

Clemson University TigerPrints

Bobbin and Beaker

Engineering, Computing and Applied Sciences,
College of

1963

The Bobbin and Beaker Vol. 21 No. 1

Clemson University

Follow this and additional works at: https://tigerprints.clemson.edu/spec_bobbin

Materials in this collection may be protected by copyright law (Title 17, U.S. code). Use of these materials beyond the exceptions provided for in the Fair Use and Educational Use clauses of the U.S. Copyright Law may violate federal law.

For additional rights information, please contact Kirstin O'Keefe (kokeefe [at] clemson [dot] edu)

For additional information about the collections, please contact the Special Collections and Archives by phone at 864.656.3031 or via email at cuscl [at] clemson [dot] edu

Recommended Citation

University, Clemson, "The Bobbin and Beaker Vol. 21 No. 1" (1963). *Bobbin and Beaker*. 204.
https://tigerprints.clemson.edu/spec_bobbin/204

This Book is brought to you for free and open access by the Engineering, Computing and Applied Sciences, College of at TigerPrints. It has been accepted for inclusion in Bobbin and Beaker by an authorized administrator of TigerPrints. For more information, please contact kokeefe@clemson.edu.

FALL

1962

CLEMSON COLLEGE LIBRARY
SOUTH CAROLINA COLLECTION

Bobbie & Beaker

Q:

WHY DOES SHELL CHEMICAL COMPANY NEED TEXTILE CHEMISTS?

A:

Shell is one of the nation's leading suppliers of hydrogen peroxide, glycerine and other chemicals for the textile industry.

Shell maintains a modern textile product application and technical service laboratory at Union, New Jersey.

Shell's research and development constantly provide the textile industry with new and improved products and application procedures—such as new chemicals and processes for fabric finishing and treating.



Shell Chemical's Union Laboratory is located in a quiet residential area of north-central New Jersey, 22 miles from New York City. Nearby is Rutgers University and within commuting distance are other universities of the Greater New York Area.



Textile Chemist Don Mayer (Tulane '55) is shown checking the finish of a fabric on a resin finishing range that was specially built for the Union Laboratory. Don joined Shell at the Noreo, Louisiana, Chemical Plant immediately after graduation. After experimental work on plant control and operations problems, he moved to Union in 1961.

If you are a B.S., M.S., or Ph.D. graduate in textile chemistry, and have set for yourself the highest standard of performance, Shell has a challenging career opportunity for you at its Union Laboratory. You would work with the latest lab and pilot plant equipment to solve customers' problems and to develop applications for new products. Your colleagues would be men with experience in all phases of textile technology. You would be supported by other technical groups at Union, such as those specializing in electron microscopy, solvents technology, infrared analysis, and statistical methods. Results of Shell research in other areas would also be available to you.

Another reason for investigating career opportunities at Shell is the Company's outstanding benefits program, including educational assistance. A recruitment representative will be glad to tell you more about The Shell Companies when he visits your campus on November 6, 1963. Or you may write directly to Manager, Recruitment Division, The Shell Companies, Dept. G., 50 West 50th Street, New York 20, N. Y.



SHELL

SIGN OF A BETTER
FUTURE FOR YOU

An Equal Opportunity Employer

THE Bobbin & Beaker

Official Student Publication
Clemson School of Industrial Management and Textile Science

Vol. 21

FALL ISSUE

No. 1

The Staff

Editor

Jerry W. Blackwood
Gaffney, S. C.

Managing Editor

Henry M. Poston
Johnsonville, S. C.

Business Manager

Gary A. Hall
Greenwood, S. C.

Advertising Manager

Steven D. Tucker
Spartanburg, S. C.

Circulation Manager

Douglas V. Rippy
Clinton, S. C.

Ass't. Advertising Manager

Julian H. Baumann
Greenville, S. C.

Ass't. Circulation Manager

Marshall White
Rock Hill, S. C.

* * * *

Faulty Advisers

D. P. Thomson
Associate Professor of Textiles

Wallace D. Trevillian
Dean

In This Issue

From The Editor	5
Revolution in the Dyestuff Industry	6
New Dean Assumes Duties	8
Outstanding Seniors	10
Efland Appointed Associate Dean	12
Seminar Hi-Lights	13
Notes From The Dean	14
Clemson Delegates Attend Fancourt Seminar	16
Sirrine Foundation Aids Bobbin & Beaker	17
A Battle Science Lost	18
High Flying Fabric	21

The BOBBIN & BEAKER. Organized in November, 1939, by Iota Chapter of Phi Psi Fraternity, and published and distributed without charge four times during the school year by students of the Clemson College School of Industrial Management and Textile Science. All rights reserved.

Address: The Bobbin and Beaker, School of Industrial Management and Textile Science, Clemson College, Clemson, South Carolina.

POLICY—

The views and opinions expressed in all guest articles are those of the writers themselves, and must not be construed to necessarily represent the views and opinions of the Editors of this magazine or of the faculty of the Clemson College School of Industrial Management and Textile Science. No article in **BOBBIN & BEAKER**, or any part thereof shall be reproduced in any form without permission of the editor. Requests may be forwarded to Editor, **THE BOBBIN & BEAKER**, School of Industrial Management and Textile Science, Clemson, South Carolina.

THE BOBBIN & BEAKER is a non-profit magazine organized to serve Clemson students and the textile industry. We ask our readers to consider favorably our advertisers when buying.

TEXTILE CARRIER

IDEAS

by **SONOCO**



CONTINUOUS RESEARCH... A CUSTOMER BENEFIT!

Since 1899, Sonoco ideas for paper cones, tubes, cores and spools have been helping the textile industry achieve faster, better quality production at economical cost.

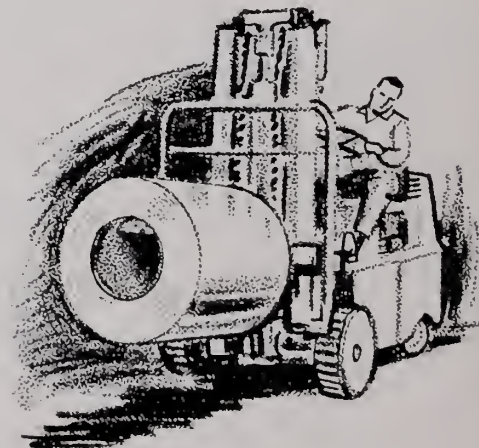
Sonoco ideas work. Research, of course, is the key. There have been some tough problems, too—from yarn mildew to streaks in finished cloth to special carriers and methods for yarn identification . . . just to mention a few. But, Sonoco ideas have solved these problems and kept pace with the technical advances of the industry.

