring to all small-scale photography, or microphotography.

tures or scenery are gargantuan. They may be quite fuzzy around the edges without attracting the attention of the spectator. The criterion for sharpness of image exercised by the movie goer is considerably below that of a scholar who is trying to read a page of a mediaeval manuscript a foot away. The scholar's critical judgment of definition³ is not dulled by the aesthetic and emotional faculties called into play by a motion picture. (Anyone who wishes to sharpen his critical perception of photographic projection need only, during his next visit to the movies, watch the objects in the background during closeup of the star. This practice, alas, will result in a detachment that will lessen the illusion of the movies forever.) The need for very fine definition over the whole screen calls for a reading machine with an optical system somewhat different from that of the projectors which the industry has made so successfully for thirty years. Manufacturers have spent a good deal of money on experimentation involving lenses and mirrors of various materials such as glass, metal and different compositions.

The optical system is only one factor in constructing a good reading machine. There is the matter of the rotating head.⁴ A motion picture or a filmstrip consists of pictures and titling set in the same direction on the film. Since human beings never walk on their heads, nor churches stand on their steeples, these objects always appear on the film right side up. Books, however, and other copiable objects, may be moved about at will. The operator of a copying camera may find it convenient to move the book he is photographing so that successive pages are unside down, or he may be copying manuscript letters which are written in different directions on opposite pages. When these microfilms are put on a reading machine, the objects photographed upside down will appear that way on the screen. Therefore the machine needs a revolving head so that the film need not be removed every time these variations from the norm occur.

One feature of the reading machine which distinguishes it from any other kind of projection apparatus is the winding mechanism. A motion picture projector is motorized and runs the film off at a uniform rate of speed and always in the same direction. Still projectors advance the film forward or backward one frame at a time. For use in libraries, an all-purpose reading machine needs a mechanism which will (1) advance the film at varying rates of speed, according to whether the reader wishes to scan or read; (2) permit the film to be wound backwards from one exposure to another when the reader wishes to go back and consult a page he has already read. In connection with point 2, some librarians have suggested a construction that would embody the properties of a rewinder, so that the film may be rewound rapidly.

Librarians, with their passion for perfection, have suggested many things to the manufacturers. Seven years ago articles on reading machines embodied such dicta as:

A projection reader should be able to accommodate both 16 and 35mm. film taken at a moderately low or a relatively high ratio of reduction. It should be so designed that the grain should not become visible and thus blur the image. Moreover, it must be simple in design, readily portable, rugged in construction, exceedingly simple to operate, and so designed that microcopies may be read efficiently without

³ Definition. Sharpness of image. A microfilm that is fuzzy or blurred is said to lack definition, or have poor definition. 4 *Head*. That part of the reading machine which holds the lens and light.

undue eve-strain or other physical or psvchological after effects.5

Assembling all the specifications set forth to date by the librarian, we find that he wants a reading machine to take either 16 or 35mm, film, in reductions⁶ of 12 to 24 diameters, laid in any one of four positions.7 He wants it designed so that when he threads the film on the machine upside down, he may push a button and the machine will compensate for his ineptness; or, if the photographer made a mistake in copying and filmed some of the material upside down, the reading machine will compensate for that too. (One machine has been designed to do just this.) He wants to be able to use the machine as a projector and as a printer for paper enlargements. He wants it portable. He wants a variable gear shift so that he can rewind the film faster than he unwound it. Above all he wants the machine foolproof so that any staff member or reader may master the mechanism at a glance. He wants all this for fifty dollars.

The manufacturers have put much research time and money into designing a reading machine for library use. They have tried out working models, put them into the largest libraries for testing, accepted and adapted librarians' criticisms. Over fifteen different models have been placed on the market, each one slightly improved over its predecessor. But so far none has combined all the qualities generally believed to be desirable. It must be remembered that after the research is over and the working model has been

tried out and adjusted, there is the outlay for tools and patterns. When the new model finally goes into production there is no great demand for it. Few libraries want them in quantity,---in only the largest libraries will you find as many as a dozen.

There is no use expecting a "good, cheap machine" until libraries need them by thousands and they will be commercially profitable. The impractibility of expecting a business firm to market a product on which it cannot make a reasonable profit has been recognized by at least one body, the Committee on Scientific Aids to Learning. Its financial backing resulted in the Spencer Microfilm Reader, a small reading machine introduced in 1940.

One other factor which we believe retards the development of reading machines is the average librarian's aversion to all things mechanical. An authority on reading machines has said:

. . . improvisation on the part of anyone with mechanical bent and access to a shop will be able to meet ordinary needs at surprisingly low figures-\$10 or under.8

Our observation of reading machine care in public and university libraries does not bear out this optimistic picture. Psychologists speak of the threshold of learning, meaning an individual's speed in adapting himself to a new set of mores. It is apparent to anyone who visits libraries where reading machines are in use, that few librarians have crossed the new threshold. Most of them have closed the mental door on the reading machine and all its strange handles, cranks, screws and knobs,-sometimes leaving the repair of the machine to the page who comes in after high school

1943

⁵ Micophotography for libraries. 1936:21.
6 Diameter of reduction. The number of times in one dimension that an object is reduced when it is photographed.
7 The positions or placements are 1, II, II-S, III. Diagrams, marked with the numbers, may be found in Camera craft 47 (1940):289; and in the Fédération internationale de documentation. Communications 6, No. 1 (1939), last plate in the number. A mimeographed sheet showing the positions may be had on application to D. H. Litchfield.

⁸ Library journal 61:138. 1936.

hours. Some chief librarians are so convinced of the staff's incapacity in mechanical matters that they forbid the custodian of a reading machine to explore it. Bluebeard's chamber was no more a forbidden territory.

This attitude has been unfortunate. Many public and university librarians who could make the best suggestions for improvements, due to their work with large numbers of readers, are cut off from an opportunity of knowing what improvements are needed. Perhaps special librarians, with their well-known eagerness to adopt new ideas and methods, will soon be thinking of microfilm as an indispensable addition to their resources. Then we may look for some ingenious suggestion for financing all the improvements that are needed in reading machine design. After all, it was a banker who introduced microfilm to us in its modern form.

REFERENCES

- Bendikson, L. How long will reproductions on 35-millimeter film last? *Library journal* 60:143-145. Feb. 15, 1935. illus.
- Includes a facsimile of one of the despatches sent to Paris by Dagron in 1870. Bennett, Ralph D. Lilliputian libraries. Tech-
- Bennett, Ralph D. Lilliputian libraries. Technology review 42:114+. Jan. 1940. illus.
- For the old engraving showing projection of Dagron's film.
- Fussler, Herman H. Photographic reproduction for libraries. Chicago, Illinois. University of Chicago Press. c1942.
- See p. 128-131 for discussion of photographic projection.
- Luther, Fredric P. The advent of microfilms. Camera craft 47:283-290. June 1940. illus. Another reproduction of the old Dagron en
 - graving, and a drawing showing how the film was attached to the pigeon's wing. There is also an excellent diagram (Table B) of the four positions.
- Raney, M. Llewellyn. Reading miniature photocopy. *Library journal* 61:136-138. Feb. 15, 1936.
- Tate, Vernon D. Criteria for measuring the effectiveness of reading devices. *Microphotography for libraries* 1936:13-26. Chicago, Ill., American Library Association, 1936.
- (Part II in this series on Microfilm Reading Machines will appear in the next issue. Reprints are available.)

