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This, the last issue by the Senior Staff, features an informative article, "Styling and Design". Thanks are extended to Mr. Harris E. Rubin, Executive Vice-President of Burlington Men's Wear, for preparing this article.

The staff urges you to pay particular attention to the information given in "Professional Development Courses" on page sixteen. We believe that this program offers a golden opportunity to all who participate.

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

Standing:
Gary Hall,
Doug Rippy.
STYLING AND DESIGN

By
Harris E. Rubin

Mr. Rubin graduated in June, 1950 from the School of Textiles, North Carolina State College with a B.S. degree in Textiles. He was employed 4 years as Asst. Styler for Burlington Industries, Inc., Men's Wear Division, then 3 years as Head Styler for the Synthetic Division of Pacific Mills. In 1957, he organized Tritex Mills, which functioned as sales agents for Reeves Bros. Inc. in men’s wear synthetics.

In October, 1960, he returned to Burlington Men's Wear as Executive Vice-President. His present responsibilities include styling and merchandising.

My approach to this topic will be with particular emphasis on the woven Men's Wear apparel field. It is important to keep in mind however that while I will dwell on Men's Wear styling and design similar relationships exist in most other textile areas—for example, in knitting, women’s wear woven fabrics, home furnishings, carpeting, domestics—only in the industrial fabrics area is the emphasis and outlook somewhat different in that function far outweighs most other considerations.

Perhaps the best beginning point for this discussion would be a definition of “Styling”. To my mind the textbook definition of styling would be that styling is the esthetic enhancement of a fabric by means of color, pattern, weave, finish, texture, cloth construction, or yarn composition or blend in order to further the saleability of the fabric by satisfying an existing market need or by creating a new area of market interest and desire. Although the styling function is extremely complex in nature, further simplification would give overwhelming emphasis to two primary points—(1) Appeal, and (2) Saleability. In the market place, then, styling is concerned with creating fabric appeal which results in sales at a profit. It works hand in hand with sales and together they form a team commonly known as “merchandising.” In any business organization the primary objective is to sell at a profit. Merchandizing is charged with the responsibility for so-doing. Through its sales arm merchandising endeavors to sell its products at the best possible price consistent with good and sound business practices. Through its styling arm merchandising strives to enhance existing products by means of color, hand, pattern, finish, etc. and to create new and desirable products which will result in enlarged, expanded, or completely new markets.

This, styling, working closely with manufacturing and sales, is expected to accomplish within the existing framework of plants and the limitations of equipment in the manufacturing area. When conditions warrant, styling is expected to advance recommendations and ideas for the purchase of new equipment or the modification of existing equipment consistent with anticipated or actual changes in the market place with ultimate consideration given to the profit motive.

Thus, in addition to its functions as a member of the merchandising team responsible for creating for sales, styling in a well managed textile organization is also the “bridge” or primary point of contact between merchandizing and its equally important partner in profit pursuit—manufacturing. Logically, what better organizational set up could be envisioned than that close contact and liaison exist and be enjoyed between those that conceive or create and those that execute and produce, for such are the functions of manufacturing over-simplified. Just as styling and sales are closely aligned, so we feel that styling and manufacturing are similarly aligned, for complete cooperation, mutual understanding of each others ideas, plans, problems, limitations, is essential in order that common goals be achieved. It is essential that this close contact and rapport exist between
merchandising and manufacturing if an organization is to function, flourish, and grow as a single entity with but one primary motivation—profit. Too often we have seen businesses well staffed, well managed, properly financed, well equipped—in short, with seemingly all the tools at hand for a success, falter and fail to progress and grow because of lack of understanding and a minimum of team-work between merchandising and manufacturing. In our organization styling is expected to enhance, encourage, and help create understanding between merchandising and manufacturing for the total benefit of all concerned.