Nobody has ideas like Sonoco. Nobody has the experience, the research facilities and an integrated production operation. That's why the industry—including you—can depend on Sonoco for sound ideas in better yarn carriers.

THIS, TOO, IS SONOCO!

Large diameter paper tubes, from 19" to 24" I.D., are widely used as cores for aluminum, stainless steel and other flexible sheet metals. Sonoco can meet rigid customer specifications for economy and high crush strength due to its vast experience in the production of cloth and carpet cores for the textile industry. It's another good Sonoco idea that works!

Sonoco is a dependable source for all types of textile yarn carriers, treated fibre products, specialty boards, corrugating medium, folding boxes, fibre cans and drums. Assistance in purchasing is available from qualified sales representatives in Sonoco plants from coast to coast. Your inquiry is invited.



SONOCO

Products for Textiles

151



from the Editor

With this issue we welcome Dean Wallace D. Trevillian as a new faculty advisor to our magazine. He, along with Professor D. P. Thomson, will assist the staff in producing quality reading material for all our readers.

Be sure to watch for Dean Trevillian's article, "Notes From The Dean," in each issue.

Our thanks go to Felix A. Buskey for his guest article, "Revolution in the Dyestuff Industry."

— Jerry W. Blackwood, Editor

SENIOR STAFF

Seated left to right:
Henry Poston,
Doug Tucker,
Jerry Blackwood.

Standing:
Gary Hall,
Doug Rippy.



Revolution In The Dyestuff Industry

By **FELIX A. BUSKEY**
President Althouse Chemical Company
Division of Crompton & Knowles Corp.
Reading, Pa.

BIOGRAPHIL NOTES

Mr. Buskey was appointed president of the Althouse Chemical Company in April of this year.

He was formerly executive vice president and general manager of the firm which manufactures quality dyestuff specialties for the textile trade at its Reading, Pa., plant.

Prior to joining Althouse, Mr. Buskey was president of Chem-Council Associates of Moorestown, N. J.. Previously, he had been senior vice president of the American Foam Rubber Corp., of Burlington, N. J.

A graduate of Northeastern University with a BS, he resides with his wife and two children at S. Tulpehocken Road, Reading, Pa.

A new technological surge is in the offing for the dyeing and finishing section of the textile manufacturing industry.

Textile dyestuff manufacturing in the sixties will be highlighted by the conversion of many-step processes into continuous single-step manufacturing processes to achieve greater production speeds.

Among the major advances in the offing are many processes which will revolutionize current thinking on some of the synthetic and older natural fibers.

Althouse Research has historically worked in the area of improving dyeing properties, increased wash fastness, and light fastness. Today Althouse continues its approach to the textile industry, plus an added effort toward reduction in costs, through cycle time and improved quality with reduced handling.

Althouse has a number of major contributions which it plans to introduce to the trade within the next two years. These contributions are the products of several years of research effort in both chemical and mechanical areas. Major breakthroughs are coming in some following areas:

1. Semi-continuous systems based on the use of new molecular concepts of the dyeing processes.
2. New continuous methods for steaming and increased penetration of dyestuffs at higher rates of speed.
3. Advances in padding techniques for piece dyeing of carpet.



Felix A. Buskey

4. New and faster dyestuffs and processes for pad dyeing cotton.
5. Increased use of instrumental color matching.

There is little doubt that the future trend of dyeing and finishing of textile will be following the direction of the past few years. This direction has meant an increase in the demand for faster dyes. The dyestuff industry with its extensive research program has sought to satisfy the demands for this increased fastness. Products of research have seen huge gains in the areas of reactive dyes for cellulosic fibers, neutral acid dyestuff for polyamides and polyamide wool blends, improved dispersed dyes for polyester for decreased sublimation and crocking, micro-dispersed for better handling in the dyehouse.

The new family of dyestuff arriving on the scene to dye polypropylene is based primarily on the chelating properties of the fiber itself. However, even as this is being written, new methods of modifying the polymers are appearing in the literature.

A whole new family of stretch fabrics based on Spandex, a generic name for the polyurethane fiber series, has changed the emphasis on dyeing in this area. The research on dyestuffs for this particular fiber will continue in the future as many of the dyes require considerable improvement and the lines of color need to be more comprehensive.

Continual rises in labor costs in the highly competitive textile market, together with increased effort to compete in international trade, are demanding not only faster dyes but better batch and continuous processing techniques. Many continuous dyeing procedures are being used at the present time, but they are still not enough of an improvement to offset increased costs.

It has become more apparent that the research programs of the dye manufacturers generate improved and faster dyeing procedures. These techniques are, in some cases, practically perfected, and we anticipate definite advances with this particular line of endeavor before the end of 1964.

Finishing can no longer be completely separated from the dyestuff field since the resulting fabric qualities are so definitely affected by the type and kind of finishing to which it is subjected. Reactive, permanent finishes that have excellent wash fastness properties with minimum effect on shade and light fastness are rapidly coming on the scene. There is

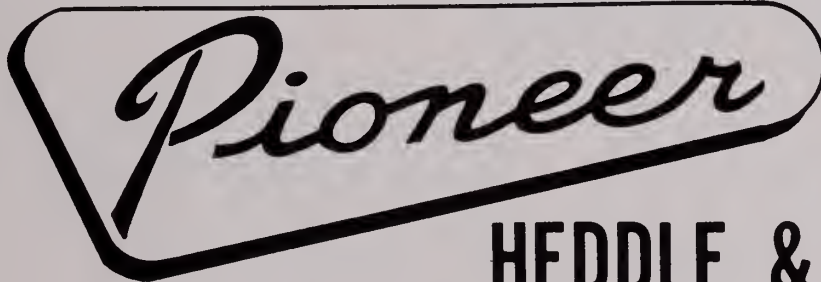
little doubt that these finishes will gain momentum in the future and will be greatly improved.

Some one-step dyeing procedures have already been introduced. These however, are small beginnings since there are newer dyes and compounds required to bring this development into fruition. These new developments, reactive finishes and one-step dyeing and finishing procedures, will have to compete with our present-day best fastness and physical properties.

A whole new field—neither paper nor textile—is evolving from the non-woven area and is demanding newer types of processing and dyeing procedures. These techniques are gradually being perfected; however, it still remains to the future to innovate improved dyes and techniques.

The constant flow of new synthetic fibers demands continuous research programs for new dyes to color these fibers commensurate with fastness properties to make them usable and salable since few fibers can exist in today's colorful world without suitable dyes for specific end uses.

For the dye manufacturer, the future holds many things—a great challenge in a constantly changing panorama of problems. Many new colors will be produced in the near future, together with speeded up techniques for applications as our answer to foreign competition which looms as a major factor in our consideration of the future.



HEDDLE & REED CO.