"MEN OF SCIENCE-PRISONERS OF WAR" SERVICE OF THE Y. M. C. A.

By JOSEPHINE E. RAEPPEL

Librarian, War Prisoners' Aid of the Young Men's Christian Associations, New York, New York

FOUR to six million men, who, only two years ago, were part of the general public in their own country—working, playing, happy or worried —are now looking at a strange country from behind barbed wire enclosures. These are the prisoners of war dwelling for the duration in Germany, Italy, Great Britain, Canada—in fact all around the world. As one might expect, when a group of men are taken prisoner, they do not all react in like manner to their new surroundings. Some are despondent, others are thankful that at least they are alive, many may consider a means of escape, while a few may begin at once to adjust themselves to their new mode of living. Nevertheless, it seems inevitable that everyone must be bewildered with the sudden quietude and inactivity after the noise and excitement of battle, and that some assistance in making adjustments is needed.

It was to help in these adjustments that in 1929 a treaty was signed by 47 nations which provided for the proper treatment of prisoners of war, and in October 1939 the World's Committee of the Young Men's Christian Associations. at its headquarters in Geneva, Switzerland, established what it called the War Prisoners' Aid, the purpose of which was to encourage the recreational. educational and moral needs of war prisoners in all countries. Since then hundreds of thousands of books, games, musical instruments and handicraft materials. have been sent into the camps, and certain neutral Y. M. C. A. officials from Geneva have received permission to visit these camps and talk with the prisoners in order to determine what more can be done.

From these reports and from prisoners' letters it was revealed that there is a great need for books for the professional man, the student and the artisan. "Send us books on medicine, surgery, engineering, concrete construction, bee raising, business administration, shorthand, catering, carpentry", they wrote. They wanted to study—some to continue where they were cut off when they answered the call to arms, others to prepare themselves for a new occupation when they return to their homeland, or to become more skillfull in the job to which they hope to return.

A way to meet this need was found by the World's Committee of the Y. M. C. A.'s, which in the spring of 1942 created the "Men of Science-Prisoners of War" Service to provide books for prisoners of war who wish to study. This Service is under the control of Mr. Paul B. Anderson in cooperation with Miss Mary Churchill Humphrey, a field worker who has been devoting a great deal of time to the cause as a volunteer. Until recently it has been receiving the expert advice of Mr. R. D. Jameson, Technical Advisor at the Library of Congress, Washington, D. C.

However, some requests cannot always be met since few scientific books published later than November 1941, are passed by the American censors, lest they give information which might be beneficial to the Axis. Some countries object to war news crossing their borders, which bars many periodicals and all newspapers. Also books must not have any pencil or ink markings in them, nor labels or bookplates.

Authors, publishers, libraries and friends have been very generous in their donations of books as well as of money to be used by the Service for the purchase of books.

In reply to inquiries as to whether these books actually reach the men in prison, the Y. M. C. A. is happy to state that it has proof that they are arriving safely in the prison camps and are used by the prisoners. Each package which is sent to a camp contains an acknowledgment card to be filled in by the recipient. These cards have been coming back regularly, a number of them bearing an extra note of thanks for the service rendered by the Y. M. C. A. Officials who have visited the camps say that they have seen the books on the shelves or in use in prison classrooms, or in the hands of prisoners.

Special libraries are rich in the type of book desired by the Men of Science. There is a great demand for dictionaries in English and in foreign languages, also law and medical dictionaries. In addition to these, books are requested on acoustics, aeronautics, agriculture, astronomy, biology, botany, building, chemistry, electricity, electrical engineering, forestry, general science, geology, magnetism, mechanical engineering, mechanics, metallurgy, meteorology, optics, physics, radiocommunication, textiles, zoology.

Gifts of this type not only relieve the monotony of a prisoner's "walking 'round and 'round"¹ the camp or of his counting the barbs on the wire which separates him from freedom, but they also bring him closer to his home and friends. All donations are received with gratitude by the "Men of Science-Prisoners of War" Service of the Y. M. C. A.

GREETINGS FOR THE NEW YEAR!

And special greetings to our Chapter Presidents and Group and Committee Chairmen to whom SLA is so indebted for their continuous effort in furthering the growth of SLA.

T HIS first of the year message might well take an inspirational tone, but I prefer to let the facts supply the inspiration.

All SLAers will be interested to know that 1943 has all the makings of the banner year. We are beginning to receive real recognition in the right places. During the past few months, the offices of our President and Secretary have become veritable "Information Please" booths. Letters from Governments, from war agencies, from large industrial concerns and from individuals arrive daily and all are asking for assistance. They include questions on how to organize a library; where a librarian can be secured; information on special classification schemes: where resources on a wide range of subjects can be located. One individual just wrote and asked, "What is SLA? I have heard so much about it that I want to get the whole story."

An executive of an air transport firm wrote to ask what method he might use to keep the executives informed daily on all news pertinent to their interests. To answer this one, we compiled and edited a sample bulletin abstracting the news of a single day on matters concerning their industry. They were exceedingly grateful and put the suggestion into operation.

Our biggest boom has been in establishing new libraries. Twenty-two new special libraries have been organized since July 1, 1942. This is a record! See the list of new libraries elsewhere in this issue.

Employment activities keep the Secretary busy. Seventy-six positions have been filled between July 1 and December 20, 1942. Now we need librarians, especially those with technical experience. The personnel files of available people are being depleted. I think it is safe to say that the aircraft industry will be one of our next big markets for expansion as we now have 11 aircraft manufacturing and air transport companies represented on our membership roster.

Special librarians also go abroad. At this writing, although no official announcement has been made, we know

¹ For a vivid account of life among prisoners of war, read: We Prisoners of War; Sixteen British Officers and Soldiers Speak from a German Camp, edited by Tracy Strong. New York, N. Y. Association Press, c1942.

that a special librarian is on her way to London as an assistant in the newly formed American library there.

Our publicity is beginning to be cumulative. I hope you did not miss the splendid article on page 1, column 1 of the *Wall Street Journal* of December 7, 1942, under the heading "Stored Knowledge." Hats off to the members who inspired this article.

Our publications program is not being neglected. Laura Woodward and Rose Vormelker are putting in long hours editing Volumes II, III and IV of Special Library Resources, which we hope to publish before June, 1943. This is an outstanding job and no one except those who have worked on it realize the amount of time and after hours' work that it involves. Rebecca Rankin is having revised for immediate publication, War Subject Headings published in June, 1942, and which has been completely sold out since September. The Patent Index to Chemical Abstracts is also nearing completion.

The Chairman of the War Activities Committee is working on binding allocations so that special libraries may be covered in the regulations for binding materials. The Membership Chairman has set a high goal for new members and the betting is that she will make it.

The Editor of SPECIAL LIBRARIES has changed printers and we hope that hereafter you will receive the magazine on time.

The Advertising Manager is still securing advertisements for the magazine, but the going is harder right now.

The Chapter Bulletins show that our members are all war conscious and are lined up for an all out effort for the duration. The Group Bulletins continue to be a real contribution and most of them supply valuable information for those who receive them.

