1948

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Clemson University

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By N. S. W. Vanderhoef

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<table>
<thead>
<tr>
<th>Company Name</th>
<th>Location</th>
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<tr>
<td>Abbeville Mills Corporation</td>
<td>Abbeville, S. C.</td>
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<tr>
<td>Cowan Mill</td>
<td>Lewiston, Maine</td>
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<tr>
<td>Darlington Manufacturing Co.</td>
<td>Darlington, S. C.</td>
</tr>
<tr>
<td>The Dallas Manufacturing Co.</td>
<td>Huntsville, Ala.</td>
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<tr>
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<td>Spartanburg, S. C.</td>
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<tr>
<td>Excelsior Mills Corp.</td>
<td>Union, S. C.</td>
</tr>
<tr>
<td>Excelsior Mills Corp.</td>
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THE BOBBIN & BEAKER
Official Student Publication
Clemson Textile School

Vol. VI  SPRING 1948  No. 2

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THE COVER – MR. GEORGE M. WRIGHT
Mr. George M. Wright, President of the J. E. Sirrine Textile Foundation, an outstanding leader in the textile industry of South Carolina. Mr. Wright came to Clemson April 13th to explain the progress of the Textile Foundation to the faculty of the textile school.

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FACULTY ADVISOR
PROFESSOR R. K. EATON
As a member of one of the country’s leading industries, CIBA COMPANY, INC. extends to you, as students of textiles, a sincere wish that your achievements in the textile industry will bring you success and happiness.
Guest Editorial

By R. M. COOPER
First Director, State Research, Planning & Development Board;
Now Vice-President of Paintset Fashions, Inc

South Carolina textile mills generally and Clemson textile graduates particularly have played dominant roles in the many recent changes in the industry—changes that have brought about improvement in quality, in distribution, and in placing better goods in more homes at lower cost.

Two outstanding developments have taken place. A few years ago, a fully-integrated textile operation under one management was unique; today there are dozens of companies which control the fibre from the opening room to the retail outlet. This means that one centralized group of executives has the responsibility of producing, finishing and converting the cloth and it also means that this same group has to figure on a profit for the entire operation rather than profits on each step in the processing from raw materials to finished goods.

In South Carolina there are numerous examples of the integrated textile system. In the last few years most of these have come into being through consolidations and purchase. Operational control for numerous plants are centered in a small group of highly skilled men. The result has been profitable for the owners, the management and the workers whose wages have climbed steadily. There are, of course, remaining many companies which perform only one of the processes necessary in the industry. They are still important in their fields.

The other development that has tended to modernize the industry has been the tremendous improvement in marketing of textiles. Many mills are now operating their own selling agencies. Included in this group are not only those which have fully integrated processes but also mills which perform only part of the necessary work on raw materials.

One highly-regarded South Carolina textile executive tells me that “the distribution of the products of Southern cotton mills has improved for the benefit of the mills during the past twenty years. There has been more effort and intelligence used in the selling and merchandising of these products. There has been a tendency to get away from the heavier and plainer fabrics and more attention given to styling and finishing. A number of mills have opened their own selling agencies and it appears to be working out advantageously.”

Another top-ranking producer also reports there has been a decided change in selling methods for the textile industry in the last 20 years. The trend has been toward mills selling their goods direct.

In 1925, he reports, there were no mill members of the Textile Merchants Association in New York, whereas today over half the membership is comprised of mills which sell their goods direct. “Many mills have nationally advertised brands and most of those whose volume is sufficiently large are either selling their goods direct or have become part of mergers. The mills disposing of their product through old-line commission agents have steadily declined. The few old-line commission agents remaining have modernized their methods and are much more efficient than they ever were heretofore.”

Of particular interest to textile students has been the nationwide demand for college-trained workers. Right here at Clemson for each of the 28 men who graduated in textiles in February, there were at least four jobs waiting for them. Last summer there was an average of 10 requests for each of the 50-odd graduates. Comparable conditions have existed at the other textile schools. Today there are about 2,700 men studying textiles in approved colleges and more than 300 are graduated each year. There is room for them and for more, too.

These important developments indicate a bright future for textiles. The combines are more financially able to sponsor important research work out of which will come new methods, new materials, new jobs. Research is the key to the future and should be carried on with vigor to the fullest extent of the industry’s resources.
Rayon In Textile Education

No one in the textile industry can underestimate the importance of rayon in the consumer market today. In the hundred years since it was first developed it has become more important than fibers that have been in use for more than 6,000 years. This story is well known. However, attention given to new fibers and their production into cloth, by textile schools is perhaps not as well known. Although there is room for a great deal of progress along these lines, some steps are being taken by the school and by the industry.

There are specific courses, such as cellulose chemistry, synthetics and finishes which are given in the textile chemistry course. Preparation of rayon pulps and the study of nylon, vinyon, rayons and protein-type synthetics are studied in these courses. Since the fabrication of these fibers is accomplished on modified cotton, woolen or worsted machinery, there are no specific courses, except a seminar in the identification and general information of new fibers. All other study concerning rayon is within the regular courses of spinning, fabric analysis, fabric structure and design, warp preparation, and fabric development.

