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DAN RIVER'S TRAINING PROGRAM

PROGRESS
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MEET THE BOSS!

He's Mr. Consumer, and he's the real boss... ours and yours! He's buying mighty carefully these days. He's choosing again—with an eye to quality and value and style.

That's why leading cutters and converters are relying on Riegel for textiles of quality. Spun, woven and finished in the same plant, Riegel textiles always please the boss.
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Professor Wilson and his carding laboratory class inspect a new Saco Lowell roller top card which has just been received by the textile school. It is one of the many new pieces of new equipment being added to the school for student instruction. Other equipment received to date are Whitin super draft slubber, Saco Lowell twister with novelty attachments, a Cocker slasher and warper, Smith-Drum Geyser yarn dyeing machine, several new chainomatic analytical balances, and cord tester. Clemson College School of Textiles is on the move toward a bigger and better equipped school!

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The late J. E. Sirrine, contributor to the progress of the textile industry and Clemson College.
Mr. J. E. Sirrine Passes

The passing of Mr. Joseph Emory Sirrine in Greenville, South Carolina, last August at the age of seventy-four, was greatly mourned throughout the textile industry. The rapid expansion of the industry in this section of the nation stands as a memorial to the genius of Mr. Sirrine. His firm started in the South and grew simultaneously with the textile industry in the South. The J. E. Sirrine Company is now known for its engineering construction work for all industries in all parts of the United States and throughout the world.

Mr. Sirrine was born in Americus, Georgia. His father and mother were George William and Sarah Enodias (Rylander) Sirrine. Both his father and grandfather were Confederate soldiers. The family lived in Charlotte, North Carolina, for a short while and moved to Greenville, South Carolina, in 1876. At that time his father was in the wagon and carriage business. He worked for the betterment of schools, which his son Joseph was to continue in later years.

Mr. Sirrine was educated at the Greenville Military Institute and then Furman University, graduating with a Bachelor of Science degree in 1890. Honorary degrees of Mechanical Engineering by Clemson College in 1928 and an Doctor of Letters degree from Presbyterian College in 1941 were bestowed in recognition of his outstanding work.

Mr. Sirrine became a practicing civil engineer in 1890 and in 1895 became resident engineer for the construction of the F. W. Poe Manufacturing Company building being constructed by Lockwood Greene Engineers Inc.

He married Miss Jane Pickney Henry of Greenville in 1898. She passed away July 31st 1938. From 1899 to 1902 Mr. Sirrine was Southern representative for Lockwood Green in charge of Southern textile mill work.

The J. E. Sirrine Engineer and Architect firm was begun in 1902. In 1921 he formed the present J. E. Sirrine and Company with eight associates. The business is now being continued by eleven partners.


Mr. Sirrine was an active member of the American Society of Civil Engineers, American Society of Mechanical Engineers and the American Institute of Electrical Engineers, as well as being past president of the Greenville Rotary Club and one of the few honorary members of the International Rotary Club. He was also an honorary life member of Greenville Lodge No. 858 of the Elks.

In addition to industrial and civic organizations, Mr. Sirrine actively participated in religious affairs, having been a member of the vestry of Christ Episcopal Church, Greenville, South Carolina, past president of the Young Men’s Christian Association, a member of Recovery Lodge No. 31 A. F. A. M., a Knight Templar, member of Hejaz Temple.

He was also a member of the Greenville Country Club, Poinsette Club, The Cotillion Club, Baltimore Forest Country Club, Merchants Club of New York, and the Newcomen Society of England.

On October 26th 1928, Mr. Sirrine became a life trustee of Clemson College, of which Dr. R. F. Poole, President said an “able, interested and devoted life trustee. Was helpful in the engineering construction of many buildings on (the) campus; was of much influence in securing the textile building. His council and advice was always meritorious and gladly given.”

Mr. Sirrine came on the Board of Trustees as one of the outstanding leaders in the textile industry, which is the largest industry of this state. He was also of assistance to the school in many other undertakings. Upon the completion of the war, he worked diligently to provide comfortable housing to provide for the increased enrollment at Clemson.

It was his dream to see the Clemson College School of Textiles become the equal of any in the world. Whenever possible, he would use his influence in procuring equipment for the textile school. He devoted much time and energy to raise needed funds.

Mr. J. C. Littlejohn, Business Manager of Clemson College and close friend of Mr. Sirrine’s, pointed out that recognition of his valuable services is universal. He was the type of man that brought prestige to Clemson. Mr. Sirrine was very retiring. In many cases when he helped students to complete their education at Clemson, it was done without any knowledge of his assistance.

He possessed a good memory, hence did not have to rely on a multitude of memorandums as to what was going on or as to observations. He had a keen mind which made it possible to analyze a situation and outline a solution to a very difficult problem.

When bids were being received from contractors prior to 1938, for the building of the textile building, it was found that the fund available were not sufficient to include the heavy freight elevator. Mr. Sirrine instructed the contractor to install the elevator as proposed and send him the bill. When the new building was being designed he saw to it that suitable provisions were made for the new types of machinery that would come into use in the future. For example, that the beams would be strong enough to withstand the vibrations of looms going at a faster rate of speed than those in existence at that time.

He gave impetus to a movement for a great textile school at Clemson, the work of which is destined to provide an excellent school to train men for the advancement of the textile industry, not only of South Carolina but the world. This is now known as the J. E. Sirrine Textile Foundation.

(See Page 20)
The Bobbin and Beaker

Organized in November 1939 by Iota 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.

TEXTILE ASSOCIATION MEETING

Clemson College was host to the South Carolina Division of the Southern Textile Association November 22nd. Approximately four hundred textile executives attended the meeting held in the auditorium of Sirrine Hall. The meeting was presided over by Mr. J. L. Adams of Spartanburg, president of the South Carolina Division.