All in all, it is most gratifying to watch SLA march forward, accept responsibilities, take its place in the present picture and contribute its part to the war effort. It is particularly gratifying because we are all working under the difficulties of depleted staffs, additional pressure of work and facing an uncertain future. Let us hope that the remaining six months of our fiscal year will show even better results.

ELEANOR S. CAVANAUGH, *President*.

Everyone recognizes this truth—that progress in any trade, business or profession has been dependent on facts, observations, and conclusions communicated by master to apprentice, and recorded for future generations; each generation building on the foundation work of former generations. The advancement in any association is in direct relationship to the improvement of facilities for the exchange and interchange of facts, information, knowledge, and truth, and the proper use of these facilities.

H. J. BURRIS

CHOOSING OUR OFFICERS

Compiled by HOWARD L. STEBBINS

Librarian, Social Law Library, Boston, Massachusetts

S Chairman of last year's Nominating Committee the compiler of this very brief article corresponded extensively with members of the Association—not only with officers and leaders but with the more articulate portion of the rank and file. Out of this letter writing emerged some very constructive opinions and observations, divorced from personalities and unlimited in time of application.

Lest they be permanently obscured in committee files, they are here consolidated and spread before the Association for whatever of interest and value they may possess. In general each individual's remarks are limited to one of the following paragraphs:

"The President should have had previous experience on the Board or at least opportunity to be closely in touch with S. L. A. affairs from a broad national point of view. Since the work of the office is very time-consuming, the President should have an adequate staff, both professional and stenographic, as well as the approval of his superiors, and also the ability to travel. The First Vice-President should be of sufficient calibre to serve acceptably as a substitute for the President and as a possible successor. The Treasurer should continue in office for several years if doing acceptable work. The proportion of men on the Board should remain about the same as at present. Chapter and Group representation should be distributed as evenly as possible. This, however, should be secondary to assembling eight people who can think broadly and clearly on Association policies as a whole."

"Leadership, vision and balance, the necessary qualities for a president, are not restricted by geography, and yet they are found more often in the personnel of certain types of libraries, which perhaps accounts for the greater number of presidents chosen from certain groups. A museum, newspaper and biological science librarian must needs be of a different make-up than those of an insurance, business or financial organization. Therefore I do not think that we should become unduly alarmed by the frequency of the choice from such groups. I quite agree with you that the choice of eight people who understand the Association's problems and have broad balanced vision and leadership is the all important job of a nominating committee."

"I realize that certain organizations either are more willing, interested or able to allow and finance to a greater extent their librarians' participation in outside professional activities than others. The profit-making organizations particularly belong in this category as they consider such activities by their employees good business. People working for non-profit organizations, usually devoted to intellectual and educational pursuits, very seldom are allowed the time off from their regular duties and are seldom given financial encouragement to take an active part in outside professional activities. This is ascribed to a diversity of causes-lack of money and short-handed staffs being the outstanding reasons. The situation can only be remedied by the individuals' holding positions in such organizations having great personal interest and desire to be of service regardless of the extra hardships involved."

"I agree with you that there should be as many chapters represented on the national policy-making body as candidates are available for office. This policy, when consistently carried out, would make for greater sense of unity and feeling that all have a voice in the formulation of policies."

"I certainly think that the members of the Board should be selected from those who have given of their time and effort for S. L. A. and who have at least served at one time as members of the Advisory Council. I think that the First Vice-President should be President-Elect. and chosen with this thought in mind-someone who is capable of filling the position and who could represent the Association in this capacity. I believe, too, that since we are a professional association, that we should really make an effort to choose our Executive Board from the trained members of the Association. I think that this qualification and S. L. A. background should be the first two considerations in choosing our officers. It may take awhile before we can achieve this end but I believe that it is something for which to strive."

"I am still of the opinion that the president should be only chosen from the ranks of those who have been knee-deep in S. L. A. affairs for some time. It really calls for much background as well as ability, as you well know."

"The next President particularly needs a knowledge of the Association and of Association relationship, a strong professional spirit, courage, open-mindedness, a feeling for cooperation, ability to make decisions and emphatically the support of his own organization."

"It does seem that the Association has moved so rapidly that being president is almost a full time job. I certainly think we should take into consideration not only the capabilities of the person nominated for president, but also his connections. By this I mean, is he in a type of organization where he can have stenographic and clerical help?"

New Libraries Formed Since June, 1942

Curtiss Propeller Division Miss Anne V. McLaren, Librarian Caldwell. New Jersev Carrier Corporation Miss Florence Hayes, Librarian Syracuse, New York Lukas-Harold Corporation Mrs. Mabel Walker, Librarian Indianapolis, Indiana Continental Foods, Inc. Mrs. Helen Hettich, Librarian 1500 Hudson Street Hoboken, New Jersey American Airlines, Inc. Mr. A. A. Paradis, Librarian Economic Research Dept. New York Municipal Airport Jackson Heights, Queens, New York Boeing Airplane Co. Miss M. LaVelle Cox Engineering Dept. Wichita, Kansas City Hospital Miss Helen Silverman, Librarian Welfare Island, New York, N. Y. (formerly run by Junior League volunteers) Office of War Information Mrs. Marion Mead Hall, Librarian 224 West 57th St., New York, N. Y. U. S. Vitamin Corporation Dr. Frances Rensloe, Librarian 250 East 43rd St., New York, N. Y. Federal Telephone & Radio Laboratory Miss Dorothy Watson, Librarian 67 Broad St., New York, N. Y. Picatinny Arsenal Enineering Library Dover, New Jersey

Curtiss-Wright Corporation Miss Elma T. Evans Research Laboratory Buffalo, New York

Devoe & Raynolds Co., Inc. Miss Gladys Garland, Librarian Louisville, Kentucky

Ranger Aircraft Engines Miss Marie Lugscheider, Librarian Engineering Dept. Farmingdale, Long Island, New York U. S. War Department New York Ordnance District Mrs. Sophia Hall Glidden, Librarian 80 Broadway, New York, N. Y. United Air Lines Transport Corporation Miss Louise Poyner, Librarian Municipal Airport, Chicago, Ill. Office of Price Administration Miss Ruth MacNeil, Librarian Empire State Bldg., New York, N. Y. U. S. War Department Aberdeen Proving Ground Miss Ruth Gill, Librarian Aberdeen, Maryland Employers Reinsurance Corp. Miss Cecelia Kiel, Librarian Kansas City, Missouri Great Lakes Carbon Co.

Morton Grove, Illinois Camp Coles

Miss Ruth Mishnun, Librarian Lincroft, New Jersey

"Yank" Miss Olive Lee, Librarian 205 East 42nd St., New York, N. Y.

EVENTS and PUBLICATIONS

WARTIME PLANNING TO MEET POSTWAR PROBLEMS by the Committee on Postwar Controllership Problems of the Controllers Institute of America may be secured from the Institute, 1 East 42nd Street, New York City for \$1.00 (1942. 55p.). It is devoted to financial problems which must be met after the war by business, and for which planning is advisable now.

* * *

Professor William H. Hayes is the author of the Columbia University Press, Home Front Warbook No. 7 on BOMES, BUILDINGS AND SHELTERS; ARP FOR THE HOME (1942, 83p. diagrams. 60ϕ). Risk, type of bombs, construction of shelters and the safest part of existing buildings are considered in this pocketsized paper booklet—for the civilian's need. In light of the decreasing interest in these matters, you may have missed this series. They are well done.