The school has procured equipment for the use of rayon yarn. This includes the Cocker rayon warper and slasher shown in the picture. There has also been installed in the weaving laboratory a new 50" Draper XD rayon loom. Dr. Hugh M. Brown, Dean of the School of Textiles, has announced that mills are welcome to use the warper and slasher to prepare their cotton and rayon warp.

On a recent visit to Clemson College Textile School, Mr. J. A. White, plant manager Slater Mill, of the Carter Fabrics Corporation, noticed the XD Draper loom and suggested that it might help the student to do some work with rayon. Since he had the same type of looms in his mill, he offered to help the weaving department set the loom up for production as soon as possible. In a short time, not only the materials, but the men to set it up had arrived and the loom was turning out rayon fabric that day. Mr. White sent harnesses, shuttles, reeds, and a loom beam with 4,092 ends of 60 filament, 3 turns, 300 denier dull rayon 1221 yards long. He had supplied acetate, viscose, and spun rayon filling.

It is cooperation such as that given by Mr. White and other individuals in the textile industry that make it possible for the students to obtain a better education and become better prepared for their future in the mills.

The Cocker Slasher which has recently been installed in the warping lab of Sirrine Hall.

Professors Walters and McKenna try the new rayon loom before turning it over to students to use.
World Trade In Cotton Textiles

By N. S. W. VANDERHOEF,
President, Textile Export Association of the United States
President, Turner Halsey Export Corporation

The United States owes its current predominance among world textile industries to one factor alone and that is its technological superiority to all others. Without this advantage world markets would have been lost long ago to nations paying coolie wages, and domestic markets would have been engulfed by a veritable flood of goods from the low-cost manufacturing areas of the Far East.

Maintenance of our leadership in the years ahead will depend solely on technical superiority, for other nations possess real advantages in that their labor rates are much lower than ours while they can purchase their raw materials at prices under those which domestic mills are compelled to pay. It is to the schools and laboratories that mills and exporters look for a steady stream of ideas that serve to reduce costs by raising the productivity of the average worker. It is for this reason that exporters have long been interested in textile education and have constantly encouraged its development here. Now is the time for American schools to develop trained men with more knowledge and more ability than the excellent, but poverty-stricken textile schools in Europe are in a position to impart.

Given a foundation of sound technical training, a textile school graduate can easily fit himself into the export business. Of late, there has been much talk of "tailoring" textiles to meet specific end uses. This technique can be applied to the science of exporting, for more than ever before the peculiar needs of each foreign market must be studied. Goods must be developed to fit the climatic conditions of every country on the globe. It will be recalled that much valuable work was done along these lines by the armed services during the war, when textiles were developed that kept out the damp and cold in the Arctic and stood up in the heat and wet of the jungles of the South Pacific.

Added to this task is the job of developing textiles that will appeal to the consumers all over the world. This involves the study of preferences in the Caribbean Islands, Central and South America, Africa, Middle East and Far East. Most of these preferences are rooted in national cultures which also should be studied by anyone planning to embark on an export career. There was a time when these likes and dislikes would be disregarded but that period is drawing to an end. From now on retention of export markets will depend on giving them the goods they want. European producers have always done this whereas there has been a tendency on the part of American mill men to regard foreign markets as outlets for surpluses that could not be digested by domestic markets.

Over the last seven years, since Pearl Harbor, there have been profound changes in world trade in cotton textiles. Neither Great Britain nor Japan is likely to recapture in the foreseeable future the predominant position they held in world markets in prewar years. The position of Lancashire is hard to appraise, for the industry since the outbreak of World War II has not only had to contend with disruption of external relationships but has undergone a complete internal change. While the industry has not been nationalized in the same manner as the British railroads, coal and steel industries, it may as well be for its manufacturing and merchandising operations are under government supervision.

Also, Lancashire is faced with the problem of adjusting itself to an altogether new set of trade relationships. As an example of this, one need look no further than Asia which for decades absorbed tremendous quantities of British textiles. A great political revolution has brought into being new governments in India and Burma and Ceylon and may produce others in Indo-China and Indonesia. The great dominions—Canada, South Africa, Australia—are not only showing a preference for American styles and qualities but seem intent upon building textile industries of their own.

Japan lost more than 75 percent of its equipment during the war and is now operating about 2 3-4 million spindles. Plans are afoot to raise capacity to four million spindles over the next year or so. Japan presents a ticklish problem in that it can easily become the commercial terror it was ten years ago. Its textile machinery and spinning industries are efficient and well staffed and have had long experience in catering to world markets. Given financial aid from other foreign governments or banks, the industry can be restored to its prewar efficiency in less time than it will take the American industry to replace its war-worn equipment. If however, Japan is to hold down to less than four million spindles and the distribution of its products restricted to its historic Far Eastern markets, world textile markets will continue to function in a stable and orderly manner.

Due to cataclysmic political changes, Europe as a whole is highly unlikely ever again to play the role in textile foreign trade that it did before 1939. While the German textile industry was not damaged as badly by bombing as many suppose, it is divided, with Russia controlling one part and United States and Britain the other. Poland and Czechoslovakia are behind the Iron Curtain and will never regain their one-time prominence in textiles (Continued on Page 6)
Is the Textile Worker Human?