**PIONEER —
SERVING THE TEXTILE INDUSTRY—QUALITY PRODUCTS—EXCELLENT SERVICE**

**DRAW-RITE FRAMES AND HEDDLES
CONVENTIONAL FRAMES AND HEDDLES
PITCH BAND REEDS
DURAFLEX REEDS
DROP WIRES
ACCESSORIES**

A southern manufacturer — prompt delivery — Full staff of Sales engineers at your service.

**PIONEER HEDDLE AND REED CO., INC.
P. O. Box 10586, Atlanta, Georgia**



New Dean Assumes Duties

By JULIAN H. BAUMANN
TM '65

Wallace D. Trevillian assumed the position of dean of the recently united School of Industrial Management and Textile Science on September 1, 1963. He succeeded Dean Gaston Gage, first dean of the new school. Dean Gage retired this year after thirty-one years of outstanding service to Clemson College.

Dean Trevillian was born in Charlottesville, Virginia, on May 1, 1918. He was educated in the public school system of Charlottesville. In 1940, he obtained a Bachelor of Science Degree in Commerce from the University of Virginia. By virtue of a Du Pont Fellowship, he received a Masters Degree in Economics from the University in 1947. While on leave from Clemson in 1950 he put in a year of graduate study in Economics from the University of California. Dean Trevillian received his Doctor of Philosophy Degree from the University of Virginia in 1954.

Dean Trevillian came to Clemson in 1947 as an instructor in Economics. He served as an assistant professor of Economics from 1948 to 1951. In 1951, he was promoted to the position of associate professor of Economics, and he served in this capacity until

1955. In 1955, when the Industrial Management curriculum was introduced into the School of Arts and Sciences, Dean Trevillian was appointed head of this new curriculum and promoted to professor of Economics. Under his able leadership, the Industrial Management curriculum has grown to attract the largest major course enrollment at Clemson.

In June, 1962, the Industrial Management Department was merged with the Clemson School of Textiles, to form the School of Industrial Management and Textile Science. Dean Gaston Gage, then dean of the Textile School, was appointed dean of the new school with Dr. Trevillian later assuming the position of Associate Dean. Upon Dean Gage's retirement in September, 1963, Dr. Trevillian assumed the position of Dean of The School of Industrial Management and Textile Science.

Since Dean Trevillian has assumed his new position, there have been several changes made in the school. All students in the school are required to wear coat and tie to all classes. This is a policy started by Dean Trevillian when he was head of the old

Industrial Management Department and which was undoubtedly influenced by the seven years he spent at the University of Virginia where coats and ties are mandatory for all campus activities. For an explanation of this policy Dean Trevillian has said "It has been scientifically proven that when people are dressed correctly and reflect good manners, they can think better and are more comfortable, regardless of the work they are doing."

Dean Trevillian has not put the classroom out of his busy schedule since assuming his new position. He still teaches two classes, an undergraduate course in Industrial Management and a graduate course in Managerial Policy. Dean Trevillian plans to continue in his capacity of "Teaching Dean" just as long as his other administrative duties allow. However, whether from classroom or from the office, the School of Industrial Management and Textile Science looks forward to Dean Trevillian's tenure of office with great expectation.

* * * * *

The "garment district" of New York City consumes a huge portion of the output of the American textile industry, and its annual dollar sales equal all the oil that comes from all the oil wells in Texas.



COMPLIMENTS OF
FLETCHER SOUTHERN
Incorporated



FLETCHER SHUTTLES
Incorporated

SOUTHERNS PINES, N. C.



N **FRANK G.**
NORTH *Manufacturing Chemists*
INCORPORATED

— TEXTILE SIZES AND SOFTENERS —

SUPERIOR NORTH RESEARCH brings you the highest quality sizing products.

- WEAVE-WELL
- S-SIZE
- S-BIND
- GREASE-RITE
- TY-RITE

Our staff of chemists, sales engineers, and technical service men — always available for service, and ready and eager to uphold our long record for quick and efficient handling of emergency situations.

FRANK G. NORTH, INCORPORATED

Atlanta, Georgia
Box 10573

Marietta, Georgia
Box 769

Outstanding Seniors . . .



Steven Douglas Tucker

Steven Douglas Tucker, a twenty-five year old Textile Management major, is a native of Spartanburg, S. C. He has completed his military obligation by serving 6 years in the Naval Reserve, two of which were active duty.

To aid with his college expenses, Doug received a Callaway Mills scholarship. He has received honors for three semesters while at Clemson. He is an active member of Phi Psi and Council of Club Presidents, Chairman of AATT, and is presently serving as Advertising Manager of Bobbin and Beaker.

Doug worked full time for the Deering Milliken Research Corporation in Spartanburg, S. C., for one and a half years before entering Clemson. He also worked the past two summers with the same company. After graduation he plans to go into production or quality control.

Douglas V. "Doug" Rippy is a twenty-one year old Textile Management major from Clinton, S. C. A Leon Lowenstein scholarship has helped finance his four years at Clemson.

For the past three years Doug has been a member of the Bobbin and Beaker staff and is presently serving as Circulation Manager. He is also serving as Sports Editor of TAPS. Among the other campus organizations of which he is a member are AATT, Arnold Air Society, Phi



Douglas V. Rippy

Psi, Sigma Alpha Zeta, Hall Supervisor, Council of Club Presidents and a CCP Senator.

During summer vacations, Doug has gained first-hand experience in the textile industry. This work experience includes one summer with Clinton Cotton Mills, Clinton, S. C., and one summer with Landrum Mills, Landrum, S. C.

After graduation he plans to enter graduate school.

By

Henry M. Poston, TM '65

Reggie Lane "Bud" Smith is a married student twenty-one years old and is majoring in textile management. He, his wife and their four-year old son are living in Anderson, S. C.

To aid with his college expenses Bud received a J. P. Stevens scholarship for two years and a Leon Lowenstein Foundation scholarship for four years. He has received honors for every semester and high honors for two semesters. He is also a member of Phi Psi, the national honorary fraternity.

Bud has worked full time with the Orr-Lyons Mills, in Anderson, S. C., since August 1958. He has gained valuable experience in every department from the opening room to the weave room.

After graduation Bud would like to go into production, staff, or design.



Reggie Lane Smith

Quality is an attitude

wash & wear ✓	tailoring ✓
wrinkle resistance ✓	crease retention ✓
color retention ✓	shrink resistance ✓
pill resistance ✓	durability ✓
seam strength ✓	trimmings ✓

VYCRON[®]
POLYESTER FIBER
VERIFIED VALUE *



*Fiber, fabric and total garment quality are tested and verified under the supervision of Nationwide Consumer Testing Institute.