Thus far we have discussed very briefly in general terms the function and activity of styling with reference to the organization—how styling’s purpose is to enhance sales and create profits; that it is an integral member of the merchandising team and as such closely aligned with sales and the customer with ultimate concern, of course, with the consumers needs and wants; that styling is merchandising’s liaison with manufacturing and its spokesman and advocate therein; that it, in turn, is expected to have a complete and working knowledge and understanding of manufacturing and its facilities so as to take full advantage of all the tools at hand available to produce saleable fabrics; and, in addition, styling must be well-versed in and aware of industry-wide progress and developments in such areas as fiber developments, new processing developments, improvements in finishing techniques, etc. in order to provide direction and advice for the development and merchandising of new products. For primarily with new products can great strides be made towards increased sales and better profit margins.

In most organizations a competent styler is a merchandiser, a salesman, a fabric development man, a designer, a colorist, and a hand finish critic. For such are the demands of styling for today’s men’s wear market where synthetics, and synthetics blended with natural fibers have created complicated fiber combinations, blends and fabrics, increasing year-by-year in usage such that day-to-day and week-by-week changes and progress in the synthetic fabric field is unending. Before the advent of synthetics, styling and fabric development was comparatively simple—cotton mills produced a variety of all cotton cloths in many constructions, either carded or combed; woolen and worsted mills produced products entirely of wool or worsted where the major variable in raw material was the grade and length of the particular raw fiber used. Of course, small quantities of Mohair were used and from time to time, silk was run as a fashion item for a spring season in modest volume. During those days, stylers principle concerns were pattern and color. They worked primarily with well established base cloths which were run season after season with only color and pattern changes. True, they also were involved in sales, but in other respects their functions were relatively uncomplicated. Today a synthetics stylist in our organization must concern himself, in addition, to four polyesters—Dacron, Kodel, Fortrel, Vycron; three acrylins—Acrilan, Creslan, Orlon; Nylon; Modacrylics; Acetate; Arnel Triacetate; Regular Rayon; Avron and Nareon high tenacity Rayon; as well as Zantrel and Avril poly-nosic rayons—all of which are available in several lusters as well as a variety of staple lengths and deniers. He must be intimately familiar with blends of various fibers; the effect of twist, denier, staple length, reeding, construction and weave on all the various fiber combinations; dyeing techniques necessary to properly color the various combinations, and proper finishing procedures required to create the effects desired for the end use intended. In short, our modern day stylist is also a fabric engineer conversant with the peculiarities and reactions of a multitude of new man-made fibers all of which react differently and can be manipulated by proper handling.

Due to the complications created by the advent of new fibers, a basic change has evolved in the styling—mill relationship as compared to typical woolen and worsted organizations. The latter, operating as they have, in well exploited, fairly familiar, comparatively stable fabrics and constructions used to best advantage a styler-designer team wherein the styler in the market place furnished pattern ideas and blankets and fabric ideas by description or sample—for example, make a 12 ounce 4 harness flannel; or, make a 13 ounce 2 ply pick and pick sharkskin suitable for clothing; or, duplicate the enclosed imported iridescent twill. The designer, based at the mill, laid out the blanket items in proper mill terms and constructions and was charged with the technical responsibility for creating the requested fabrications. In short, he was the technician and fabricator while the stylist was an idea man—salesman, often not well grounded or knowledgeable about fabrics, but with a flair for pattern. The modern day synthetic fabric styler, because of all the perviously cited reasons, has usurped most of the designer’s functions, so that even though we do function in concert with mill designers, their responsibilities have been radically reduced to picking out weaves, making up reed plans, chains, and draws, etc—in short, a mill service function rater than a creative function of design and fabric development. Please bear in mind that I am referring to a typical men’s wear synthetic oriented woven operation. The old styler-
designer relationship still exists in the primarily woolen or worsted blend organizations.