By G. M. MOISSON, JR. '49

(ed. note—An article by a student for the students)

Perhaps this magazine is not the proper place to express my views of personnel problems, but it is the only means at my disposal.

Why do professors stress repeatedly the necessity for the young graduate to "study the hands," to learn their language; to refrain from offending them? Is it because the textile worker is a subnormal being, incapable of being understood, not socially equal to his supervisory staff? Or, is the real reason this: that the "young graduate" is himself a too-wise, inexperienced, and cocky individual, who, by his lack of understanding, quickly antagonizes any oldtimer with whom he is working?

During the last depression I was knocked violently from my pedestal and was forced to go to work in a textile dyehouse in order to contribute my share to the family grocery bill. In that dyehouse I learned that I too could stink and sweat as much as any other worker. I learned more than that. I learned that the boys in the dyehouse, the old men and women at the looms, and the crippled night-watchman were human beings, capable of profound thought and well deserving of respect! Since that time one of the watchmen has been ordained a minister; one of the dyehands has gone into business for himself and has put three children through college; one of the girls in the finishing room has established a prosperous dry cleaning business; others have risen in the mill to positions of responsibility. There is no reason on earth to set these people as a class apart!

Why go to college then, if college education does not equip you with the ability to handle and to understand people? There is only one answer to that: learn at school what is taught there; learn as quickly as possible after graduation that you are just another "new-hand" in the mill! Don't flash that Clemson ring too much; it merely leads you to the door of opportunity—your personality is the key; see that it fits!

WORLD TRADE IN COTTON TEXTILES

(Continued from Page 5)

until they shake off the smothering effects of Russian influence. The future of France and Italy as textile producers has brightened as a result of the success of their governments in overcoming the recent assaults by Communists but both countries have yet to reach that degree of political stability in which industry can flourish.

While the next few years will continue to witness a lessening of European and Asiatic competition, as compared to prewar, it will be marked by increasing competition from Latin American countries. These traditional markets for American goods are industrializing at a rapid rate. Brazil and Mexico, for example, have reached the point where they can not only supply their own needs but are able to compete for export business. Brazil during the last year concluded bilateral agreements with its neighbors which give its textiles preferred treatments in such important markets as Argentina and Chile. This trend toward self-sufficiency in Latin-America will produce a host of difficulties for American exporters over the next few years. Important textile industries there are demanding more protection and are getting it. A straw in the wind was the refusal of many Latin-American delegates in the Havana conference to compromise on the subject of quotas. Anyone experienced in foreign trade knows that quotas are more effective than even the highest tariffs in halting the flow of goods to foreign markets.

This, of course, is but a brief summary of world trade development that the Textile Export Association is seeking to appraise. They add up to the obvious conclusion that American textiles will continue to sell in volume until political stability is achieved in Asia and Europe but that the prewar pattern will never be renewed.

At present the United States is the world's leading exporter of cotton textiles. Its relative position is illustrated by the following table:

WORLD EXPORTS OF COTTON PIECE GOODS

(Million square yards)

<table>
<thead>
<tr>
<th>Country</th>
<th>Avg. 1934-38</th>
<th>Est. 1947</th>
</tr>
</thead>
<tbody>
<tr>
<td>Americas</td>
<td></td>
<td></td>
</tr>
<tr>
<td>United States</td>
<td>234</td>
<td>1,500</td>
</tr>
<tr>
<td>Canada</td>
<td>——</td>
<td>20</td>
</tr>
<tr>
<td>Mexico</td>
<td>11</td>
<td>90</td>
</tr>
<tr>
<td>Brazil</td>
<td>——</td>
<td>70</td>
</tr>
<tr>
<td>sub total</td>
<td>245</td>
<td>1,680</td>
</tr>
<tr>
<td>Europe</td>
<td></td>
<td></td>
</tr>
<tr>
<td>UK</td>
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<tr>
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<td>130</td>
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<td>Czechoslovakia</td>
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<td>30</td>
</tr>
<tr>
<td>France</td>
<td>364</td>
<td>250</td>
</tr>
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<td>USSR</td>
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<tr>
<td>Netherlands</td>
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<td>65</td>
</tr>
<tr>
<td>Other Europe</td>
<td>128</td>
<td>380</td>
</tr>
<tr>
<td>sub total</td>
<td>3,365</td>
<td>1,530</td>
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<tr>
<td>Asia</td>
<td></td>
<td></td>
</tr>
<tr>
<td>India</td>
<td>205</td>
<td>240</td>
</tr>
<tr>
<td>Japan</td>
<td>2,563</td>
<td>400</td>
</tr>
<tr>
<td>Other</td>
<td>153</td>
<td>50</td>
</tr>
<tr>
<td>sub total</td>
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<td>690</td>
</tr>
<tr>
<td>Total</td>
<td>6,536</td>
<td>3,900</td>
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SIX

THE BOBBIN AND BEAKER
The Knit Underwear Industry

By ROY A. CHENEY
President of the Underwear Institute

The knit underwear industry, which will be the subject of this little article, is not so old as its brothers in the textile industry, as knitted underwear did not receive much of an impetus in production until about the time of the war between the states. It was founded in this country in New England, as most of our textile industry in this country was, although New England got its inspiration and its first machines from old England. The textile manufacturers must have always been association-minded because this association was founded in 1864 and has been in continuous operation ever since.