There's never been anything like the *Vycron Verified Value* program. It recognizes the fact that people buy fashion first, but they also want the assurance of quality, not only in the fiber and fabric, but in the total garment. Quality is an attitude at Beaunit, a fiber manufacturer dedicated to quality, total quality. It shows in our devotion to research, to product development, to continuous quality control and continuous testing. The same approach to quality you see in the Vycron Verified Value program is reflected in the development and production of our other fibers: viscose rayon, Tyrex[®] rayon, American Bemberg[®] and polypropylene. American Bemberg and Vycron are Beaunit trademarks.

Beaunit Corporation, 261 Fifth Avenue, New York 16, N. Y.



Thomas D. Efland

Efland Appointed Associate Dean

By
Marshall White, T.C. '65

Mr. Thos. D. Efland is the new Associate Dean and Director of Research for the School of Industrial Management and Textile Science. Mr. Efland is also Professor and Head of the Yarn Manufacturing Department. In 1949 he received a Bachelor of Science degree in Textile Management from North Carolina State College and in 1956 received a Master of Science degree from Georgia Institute of Technology in Textile Technology.

Mr. Efland consults and advises on all problems relating to knitting and yarn manufacturing, or preparation in the Textile Research Department. In addition, he has acted as a private consultant on knitting and related subjects and knitting patents.

Before coming to Clemson, he was instructor of knitting at North Carolina Vocational School in Belmont. Mr. Efland is a former Consulting Technical Editor for "Hosiery Industry Weekly" and for the "Knitter."

Recently, Mr. Efland returned from a two-weeks trip to the Textile Machinery Exhibition in Hanover, Germany. On the trip he also visited the School of

Textiles in Leicester, England; Shirley Institute in Manchester, England; Danish Textile Institute in Copenhagen, Denmark; research laboratories in Zurich, Switzerland; and the Institute of Textiles in Paris, France.

Mr. Efland lives at 304 Tamassee Drive in Clemson. He is married and has two boys and a girl.

INDUSTRIAL ENGINEERS

- NEW MILL PLANNING • MODERNIZATION PROGRAMS
- PLANT LAYOUTS • COST SYSTEMS
- COST REDUCTION REPORTS • WORK LOAD STUDIES
- MANAGEMENT PROBLEMS • SPECIAL REPORTS

RALPH E. LOPER CO.

GREENVILLE, S. C., Dial Cedar 2-3868 (Area Code 803)
FALL RIVER, MASS., Dial OSbarne 6-8261 (Area Code 617)
Specializing in Textiles Since 1914

Seminar Hi-Lights

By
Gary A. Hall, TS '64

The curriculum of each student at Clemson who is majoring in either Textiles or Industrial Management is highlighted by a seminar course that is offered to him. The seminars are offered in two courses. The industrial management seminar is offered to all students seeking a degree in Industrial Management, and the textile seminar is offered to all textile seniors, and all other students (textile and industrial management), the faculty of the School of Industrial Management and Textile Science, research personnel and others are invited to attend.

The speakers are composed of outstanding men of the business world. These high executives are invited to discuss problems of mutual interest with our students. There will be at least one of the business officials speaking to textile seniors each week of this fall semester. There will be six men speaking to the Industrial Management students throughout the year.

The fields of the businessmen are widespread throughout business and industry, and their duties range from research directors to the directors of hospitals. This wide variety allows the student to become acquainted with each aspect of the business world.

It is certainly a privilege for the Clemson student to have such outstanding speakers in his midst. There are very few places one could hear such a group of proven businessmen at such convenience.

There are a total of twenty speakers who will speak or have already spoken this year.

The textile seminars are as follows:

September 24th—Mr. William C. Little, Jr., Industrial Relations Department, J. P. Stevens & Co., Inc., "Recruiting of College Students."

October 1st—Mr. F. H. Martin, Research Director, Springs Cotton Mills, "Mill Modernization and Expansion."

October 8th—Mr. E. R. Higgs, Senior Research Engineer, Saco-Lowell Shops, "New Development in Yarn Mill Processing Machinery."

Mr. Herman Jones, Research Engineer, Saco-Lowell Shops, "The Spinning Mill of the Future."

October 15th—Mr. James P. Kinard, President, Glen Raven Mills, Inc., "The Marketing of Textiles."

October 22nd—Mr. Gaston Jennings, Divisional General Manager, J. P. Stevens & Co., Inc., "Ethics in Business."

October 29th—Mr. J. D. Mashburn, Director Fiber Utilization Dept., Deering Milliken Service Corporation, "Waste Utilization and Control."

November 12th—Mr. Weddie W. Huffman, Industrial Relations Manager, Burlington Industries, Inc., Community and Employee Relations."

November 19th—Mr. E. W. Marshall, Personnel and Safety Director, Reeves Brothers, Inc., "Government Agencies and the Mills."

November 26th—Mr. Jim Elmore, Personnel Manager, Albany Felt Company, "Industrial Fabrics."

December 3rd—Mr. Thomas D. Efland, Director of Research, Head of Yarn Manufacturing Department and Associate Dean, School of Industrial Management and Textile Science, Clemson College, "The Hanover Textile Machinery Show and European Tour."

December 10th—Mr. William E. Reid, President, Riegal Textile Corporation, "Redistribution of Our Exports."

December 17th—Mr. Allen W. Taylor, Vice President, Burlington Industries, Inc., "New Developments in Synthetic Finishings."

January 7th—Mr. Frank H. Cunningham, Piedmont Cotton Company.

The following will speak to the industrial management students:

October 10th—Mr. George M. Williams, Assistant Vice President, Southern Railway Co., "I've Been Working on the Railroad."

October 31st—Mr. A. B. Robertson, President, Crawford and Company, "What Business Expects of the College Graduate."

April 30—Mr. Brown Mahon, Chairman of the Board, Carolina Federal Savings and Loan Association of Greenville, "Community Responsibility."

To be announced: Mr. J. E. Fitts, President, Colonial-Hites Company, "The Opportunity Is Still There for the Small Business Man."

To be announced: Mr. E. H. Seim, General Manager, Mecarta Division, Westinghouse Electric Corporation, "Management in Today's Business World."

Notes from the Dean

More than 100 industrialists returned to the Clemson campus during the summer to attend courses conducted by the School of Industrial Management and Textile Science in Textile Chemistry, Supervisor Development, Fabric Development, and Yarn Manufacturing. Thirty-seven firms were represented from five states and three foreign countries. We are planning to expand this program, and any suggestions you can let us have about the type of courses to be included will be appreciated. We think this continued education program is one of the best ways we can serve industry.

Tom Effland, Director of Research and Associate Dean, has returned from a two-weeks tour of textile educational facilities in Europe and a visit to the Textile Machinery Exhibition in Hanover, West Germany. Among the institutions visited were: Leicester Technical College, Manchester College of Science and Technology, The Shirley Institute, University of Ghent, The Danish Textile Institute and L'Institut Textile de France. This educational tour was made possible by the J. E. Surrine Foundation.