The program was opened with the invocation by Reverend E. W. Hardin, Pastor of the Clemson Methodist Church. Dr. R. F. Poole, and Dean Hugh M. Brown welcomed the members to Clemson.

Mr. George M. Wright, President of the J. E. Sirrine Textile Foundation gave an address about the activities of that organization. He spoke about the late Mr. Sirrine, then stated that the Foundation was set up for the betterment of textile education in South Carolina. It is planning a program to make it possible for the members of the textile school faculty to visit textile plants in the South so that they may obtain a first hand knowledge of working methods in the industry. The Foundation would make it possible for instructors to take charge of their classes while they are absent for short periods and provide traveling expenses. The Foundation is also working on plans to supplement retirement funds for eligible textile professors.

Dr. R. E. Rupp of the Lyman Division of Pacific Mills gave a talk on cloth defects in grey goods and explained how they affect the bleaching of fabrics.

Mr. J. T. Wigington, Director of the Division of Technical Service of the Cotton Textile Institute spoke on the importance of cotton fiber testing to uniformity of quality in production and economies in manufacturing.

Because of the unusually large crowd for Homecoming, and in an effort to assist those in attendance at the Southern Textile Association meeting, several members of the Iota Chapter of Phi Psi Fraternity directed the visitors to the auditorium.

COMMENTS ON THE PUBLICATION

It is with genuine pleasure and enthusiasm that the students of Clemson College bring to you the BOBBIN AND BEAKER again. It is our hope that each succeeding issue will be an improvement over the previous publications and that all of them will continue to be of interest of our readers.

Our policy as has been stated in the past will continue to be our aim. Our primary objective has been to try to give our readers as complete and accurate information about the textile school as possible. The faculty, courses and equipment of our school are constantly changing. We have from time to time tried to keep those interested abreast of these changes.

Secondly we have presented discussions and statements from various textile organizations of South Carolina and the nation. These articles will be presented by well informed people in the textile industry, for the interest of students and people working in the industry.

Thirdly we have presented information on technical subjects which we hope to continue for the interest of the readers.

Circulation—
The BOBBIN AND BEAKER is sent gratis to mill executives, managers, and superintendents in South Carolina, North Carolina, Georgia and other states, in addition to alumni and students. We have made a special effort to bring our files containing the address of alumni up to date. The circulation at present is about two thousand and plans are now being made to augment our mailing list. By maintaining our policy of free circulation we are able to send the BOBBIN AND BEAKER to whom we please, and treat all of our readers equally.

Financing—
With the exception of the Iota Chapter of Phi Psi, this publication is subsidized by no other organizations or persons, than those who purchase space for advertising. Without advertising to offset the costs of engraving, printing, and mailing, this magazine would not exist. We feel, however, that in return we are able to perform a service to the advertiser by placing his name and product before the buyers.

We have but two favors to ask of our readers, first that they favorably consider our advertisers when buying; secondly, we would appreciate letters, with your comments of criticism or approval so that we may have some indication of the results of our work.

To The Students—
A publication of this sort affords an excellent opportunity for the student to present their views in a professional way, giving them experience in writing, selling, and research. Original research is almost impossible for the student because of the lack of time and knowledge; however, it is possible to do research in gathering and consolidating the findings of others and presenting them in a form that may be of benefit to others as well as themselves. In gathering material the student must read and learn, doing this he will gain knowledge that will be helpful to him in later work.

When asked to make a contribution, the standard answer received from the student is, "I can't write" or "I did not do very well in English." When is a better time to learn, than while at college? Almost all prominent people are asked at one time or another to give comments on a subject, in written form. Here is your chance. It is also an opportunity to express yourself and present yourself to the industry.

Another important function of the magazine is the selling of advertising space. There are some students who are thinking of participating in the selling branch of the textile industry, here then is a chance for experience and contacts. Even if the student is not interested in selling as an occupation the experience will be helpful, because all of us at some time or another have to at least sell ourselves.

For participation in either of the above two phases of the magazine, the student is permitted to take the course English in Action (Engl 300) taught by Professor John D. Lane. This class meets one hour a week, gives one credit, and requires no outside work.
The Burden Shouldn't Be Borne Altogether
By The Textile Schools

By JOHN M. CAUGHMAN

This article was first presented in TEXTILE BULLETIN, December 15, 1946. The author is a former student of Clemson and graduated an honor student of North Carolina State College in 1930. He is past president of the Southern Textile Association and now Executive Secretary of that organization. At the present time he is general Superintendent of Spartan Mills, which position he has held for the past seven years.

Our textile schools and their graduates do not need defending, so a reply to the article, “The Textile Graduate” (TEXTILE BULLETIN, Oct. 15, 1946), is slightly superfluous, but I do not feel that I can conscientiously pass it by without comment. Certainly our textile schools are not perfect, but they constantly are being improved. The same is true of all our seminars, colleges and universities. There are many things that the young medical school graduate learns after leaving medical school, and I am certain that any doctor will tell the “graduate of 1947” that he (the doctor) has kept on learning long after his medical school days. I wonder if our student ministers are taught while in school how to handle a “gossiping sister” or a stubborn deacon? Did the “graduate of 1937” feel for four years in college that when the day came for him to receive his sheepskin that his education would be complete? Did it occur to him that when his teachers gave him reference reading assignments that he was preparing the student for continued study long after the end of his school days? Or did he feel that the teacher was merely making college days unpleasant?

He bemoans the fact that there were and are no text books on “How to get along with textile employees”. Are textile workers so different from other workers that a text book should be written about them to explain the differences? I think it would be an insult to the whole textile industry if such a text book were written.