Knitted underwear is most generally made on circular knitting machines and comes off the machines in the form of tubing. These types of machines utilize all fibres, viz., cotton, wool, rayon, nylon, silk, etc. On this circular knitting machine you can produce a ribbed fabric or a flat fabric, the former stretching more readily than the latter, although the latter has more elasticity than woven materials.

The second great type of knitting machines are known as warp knitting machines, which combine the art of weaving with that of knitting, in that a warp has to be used in the manufacture of the product. Warp knitting, so far as underwear is concerned, is confined mostly to rayon and nylon as its materials, although an increasing amount of cotton and wool knit fabric is now being produced, mainly for the fabric glove trade.

The fabrics coming off the warp knit machines are most popularly known as tricot and milanese.

There is a third group of machines, very few of which comparatively speaking are in this country, known as interlock machines, which make a very fine, yet very sturdy fabric for use in underwear, but mainly in outerwear and pajamas.

One of the drawbacks to knitted underwear has been its shrinkage under adverse laundering conditions. The same was true of woven fabrics until the Sanforizing process was developed and made commercially available. It is very interesting to know that a new machine has been developed which will do the same thing for knit goods that Sanforizing does for woven goods. It is expected that within a year these machines will be commercially available and knitted garments offered to the public with certainty that residual shrinkage indicated on the labels will be maintained. This new method of preshrinking has to do mainly with taking out the relaxation shrinkage left in the fabric after mass production. It is different from the anti-felting wool shrinkage treatments which have been recently developed and have come on the market not so very long ago. The wool anti-felting shrinkage process is mainly a resin or chlorine treatment and has been proven highly satisfactory by many tests given to it by the Army. The Army also is testing the new process of relaxation shrinkage and has found very desirable results.

The largest production of knit underwear is found in the Middle Atlantic States, viz., New York, Pennsylvania, etc. The South comes next, with New England third, and the Middle West fourth. The South, however, is growing in its production of knit goods and in my opinion will see even a larger growth in the next few years. Some of our southern mills are making the highest possible quality knit underwear and sportswear, which will compare very favorably and on an equal basis with the best quality product here and abroad.

The knit underwear industry is made up mostly of comparatively small mills located as a rule in small communities.

The industry made a tremendously fine record during the war and delivered to the armed services all the underwear needed, when it was needed and where it was needed. Luckily the industry did not expand to any appreciable degree during the war. In fact, the queer and strange rules of the Office of Price Administration forced several mills to close their doors. The result is that from those causes and the increase in the population I believe a proper balance has been reached between production and consumption of knitted underwear, and unless some unforeseen emergency occurs I look for many years of prosperity ahead of the industry.

There is a real need in the underwear industry—as I imagine there is in most industry—for capably trained young men to enter the business as junior executives, and we are looking to great and outstanding schools like Clemson for the type of men we would like to have in our industry.
New Textile

Courses Of Study

In the last issue of this magazine we mentioned some additional pieces of equipment being added to the Clemson College School of Textiles in an effort to keep the training on the highest possible level. We also introduced the new members of the school faculty who are not only improving the teaching, but make it possible for the textile school to increase the enrollment so that the demand for more and better trained men by the textile industry may be met.

In this issue we shall endeavor to present some of the changes in the academic program that have been made in the last few years. Since the completion of the war, Clemson College has initiated two new courses, textile manufacturing and textile engineering. There have been minor changes in the textile chemistry course to meet some of the changes that have taken place in the industry, the two previously mentioned courses represent an almost entirely new approach. The reason that this subject is taken up at this time is that the graduating class will now contain a large number of men who have completed these new courses. We feel that such an article may be of interest to new students, and students who have not completely made up their minds as to what course of study they want and also the men in the textile industry who want to know just how the Clemson graduate is being prepared for work in the textile field.

It is hoped that textile men may have suggestions to offer for improvement of the courses of study, because they are in the best position to know how the men entering the industry should be prepared. There will, however, be some conflicting viewpoints, and the school should be able to include both points or strike the happy medium. Of course it is realized that the employer hires the man, not the degree, but there is always room for improvements in training.

THE TEXTILE MANUFACTURING COURSE

The course of textile manufacturing follows the course of study similar to the previous textile engineering, with the exception of the few engineering courses that were dropped and textile subjects substituted or expanded.

Fabric Structure and Design, Time Study, Physical Textile Testing, and Fabric Development have been added and other subjects changed and enlarged. The technical textile subjects together with the general science subjects are designed to equip the student with a background suitable to enter a textile organization and qualify for working in a job related to manufacturing textiles with a minimum of instruction for advancement.

The subjects taken during the first year of this course give the student instruction of a general nature, to develop his background. The classes are in general chemistry, engineering drawing, composition and literature, American national government, mathematics, and an introduction to textiles.