* * *

The last compilation on park acreage operation and value by the National Park Service was done in 1937 and presented 1935 statistics. MUNICIPAL AND COUNTY PARKS IN THE UNITED STATES; 1940, by the Service, with the American Institute of Park Executives and the National Recreation Association, has just been released (National Recreation Association, 315 Fourth Avenue, New York City, 1942. 173p. \$1.50). Data on 1,465 cities have been received.

SUBJECT GUIDE TO REFERENCE BOOKS, by Herbert S. Hirshberg, Dean, School of Library Science. Western Reserve University, is an alphabetical subject guide to those books most needed by librarians in answering the most frequently asked reference questions. A limited number of books in foreign languages has been included, but national bibliographies, foreign language dictionaries, smaller English dictionaries and atlases are generally omitted. A work book to accompany this guide is in preparation. (Chicago, Ill., American Library Association, 1942. 259p. \$4.00.) ж ж

WARTIME RATIONING AND CONSUMPTION (League of Nations Publication 1942 II.A.2) is a book for the individual American who has a very personal interest in what rationing will mean to him, and also for all those with a professional interest in the subject. Every type of rationing and the experience of many countries are reviewed, analyzed and tabulated on the basis of material collected by the Economic Intelligence Service of the League of Nations. (New York, N. Y., Columbia University Press, International Documents Service, 1942. 92p. \$1.00.)

÷

...

*

4

The United States Chamber of Commerce has prepared the first of the series of progress reports on Postwar Surveys. One phase of the survey gives highlights of the consumer and determines postwar needs and our capacity to meet them. The second phase deals with industry, manufacturers and retailers (Washington, D. C. mimeographed sheets, gratis).

* *

Reference to CORRECTIONAL EDUCATION IN THE NEW YORK CITY PENAL INSTITUTIONS should prove very valuable for anyone seeking a general understanding of education in penal institutions and for specific information regarding activities carried on in New York City. This report of the Bureau of Education, Recreation and Libraries for the period July 1, 1941 to August 31, 1942, covers individual reports of each institution as well as the history and activities of the Bureau. Statistics are presented in chart and graph form. (New York, N. Y., Department of Correction of the City of New York, 1942. 103p.)

At a time when all phases of aviation are of primary interest throughout the world, a publication like AERIAL PHOTOGRAPHS: THEIR INTER-PRETATION AND USE, by A. J. Eardley, is of unquestionable importance. This is the first volume in Harpers Geoscience Series, edited by Carey Croneis. The first half covers the subject matter of the usual college map reading course, while the second half is devoted to the principles of interpreting geologic maps and their applications to the interpretation of aerial photographs. (New York, N. Y., Harper, 1942. 200p. 50 photos. \$2.75.)

\$:

TRAINING WITHIN INDUSTRY ABSTRACTS; British Engineering Bulletins. The War Effort Training, Upgrading, Supervision. Abstract No. 4. (Washington, D. C., War Manpower Commission, Training Within Industry, 14p. 1942.)

* * *

A HANDBOOK OF ALABAMA STATE AGENCIES (University, Alabama, Bureau of Public Administration of the University of Alabama. 1942. 203p. Price?) might well serve as a model for other states to follow. Each department is analyzed in clear outline form as to origin, organization, finance and specific duties. Recommended.

Training and educating personnel to carry out inspection functions are a major problem of the War Program. INDUSTRIAL INSPECTION METHODS, by Leno C. Michelon, fills the need for such instruction and aims to explain and illustrate the correct use and application of precision measuring instruments, along with problems related to the precision inspection of ordnance materials. (New York, N. Y., Harper, 1942, 387p. \$3.50.)

The Delaware White House Conference on Children in a Democracy is one example of the effective way in which State White House Conference Committees are helping to bring wartime problems of children to the public's attention. At the Conference in Wilmington on November 18th, Marshall Field discussed the Relationship Between Problems of CHILDREN AND PROBLEMS OF MANPOWER. The address includes a discussion of Day Care of Children of Working Mothers, Wartime Problems of Education, Juvenile Delinguency, Child Labor and Youth Movement and Maternal and Child Health. A limited number of copies of this 18-page pamphlet is available from Mrs. Betty Eckhardt May, Director, National Citizens Committee. White House Conference on Children in a Democracy, 122 East 22nd Street, New York, N. Y.

Another manual which will help those interested in keeping abreast of new developments in the aircraft industry is WELLS' MANUAL OF AIRCRAFT MATERIALS AND MANUFACTURING PROCESSES, by T. A. Wells. This manual discusses the characteristics, advantages and disadvantages of all important materials and manufacturing processes, and points out the reasons for using or not using them. (New York, N. Y., Harper, 1942. 212p. \$3.50.)

In simple, non-technical language SCIENCE REMAKES OUR WORLD, by James Stokley, tells what science today is creating in the industrial laboratories of the nation. New products, new industries, new jobs are discussed. (New York, N. Y., Ives Washburn, 1942. 298p. \$3.50.) The war has prompted an inquiry into what might be called the "farming out" or "contracting" of research problems by the Federal Government. Richard H. Heindel discusses this problem in INTEGRATION OF FEDERAL AND NON-FEDERAL RESEARCH AS A WAR PROBLEM, prepared as Technical Paper No. 9, for the Science Committee of the National Resources Planning Board. (Washington, D. C., National Resources Planning Board, 1942, 122p.)

*

*

*

The PORT OF NEW YORK AUTHORITY (Studies in History, Economics and Public Law, No. 468), by Erwin Wilkie Bard, may be described as an institutional biography. It is a threedimensional description and analysis of the Port of New York Authority, its manifold relations to the community, its contributions to the various problems with which it has dealt, and the conclusions which may be drawn from its experience. (New York, N. Y., Columbia University Press, 1942. 352p. \$3.50.)

* * *

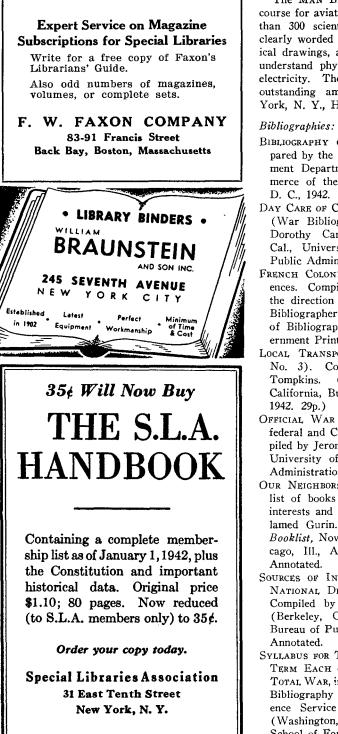
The Special Libraries Council of Philadelphia and Vicinity announces the publication of the 6th edition of its DIRECTORY OF LIBRARIES AND INFORMATIONAL SOURCES, 1942, listing over 240 libraries and collections in greater Philadelphia, Wilmington, Delaware and neighboring communities. This is indeed a reference tool for librarians, educators, research workers and laymen. The price per copy is \$1.35 to members of the Council and \$1.60 to non-members. Copies may be ordered from the Secretary, Miss Helen M. Rankin, c/o The Free Library of Philadelphia, Logan Square, Philadelphia, Pa.