If this “1937 graduate” did not learn to get along with children while he was a child in a cotton mill community, if he did not learn to get along with students during college days, then no text book will do him any good. On the other hand, if he did learn to get along with children, students and professors without a special course, he will get along with the boss and textile workers or anyone else. Most of the valuable things that we learn in life do not come out of text books, but we learn only with age and experience and from the experiences of others. Society has not yet let future husbands and future wives gain prior experiences in the greatest of all responsibilities—the bringing into the world and the rearing of children.

The fact that a few people have said that a textile school is the last place they will send their boy is no reason to condemn the textile schools or to feel that men have lost faith in the industry. Have you ever heard a doctor say, “I hope my boy stays out of medicine”? Most of us have our down-in-the-mouth spells about our jobs, but deep down most men who are successful in their chosen line of endeavor hope their sons will choose the same field of endeavor as theirs. After all, do not parents make a mistake in “sending” their sons and daughters to college? Shouldn’t the boy or girl be allowed to choose his or her life work, and be encouraged to prepare himself or herself in the best way to begin that chosen work?

In my opinion, too many people go to college with the wrong idea. If boys or girls go to college with the idea that they are going to spend four years getting a diploma, which in turn enables them to command a “big job” or high salary simply because they have spent four years behind the four walls of a college, then it would be better that they not waste the time and money on four years in school.

I am not being idealistic in the following statement, but very practical. Boys and girls should not seek a college degree with the false idea that it will make it easier to earn a living, but with the idea that it will prepare them to live better with their fellow men. They should seek an education with the idea of preparing themselves to live such a life that the community and the world in which they live is better because of what they have contributed to others. Has the “1937 graduate” served a group of boys as a scoutmaster, a Sunday School teacher, a school trustee, chairman of the Red Cross or Community Chest drive, or any other activity; does he do jury duty, fail to vote and too busy to work in his church?

The training that a boy or girls receives in school is simply a nice set of tools to start life’s work, the equipment with which to begin to work. Lock that training in some dark box of one’s mental storage chamber and it soon becomes foul with rust and beared with uselessness. Use that training and it becomes shining with ideas. The young college student must learn to always keep his thinking clean shaven—even to the time of retirement. The most expensive set of camel hair brushes and the most expensive

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Specialization is being emphasized in every field of education at present. The employer of college graduates is placing less and less stress on the Bachelor’s Degree, and more emphasis on the immediate value of the man’s training in his chosen field.

In order to make this article interesting to both the student and his future employer, the writer is faced with a sort of dilemma: whether to dramatize the field of Textile Chemistry and Dyeing, or to present only the facts about Clemson’s “T. C.” curriculum. A compromise is perhaps the best solution.

In reference to the employer’s needs, as before mentioned, a broad knowledge of chemistry is valuable to the general chemist—an undisputed fact; but, for a man to apply his general knowledge to a specialized field, a period of concentrated study is essential. If, however, the new man is more or less conversant with the applications of chemistry and dyeing in the textile field, he can be of more immediate value to the industry. This knowledge is usually of intrinsic value to the employer, and one who possesses it will command a larger starting salary.

The author investigated several large textile plants before starting his course of study at Clemson. It was found that of the three textile courses offered, that of textile chemistry was the least crowded; and, in direct proportion, the needs of the industry reflected this condition. Textile chemists and colorists who know their jobs will not have to search long for employment in the near future.

To allay the fears of those prospective students who have not chosen to specialize; and who desire to build a broader foundation to support future graduate work, it is pointed out that the more advanced courses in general chemistry may be taken as elective work.

Of course, the textile chemistry courses place their emphasis on the processes most applicable to the industrial needs, but the basic principles are identical with those taught in general chemistry courses, and the practical laboratory work is essentially the same. The object of all these comparisons is to show that the graduate in textile chemistry need not fear that his adaptability will be impaired by specialization.

In line with his study of chemistry the textile student is made familiar with the processes involved in the various phases of the manufacture of fabrics. Emphasis is placed on cotton processes; but wool, silk, linen, and the synthetics are reviewed sufficiently to acquaint the student with the broad scope of the industry.

The intriguing story of cotton, from the field to the dry-goods counter, is told by professors who have had years of experience in practice and teaching. The structure of all fibres and the chemistry of their processing are taught by men who are outstanding in their respective fields. No Clemson man will admit any other school’s claim to superiority in faculty “know-how.” It is up to the student to avail himself of his opportunities to learn from these men.

Professor Joseph Lindsay, Head of the Textile Chemistry and Dyeing department at Clemson, has compiled some interesting data on the basis of information obtained from other textile schools in this country. The replies to his queries, averaged for seven schools, are as follows: Each graduate seven textile chemists in 1947; each had jobs offered for thirty. Average salaries offered were from $200 to $300 pr month; some were much greater. The Deans of several of these schools expressed the opinion that the field of textile chemistry will never be crowded.

If this article serves to attract only one new man to the field, it will have served its purpose. It is hoped, however, that many more men will see the advantage of specialization, and by joining our ranks they will provide the industry with a much needed commodity in the form of trained personnel.
Dan River's Training Program

By TRAINING DEPARTMENT STAFF

Dan River Mills, Inc., Danville, Virginia

It has been said that Dan River is a graduate school for Clemson men and the statement is close to correct. We have Clemson men from the Class of '27 through the Class of '47.

It is to one's advantage, when seeking a job or, preferably, a "position," to obtain one in which the individual may develop his aptitudes and attitudes to the fullest. It occurs to us at Dan River that you might be interested in knowing how one progressive textile mill handles its selection and training of new supervisory personnel. Let us assume that your senior year is near completion and representatives of various organizations are around looking over the prospective graduates and you are in turn looking over the companies and their afforded opportunities.