As previously mentioned, styling is closely aligned with sales and merchandising. Stylists in our organization work closely with customers and salesmen. Some are assigned primary responsibility for accounts in their particular field—a suit stylist might call on key clothing accounts, while a stylist whose primary concern is the boys wear trade would be assigned typical customers in his field. Stylists are encouraged to go out in the market with salesmen making their rounds; conversely, salesmen routinely have stylists on hand when showing lines to customers. In addition, stylists are urged to visit retailers. Through close association with customers and retailers, the stylist is better able to maintain a watch on market trends and needs so that these needs may be anticipated and satisfied. But, so much for the broad, general relationship of the stylist to other members of the organization. What about his specific duties and responsibilities as the creative member of the merchandising team? How does he function in that group? What part does he play? Where do ideas originate and how are they implemented? What actually happens in the New York office of a typical men's wear sales organization? Where does it all begin?

To start with, one basic fact must be understood! Just as in the domestic business where white sheets and pillow cases represent the lions share of the volume—in several constructions of course—while fancy prints and colored goods sales are small by comparison, so in the men's wear field staples or basic plain fabrics such as twills, flannels, sheens, tropicals, bengalines, coverts, cords, linen effects, poplins, etc. represent probably 85% or more of the volume for dress slacks and outerwear, somewhat less for clothing.

It has often been said that there is really not much new under the Sun—the implication being rather obvious. So it is in our business now, and so it will be in the future. Perhaps, from time to time, a new basic item will be conceived that will assume its place with existing staple fabrics—my guess, however, is that far greater strides will result from improvements and refinements made on existing staples from yarn development and fiber development. For example, Lycra, the new DuPont fiber, when introduced in a variety of basic fabrics, will impart stretch characteristics to a variety of basic fabrics.

In case some of you are wondering what an 85-15 ratio of staples to fancies has to do with specific styling functions, it indicates the most important, most vital area of styling concern today—fabrication. For herein lies the crux of successful volume merchandising concentration and the area where the stylist can best distinguish himself. Through a knowledge of the characteristics of the various fibers, how they blend, dye and react in cloth, he is able to engineer new and improved basic fabrics with unique appearance and hand, increased abrasion, better wash and wear performance, improved stability, longer more satisfactory wear.

New ideas for fabrics may originate from anywhere within the organization. They come from the sales area as a result of customers suggestions, items seen in competitors lines, or because of alertness on the part of competent salesmen who recognize a need for a particular cloth. They originate in the styling area from fiber and fabric development experiments, from blanket work in previous seasons, or from purchased fabric import sample cards. Ideas also come from merchandising management as a result of analyzing current sales trends and projecting into the future or from new fiber development information received as a result of fiber company contacts.

In any case, once an idea for a fabric is presented, it is the stylist who must develop and create a saleable fabric. Most mill organizations have sample department facilities available where small poundages of new yarns can be spun, experimental pieces and blankets woven, cloth dyed and finished. It is here that the mill designer is head-quartered, to receive layout and construction details from the styler and supervising the manufacture of the samples. Lab dye instructions are furnished the dye plant and eventually color standards set-up from the lab dyeings. Frequently the stylist will visit the dye plant when experimental or developmental work is in process to furnish guidance and direction regarding color and hand desired. Once work has been approved and new constructions put through the lab for complete end use testing, often including actual wear testing, at a suitable time before a line is to be opened—usually eight to ten months—fabrics are evaluated by key merchandising people. A review is made of ranges to be re-run, base fabrics to be re-run, and in general terms, new fabrics deemed worthy of inclusion in the new line, selected. A sales projection is developed fabric by fabric, range by range. The stylist reviews sales by color for repeat ranges and issues dyeing instructions for color lines in accordance with trends, past history, instinct, and lab dye developments. He also issues finishing instructions for all fabrics and is responsible for the approval of all color and hand submits until such time as cloths are turned over to the production people.
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The program presented at Clemson recently (arranged by John Wigington of A.T.M.I.) for the National Council for Textile Education was well received by both educators and industrialists. The confreres were impressed and often surprised to learn how rapidly certain educational developments are taking place in South Carolina. Developments which are not only serving to attract additional industries but more importantly serving those now well established—Textiles. Of course to serve the industry is to serve the people and to serve the people is to serve the industry.