Another first for Surrine Hall—The distaff side has taken over the personnel management course. Mary Claire Griffin is a native of Lynchburg, South Carolina, graduated from Winthrop and received her Ph.D. at Ohio State. She comes to Clemson from the University of Illinois. Mr. John Wannamaker, another native from Orangeburg, comes to us from L.S.U. He received his M.A. from the University of South Carolina and is in the process of completing his Ph. D. requirement at L.S.U.—major field—accounting.

The lights are burning late in Surrine Hall as faculty and students pursue their research. The graduate students in Textile Chemistry and Industrial Management are an impressive group. You can expect us to extend our offering in graduate work in the immediate future as our staff continues to emphasize both teaching and research. We do not intend to look upon such as separate areas or separate staff.

The faculty is very active in many professional organizations. Papers delivered recently are too numerous to mention. Professor Hubbard and four of our students recently attended the Walter F. Fancourt Memorial Seminar in Greensboro, as guests of the W. F. Fancourt Company. The South Carolina Division of the Southern Textile Association met here on October 5. Rodger Hughes, the chairman, informs me "The arrangements made by you, Betts Wilson and John Wigington, and the participation of the faculty (one for each technical group) made this one of the most successful meetings that we have ever had." We enjoyed having them—all 400 plus.

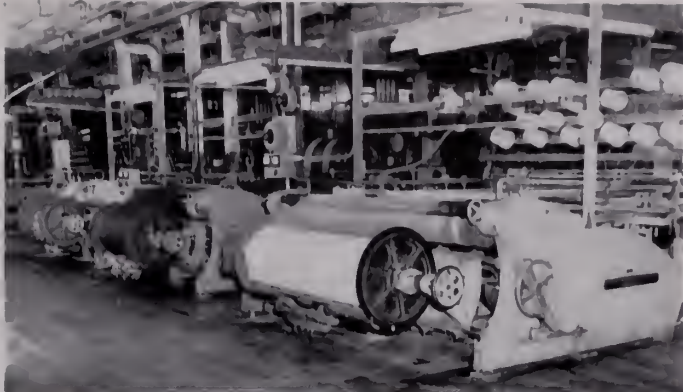
For years our professors have consulted and worked with industry. For example, Dr. Porter worked with the Lyman Finishing and Printing Company this past summer. The seminar and visiting lecture programs of this school are well known. This statement by Clarence Randall sums up our philosophy on this subject, "Wise is the businessman who seeks the company of scholars. Wise also is the scholar who seeks the company of businessmen and foresees the institution of higher learning which invites them to visit its academic halls"—This two way street has a new twist—one of your folks, Clyde Simmons, is a part time lecturer for us this year, helping out with a graduate course in Managerial Policy, each Monday night.

The students in this school are cooperating nicely regarding our ground rule that coats and ties should be worn. One mother wrote, "I think this is the nicest thing I've heard about Clemson recently, and I endorse it completely."

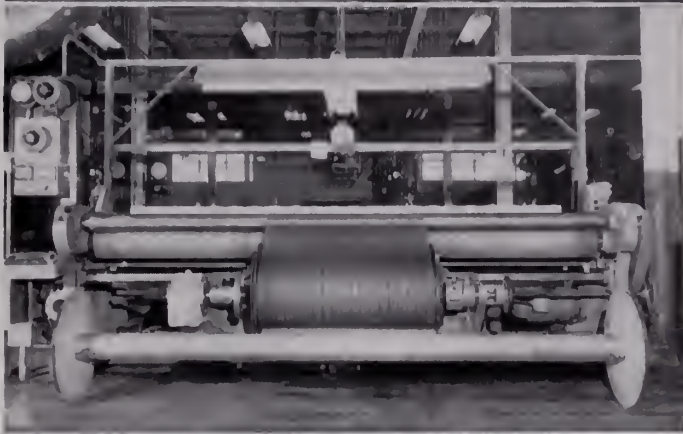
We are certainly pleased to report that Dean and Mrs. Gage are finally at home in Clemson and after a hectic summer, as a result of the automobile accident—are both beginning once again to share their warm personalities with many friends and admirers.

—Wallace D. Trevillian

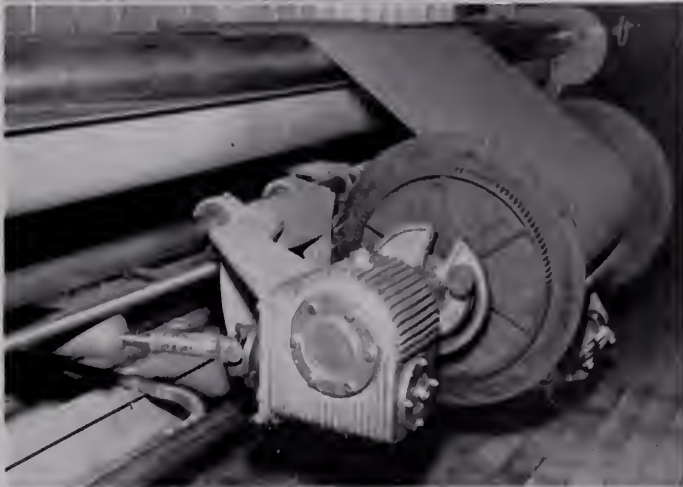
THE COCKER GH SLASHER VERSATILE EFFICIENT



Shown here are several views of part of a Cocker 9 cylinder GH Slasher installation at Swift Manufacturing Company, Columbus, Ga.—one of America's most versatile mills. These slashers operate on Acetate, Rayon, Nylon, Cotton and blends—stripes, solid colors, as well as greige goods.

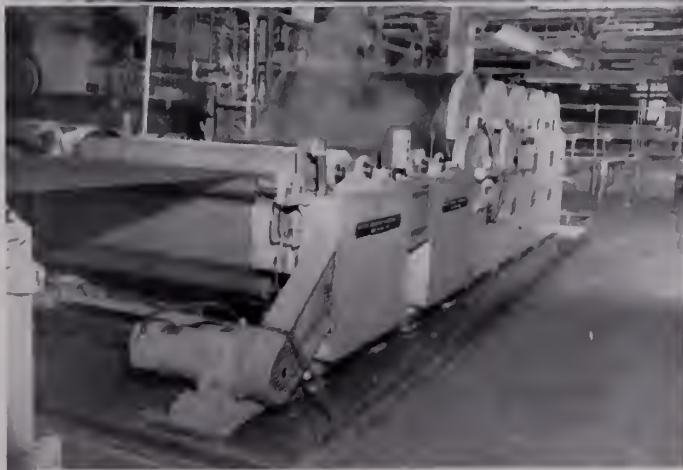


The second picture demonstrates the extreme flexibility of the Cocker GH Slasher—accommodating beams from 36 inches to the 128 inch beam shown in front of the machine—with no projecting spindles. Note also, the convenient control panel.