During the second year, studies are taken in economics, literature and advance composition, general physics, with textile courses consisting of fabric design, cam loom mechanics, blending and cleaning, and carding.

The junior and senior years are made up principally of textile subjects which cover fabric structure and design, fabric analysis, dobby and box mechanics, Jacquard mechanics, knitting, roving frames, spinning frames, cotton marketing, combing, and organic textile chemistry, chemical processing of textile materials, warp preparation, fabric development, costing, management, time study and textile testing. Other classes in public speaking, business law, accounting, and elementary sociology are required as well as a few subjects which left to the students election.

THE TEXTILE ENGINEERING COURSE

With the immense growth in production of the textile industry and the intense competition of this business in normal times, there has been increased demand for men with specialized training. There is more and more engineering being used in textile production. If the outlined training does not suit a man for the direct application of this course, he will be acquainted with the fundamentals of electricity, steam heat, machine design, etc.; and will be more cognizant with this work being done in mills. This fact probably is the general reason for a course such as
textile engineering. Training of this type will have direct application not only in textile machinery firms, research organizations in mills and for graduate work, but also in the production of textiles.

In a past issue of the DAILY NEWS RECORD, Mr. H. W. Anderson, in discussing the value of the graduate engineer in a manufacturing plant said, "the most important element of an engineering education is emphasis placed upon logical reasoning. A profession based upon mathematics is one of the first and last calls for sound logical reasoning. A well-trained engineer graduating from a top flight engineering college receives an education that makes him most appreciative of the contributions made by labor in industry. His observations become practical ones which particularly lend themselves to dealing intelligently with every manufacturing strata."

Some mills have found it worth while to employ engineers, many of whom may have graduated in mechanical or some other type of engineering and later trained in textile manufacturing. This new course in textile engineering provides the student with both an engineering and a textile manufacturing background.

The first two years of study are identical with the other branches of engineering offered at Clemson. During the last two years, courses in mechanism, machine design, direct and alternating electrical circuits and machines, static kinetcs, and strength of materials, mechanics, and a mechanical engineering heat-power course in thermodynamics. These engineering courses are taken in the engineering building with men who are majoring in mechanical engineering. In addition to the engineering subjects, however, basic work in textiles is covered by such subjects as blending and cleaning, carding, fabric design, cam loom mechanics, roving and spinning frames, costing, management, time study, dobby and box mechanics and testing.

A comparison of the two courses shows that the textile engineering course does not require eleven textile courses that are required for textile manufacturing. They are introduction to textiles, fabric structure and design, fabric analysis, knitting, jacquard mechanics, combing, cotton marketing, warp preparation, fabric development, textile organic chemistry, and chemical processing of textile materials. It would be possible for a great many students to elect almost eight subjects many of which could be these textile courses not required. Other students may prefer to take some electives in the school of general science or maybe in the engineering department, studying air conditioning or other courses in English, economics, and psychology.

The student in taking this engineering course sacrifices the above mentioned textile courses but he gains a working knowledge of electricity, the theoretical and practical aspects of its application. Therefore, this should be of importance in a mill considering the large amount of electricity used. There is also gained an understanding of some of the scientific principles concerning steam heat. Instruction and practical work on the basic power machines in the machine shop is given. The work and value of the machine shop in the mill is learned here. Also included is a short course in machine design, which gives the student an insight into some of the problems that present themselves when developing machines of a general nature, not necessarily textile machines; but the professor is always willing and interested to discuss textile machines with anyone who shows enough interest. When designing machinery it is necessary for the student to make decisions and use ingenuity.

These two new courses for the processing of textiles are primarily designed to supply the industry with better prepared graduates, and men with different backgrounds to fit into the various phases of the textile industry. The student is also offered alternatives so that he might be able to choose the type of subjects he thinks would be preferable to him. It is believed that these courses cover the essential points of processing all fibers into a fabric. Certainly the courses outlined are not static, but will be changed from time to time as the school administration and the industry believe would be best.

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VISITATION BY HAROLD H. HART

During the later part of the last semester Iota Chapter of Phi Psi Fraternity was honored by a visit from the National Executive Secretary, Mr. Harold H. Hart. During his visit here Mr. Hart took charge of the meeting at which the chapter conferred honorary membership upon two members of the faculty of the Clemson College Textile School.

After the initiation the members of the fraternity welcomed the new members and formally met Mr. Hart. At the close of the meeting, refreshments were served and an informal discussion ensued. Mr. Hart was one of the five students of the Philadelphia College of Textile Engineering who organized the Phi Psi Fraternity on March 18th 1903. As stated in the constitution the purpose of the fraternity is to promote good fellowship, social intercourse, mutual advancement of its members and the art of textile manufacturing.

Mr. Hart explained that he was making a trip to some Phi Psi Chapters in the South. He had just come from a visit to Eta Chapter at North Carolina State College, at Raleigh, and had planned to go to Theta and Lambda Chapters at Georgia School of Technology at Atlanta, and Alabama Polytechnic Institute at Auburn, respectively. He said that he was enjoying his visits to the Southern Chapters and was happy to find them in a healthy condition. He also told the members that the next national convention would be in New Bedford, Massachusetts May 14, 15, 16 of this year. He promised that there would be a fine program and a good time for all during that weekend.