Three of these developments, (1) Technical Education, (2) Educational Television, (3) Management Graduate Program, referred to above and briefly discussed here have taken place for many reasons, but certainly one underlying reason, common to all, is the impact of automation. Regardless of which one of the 24 definitions of automation listed by James R. Bright, in his book “Automation and Management”—you prefer—it is usually agreed that automation involves change—the kind of change that requires the loom fixer to know more, the executive to study harder, yes, and even the college professor to take refresher courses, or perhaps even select a new field of endeavor. In short, no profession or trade has a monopoly on obsolescence.

TECHNICAL EDUCATION—The Greenville Technical Education Center, one of several in the state, picks up where the public school leaves off. T.E.C. already offers courses of study in such careers as chemical technology, drafting and design, machine shop, mechanical technology, and data processing—these graduates (highly skilled workers who have learned a specialty, or technicians ready for the job training) are constantly being sought after and employed by the textile industry. Now, however, the Center plans to produce a reservoir of technical talent for textiles per se. The proposed textile technology program should get underway by January 1965, which is none too soon when one observes the rapid technological advances reflected in the new plants and at the same time observes the advanced average age and degree of skill of those now employed in the mills.

EDUCATIONAL TELEVISION—In South Carolina Educational Television is now a wide spread and vigorous part of education. It is constantly expanding its services to the elementary, high schools, and colleges, as well as industry itself. The nursing series produced in cooperation with the South Carolina Hospital Association for nursing training and the insurance courses presented in 39 centers throughout the state, jointly sponsored by the South Carolina State Insurance Department and the Executive Committee of the South Carolina Association of Insurance Agents are two excellent examples of how industry can benefit from this medium. Textile executives will want to keep posted on more recent plans to bring to the plant up-to-date programs in supervisory training under the auspices of the Greenville T.E.C.

MANAGEMENT GRADUATE PROGRAM—Again to meet changing demands for managerial talent, the Master of Science program in Industrial Management at Clemson University is now firmly established. Conceived in 1961, started in 1962, the program is attracting applicants who have diverse undergraduate training. Currently participating in the program are students representing ten disciplines including—forestry, math, ceramic engineering, and mechanical engineering—from six different colleges.

Each candidate must take the core curriculum made up of the following:

QUANTITATIVE ECONOMIC ANALYSIS—An application of quantitative techniques including an introduction of econometric models as a potential method of solving many of the problems arising in a modern industrial enterprise.

FINANCE—The analysis of the financial condition of business firms as a means of recognizing current and long-term financial needs. Emphasis on selection of the most feasible actions necessary to secure the best possible financing under varied circumstances.

PRODUCTION MANAGEMENT—An analysis of the problems facing an industrial enterprise in planning, organizing, directing, and controlling its production activities and a study of the literature of the scientific management movement.

MANAGERIAL POLICY—A course in management policy making. The course emphasizes determining objectives and developing sound policies for achieving them. Managerial Policy builds upon and integrates the other graduate courses. The case method is used extensively.

The objective of this program is to aid college graduates in preparing for positions of major responsibility in American industry. Graduates of engineering or science curricula are especially encouraged to enter, although it is considered equally as valuable for individuals with other backgrounds.

—Wallace D. Trevillian
In a recent Industrial Management Seminar, Dr. Brown Mahon, Chairman of the South Carolina Board of Education and Carolina Federal Savings and Loan Association of Greenville, S. C., spoke on “Community Responsibility.” Shown above are (left to right) Dean Wallace Trevillian, Bruce M. White, William W. Sattia, Jr. and Dr. Mahon. Mr. White and Mr. Sattia are I.M. graduate students.

This seminar was one of six that is held during each academic year wherein outstanding men in business and industry are invited in to talk to and with Industrial Management faculty and students.