Shown clearly in the third picture is the revolutionary Cocker Torque Tube Drive* which eliminates troublesome belts, chains, sprockets, etc. This greatly reduces maintenance and simplifies changing beam widths.

The lower picture shows the cylinder section and two Model DA Size Boxes.



Due to especially heavy warp construction, maximum speeds on this particular installation are approximately 100 yards per minute. In other mills, Cocker GH Slashers are operating at speeds up to 184 yards per minute on lighter constructions.

We believe that the new Cocker Model GH Slasher is the most efficient and versatile slasher in the World. Let us give you full information.

*Pat. Pending

COCKER MACHINE & FOUNDRY CO.

IN CANADA:
Contact W. S. Clark
Montreal, Canada
Oxford 7-2242

IN MEXICO:
Ing. J. Via, Jr.
1. La Catolica 45-911
Mexico, D. F.

PLANT & OFFICES
at Randle, N. C.
MAILING ADDRESS:
Gastonia, N. C.

**WORLD'S LARGEST DESIGNERS
AND BUILDERS OF COMPLETE
WARP PREPARATORY EQUIPMENT**

Clemson Delegates Attend Fancourt Seminar

The Second Annual Walter F. Fancourt Memorial Seminar, held at the W. F. Fancourt Co., 408 Banner Ave., Greensboro, N. C., on October 3 and 4., 1963, brought together some fifty students and faculty representatives from Carolina colleges to hear top-flight textile executives discuss the many aspects of their huge and complicated industry.

Established by John L. Fancourt, president of the Fancourt Company, producers of textile chemicals, in memory of his father and older brother, the seminar was designed to offer guidance to young people who intend to make their careers in the textile industry.

To accomplish this end, leading men in the field were asked to discuss not only the technicalities of their specific interests but also the future of the industry as a whole and the promise it holds out to young people.

Principal speaker at the annual banquet held the night of October 3 was Felix A. Buskey, president of Althouse Chemical Co., Division of Crompton and Knowles, Inc. His subject was "Textiles, an Aroused Giant."

Herbert A. Stauderman, of the **American Dyestuff Reporter** served as the toastmaster.



Production and shipping are reviewed by John L. Fancourt (2nd from right), president of W. F. Fancourt Co. to Clemson students and faculty (l. to r.) Prof. J. C. Hubbard, Jr., Michael R. Prater, Hoyt Ray Martin, Jimmy Bert Queen, and William E. Barrineau, held at Greensboro, N. C. Plant. Seminar also included plant visits to P. H. Hanes Knitting Co., and Hanes Hosiery Mills in Winston-Salem, N. C.

The seminar began October 3 at 1:30 with a talk by Robert J. Froeber, executive vice president of Hanes Hosiery Mills, Winston-Salem, N. C., on sales and promotion of hosiery.

He was followed by Frank H. Dunn, sales manager, Special Brands Division, P. H. Hanes Knitting Co., also of Winston-Salem, who discussed sales and promotion of Knitted Underwear and Kindred Lines.

On Friday, October 4, the seminar moved to Winston-Salem, where it first visited the Cloth Manufacturing Division of the P. H. Hanes Knitting Co. for an on-the-spot discussion and demonstration of manufacturing, quality control, research and development, and dyeing and finishing.

Following lunch at Hanes Hosiery Mills Co., a discussion on similar aspects of the hosiery business was conducted by Robert E. Elbersen, vice president, Manufacturing, and James E. Gibson, vice president of Manufacturing Services.

Participating in the Seminar were students and faculty members from the following colleges and universities: Belmont Abbey, Catawba, Clemson, Davidson, Duke, Elon, Guilford, High Point, North Carolina State, University of North Carolina, University of South Carolina, and Wake Forest.

Clemson's delegates included: Mr. J. C. Hubbard, Associate Professor of Weaving; William E. Barribeau, a T.M. major from Lake City, S. C.; Jimmy B. Queen, an I. M. major from Gaffney, S. C.; Randy Prater, a T.C. major and Ray Martin, an I.M. major, both from Seneca, S. C.

* * * * *

John—"What did you do with my shirt?"

Roommate—"Sent it to the laundry."

John—"Ye gods! The whole history of England was on the cuff."

Sirrine Foundation Aids Bobbin & Beaker

Not many people realize the amount of support given to the Bobbin and Beaker and the Textile Department by the Sirrine Foundation. Because the magazine is distributed free, returns from advertising do not always cover our expenses. In 1953 the Sirrine Foundation board of trustees came to our aid by agreeing to underwrite costs not covered by advertising and to pay modest honorariums to senior staff members. Needless to say, without this support the Bobbin and Beaker would have "folded" some years ago.

The Textile Department benefits from the generosity of the Sirrine Foundation. This aid includes: (1) enhancement of the state retirement for textile staff members; (2) enhancement of the college travel funds to aid professors in visiting textile plants; (3) to employ professors to work on research during the summer months; (4) annual contributions to our textile library for employing a librarian and provid-

ing funds for the purchase of many books which would not otherwise be available.

Both the Bobbin and Beaker staff and the Textile Department offer their heartfelt thanks to the Sirrine Foundation for their valuable contributions.

Simmons Machinery Company, Inc.

EQUIPMENT — SUPPLIES — ACCESSORIES

— TEXTILE MACHINERY —

P. O. Box 202

Phone CEdar 9-7621

GREENVILLE, S. C.

A BATTLE SCIENCE LOST

The past few years have been an undeniable age of science for the textile industry.

Millions of dollars have been spent to develop new fabrics and the high-speed precision machinery to produce them; dyes for a rainbow of colors that neither fade nor run; finishes which seem to improve with age, and carefully-researched sales campaigns to attract customers to new and more exciting products.

Every penny of the investment has been worthwhile. The American textile industry today represents one of the most modern and progressive industries in the world.

Yet, an inferior type of cloth produced by hand with second-rate materials under the most primitive conditions imaginable is proving that the human element still plays an important role in shaping the fast-moving world of fashion.

The cloth that defies progress is "bleeding madras."

Madras originated in India, but production of madras-type cloth is almost world-wide. Bleeding madras, however, remains practically untouched by modern methods. It is woven in individual lots, with no continuity of pattern and with almost every human flaw possible in individual pieces of hand-made cloth. Dyed yarns are used for both warp and filling, but the yarns are colored separately with natural dyes which bleed and run when the cloth is washed. Finally, madras is lighter and less durable than machine-produced cloth turned out under the exacting conditions of the modern textile industry.