As a result of hearing the success stories about Clemson men at Dan River and our representative's visit, you drop our divisional manager a note expressing interest in Dan River and you decide upon a mutually agreeable date for your visit. Upon arrival Mr. Henderson, Manager of Schölfeld Division, would cordially greet you and send you upon an extensive inspection tour through our Yarn, Weaving, Finishing, and Research Departments. This consumes a full day. The next day you would be conducted to our Testing Service. Here we present our overall picture of trainee responsibilities and opportunities, as well as, administer aptitude tests. This, along with the conferences with top management, is very important; as to a certain extent, a man's future rests upon the decision that the applicant and management make as a result of the individual's impression of the organization and vice versa.

Clemson Applicant Dale G. Vander Voort, M.E. '46, being interviewed by Mr. C. J. Schollenberger, Director of Training (center), and W. B. Williams of the Testing Service in June '46. Mr. Vander Voort is now Superintendent of Dan River's Electrical, Carpenter, Machine, and Pipe Shops.

Schoolfield Division of the Dan River Mills, Inc. Over twenty-five Clemson men are working in this division.

Selection on the supervisory level begins with a cordial reception of the applicant and a coke and cigarettes are in order. As you remember from your courses in personnel, the purpose of this is to establish rapport.

A discussion of the selection techniques will be of benefit in that you as a potential applicant may get a picture of what sort of thought patterns one progressive mill is interested in. No secrets will be revealed since we have none. Any forthright organization is desirous of letting you know what is expected of you and what opportunities may be exchanged for your effort out put. It so happens that everyone is not constituted the same and that some individuals may fit very well into one organization or type of work and not into another. It is therefore possible to predict by tests and an objective patterned interview how an individual will fit into a given organization. Before such techniques may be utilized in employment selection, it is first necessary to devise a group of questions or attitude inquiries and apply these to your present working force. If the test is valid, the Testing Service will find that a majority of the more successful people respond in manner "A", whereas a majority of the less successful will respond in manner "B". A concrete example of what might be an objective personality item is that, in general, we've found that those with a Southern or even nondescript accent are more successful than those with a Yankee or, more specifically, a Brooklyn brogue. Such items are subject to statistical weighing.

We are presently working out statistical weights for positive reactions to such conditions as evening school attendance, acceptance of shift work, and overall control consciousness such as periodic tests. The nature of these tests may be experimental, evening school course content, or general plant knowledge.

It so happens that all our successful supervision goes to night school two to four nights a week. Either a man is or is not willing to devote several evenings to learning (See Page 18)
Quartermaster Training
Available To
Textile Students

By E. B. MAY

A Quartermaster ROTC Unit was activated at Clemson College with the beginning of the 1946-1947 term. Major Walter F. Hall, QMC, is in charge of instructing this Branch of the ROTC. It is composed of cadets from the schools of textiles, agriculture and chemistry. The students selected for the Quartermaster course are majoring in subjects at college which closely parallel the various duties performed by the Quartermaster Corps.

At the present time the Quartermaster Corps has civilian personnel in charge of some phases of their research and testing programs. It is hoped that by getting men schooled in a particular field, as in textiles, and having commissions in the Quartermaster Reserves, that the technical experts can be helped in their research by these officers who are receiving this additional training thereby. In this manner a more workable organization will result. It is hoped that Clemson men with Quartermaster Reserve commissions, can be assigned active duty tours in testing and research laboratories.

If the graduate was assigned to such work he would receive valuable experience in the field of research that would prove beneficial to him if he later went to work in the industry. Today more research than ever before is being done in the textile industry. Individual textile firms in many cases have their own laboratories. Organizations for research have been set up by groups of mills. The Department of Agriculture has laboratories like the one here at Clemson, throughout the country which are conducting experiments all the time, for the benefit of farmers, manufacturers and consumers.

The graduate while doing research may find that he would like to stay in the Army permanently. This would be the best method of determining whether a person was suited for making the Army a career. A competitive tour of two years is required. The procedure for the Quartermaster Corps is stated in the War Department Circular No. 210, 1947.

The Army has prepared a colorful booklet “YOU AND THE QUARTERMASTER CORPS” which dramatically outlines the work of the Corps. The parts of this booklet dealing with textiles point out that during the last 150 years of our history in which this country participated in seven wars, the Quartermaster Corps provided the best of clothing and equipment. The American fighting man had the reputation of being the world’s best dressed soldier. “Because the Corps has been in the clothing business for such a long time its textiles know how—will be of immeasurable value to the reserve officer interested in civilian clothing supply.”

A few examples of the kind of work that is done would be along the lines of finding the kind of fabric for the best protection against the harshness of an Arctic winter, or cloth that will not mildew in humid tropics. A large project done by the Army has been with hot and cold climate clothing. This work is being continued at the present time. Still another problem has been to obtain a water repellent fabric that will not crack in cold climates and melt in hot climates.

Testing is done by the Army in rooms at which the mercury in the ordinary thermometer would freeze, sometimes as much as 70 degrees below zero Fahrenheit. For the other extreme, temperatures over 150 degrees Fahrenheit are produced with salty humidity added to stimulate the climatic conditions on small tropical islands. Any other climatic variations may also be reproduced.

Much of the textile research work done by the Army takes place at the Quartermaster Depot in Philadelphia, Pa., and testing by the Quartermaster Board at Camp Lee, Va. Work done by the Quartermaster Corps during the War in developing the best fabrics for each distinct use and climate is being continued so that the American soldier may continue to be the best outfitted soldier in the world.