Those who were privileged to spend some time with Mr. Hart while he was at Clemson were entertained by his philosophy, which was only surpassed by his wit. He had many interesting stories to tell of his school days. He said that he was nearly fired several times for some of the pranks he participated in and instigated. He also told of his experience in the textile industry, and of his many interesting friends.

The members of Iota Chapter enjoyed his visit very much and hope that he will be able to visit the chapter again soon.

INITIATION OF HONORARY MEMBERS

At the meeting at which the National Executive Secretary presided, initiation of Doctor James H. Langston, Associate Professor of Textile Chemistry and Dyeing and Mr. Arvid Czarnitzki, Assistant Professor of Textile Chemistry and Dyeing; to honorary membership in Phi Psi Fraternity took place. Two honorary memberships are given each year by each chapter to men who are associated with the textile industry who are not undergraduates. Honorary memberships are only given upon unanimous approval of all active members of the chapter.

Doctor Langston joined the faculty in September, 1946. He received his A. B. degree from Stephens F. Austin State Teachers College of Texas, and his M. A. and Ph D. at the University of North Carolina. Mr. Czarnitzki also joined the staff in September 1946. He received his B. A. degree at Newberry College, and his M. A. at the University of South Carolina. Both professors are well known around the school, holding classes principally in organic chemistry.

PHI PSI ACTIVITIES THIS SEMESTER

L. P. Batson Jr., Textile Engineering senior from Greenville who was elected Vice President of the chapter at the last election, has taken over the duties of President because of the graduation of President R. B. Willey.

At the first meeting of this semester thirteen students were chosen for membership in the fraternity. These students were R. Anderson of Greenville, M. M. Clinkscales of Abbeville, J. C. Rair of Greenville, F. P. Hammond of Greenville, R. M. Hicklin of Richburg, C. R. Howell of Greer, F. K. Jones of Newberry, W. D. LeGrand of Greenville, W. E. McSwain of York, C. R. Martin of Pendleton, G. M. Moisson, Jr. of Greenville, G. E. Uldrick of Donalds, and R. N. Westmoreland of Winston-Salem, N. C.

ANNUAL SPRING BANQUET

The Iota Chapter of Phi Psi Fraternity at Clemson College held its annual spring banquet at the Hotel Greenville, April 30th. Mr. David Clark of Charlotte was the guest speaker. His subject was "The Background of the Textile Industry of the South."

Mr. Clark is well known in the textile industry and has long been associated with the industry in the South. He is President and Editor of the Textile Bulletin, one of the outstanding textile magazines.

This annual banquet affords the active members in the textile school and the alumnae members of the faculty and in the industry to renew old friendships.

The new officers of the chapter were announced. They are F. F. Griffin of Greenville, President; R. J. Cheatham of New Orleans, La., Vice President; E. T. Broadwell of Sumter, Secretary-Treasurer; G. M. Moisson of Greenville, Senior Warden; R. N. Westmoreland of Winston-Salem, N. C., Junior Warden.

There were approximately ninety people at the banquet, which included active and Alumni members and their guests. Entertainment was supplied by a magician, Mr. Moody of Woodside Mills.
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CLEMSON, SOUTH CAROLINA

SPRING, 1948
The Bobbin and Beaker

Organized in November 1939 by Iotta Chapter of Phi Psi Fraternity, and published and distributed without charge three times during the school year by students of the Clemson College School of Textiles.

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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 Textiles.

WARWICK CHEMICAL COMPANY AWARDS SCHOLARSHIP TO CLEMSON COLLEGE

Mr. Ernest Nathan, President of Warwick Chemical Company and President of the Warwick Chemical Foundation announced that a three thousand dollar endowment would be awarded to Clemson College in memory of Manfred Ceraci, a member of that organization who was killed in World War II.

The Warwick Chemical Foundation also awarded two other like endowments as memorials to members of the Warwick Chemical Company who gave their lives in the last war. In memory of Walter Nowicki an endowment was given to Lowell Textile Institute and an award was made to the Philadelphia Textile Institute in memory of Walter W. Lane.

THANK YOU

The staff of the BOBBIN AND BEAKER wish to thank those men in the industry who have taken the time and trouble to prepare articles for this and other issues of this publication. It also wishes to express its appreciation to the advertisers who make this publication possible.

In our last issue the Training Department Staff of Dan River contributed a fine article concerning that organization's training program. In this issue we feel that we were again fortunate and received articles from such distinguished men as Mr. R. M. Cooper of the South Carolina Research Planning and Development Board; Mr. N. S. W. Vanderhof, President of the Textile Export Association of the United States and President of Turner Halsey Export Corporation; Mr. Roy A. Cheney, President of the Underwear Institute. These articles were extremely interesting and enlightening to us. We would also like to thank Mr. John T. Wigington, Director of the Division of Technical Service of the Cotton Textile Institute who gives us invaluable help and assistance.