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Thomas Warren Weeks

Thomas Warren Weeks is a twenty-one year old married student majoring in Industrial Management. He is a native of Aiken, South Carolina.

Tom transferred to Clemson from Furman University at the beginning of his sophomore year. While at Furman, he played freshman football and was on the Dean's list for two semesters. At Clemson, he has held a high scholastic average for four semesters. He is an active member of the Central Savannah River Area Club and the Industrial Management Society.

During the summers, Tom has gained valuable experience in his major field by working with Owens-Corning Fiberglas in Aiken in the Technical Control Department and with Daniel Construction Company in the Receiving Department.

At present, Tom is still undecided about his plans after graduation.

William Allen Suttle

William Allen Suttle, a twenty-two year old Textile Science major is a native of Great Falls, South Carolina. He has received a Sonoco Products Scholarship to aid him with his expenses at Clemson.

William is an active member of the Numeral Society, the Chester County Clemson Club and Phi Psi. He is enrolled in ROTC and serves as the Battalion S-4 for the Third Battalion.

For the past four summers, William has worked for J. P. Stevens in Great Falls, South Carolina. He worked three summers in the Industrial Engineering Department and one summer in the Slashing Department.

After graduation, William plans to go to graduate school but he is still undecided upon the institution.

Walter T. Cox, Jr.

Walter T. Cox, Jr., a twenty-one year old Industrial Management major is a native of Clemson, S. C. He is married to the former Miss Vicki Grubbs of Anderson, S. C.

During his four years at Clemson, Walter has made an outstanding record. He is a member of Blue Key; Scabbard & Blade; Block C; Delta Kappa Alpha; Tiger Brotherhood; and serves as Placing Chairman for the Central Dance Association.

Walter played football for four years and has received a grant-in-aid from the Clemson Athletic Department. He is currently Brigade Commander in Army ROTC and holds the rank of Cadet Colonel. He has received the Reserve Officers Association Award, and is listed in Who's Who.

During the summer, he has worked for Clemson Excelsior Mill, Sears in Anderson and Clemson Physical Plant. After graduation, he plans to go into the Army.
James Michael Logan

James Michael Logan, a married student majoring in Textile Management, is a native of Mooresboro, N.C. He has received a Sonoco Products Scholarship to aid him with his expenses at Clemson.

Mike transferred to Clemson from Gardner-Webb Junior College in Boiling Springs, North Carolina. While at Gardner-Webb, he was president of the student body. For two and a half years Mike worked full time with Shelby Mills, Inc., in Shelby, North Carolina, in the production control department. He also worked one summer in the same department after entering Clemson.

After graduation, Mike would like to enter production control or costing.

Guy Edward Ballard

Guy Edward Ballard is a twenty-one year old Textile Management major from Columbia, South Carolina. To aid with his college expenses he has received a Carolina Yarn Association Scholarship.

Ed has been an active member of the Central Savannah River Area Club, and Phi Psi, the national textile honorary fraternity. He has worked for two summers with Sears in Augusta, Georgia, and one summer with Sibley Mill also in Augusta. During the past summer he worked for Gaffney Manufacturing Company in Gaffney, South Carolina.

Immediately upon graduation Ed plans to accept a position with Gaffney Manufacturing Company.

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SPRING ISSUE 1964  THIRTEEN
THE TEXTILE COMEBACK

By Clarance Newman

The din of carpenters’ hammers echoes through a section of the Burlington Industries, Inc. plant and manufacturing manager Joseph E. Sampson has to shout to make himself heard. “We never stop changing,” he says. “We go on the theory that everything we do is wrong and we have to look for better methods.

Mr. Sampson was speaking for Burlington, the nation’s largest textile company. But his words reflect the vigorous new attitude of the entire industry.

For years it seemed that just about every thing the textile industry did was, indeed, wrong as sales and profits dropped because of ancient equipment, often weak management, foreign competition and other problems. Some problems still remain. But, largely because of a trend toward mergers and increased capital spending, the industry has been making considerable progress in solving them.