Research and development activities generally follow three steps as outlined in the Army’s bulletin “YOU AND THE QUARTERMASTER CORPS”. “First, research laboratories develop the new article. Their work is usually based on reports from the field that a new or an improved article is required or from studies of similar articles issued to troops of foreign armies that appear desirable for adoption by the U. S. Army. Research laboratories have turned out a variety of interesting products, such as the waterproof match, a new synthetic detergent to take the place of soap in field laundries, and various types of packaged rations.”

“Next, The Quartermaster Board conducts field trials and other extensive tests to determine the durability, efficiency, and safety of the new or improved articles. If the new item is an experimental combat ration, for example, the new food is served to selected groups of men for an extensive period in a carefully controlled experiment. If the item is a new shoe or boot, it is worn for several hours every day for many weeks on a ‘shoe course’ which simulates

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Our Progressive Textile Industry

By Doctor Hugh M. Brown, Dean Textile School

The following is a discourse by Doctor Hugh M. Brown, Dean of Clemson College School of Textiles which explains some of the changes that have come over the textile industry. This speech was transcribed and presented by several radio stations on the program, “Textile Topics”, which is sponsored by J. W. Valentine Company, Inc., New York textile selling agents.

“It has often been said that the textile industry is backward or static. Of course, textile manufacturing is one of man’s oldest industries, which for ages was a handicraft or art. It cannot be compared with newer industries that originated and mushroomed to enormous size almost within our own time.

“But the textile industry is not to be called backward, considering the changes since Whitney’s cotton gin and the advent of mechanical power. While new industries like the automobile or radio develop slowly into colossal enterprises, the textile industry has always been large, and seems less spectacular.

“This industry changes continually. Like the pioneers, it has moved—from North to South here in America, and also from England to India. While these moves were made toward more economical sources of labor, production costs were being attacked on another front—the more efficient use of power.

“Much tedious hand work was eliminated by inventions of automatic machinery for ginning, spooling, winding—for tying-in, drawing-in, and weaving. These, and new automatic high speed knitting machines, are marvels of the industry. A cotton mill was recently defined as ‘a place where they make a lot of noise and have no people’.

Today, precision in machinery is eliminating the noise, too. These labor-saving devices have more than double the wages for each laborer—a trend seen in all the more prosperous industries. Farmers, too, have mechanized, with power-driven multiple-row planters, mechanical hoes, flame cultivators, and mechanical harvesters. One man can now grow and harvest one hundred acres of cotton in a season.

“Textiles for the consumer have undergone the same change. In our mothers’ day, every housewife could tell, with her eyes and hands, the quality and content of a piece of cloth. Now it requires an expert technician with laboratory equipment to analyze cloth. The fabric designer has become a fabric engineer. Taking many new fibers in different forms, he blends them together or with natural fibers. He can treat them chemically to produce waterproof, shrinkproof, of mildewproof fabrics, or give them crush resistance, flame resistance, or improved appearance. Already millions of yards of non-woven fabrics are resulting from the combination of plastics and textiles, and this trend is just beginning.

“Into this picture the textile schools must place a new type of graduate—one having more background in physics, chemistry, engineering, and research. The industry needs more college trained men to cope with the chemistry, electronics, and complex machinery used today. Post college training is now being requested for certain personnel, and more training in human relations is also being demanded. Fortunately, the progressive textile schools of our nation, with the help of the industry, are prepared to meet this new challenge.”

ADDRESS CARDS

A few interesting facts have been noted from the kind of work being done by the graduates. Although the great majority were employed in the textile industry, it was found that some were employed in hospitals, banks, post offices, farms and newspapers; others were in the insurance, florist, laundry and automobile business; several were still in the service and others were soil conservationists, plantation superintendents, students and one a physician.

A survey shows that about fifty percent of the alumni who graduated before 1920 are not in the textile business. Of those that graduated after that date, approximately ten percent are not presently associated with the textile industry. Perhaps the reason for such a low percentage of graduates before 1920 continuing in the textile field can be attributed to the fact that during that time the state authorized a certain number of scholarships for men of each county to study textiles and agriculture.

We want to thank the alumni who filled out the address cards and mailed them in. Without your help this project would not have been possible.

Full Name ____________________________________________
Street Address _________________________________________
Town and State _________________________________________
Position ______________________________________________
Organization __________________________________________
Location ______________________________________________
Year of Graduation ____________________________________
Years in the service ____________________________________

FALL, 1947
Deering Millikin to Build New Plant

On December 6th, Mr. Roger Milliken, President of the Deering, Milliken Company announced that his firm had decided to construct a four million dollar mill in Anderson County, South Carolina. This decision by the Deering Milliken interests is increased evidence that the textile industry finds this section of the country, and South Carolina in particular, offers many advantages to textile mills. The plant will employ between four and five hundred individuals, and would be used to weave rayon fabrics. This large plant will enlarge the textile production of this section which is already one of the major textile centers of the country.

Mr. Alan B. Sibley, one of the outstanding men in the textile industry, will be in charge of manufacturing operations. Mr. Sibley is now treasurer of Laurens Mills and Judson Mills.

Mr. Milliken stated that this new mill will be “the finest industrial plant in the country. This modern rayon weaving mill, will not only be the last word in mill construction, but will also contain new machinery especially designed for the production of filament rayon fabric.”

A three hundred and twenty-five acre tract has been secured. Construction will be done by the Daniel Construction Company of Greenville, S. C. According to Mr. Charles E. Daniel, the work on the construction will start not later than the first of the year. The construction materials have been on order for some time. It is planned to have the plant finished and operating in July, 1948.

The mill will be entirely for the weaving of high quality filament rayon cloths. The rayon will be twisted and woven on machinery which is of a new design, especially for production of this fiber into cloth. This machinery has been on order for quite a long time so that it will be ready for installation and production upon completion of the building.