We feel that these men who are so much a part of the textile industry are responsible for the success of this project. They make this magazine worth reading for the practical information contained herein. It is our hope that the student will find this information as valuable as the theory that he receives in the classroom.

We believe that it is a fine thing that these men, as well as the advertisers, have felt that is was worthwhile to help the students publish a good magazine. It is hoped that the people in the industry will continue to show interest in the textile school as they have in the past.

It is also fortunate for the textile school to have men such as Mr. J. A. White, of Slater Mill, interested and willing to help the school (article page 4). Many mill suppliers too, have assisted the textile school and faculty in giving the students the best possible training.

We would also like to express our appreciation to the Altman Printing Company of Anderson, S. C., and the Charleston Engraving Company of Charleston, S. C., for the patience they have had with us amateurs in the publication field and for the fine work we have received from them.

Editor

SIRHINE LIBRARY

A book recently added to the reference library in SIRHINE HALL is the TEXTILE BRAND NAMES DICTIONARY published by the Textile Book Publishers, Incorporated, 303 Fifth Avenue, New York. Copyrighted in 1947, this book contains 380 pages, its size is 6 1-2x9 1-2, red cover, and sells for $6.00.

The book contains information of over 4,000 fibers, yarns, and cloth brand names, together with an illustration of the trade-mark of each.

There are three main sections of the book. The first part contains an alphabetical listing of the brand names, the illustrated trade-mark, name, serial number of the patent, the manufacturer, and location; date the patent was filed, what kind of product the trade mark is used on, with the fibers used in the construction and the date the claims were used. This information was first published in the OFFICIAL GAZETTE of the United States Patent Office, then compiled in the RAYON TEXTILE MONTHLY as a regular feature. The information in this book was published previously between 1934 and the early part of 1947.

The second part is a classified arrangement of textile brand names under 12 textile headings, which are: coated fabrics, cotton goods, knits and laces, linen goods, nylon, pile fabrics, rayons, ribbons and elastics, silks, synthetics, wool and worsted goods, yarns and threads.

Part three is an index of companies owning the brand names listed in the first part and giving the page numbers.

V. Alexander Scher of Richards & Geier, patent and trademark attorneys, New York City, has written the introduction suggesting how to choose a brand name and how to register a name and trade-mark with the Patent Office.

This dictionary has many applications in the textile industry. Some examples of its use may be for the identification of brand names, fabrics, and the companies to which they belong. It should also prove valuable when choosing a new brand and trade-mark and having it registered.

Another book just placed in the library is the second edition of the AMERICAN WOOL HANDBOOK by Werner von Bergen and Herbert R. Mauersberger. Copyright 1948. Published by Textile Book Publishers, Incorporated, Format 5 1-4"x7 3-8". It is illustrated with various types of wool bearing animals, enlargements of fibers, diagrams, tables, graphs, charts, and machinery used for all processes. It contains 1,055 pages including an index and is bound in green cloth cover with silver lettering. It sells for $8.00 in the U. S. and Canada.

Everyone in the industry is familiar with the first edition that was published in 1938 which was very popular. This edition has 24 chapters, one more than the first edition and 175 additional pages of text. This new edition is a revision and expansion of the first edition to take

(Continued on Page 16)
Additional Service For Mill Employees

In the last few years textile mills that are established in small communities have found that they can perform a useful and needed service to their employees by establishing self service laundry units. Many mills in this section of the country are unique in that they have mill villages, or that one mill is the principal industry of the community, therefore anything that is done for the improvement of the village and the convenience of the townspeople indirectly helps the mill.

Because textile mills employ a great many women, the weekly wash for the family presents quite a problem. Many mill communities are too small to make a commercial laundry profitable; however, the installation of several automatic washing machines, and automatic dryers makes a laundry service possible for the average family at a nominal cost. The hard and tiring job of doing the weekly family wash can easily be done now by taking the week's wash to the self service laundry store and calling for it later.

The washing machine automatically tumble-washes, triple rinses and damp-dries the clothes in a matter of thirty minutes. There is also a special setting on the machines which makes it possible to wash blankets, woolens, silks and other fine things in eighteen minutes.

Laundering stores can be equipped with six or more machines. Estimated cost of establishing a twenty machine installation on leased premises is said to range from $7,500 to $13,000. It has been figured that the entire investment can be amortized inside of three years. The practicability of economically establishing such a laundry service as this lies in specialization, simplification of services and methods of pricing, plus the efficiency of production. The minimum space required for twenty machines would be 14 by 45 feet and an additional utility space for heaters, softeners, and storage.

An example of a successful self service laundry run by

(Continued on Page 14)
Product Displays In Sirrine Hall

Shown here in pictures are two showcases which have been installed in the hallways of the Textile Building. These displays dramatically exhibit some of the products of the textile industry. They give the students and visitors an idea of the fabrics that are being made by Dan River Mills, and Burlington Mills. They also do much to embellish the interior of the building.

It is hoped that other manufacturers will consider putting displays in Sirrine Hall so that their products may be represented too. These showcases are in the hallway connecting the center entrance of the building with the Dean's office.