“A new and better day is dawning for the American textile industry,” says Robert T. Stevens, former Army Secretary and now president of both the American Textile Manufacturers Institute and J. P. Stevens and Co.

Total profits of all textile manufactures hit $346 million in 1962, up from $248 million in 1957, according to Government statistics. Profits during the third quarter of 1963, the latest period for which such figures are available, totaled $97 million, up 13% from the like period a year earlier. Industry sales totaled $3.8 billion in the third quarter of 1963, a 6% increase over comparable 1962 period.

The brighter picture is reflected in the fact that the industry now is operating at 90% of capacity compared with 80% in 1957. Moreover, capacity itself has been increasing during this period, due to more efficient equipment.

This resurgence follows a drastic shake-up in the industry. Between 1947 and 1960, a Senate Committee subcommittee had reported 838 textile companies closed down. In the three years through 1961, 110 others were acquired by bigger companies. “The big are getting bigger” says one textile man. “I look for more mergers, more liquidations, simply because the smaller mills can’t keep pace.”

“Ten years ago the 10 largest publicly reported companies had sales of $1.9 billion, or 15% of textile mill sales,” says John B. Cave, treasurer of Burlington. “In 1962 the 10 largest publicly reported companies had 23% of industry sales. This concentration has led to more diversification, larger expenditures for research and new equipment and increased financial stability.”

William J. Erwin, president of Dan River Mills, Inc. figures that industry spending on capital improvement totaled $650 million last year, up from $610 million in 1962 and $500 million in 1961. Dan River itself spent more than $10 million last year to build and equip a new quarter-mile long, air-conditioned plant in Greenville, S. C. During the last five years, Burlington has invested $205 million in new capital equipment and facilities, exclusive of spending on acquisition of other companies. This year the company expects such outlays to rise 10% above 1963’s $52 million.

Due mainly to increased capital spending by mill owners, textile industry productivity per man hour climbed 55% during the 1952-1962 period, according to Federal Reserve Board figures. Even so textile industry sources note that about 80% of existing textile plants and machines are at least 10 years old. They look for a continuing increase in capital spending by textile manufacturers to take advantage of cost-cutting machinery.

Machinery makers have developed high speed frames for spinning fiber into yarn which they say can boost productivity 50%. Improved looms, for weaving the fiber into cloth, are faster and also wider, so operators can turn out bigger strips of fabric in less time. Automatic vacuum cleaners coast along overhead tracks in the mills, pulling up lint through long hoses dangling almost to the floor, thus reducing time lost through stoppage of clogged equipment.

Computers also are finding increasing application in the textile industry. Burlington recently started using them to supervise the mixing of different colored dyes, to reduce the possibility of human error. An IBM 1410 computer and a Univac 1004 punchcard processor help coordinate J. P. Steven’s two dozen merchandizing departments in New York with its 29 manufacturing units scattered around the country. Soon Stevens plans to turn many tasks linked to purchasing, inventory control and order assignments over to computers.
Along with bringing in electronic brains some companies have been stepping up efforts to recruit and train talented executives. "Time was when management in the textile business was largely a family affair," says Mr. Erwin of Dan River. "Some of the giants of this industry were and still are family enterprises; make no mistake about that." But others more numerous have passed from the scene. More and more the industry is being directed by professional managers.

Dan River yearly lures about 40 college graduates and rotates them among various departments for training as executives. Each year Burlington hires 125 to 150 college men for its marketing and manufacturing executive training programs.

The textile industry has benefited from the proliferation in recent years of such man-made fibers as triacetate, polyester, and acrylic to supplement those synthetic stand-bys, nylon and rayon. All these synthetics have reduced the industry's dependence on natural fibers whose prices often fluctuate widely.

"We freely switch from one synthetic fiber to another" says Charles F. Myers, president of Burlington. "We simply use what the public wants."

From both synthetic and natural fibers, industry researchers have been developing new types of fabrics. These feature such special quality as resistance to wrinkles, mildew, germs or even fire.