* * *

The Paper Trade Journal for October 29, 1942 contains a very sound and constructive article on "The Role of the Technical Librarian in the Paper Industry," by Catherine Davies.

* *

Many of the quirks in our thinking are traceable to our frontier tradition, and stand in the way of constructive postwar planning, both in the domestic and international field. This fact is brought out in the current Public Affairs Pamphlet (No. 73), AFTER THE WAR? by Maxwell S. Stewart. This general summary of the problems of postwar planning and reconstruction will be supplemented in 1943 by other Public Affairs Pamphlets treating specific aspects of these problems. (New York, N. Y., Public Affairs Committee, 1942. 32p. 10¢.)



The MAN BEHIND THE FLIGHT is a ground course for aviation mechanics and airmen. More than 300 scientifically exact drawings and a clearly worded text show how to read mechanical drawings, and provide the facts needed to understand physics, mechanics, hydraulics and electricity. The author, Assen Jordanoff, is outstanding among aviation writers. (New York, N. Y., Harper, 1942. 276p. \$3.50.)

BIBLIOGRAPHY ON POSTWAR PLANNING. Prepared by the Construction and Civil Development Department of the Chamber of Commerce of the United States. (Washington, D. C., 1942. 13p.)

*

- DAY CARE OF CHILDREN OF WORKING MOTHERS (War Bibliographies No. 2). Compiled by Dorothy Campbell Tompkins. (Berkeley, Cal., University of California, Bureau of Public Administration, 1942. 9p.)
- FRENCH COLONIES IN AFRICA; a list of references. Compiled by Helen F. Conover, under the direction of Florence S. Hellman, Chief Bibliographer, Library of Congress, Division of Bibliography. (Washington, D. C., Government Printing Office, 1942. 89p.)
- LOCAL TRANSPORTATION (War Bibliographies No. 3). Compiled by Dorothy Campbell Tompkins. (Berkeley, Cal., University of California, Bureau of Public Administration, 1942. 29p.)
- OFFICIAL WAR PUBLICATIONS; guide to state, federal and Canadian publications, v. 4. Compiled by Jerome K. Wilcox. (Berkeley, Cal., University of California, Bureau of Public Administration, 1942. 195p.)
- OUR NEIGHBORS TO THE SOUTH; an informal list of books on Latin America for diverse interests and tastes. Compiled by Ruth Melamed Gurin. Published as Part 2 of the *Booklist*, November 1, 1942, pp. 81-93. (Chicago, Ill., American Library Association.) Annotated.
- SOURCES OF INFORMATION FOR THE STUDY OF NATIONAL DEFENSE AND THE WAR EFFORT. Compiled by Dorothy Campbell Tompkins. (Berkeley, Cal., University of California, Bureau of Public Administration, 1942, 49p.) Annotated.
- SYLLABUS FOR TWO COURSES OF STUDY OF ONE TERM EACH ON THE POLITICAL ECONOMY OF TOTAL WAR, including an essay on geopolitics. Bibliography prepared by Legislative Reference Service of the Library of Congress. (Washington, D. C., Georgetown University, School of Foreign Service, 1942, 128p.)

- USES OF INDUSTRIAL DIAMONDS; a selected bibliography. Compiled by Idair Smookler. (Washington, D. C., Office of Emergency Management Library, August 1942, 14p.) Annotated.
- WAR PRODUCTION PROGRAM; selected documentation on the economics of war. Prepared by Legislative Reference Service of the Library of Congress. (Washington, D. C., War Production Board. Division of Information, July 1942, 31p.) Annotated.
- WHAT ONE SHOULD KNOW ABOUT CHINA; an annotated list of some dependable books. Compiled at the Library of Congress. (Published in the *Wilson Library Bulletin*, September 1942, pp. 47-50.) Annotated.
- WHAT TO READ ON PSYCHOLOGY. Compiled by Marion E. Hawes, Head, Department of Education, Philosophy and Religion, Enoch Pratt Free Library, Baltimore, Maryland. (Chicago, III., American Library Association, 1942, 36 p. 40¢.) Annotated.
- WOMEN IN WAR INDUSTRY. (Published by Business Information Bureau, Cleveland Public Library, Cleveland, Ohio, in *Business In*formation Sources, September 1942, 4p. 10¢.)

JANUARY FORECASTS OF Forthcoming Books

(Where the publisher has supplied the price and a brief description of the book, these have been included.)

- ANALYTIC GEOMETRY, by E. S. Smith, M. Salkover and H. K. Justice. John Wiley & Sons, Inc., New York, N. Y. Probable price, \$2.50. "Intended to give the student accurate and fully illustrated explanations of the topics commonly taught in analytic geometry and, at the same time, fit him for further studies in mathematics."
- THE BOOK: THE STORY OF PRINTING AND BOOKMAKING, by D. McMurtrie. Oxford University Press, New York, N. Y., 7th edition. "A fascinating story of the making of books, from the beginnings of writing down to the illustrated books and novels of the current year."
- BUSINESS AS A SYSTEM OF POWER, by R. A. Brady. Columbia University Press, New York, N. Y. Price \$3.00. "The author describes the evolution of manufacturing peak associations in four countries which are now totalitarian (Germany, Italy, Japan, and France) and in two countries which still

FORECASTING THE ECONOMIC FUTURE

The thoughts and plans of political, educational, labor and business leaders as expressed in their complete and unedited speeches.

VITAL SPEECHES - OF THE DAY -33 West 42nd St., New York Issued semi-monthly, \$3.00 a year, \$5.00 two years BINDINGS IN ANY MATERIAL. IN ANY COLOR Prices: before you place your order elsewhere, consult us first Feature: if the sets you give us for BINDING lack vols. and nos.. we are most likely able to fill them in at cost Universum Book Export Co., Inc. 45 East 17th St., New York, N. Y. -SANFORD'S Library Paste Permanent Clean Cream the Paste with the brush. Spread thin. Card pockets, book plates, and even bindings will be inseparably held. A 2 oz. sample sent on request of any librarian SANFORD INK CO.

New York

29

Contributions toward A SPECIAL LIBRARY GLOSSARY

Edited by Linda H. Morley

A series of definitions with amplifications and examples of special library terms in common use. Also includes general library terms which have acquired changed meaning in special library usage. Contains terms created to express special library policies, practices, and ideas, for which generally accepted terms have not existed.

Prepared by a group of special librarians for the A. L. A. Committee on Library Terminology. Mimeographed.

Price: \$.35

App. 20pp. January 1943

Order from

SPECIAL LIBRARIES ASSOCIATION 31 East Tenth Street, New York

U. S. GOVERNMENT PERIODIC PUBLICATIONS

A DESCRIPTIVE LIST

Current publications and releases of the important government bureaus and agencies. Gives title, frequency of publication and form. Tells what publications to keep and what to discard. Invaluable in keeping up to date on government releases, so important in the war effort.

PRICE: \$2.00

Plus 10¢ postage and handling. 100 pages. Planographed. June 1942.

SPECIAL LIBRARIES ASSOCIATION 31 East Tenth Street, New York maintain the liberal capitalist position (Great Britain and the United States). The book offers amazing facts and disturbing parallels for the complacent liberal and the wellmeaning conservative, and much solid meat for the scholar."