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Anderson, S. C.
New Professors --

The staff again takes pleasure in introducing to the readers two more additions to the faculty of the Textile School of Clemson College. The textile school now has seven hundred and three students and twenty six teachers, of whom seven have received Master's Degrees and three have received a PhD.

R. C. LATHEM

Professor Lathem has worked in the steel as well as the textile industry. In 1933 and 34 he worked as a U. S. Steel salesman and in the inspection department. He went to Auburn in 1935, '36, '37 and then he worked as a mechanic and in the tin house until 1940. He received a B. S. degree in 1941 in Textile Engineering at Auburn, and was a member of Phi Psi and Lambda Chi Alpha fraternities.

He then worked for Avondale Mills from 1941 to '43 in the costing department at Sylacauga, Ala., and as production manager at the Birmingham, Ala. plant. He was superintendent of learners for Pacific Mills in 1943 and '44. In 1944 and '45 he was assistant to the superintendent of Avandal Mills in Birmingham, Ala. From 1945 until the time he came to Clemson, Professor Lathem was plant survey engineer and overseer of Spinning for Dan River Mills. He is married and has a step-son.

E. A. LAROACH

Professor Evans A. LaRoche is a Clemson graduate, who has returned to Clemson after nearly six years absence. He was a member of the class of '42 and received a B. S. degree in Textile Engineering. While a student at Clemson, Professor Le-Roche was a member of Phi Psi, Phi Kappa Phi, and Beta Sigma Chi Fraternities.

After graduation he entered the service and was in the Army for three and a half years. Upon discharge Professor LaRoche worked at Watts Mills in Laurens, S. C., from March 1946 to March 1948. He now lives here with his wife and son.

SPRING, 1948
care of the changes that have taken place in the woolen and worsted industry. In addition to the thorough treat-
ment of the basic material in the book, several flow sheets on yarn manufacture, and dyeing and finishing processes have been added in the new edition. Separate chapters have been devoted to the chemical properties and the marketing of wool, the manufacture of carpets and rugs, woven and non-woven felts and a complete bibliography. The labeling act and the new tariff schedules are included. The testing chapter has been enlarged stressing quality control. Many new photomicrographs, machinery and other illustrations have been added. The many valuable features of this book demonstrate the extent to which the authors have gone to make this the finest handbook in the wool industry.

The authors, Werner von Bergen and Herbert R. Mauerberger, were teachers in the Extension Division of Columbia University. The former was a consultant to the Quartermaster General during the war, and presently di-
rector of research of Forstmann Woolen Company. The latter is presently textile consultant and president of the Textile Book Publishers, Incorporated.

Arthur Besse, President of the National Association of Woolen Manufacturers, has again written the foreword to this book and terms it “a most comprehensive study of the wool textile industry with special emphasis on existing American practice.” Twenty specialists in various phases of the business collaborated in the preparation of the text which has been in preparation for over two years. The authors have adhered to the same excellent presentation as was used in the first edition.

There is no doubt of the importance of this book to the men of the textile industry. It should also prove to be useful to the students here at Clemson even though we do not have courses in woolen and worsted manufacturing, the subject of microscopy does include the study of animal fibers. Students interested in learning the difference in pro-
duction, dyeing, and merchandising woolen and worsted fabrics and that which is taken up in their courses will find the AMERICAN WOOL HANDBOOK essential.

WHERE SOME OF OUR TEXTILE GRADUATES ARE LOCATED

(ed. note: This feature, which appeared in the 1943 BOBBIN AND BEAKER, is being continued by request. We shall include as many graduates as possible in each issue.)

W. E. Broadwell ’47, Graduate Student, Institute of Textile Technology, Charlottesville, Va.
H. L. Jones ’47, Apprentice, United Merch. & Mfg., Bath Mills, Bath, S. C.
M. D. Lindsay ’47, Control Laboratory, D. E. Con-

verse Co., Glendale, S. C.
D. W. Quinn, Jr., ’47, Self Mills, Ninety Six, S. C.
T. C. Perry, Jr., ’47, Textile Engineer, Pepperell Mfg.
Co., Apelika, Ala.
R. M. Phillips, ’47, Asst. Foreman, Starch Dept. Amer-

ican Finishing Co., Memphis, Tenn.
W. E. Lindsay, ’47, Warping, Republic Cotton Mills,
Great Falls, S. C.
F. Jackson, Jr., ’47, Control Lab Tech, Standard-Coosa-
Thatcher Co., Chattanooga, Tenn.
R. B. Toms, ’47, Ely & Walker (Calhoun Mills) Cal-

houn Falls, S. C.
R. F. Sherriff, ’47, Asst Dyer, Burlington Mills, Bur-

lington, N. C.
W. S. Baker, Jr., ’47, Salesman, Baker Motor Co., Greenville, S. C.
J. R. Clark Jr., ’47, is with the Chicopee Mfg. Co., Walhalla, S. C.
V. R. Mills, ’47, is with Dan River Mills, Danville, Va.
J. M. Perry, ’47, Dyeing and Finishing Dept., Stone-
cutter Mills, Spindale, N. C.
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