In other words, by the usual standards applied to the fabric and apparel trades, madras is doomed to failure.

There are times, however, when fashion combines with the unpredictable nature of textile customers to turn weaknesses into strengths. This is what has happened with madras.

People who would ordinarily demand fabrics which are durable, shrink-proof, run-proof, color-fast and new have become unaccountably fascinated by madras, especially the primitive natural colorations. The constantly changing patterns of madras have become the basis for the fabric's popularity in sportswear, dresses, men's coats and dinner jackets, hair bows, belts, neckties, kerchiefs, pocketbooks and watch bands.

This "human element" in the popularity of madras and other so-called fashion items is proof, textile sales experts say, that no industry or company has a "patent on progress" and that progress has no patent on popularity. In fact, the experts add, it re-emphasizes that a successful textile organization today must include the kind of people who have not only a well-developed sense for scientific thinking but, also a keen sensitivity for fashion and style.

"The element of fashion," the fashion apparel merchandising manager of a leading department store chain said recently, "continues to be a dominant factor in serving the American public." This requires, he suggests, that a successful company must have and keep modern production facilities, management personnel bold enough to face challenges quickly, and, perhaps most important, production personnel who can adjust to the needs of their company, the textile industry and the textile market.

Special TEXTILE DICTIONARY for BEST RESULTS in Textile Processing



C

Corobex (Kôr 'a-bex)

A durable anti-bacterial additive for textiles. Provides fixed, lasting protection against germs, mildew, perspiration odors and other odors of bacterial origin.

Easily applied during dyeing or finishing operations. Will cause no shade change in dyed and printed colors, no yellowing of whites. Does not affect the hand of the finished goods. Compatible with most types of finishing materials.

D

Discolite[†] (dīs / kō . līte)

Concentrated sodium sulphoxylate formaldehyde available in lump, pea, rice or powder form.

A powerful reducing agent, stable at high temperatures. Widely used to effect reduction and solution of vat colors, and for discharge effects when applied to colored grounds. Effective when mixed with vat colors and discharge pastes wherever the reducing agent must retain its reducing power after being dried into the fabric.

Dispersall (dīs . pūr / sal)

A long chain ethylene oxide condensate in the form of a colorless, neutral, somewhat viscous liquid. Fully resistant to hard water, and miscible with water in all proportions. A retardant and leveling assistant in vat dyeing.

Used widely as a dispersing agent in dyeing synthetic fibers with disperse colors and for fast color salts and bases in Napthol dyeing and printing.

Effective in stripping to prevent redeposition of the color on stripped goods.

N

Neofinish (Ne / . O . Finish)

Non-ionic softener dispersible in hot water, suitable for all textile fibres, both natural and synthetic. Compatible with all types of finishing materials, including resin finishes. No development of color or odor in goods finished with Neofinish, even in storage. No yellowing at time of application.

Neowet (nē / ō . wēt)

Complex Polyethylene Ether in the form of a pale yellow, slightly viscous liquid.

A non-ionic surface active wetting agent, effective at all temperatures. Completely compatible with enzymatic desizing agents and readily soluble in water. Contains 33 1/3% active ingredients. Widely used in scouring all types of textile fabrics and for general wetting purposes.

Neowet X (nē / ō . wēt)

Organic Ether Sulphonate in the form of a water white slightly viscous liquid.

An anionic surface active wetting agent, effective at all temperatures. Does not affect enzyme activity in desizing. Compatible with hydrogen peroxide and resin finishes. High detergent value. Contains 20% active ingredients.

Neozymes[†] (nē / ō . zīms)

Desizing agents made up of amylolytic, proteolytic and fat splitting enzymes available in the form of crystalline powder or liquid concentrate for high or low temperature requirements.

Neozymes quickly remove all trace of starch glue or gelatin sizing without danger of damage to even the most delicate fabrics. For best results, use with NEOWET to speed saturation.

P

Parolite[†] (pār / ō . līte)

Zinc sulphoxylate formaldehyde in the form of white crystalline powder. A highly concentrated stripping agent for all forms of wool and modern synthetics.

Completely soluble in water. Leaves stripped goods soft, completely free of zinc dust and in most receptive condition for further processing. Often completely strips goods where other stripping agents fail. Very effective in discharge printing on acetate rayon.

V

Vatrolite[†] (vāt / rō . līte)

Concentrated sodium hydrosulphite in the form of white crystalline powder. A powerful reducing agent for vat colors, ideal for dry feeding because of its free flowing, dustless character. Completely soluble in water.

Effective stripping agent for direct, sulphur and vat colors on cellulosic fabrics.

Quickly removes rust stains from cotton goods. May be stored indefinitely.

Available with optical whites and in buffered formulas for high temperature use without excessive alkalinity.

Velvo Softener (vel / vō)

A highly sulphonated tallow in the form of a creamy white paste, easily dispersed in water. Used in general finishing of all types of textile fabrics. Will not "smoke off" or change color in high temperature operations such as calendering or drying. Has no effect on light fastness of colors.

Strategically placed warehouses plus company owned trucks add up to fast dependable delivery, every time.



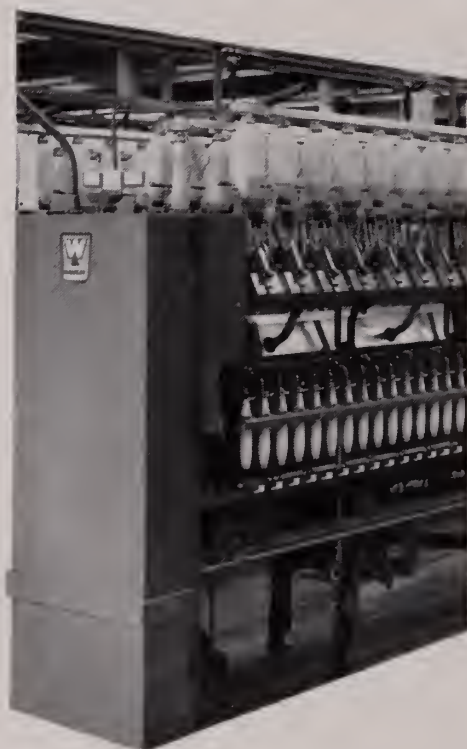
Royce



CHEMICAL COMPANY
EAST RUTHERFORD, NEW JERSEY

W

herever man turns fibers into yarn..



Whitin manufactures a complete line of modern, efficient, high-production equipment for the processing of cottons, wools, worsteds, synthetics and blends. Whitin's world-wide reputation for producing the very finest in textile machinery is built upon more than 130 years of experience in the field. Regardless of its preparatory function, each Whitin machine will do its specific job better, faster or more economically than that job has ever been done before. Each will show unmistakable evidence of the advanced research, engineering and craftsmanship which are inherent in all machinery made by Whitin.