- CHEMISTRY OF POWDER AND EXPLOSIVES. Vol. 2. By T. L. Davis. John Wiley & Sons, Inc., New York, N. Y. Probable price \$3.00. "This is the only book in English which covers this subject in detail."
- CLOTHES AND PERSONAL APPEARANCE, by G. M. Morton. John Wiley & Sons, Inc., New York, N. Y. Probable price \$3.75. "Emphasizes essentials of good design in costume and applies art principles to everyday life."
- THE FAMILY, by J. K. Folsom. John Wiley & Sons, Inc., New York, N. Y. Probable price \$4.00. 2nd edition. "Discussion of the major problems pertaining to the family."
- FOOD PREPARATION RECIPES, by A. M. Child and K. B. Niles. John Wiley & Sons, Inc., New York, N. Y. 2nd edition. Probable price \$2.50. "Present those facts and principles which govern food selection in everyday use."
- FOREST ECONOMICS AND FINANCE, by P. L. Buttrick. John Wiley & Sons, Inc., New York, N. Y. Probable price \$4.00. "Purposes of this text are: to present a unified discussion of the economic and financial aspects of American forestry based on modern economics; to include considerable material dealing with the economic and financial nature of forest exploitation and of the forest industries; to consider the economic aspects of protection, recreational, and wildlife forestry."
- FUNDAMENTALS OF SOIL SCIENCE, by C. E. Millar and L. M. Turk. John Wiley & Sons, Inc., New York, N. Y. "For the beginning student in soils."
- GENERAL METALLOGRAPHY, by R. L. Dowdell. John Wiley & Sons, Inc., New York, N. Y. Probable price \$3.50. "Intended as an introductory work to the many specialized books and technical information being published in the field."
- MAGNETIC MATERIALS AND TRANSFORMERS, by Eectrical Engineering Staff of the Massachusetts Institute of Technology. John Wiley & Sons, Inc., New York, N. Y. Probable price \$6.50. M. I. T. Series, Vol. II.
- OUTLINES OF THEORETICAL CHEMISTRY, by Getman and Daniels. John Wiley & Sons, Inc., New York, N. Y. 7th edition. Probable

price \$3.75. "A textbook for the usual threeor four-hour general course in physical chemistry."

- PHOTOGRAMMETRY, by H. O. Sharp. John Wiley & Sons, Inc., New York, N. Y. Probable price \$3.50. "Fundamental principles involved in both terrestrial and aerial photographic surveying."
- REINFORCED CONCRETE DESIGN, by H. Sutherland and R. C. Reese. John Wiley & Sons, Inc., New York, N. Y. Probable price \$4.50. "Emphasis again laid upon the development of principles involved in the analysis of the different members of a structure."
- SECRET SOURCES, by W. Williams and W. Van Narvig. Alliance Books, New York, N. Y. Price \$3.00. "Here is the inside story of the origin of Wythe Williams' scoops. The 'history-before-it-was-made' stories that have long astounded and baffled other newsgatherers, government officials and the men on the streets."

[The Editor has received many requests urging that this column be retained. Therefore it will continue to be published in each issue as heretofore.]

Announcements

Washington, D. C. Chapter

The November 11, 1942 issue of *The Troya*, organ of the Georgetown University, contains items either on or by Mr. Phillips Temple, President of the Washington, D. C. Chapter; one calls attention to Mr. Temple's appointment as National Chairman of the S. L. A. War Activities Committee and lists other positions which he also holds; another is a column on "Riggs Library Notes" compiled by Mr. Temple whose professional position is Librarian of the University.

When they ask for MARINE BOOKS ... have CORNELL Books on hand!

The only company in America to publish maritime books exclusively, The Cornell Maritime Press offers an outstanding list of informative books on ship construction and operation, written by men who are foremost in their respective fields. Such books are in urgent demand today . . . make sure YOUR library has them!

SUBJECTS COVERED:

al Reserve
's Business
al Architecture
Construction
ir & Alteration
print Reading
ng
t Protection
1

CORNELL MARITIME PRESS 350 West 23rd Street New York, N. Y.

Special Libraries Council of Philadelphia and Vicinity

The Bulletin of the Special Libraries Council of Philadelphia and Vicinity for November 1942 contains an interesting and instructive article on the "Dropsie College Library" by its librarian, Joseph Reider. This library is a member of the Philadelphia Bibliographical Center and Union Library Catalogue and as such endeavors to render service not only to Philadelphia and vicinity but also through interlibrary loans to all parts of the United States.



NEW REVISED 1942 EDITION MACHINE SHOP SCIENCE AND MATHEMATICS

By Eaton and Free

Invaluable to both the beginner and veteran machine shop man. Explains in a very usable way the physics, chemistry and mathematics needed in the shop, as they apply to the operation of lathe, drill press, planer, milling, and other machines. Helps meet everyday questions and problems which arise on the production floor and in repair work. Cloth, \$2.00.

THE MANUAL ARTS PRESS, Peoria, Illinois

Request list of technical books

31

THE AMERICAN LIBRARY DIRECTORY 1942 **Contents include** LIBRARIES IN THE U.S. 1 Public (7,820), junior college (447), higher education (1,168), law (320), medical (194), institutional (132), hospital (169), federal (242), state (153), and special (462)-11,107 libraries. LIBRARIES IN THE U.S. TERRI-2 TORIES AND DEPENDENCIES Includes all types of libraries-69 libraries. 3 LIBRARIES OF CANADA AND NEWFOUNDLAND Includes all types of libraries-588 libraries. LIBRARY SCHOOLS 4 in the United States and Canada-39 entries. LIBRARY ORGANIZATIONS 5 An alphabetical list of national, regional, state and provincial associations, and local library clubs in the United States and Canada-164 entries. STATE AND PROVINCIAL 6 EXTENSION AGENCIES Indexed by state. SPECIAL COLLECTIONS 7

Index by subject of special collections, special subjects, and special libraries.

PRICE \$15.00

R. R. BOWKER CO. 62 W. 45 ST. NEW YORK, N. Y.

Greater St. Louis Chapter

Miss Ida May Hammond resigned as President of the Greater St. Louis Chapter on October 1, 1942 to go to Detroit, Michigan, to work in the Medical Service Department of Parke, Davis and Company. Mr. Allen G. Ring, Vice-President of the Chapter, is now its President. Mr. Ring is Librarian of the Mallinckrodt Chemical Works, St. Louis, Missouri.

Milwaukee Chapter

The Milwaukee Chapter has prepared a very attractive Program and Directory for the season of 1942-1943. This little booklet contains not only a list of officers and members of the Chapter but also the dates, places of meeting, names of the speakers and names of the hostesses, for each meeting from November 1942 through May 1943.

S. L. A. War Roster Grows

Miss Lydia Louise Allen, formerly Librarian of the Eastern Laboratory Library, E. I. du Pont de Nemours & Company, Gibbstown, New Jersey, is now in the WAVES. Miss Margaret W. Imbrie has taken her place as Acting Librarian.

Miss Frances L. Beckwith, formerly Librarian of the Forest Service, U. S. Department of Agriculture, Milwaukee, Wisconsin, is now with the WAVES.

Miss Eloise Blake, formerly with the Department of Justice Library, Washington, D. C., is at present a Midshipman at the Midshipman's School of the Women's Reserve of the U. S. N. R. at Mt. Holyoke, South Hadley, Massachusetts.