Before deciding on the site near Pendleton, the Deering, Milliken Company had considered sites in Saluda and Belton, South Carolina and Hartwell, Georgia. The Board of Directors of the Anderson Chamber of Commerce together with the civic-minded citizens of Anderson County provided a free site as an indication of the people’s cooperation with the Deering, Milliken interests in situating the plant in this locality. The excellent labor relations existing in the Anderson Area was another influencing factor in choosing this site.


This mill will be the largest industrial plant to locate in Anderson County since the completion of the war. The location between Boscobel Lake and Pendleton will only be a few miles from Clemson College. The Pendleton plant will be larger than the Deering, Milliken plant at McCormick, South Carolina, by one third. The design and construction will be similar to the Deering Milliken plants at Clemson, Johnston, and McCormick, South Carolina.

At Johnston and McCormick are two of the latest constructed mills of the Deering Milliken interests.

The Clemson plant is also of recent construction, for finished rayon products. Incorporated in the designing of these buildings has been the latest ideas in mill construction, for the best possible working conditions. They are windowless structures, with modern fluorescent lighting. The mills are completely air-conditioned and refrigerated so that constant temperatures can be maintained the year-round.

The mills have been constructed with concrete floors, walls and roofs. The Pendleton plant will have one room on one floor three hundred feet wide and five hundred and forty feet long. A section for offices will be on the front part of the building, this section will contain windows. The mill grounds and surrounding area will be landscaped to make the plant as beautiful as it will be functional.

In addition to the mill, there will be constructed eighteen or twenty brick houses. These homes will be in the vicinity of the mill and be occupied by key personnel.

Mr. Roger Milliken was very much impressed by the
cordial relationship which exists in Anderson County between employees and employers, and the fine labor record that has been maintained. This new industrial plant will mean about a $1,250,000 increase in the annual payroll of this section.

Governor J. Strom Thurmond of South Carolina said in a message to Mr. Milliken, “Congratulations on the decision to locate your sixteenth plant in South Carolina. We are delighted that you have so magnificently recognized the abundant advantages our state has to offer industry. We anticipate a continuation of the industrial development in South Carolina because of our favorable climate, natural facilities, and a plentiful supply of native-born friendly labor. We sincerely hope that your sixteenth plant is only the beginning. Please feel free to call on us for any assistance we can render.”

Doctor Frank R. Poole, president of Clemson College stated, “I’m happy to know that Deering, Milliken is building another fine plant in this section of South Carolina. Clemson College is happy and will extend to the officials of this company and the people it employs every possible cooperation. We shall offer to them the full facilities of our textile engineering and agricultural schools, with the hope that we can be of service to them, it will be a fine addition to South Carolina industry.”

Mayor Julius Aull of Pendleton is reported to have said that Pendleton is mighty happy over the location of this very modern plant near us. We have worked hard to ‘sell’ the Deering, Milliken interests on the advantages of this section. We know they will never have cause to regret their decision in selecting this site for the location of their plant.

(Note: Some of the material presented in this article was obtained from Vol 32-No. 68 of the Anderson Independent.)

Pictured here is the Deering, Milliken plant at McCormick which is three fourths as large as the mill to be constructed by that company at Pendleton, South Carolina, a few miles from Clemson College. The Pendleton mill is to be of the same design, costing over $4,000,000, with 165,000 square feet, consisting of one room on one floor, the mill having no windows. This ultra-modern mill will produce rayon fabrics. About 400 people will be employed, receiving an annual payroll of over $1,000,000. Daniel Construction Company of Greenville, South Carolina, will build the plant. Mr. Alan B. Sibley will be in charge of manufacturing operations.
The faculty of the Textile School of Clemson College has been augmented by the Professors whom we would like to introduce at this time. These men have come to Clemson during the summer and fall semesters of this year. Some are graduates of Clemson College, the others are from neighboring colleges. To all we extend a hearty welcome and hope that you will be as happy here as the students are to have you with us.

**J. C. HUBBARD, JR.**

Professor Hubbard was a member of the class of 1942, receiving his B. S. degree in Weaving and Designing. Immediately after graduation, he entered the service and saw action in the Pacific Theater of Operations.

Upon discharge from the army in the spring of 1946, he joined the technical staff of the Institute of Textile Technology at Charlottesville, Va.

Professor Hubbard joined the faculty of the School of Textiles at Clemson in the fall of 1947.

**ROY A. JONES**

Professor Roy A. Jones came back to Clemson this fall to teach Cotton Opening, Cleaning and Picking and Cotton Marketing. The last time that he was officially here, was when he graduated in 1932. From here he continued his education in Textiles at North Carolina State summer school. To further his education he took a business management course at Furman University for a summer. He then taught school in West Columbia, S. C.

After that he was on the executive force of the Columbia Mills in the production department. He also did some work as the athletic director of the baseball team, being manager of the Columbia Mills team.

In 1936 he went to McColl, S. C., to work for the Marlboro Cotton Mills. He had an operation while there which resulted in his being unable to work until 1940. At that time he became associated with the War Department Textile Division, Inspecting Branch. His territory was from Boston to Atlanta. His job was inspecting work done by mills and finishing plants for the government.

Mr. Jones is from Newberry, S. C., and his wife, the former Constance M. Booth, is from Buffalo, N. Y. They have a three year old son.

**WALTER J. CRENSHAW**

Professor Walter J. Crenshaw graduated from Clemson College in 1938, receiving his B. S. degree in Weaving and Designing. After graduating he worked in the Production Department of Burlington Mills Corporation at Burlington, N. C. doing Jaquard and dobby designing as well as scheduling production until December 1941.