Established 1831



Whitin

THE BEST WAY TO BETTER YARNS

WHITIN MACHINE WORKS: CHARLOTTE, N. C. • GREENSBORO, N. C. • ATLANTA, GA. • SPARTANBURG, S. C. • WHITINSVILLE, MASS.
WHITIN INTERNATIONAL LTD.: PRINCIPAL OFFICE: SAN JUAN, P. R., BOX 3187 • U. S. A. OFFICE: WHITINSVILLE, MASS.

HIGH FLYING FABRIC

A fabric that is glued together instead of stitched is being regarded as the next step in the continuing development of flight uniforms for Naval aviators and possibly astronauts.

The fabric is made from polyurethane, one of the newer man-made fibers. Tests to date indicate that it offers good comfort qualities and high abrasion resistance, although the fact that it can be put together with adhesives is one of its major selling points.

Coated nylon now used in flight suits is considered good material for high altitude flight suits, but it has to be stitched together. The stitches themselves are fortified with cement and seams are strengthened with sealing tape, but they are still considered weak points in flight suit construction. It is possible for them to leak, thus reducing the inside pressure of modern flight uniforms.

Of special interest to the Navy is the thinness of polyurethane fabric. This allows an exceptional amount of flexibility, which scientists point out is of increasing importance to high-altitude fliers. The

scientists add that flexibility has not been of particular importance to astronauts thus far, since there has been little need for them to be mobile.

However, this will not be true in the future, as space craft and other high altitude vehicles become larger and instruments cannot be placed within easy reach. Also, future high altitude and space flight crews will be expected to walk around within their vehicles and, possibly, outside them.

Polyurethane is also being tested as a lining for flight gloves and as an inner collar to prevent a flight suit from flooding if a pilot is dumped in the water without his helmet.



The
BEST for
39
years

Greensboro Loom Reed Co., Inc.

H E L P !

The Bobbin & Beaker is supported entirely by advertising. Anyone wishing to advertise please write to:

The Bobbin & Beaker,
School of Industrial Management
and Textile Science
Clemson College, Clemson, S. C.

Index to Advertisers



Beaunit Corporation	11
Cocker Machine and Foundry Company	15
Fletcher Southern, Inc.	9
Frank G. North, Inc.	9
Gaston County Dyeing Machine Company	23
Greensboro Loom Reed Company, Inc	21
Pioneer Heddle & Reed Company, Inc.	7
Ralph E. Loper Company	12
Royce Chemical Company	19
Shell Chemical Company	2
Simmons Machinery Company, Inc.	17
Sonoco Products Company	4
Steel Heddle Manufacturing Company	24
Whitin Machine Works	20



SELLERS DYEING COMPANY
Quality Package Dyers
 SAXAPAHAW, NORTH CAROLINA

A decade of growth and progress

For many years the group of mills headed by Senator B. Everett Jordan have been highly successful producers of Durene, cotton, wool, rayon and synthetic yarns.

During the past 10 years Sellers Dyeing Company, under the direction of President Ben E. Jordan, Jr., has added considerable luster to the well established reputation of the Jordan enterprises.

An exciting success story from the beginning, Sellers has made it possible for the mills to offer a complete line of dyed and bleached yarns to supplement their lines of natural and mercerized yarns.



Gaston County Dyeing Machine Co.

WORLD'S LARGEST PRODUCERS OF PRESSURE DYEING & DRYING MACHINERY
 STANLEY, N. C., U.S.A.

REPRESENTATIVES

G. Lindner
 Terminal Bldg., 68 Hudson St.
 Hoboken, N. J.

Albert Beglan
 316 Spencer St.
 Philadelphia 20, Pa.

J. R. Angel
 1104 Mortgage Guarantee Bldg.
 Atlanta 3, Ga.

A. R. Breen
 80 E. Jackson Blvd.
 Chicago, Ill.

The Rudel Machinery Co., Ltd.
 980 St. Antoine St., Montreal
 278 Lakeshore Blvd. E., Toronto

THE BOBBIN AND BEAKER

Student Publication

School of Industrial Management and Textile Science

Clemson College

CLEMSON, SOUTH CAROLINA

NON PROFIT ORGANIZATION
BULK RATE
U. S. POSTAGE
PAID
CLEMSON, S. C.
PERMIT NO. 7

Return Requested

Stehedco THE QUALITY LINE

The World's Most Complete Line of TEXTILE WEAVING SUPPLIES

You must have the best quality equipment of the most advanced design to produce the finest quality fabrics consistently and with true operating economy.

Every Stehedco Product is quality engineered to weave perfect fabrics most economically and with least possible down time or replacements.

Remember Stehedco for quality and perfection. Ask at any time to have one of our qualified Sales Engineers help you to solve your problems.

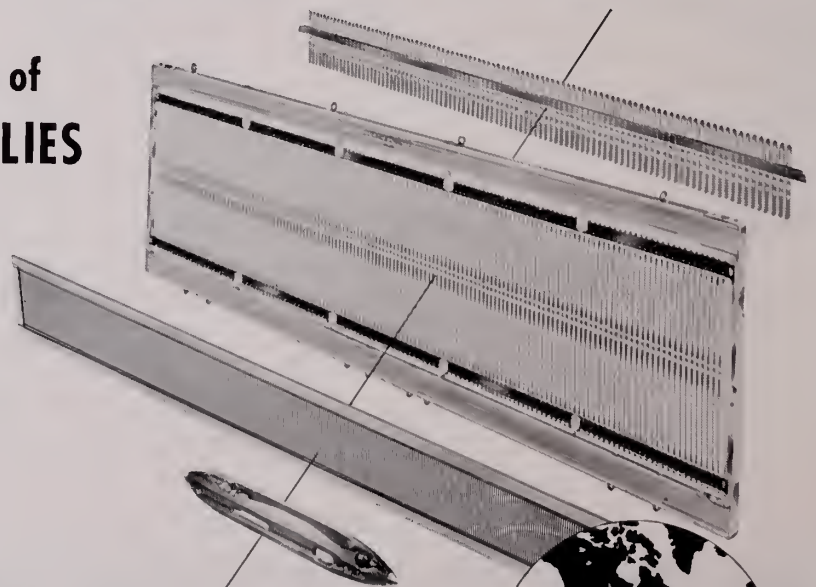
STEEL HEDDLE MFG. CO.

PHILADELPHIA 32, PENNSYLVANIA

Greenville, South Carolina—Greensboro, N. C.—Atlanta, Ga.

Lawrence, Mass.—Granby, Quebec, Canada—Textile

Supply Co., Dallas, Texas—Albert R. Breen, Chicago, Illinois.



A-6301