Miss Dorothy L. Dixon, formerly Librarian of the Imperial Tobacco Company of Canada, Ltd., Montreal, Canada, is with the Women's Royal Canadian Naval Service.

Mr. Ernest E. Doerschuk, formerly of the Tremont Branch of the New York Public Library, New York, New York, and an Active member of S. L. A., is now in the army.

Dr. Anna Haddow, recently Chief of Research at N. E. A., Washington, D. C., and Secretary of the Social Science Division, has become a member of the WAVES. Miss Haddow at present is assigned to Smith College.

Miss Mildred Lewis, Research Librarian at Parke, Davis and Company, Detroit, Michigan, has resigned her position to accept a commission in the WAVES.

Miss Emily V. Wood, formerly of the Walden Book Company, New York, New York, has joined the WAVES.

In Appreciation of the S. L. A. Duplicate Exchange Service

Dear Mrs. Stebbins:

We have forwarded the invoice for our subscription to the Duplicate Exchange Service to the Treasurer of the College for payment. As a small college we feel that we have been repaid several times over by the periodicals we received to fill our "gaps." We are sorry that oftentimes we have been able to give so little in return. The new subscription rate is still very reasonable.

Very truly yours,

(Rev.) FINTAN R. SHONIKER, Assistant Librarian, St. Vincent College Library, Latrobe, Pennsylvania.

The subscription rate for this Service is \$2.00 per year to all S. L. A. members except Institutional, who receive it gratis.

If you are not receiving this Service why not subscribe today. You may find listed in its columns the very item to complete your files.

1943 Victory Book Campaign

The 1943 Victory Book Campaign, the second annual drive for the collection of books for men in all branches of the service, will start officially on Tuesday, January 5, 1943 and will be carried on throughout the United States up to and including Friday, March 5, 1943.

The purpose of the drive will be to collect and deliver to the public libraries as many books as it is possible to accumulate in the given time. This year, however, emphasis is being placed on the *quality* of books — both as to physical condition and readability—rather than on the attainment of a staggering over-all total.

Classifications of books desired for the increasing millions of our fighting men, soldiers, sailors, marines, coast guardsmen and merchant seamen, include:

- Current best sellers (Book of the Month, Literary Guild and other book club selections) and the more recently published (1930 to date) popular fiction and popular non-fiction, in good physical condition.
- 2. Adventure and westerns, detective and mystery fiction in good physical condition. (These are described by camp librarians as the two types of books most sought after, and most read by the men.)
- 3. Technical books published since 1935 in the fields of: Architecture; Aeronautics; Chemistry; Drawing; Machine mechanics and design; Mathematics; Mechanical

JUST PUBLISHED -

INTRODUCTION TO Naval Architecture

by JOHN P. COMSTOCK Assistant Naval Architect, Newport News Shipbuilding and Dry Dock Company

Based upon the author's course in theoretical naval architecture given hull drawing apprentices at Newport News, Va. The text is suitable for high school graduates, as it contains no college mathematics. It explains fundamentals of theoretical naval architecture and shows how they are interrelated and progressively applied in the design of a ship.

210 pages, 67 drawings, 6x9, cloth, \$4.00

THE

Steam Locomotive

by RALPH P. JOHNSON, M. E. Chief Engineer, The Baldwin Locomotive Works

The first American book on the steam locomotive in twenty years. Covers theory, operation and economics of the steam locomotive in the light of latest research and current practice. Includes comparisons with Diesel-electric locomotives. The subject matter is stripped down to fundamentals, with just enough historical background retained to indicate paths of development.

500 pages, 100 illus., 70 tables and charts, 6x9, cloth, \$3,50

Book Department

SIMMONS-BOARDMAN PUBLISHING CORP.

30 Church St., New York, N. Y.



THE DAHLS

Stamford, Conn.

•

SPECIAL LIBRARY RESOURCES

VOLUME I Edited by ROSE L. VORMELKER Cleveland Public Library

A comprehensive survey of 765 libraries in 35 states and the larger cities of Canada, putting at your disposal 57,246,066 books, 13,895,160 pamphlets, 320,320 magazines, 5,718 newspaper files and 44,140 drawers of vertical file material.

Locates for you 2,922,387 maps and charts, 7,965,290 photographs and picture collections, 1,404,717 music collection items and 770,787 patents.

Geographical arrangement with organization, personnel, subject and special collection indexes. Edition limited, few copies left.

776 pp. 1941. Price \$6.00 plus postage. Volumes II, III, and IV in preparation.

Order from

SPECIAL LIBRARIES ASSOCIATION

31 East Tenth Street, New York.

drawing; Meteorology; Military Science; Navigation; Photography; Physics; Radio; Shop mechanics; etc.

- 4. Humorous books—books of jokes, humorous stories, anecdotes, cartoons and group games in *good* physical condition.
- 5. Pocket books and other small-sized editions of popular titles.

Special libraries will again take a very active part in this Campaign as they did in the previous one. Miss Cavanaugh has sent a letter to each Chapter President suggesting ways and means by which every S. L. A. member can help in securing these needed books.

When making your selections remember that "Any book you want to keep is a good one to give."

Index Numbers

(Continued from page 14)

Description:---Monthly estimates of sales of all retail stores 1935-41. Survey of Current Business. October, 1941. p. 18-25.

Stocks and bonds

Standard and Poor's Corporation

Bond prices. These are an average of the median bond in the group. High grade medium and low grade series all in a selected list are first yielded to maturity and the average medium yield obtained. Defaulted bonds are largely railroad bonds. All series are computed on the daily prices and averaged to arrive at the monthly indexes.

Base:-Dollars per \$100 bond.

Period covered:-1937 to date, by months.

Stocks and bonds

Standard and Poor's Stock Price Index.

The index was originally computed on a base of 1926 but has been re-computed on the base of 1935-1939=100.

The "base-weighted aggregative" is used and the prices of Wednesday closing or the last closing price are the basis.

Period covered:-1918 to date, by months.

Description:—Standard and Poor's Long Term Security Price Index Record.

Transportation

A total transportation index for the United States, 1929-1942 including all commodity and passenger transportation arranged by kind of transportation adjusted and unadjusted. Prepared by L. J. Paradiso and George Perkel. Base :--1935-1939=100.

Description :-Survey of Current Business, September 1942, pp. 20-28.



A. C. PANDICK MANAGER



PRINTING

NEW YORK OFFICE PANDICK PRESS, INC. 22 THAMES STREET NEW YORK, N. Y.

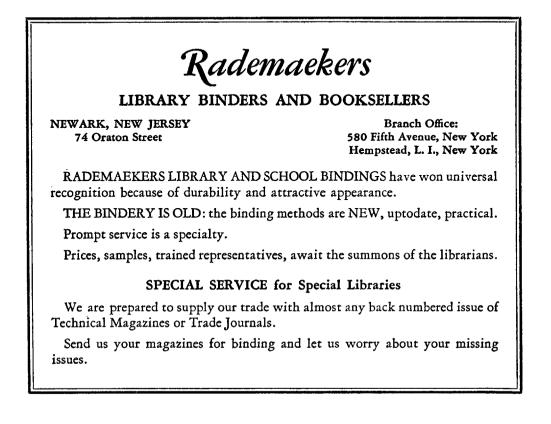
SPECIAL LIBRARIES

NEW JERSEY DIVISION

ARTHUR W. CROSS, INC. 71-73 CLINTON STREET Newark, N. J.