Stretch fabrics, introduced in 1959, represent one of the most important new developments. "Our business is booming right now because demand for stretch has grown tremendously," says Martin Cohn, president of International Stretch Fabrics, Inc. "I'd predict that in five years everything people wear and use will be made with stretch with the possible exception of handkerchiefs."

Makers of tufted fabrics, some times referred to as fake furs, also are enjoying booming sales. "Business couldn't be better," says Clarence E. Halford, president of Glenoit Mills, a division of Botany Industries, Inc., and a major producer of tufted fabrics.

While adding new fabrics to their lines, some makers have been dropping older, less promising products. "We've made material changes in one product in an effort to eliminate unprofitable items," says Ceasar Cone, president of Cone Mills Corp. "Even though it may produce a $2 million to $3 million sales decline, we're getting out of lines we see no future in. But this should result in improved earnings."

Of the problems that still plague the textile industry, perhaps the most pressing is the Federal two-price cotton program. Under this program, domestic mills must purchase cotton at the Government-supported price which currently runs about 81/2 cents above the world market price, at the same time, the Government pays U. S. cotton exporters the difference between the domestic support price and the world market price; so the exporters can afford to sell their cotton at the world market price. Thus, textile men point out, foreign textile mills can buy American cotton cheaper than U. S. mills can. This gives overseas competitors the advantage of lower raw material cost to add to their generally lower labor cost.

Textile men say that in some cases imported fabrics have sold in this country as much as 40 cents a yard below what it would cost to produce them in the U. S. Burke M. McConnell, Burlington vice-president, recently told the U. S. Tariff Commission that the industry was "haunted by the ever rising line on charts representing the flow of foreign-made textile products into the market."

Some textile manufacturers are worried that an intensified organizing drive by the Textile Workers Union, AFL-CIO, will push their labor costs higher and make them even more vulnerable to foreign competition. Of the industry's 800,000 production workers, only some 255,000 are union members. In the South, which has been drawing more and more textile plants since the 1920's, only about 10% of the workers are organized. The TWU now pushing a drive to sign up members in J. P. Stevens' mills, says that the average pay in the textile industry lags 30% behind that for all manufacturing employees and contends that non-union workers in the industry earn considerably less than union men. The American Textile Manufacturers Institute reports that average weekly earnings in the industry amounted to $72.34 last December.

PROFESSIONAL DEVELOPMENT COURSES

The Bobbin and Beaker would like to call attention to its industrial readers the Courses for Professional Development that will be offered in the School of Industrial Management and Textile Science during the Summer.

This will be the seventh annual schedule of classes and since the program's start, more than 400 persons in various branches of industry have completed courses.

The courses and dates of each are as follows:

Introduction to Textile Manufacturing  
Dyeing and Finishing  July 6-10

Yarn Manufacturing  June 15-26

Will be repeated  July 6-17

Supervisor Development  June 15-26

Will be repeated  July 6-17

Methods Analysis and Time Study  June 15-26

Quality Control  June 15-26

Basic Textile Chemistry  July 20-31

Advanced Textile Chemistry  August 3-14

The classes will be conducted from 8:30 A.M. until 4:30 P.M. Monday through Thursday with a half-day session on Friday. All classes will have several instructors and most will be held in air-conditioned buildings.

A catalog with complete details, including application forms, may be obtained by writing to Professor C. V. Wray, Sirrine Hall, Clemson College, Clemson, S. C.
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Discolite* (dɪs'kɒ-līt)
Concentrated sodium sulphoxylate 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.

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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 dying synthetic fibers with disperse colors and for fast color salts and bases in Napthol dyeing and printing.
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Neozyne* (né-o'si-nə)
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. Neozyne quickly removes 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.

Parolite* (pɑr'ə-līt)
Zinc sulphoxylate available in the form of white crystalline powder. A highly concentrated stripping agent for all forms of wood 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.

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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.
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