He served four years in the Army and spent thirty-one months in the Pacific Area as Captain of Infantry being in Hawaii, New Guinea, Philippines and Japan.

Upon returning from the Army, he was employed by Norwood Woolen Mills of Briston, Va. to supervise installation of a cotton spinning unit. Prior to coming to Clemson this fall Mr. Crenshaw was employed as assistant to manager of Mil-Art Co. Inc. of Spindale, N. C. and was in charge of fabric development.

The subjects he teaches now are Advanced Dobby Design and Jacquard Mechanics.

**Dr. A. N. J. Hehn**

Dr. A. N. J. Hehn was born and reared in Delft, Holland. He received his Candidate Degree (equivalent to our B. S.) in General Botany from Utrecht University June 27, 1927, his Doctoraal Degree (equivalent his PhD in 1931. From September 1929 to January 1936 he worked as Assistant and Chief Assistant with professor Dr. F. A. F. C. Went at Utrecht University.

Dr. Hehn also worked at the following places: Laboratory of Microbiology, Delft; Laboratory for Technical Botany, Delft; The experimental garden of Professor Hugo de Vries at Lunteren; and the X-Ray laboratory of the University of Amsterdam.

Dr. Hehn was sent abroad to do research work where he spent considerable time in the laboratory of the College de France; Laboratoire de Cytologie Vegetale; Textile Physics Laboratory in Leeds.

In 1936, Dr. Hehn was sent to the Netherland East Indies on a mission to carry on investment and research work in the Trueh Laboratory at Buitenzorg on Chromosomes of tropical cultivated plants in relation to breeding and on a phytopathological subject of fusarium rot in sugar cane. It was there that he started research work on the molecular structure of fibers from tropical plants and as a result of
this work he was asked to accept a position as a Government Technologist in the Department of Economic Affairs which he accepted in 1937.

Dr. Hehn established his own laboratory at Djoejakarta and did research work on development and structure and the production of plant fibers especially cellulose, pectin, retting processes, cellulose bacteria. Dr. Hehn also established three large factories of Coir yarn.

For the past twelve years Dr. Hehn has specialized in fibers and textiles which is his field at present. Dr. Hehn has written books that have been published in French, German and English. He was appointed to the faculty of the Clemson College Textile School during the Spring of 1947.

WHITTEM

Professor Whitten, member of the class of 1947, received his B. S. degree in textile engineering from Clemson. He immediately accepted an appointment to the faculty of the textile school as instructor in weaving and designing.

While at Clemson, Professor Whitten was a member of the Iota Chapter of Phi Psi Fraternity.

His course of studies was interrupted by service in the Army. While in the Army he saw active duty in the European Theater of Operation.

ROBERT G. CARSON, JR.

Professor Carson, member of the class of 1939 receiving his B. S. degree from Clemson College in Weaving and Designing. While at Clemson he was a member of the Iota Chapter of Phi Psi, the honor textile fraternity.

Following his graduation he worked for the Callaway Mills for two and a half years in the Army, following which he worked for a year and a half in a garment plant, first in the standards department and later superintendent.

He was appointed assistant professor of textiles in the fall of 1947. He now teaches introduction to textiles but will have classes in time study in the future.

BERRY

Professor Berry graduated from the Philadelphia Textile School in 1941 after completing a course in Weaving and Designing. Before that, however, he worked for the Collins and Itman Company doing work in designing and costing. His formal education also included two years of Mechanical Engineering at the University of Pennsylvania.

Before coming to Clemson Mr. Berry did some designing and engineering work for the LaFrance Industries at Pendleton, S. C. He was appointed to the faculty in September and is now conducting classes in Sophomore designing, cam loom fixing, and introduction to textiles.

JAMES MacDonald, JR.

Professor James MacDonald, Jr. is the new instructor of knitting in the textile school was appointed to the faculty in June 1947. He studied textile engineering at Georgia Tech for three years. At North Carolina State College he received a B. S. degree in Textile Management in June 1947 after completion of three years of study.

While at North Carolina State College Mr. MacDonald was a member of Sigma Tau Sigma which is the local honorary textile fraternity. Members are chosen on scholarship.

Since coming to Clemson Mr. MacDonald has done a great deal of work to put more knitting machines in operation in the laboratory in addition to his work in the classroom. The knitting laboratory is under a great handicap because of difficulty in securing supplies.

J. E. SIRRINE COMPANY

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Greenville, South Carolina

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Division of J. P. Stevens & Co., Inc.

Greenville, South Carolina

FALL, 1947

THIRTEEN
Iota Chapter of Phi Psi started the new school year off with the first meeting during the latter part of September. Fifteen of the twenty remaining active student members were present for a general discussion of business. The main topic concerned the plans for new members and initiations. Other subjects considered included the completion of a memorial plaque dedicated to former Clemson textile students. This plaque would be erected in Sirrine Hall. It had been decided during the last semester that by using the school facilities, the work could be done by the chapter members. Through the efforts of the members, a plan has been drawn up and the letters for the pattern ordered.


At this point we would like to repeat the purpose of our organization. Phi Psi Fraternity is the largest and most respected textile fraternity in the world. We have always had one of the highest scholastic standings on the campus. It is our purpose to promote scholarship, the mutual advancement of our members and the art of textile manufacturing. One of the things that our chapter is proud of is that we have maintained this high level. One reason is because the cardinal requisite for membership is a specified class standing for all applicants.

The required scholastic rating is a minimum of 4.5 and 4.25 grade point ratio for first and second semester seniors, respectively. A second semester junior must have a 5, while a first semester junior needs at least a 6. All

(See Page 20)

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Clemson South Carolina

FALL, 1947
The Burden Shouldn’t Be Born Altogether By Textile Schools

(Continued from Page 5)

pallate, oil and color never produced a painting without the guiding hand and mind of the artist.