TELEPHONES { NEW YORK-RECTOR 2-3477 NEWARK - MARKET 3-4994

This book printed by Arthur W. Cross, Inc.



THE FOUR HIGH LIGHTS OF STECHERT SERVICE

ARE

ACCURACY ECONOMY DEPENDABILITY SPEED

STECHERT SERVICE is not merely a slogan but a POLICY of FAIR DEALING AND PERFORMANCE

We invite every librarian to take advantage of our facilities for supplying

BOOKS New and Secondhand Out of Print Domestic and Foreign PERIODICALS

Subscriptions Sets Runs Single Volumes

DOMESTIC PUBLICATIONS supplied promptly at customary library discounts.

BRITISH PUBLICATIONS obtained through our own office in London by mail or in our regular freight shipments.

LATIN AMERICAN PUBLICATIONS—New books received upon publication. Government documents obtained.

SECONDHAND, OUT-OF-PRINT, RARE BOOKS—Our large stock covers the entire field of human knowledge.

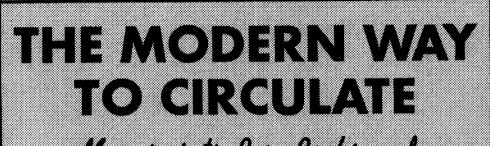
Good books of every description *BOUGHT*—also periodicals, sets, runs, single volumes. Please offer us any you wish to sell.

Subscriptions solicited to all periodicals.

G. E. STECHERT & CO.

(ALFRED HAFNER)

31 EAST 10th STREET . . . NEW YORK



Manuscripts, Rare Books, and Other Irreplaceable Material

Project the entire contents of each page with the inexpensive—easy to operate



The S.V.E. Microfilm Reader provides at low cost a convenient method of studying microfilms. It has many outstanding advantages:

- It shows either perforated or nonperforated 35 mm. film.
- It accommodates text laid down in any direction.
- It can be used under ordinary light conditions.
- It is entirely portable.

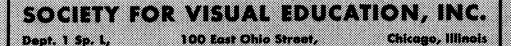
Write for complete details and priority requirements.

MICROFILM READER

magnifies 35 mm. microfilm 12 times on a 12" x 12" translucent screen

PRICE COMPLETE, SELF-ENCLOSED IN CASE, with 100-watt lamp, cord and projection lens.

\$75.00 F.O.B., Chicago, III.



A"Checklist" of Scientific Books Essential to Your Library

RUBBER, PLASTICS AND RESINS

- Chemistry and Technology of Rubber --- by Cartoli C. Davis and John T. Blair, A. C. S. Mongraph \$15.00
- Science of Rubber-Edited by Perf Dipl.log K. Memour-Translated by R. T. Daubrock & V. S. Morris 11.00
- Lates, its Occurrence, Collection, Properties and Technical Applications - by Ernst A Hauser 455
- Polymerication and its Applications in the Fields of Euliser, Synthetic Rasins, and Petroloum — by Polymer 2: Burk, Howard 11: Thompson, Archie J. Westmand In: Williams A. C. S. Monograph 3:10
- Chemistry of Synthetic Resize --- Two volumes on me binding --- by Carteros Ellis 20.00
- Chemistry of Synthetic Surface Coatings-by William Krumbiner 4.00
- Plastics and Malded Bestvical Insulation --- by Knile Hemming 5.00
- Cesein and Ha Industrial Applications by Edwin Sutermeaster and Frederick L. Browne A C S. Monograph 5.50
- Systematic Survey of Rabber Chemistry -- by Clayyon W. Betford and Herbert A. Winkelmann 8.00

PETROLEUM, FUELS AND LUBRICANTS

- Interesting of Pars Mydramarkans --- by Contav Sgind, George Hulls, and V. I. Konservedy A. C. S. Monograph \$5.00
- Cheminal Reliating of Patrateum --- by Vialimir A. Kalichevsky and Bert Allen Siagun, Second Edtion, A. C. S. Monograph 7,50
- Chemistry of Patralaum Destivatives by Carlein Ellis Volume 1 18.00 Volume 11 20.00
- Modern Methods of Refining Lubricating Offs -- by Vigdimir A. Kalichevsky: A. C. S. Manugraph 6.00
- Lubricating Grasses: Their Manufacture and Useby Z. N. Klengard 11.00
- Conversion of Petrolaum, Production of Muter Parts --- Thormal & Catalytic Processes --- by A. N. Sachance & 500
- Motor Puels: Their Production and Technologyby Eugene H. Lesite 6.00
- Shale Off --- by Raigh H. McKee A. C. S. Mann-Fraph 6.50
- The Reactines of Pure Hydronarbons --- by Gustav Egial A C S. Monograph 16.75
- Physical Constants of Hydrocerbess --- by Gustav Egioff: A. C. S. Monograph Volume 1 9.00 Volume 11 12.00
- Catalysis -- Inorganic and Organic --- by Sophic Borkman, Jacque C. Morrell and Custov Egiol. 18.00
- Emulsions and Foams --- by Sophia Berkman and Gustav figtoff 8.30

METALLURGY

- Protective Contage for Metals -- by R. M. Burns and A. E. Schub, A. C. S. Monograph 50,00
- Silver in Industry Edited by Lawrence Addition Spansored by the Silver Fredword' Research Freect with the active conjunction of the Annual Silreas of Standards and many universities and some filts organizations 10.00
- 10,00 Corrusion Resistance of Metata and Alloys — by Refert J. McKey & Robert Worthington, A.C. S Montgraph 7,00
- Tim Its Minung, Production, Technology and Applications - by C. L. Mantell A. C. S. Monograph 5.25
- Sampling and Analysis of Carbon and Albry Steels. Prepared by The Chemote Commutes of the Satadiary Comparison of the U. S. Sinei Curp 4.50
- Sheet Steel & Tin Plate --- by R. W. Skannon Luo
- Texthenit of Metallography. Chemistry and Physics of the Matale and Their Alleys --- Gaussie Tammann 7.00
- Zircennum and its Compounds --- by Frantis P. Ven abin. A. C. S. Monograph 1.00
- Arsenind and Argentiferons Copper.-...............J. L. Gregg. A. C. S. Monograph 6.00

FOOD AND NUTRITION

- We Need Vitamins by Waters H. Eddy and C. G. Hawley \$1.50
- What are the Vitamins? -- by Watter H. Edds 3.50
- Minerala in Nutrition ---- by 2. T. Wirtschafter 135
- The Vitamins --- by R. C. Sherman & L. S. Smith. A. C. S. Monograph 840
- Mineral Matshellism --- by A. T. Shohl A. C. S. Monograph 5.00
- Asimal As a Converter of Matter and Energy --- by Henry P. Arnshy & C. Robert Monten, A. C. S. Mantgraph 350
- Comprehensive Survey of Starth Chamistry-by Robert P. Walton 10.00

Sand for copy of "LET'S LOOK IT UP" containing detailed description of these and many other tiles

REINHOLD PUBLISHING CORPORATION, 330 W. 42nd St., New York, N. Y.