To make the statement that "politics" is essential in getting ahead is an insult to everyone that has advanced the ladder of promotion. I am still old fashioned enough (while not old) to believe that Horatio Alger stories do come true. The word ability still has its original meaning, and most times society and business do not fail to recognize and reward ability.

I’m not going to bother to tell the “graduate of 1937” how he can determine if the boss likes him except to say if he doesn’t like the boss it is a pretty safe bet the boss doesn’t like him. Neither am I going to enter the argument as to “who will make the best superintendent, a spinner or a weaver”, except to say that be he either carder, spinner or weaver—if he has managerial ability and what it takes to run a job anyone of the group will be successful when the responsibility is given him. Look at my roster of mill men and explore these men’s background. They do not hold their present positions simply because they were carders, spinners, weavers or because they had a pull or because the boss liked them. One word, ability to do a job which someone recognized explains their present position.

A 1947 All-American football team has just been chosen. Were those 11 men chosen because coaches liked them and put them on the team? Were they chosen because they were able to win favor in the eyes of certain sports writers, or because they photograph well? No, they had what it takes. They were blessed with certain physical and mental assets which were developed through attention to detail and hard work, plus experience on the playing field and along with the previous experience of the staff of coaches which developed them. True it is there are many more, given the same training, the same opportunity, would have been just as great, but we do not condemn the great game of football because they were not chosen. No, the game remains great not because boys play to see their names in the headlines and to become All-American, but because they love to play the game.

Certainly there are overseers of spinning, carding, weaving, etc., who have ability and when given an opportunity will be successful on more responsible jobs. Some are textile school graduates, others are not, and still others never went to college at all. Some will get the opportunity, others never will. It is the same in every field of endeavor. To some the opportunity comes early and that star blazes across the sky of success; sometimes only a quick short blaze that is soon burned out—at other times a light that lasts long and contributes much. To others the opportunity comes late and to some not at all. This I think is best expressed in Thomas Gray’s “Elegy” written in the country church yard. I quote the 13th and 14th stanzas:

But knowledge to their eyes her ample page
Rich with the spoils of time did n’t e’er unroll;
Chill Peunray repressed their noble rage,
And froze the genial current of the soul.

Full many a gem of purest ray serene,
The dark unfathomed caves of ocean bear;
Full many a flower is born to blush unseen,
And waste its sweetness on the desert air.
The American Association of Textile Chemists and Colorists is a Natural Organization. It was organized in 1921 with the following purposes.

"To promote increase of knowledge of the Application of dyes and chemicals in the Textile Industry.

"To encourage in any practical way research work on chemical processes and materials of importance to the Textile Industry.

"To establish for the members channels by which the interchange of professional knowledge among them may be increased."

Recently a Student Chapter was organized by the upper classmen majoring in Textile Chemistry. These members are classed by the national organization as Student Members which when graduating will automatically become Junior Members. Student Members receive the same benefits as Junior and Senior members and will receive a copy of the annual Year Book and bimonthly issues of the American Dyestuff Reporter, which carries the Proceedings of the Association.

The Student Chapter plans to have three formal meetings during the school year, at which it is planned to have


a guest speaker. Approximately two informal meetings will be held monthly.

Professor Joseph Lindsay, Jr., was unanimously elected faculty advisor for the organization.

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more about the men, machines, and concepts for which he is or expects to be responsible.

Once it is decided that the individual possesses the necessary aptitudes and attitudes for potential success and a deal is made, opportunity must be afforded to nurture them. This brings us to the set up and working of a comprehensive training program.

First, let us realistically determine the responsibilities of a manufacturing supervisor and relate them to your training. The importance of this ability can not be over estimated. It makes or breaks a man regardless of his technical know how. As our Divisional Manager Mr. R. E. Henderson, so aptly puts it, "In the future, the man who makes his particular function the most successful, will not be the best engineer, the best scientist, nor the best educated. He will be the man who has learned the art of dealing with people and the basic truths of leadership". Dan River has no elaborate courses in How to Develop Leadership, but it does have courses in carding, spinning and loom fixing, which meet two hours a night and two nights a week. In these the trainee actually works with the men over and those who may be under him.

In a typical fixing class you may expect to find the operator on the set of frames next to the ones that you are learning to run on one side, and on the other, your overseer or superintendent, who may be in a student or instructor capacity. It is amongst the grease and gears that the trainees informally learn what some people disparagingly call the "old line" which enables him to get along with folks, both superiors and subordinates. At the same time he gains knowledge of the machinery for which he will be responsible and hence may command the respect of his people.

In the past five years the textile industry has made tremendous progress in managerial technology. Various necessarily complicated cost, quality, personnel and production controls are initiated and installed by consultants, yes, but it eventually becomes the manufacturing supervisor's job to effect them. Knowledge of these is gained in our extensive mill training. The trainee spends, for instance, a month in the Time Study Department. During this time he actually takes time studies, breaks the job into elements, computes normal times, works up his studies, and scientifically determines a reasonable job load. Such familiarity with our labor measurement system will put the potential supervisor in a position to appreciate cleaning schedules, job loads, and direct and indirect labor allowances. From the above you will readily see the desirability of thoroughly mastering your theory courses such as Textile Costing 41 and 42.

An overseer is further responsible for the application of control concepts such as fairly carrying out the specifications of the union contract. Evening school and several days in the Labor Relations Department provide opportunity for the trainee to learn company policy, grievance

Don River Training Program

(Continued from Page 7)
procedure, and best of all, methods of settling complaints before they become grievances. All other control concepts are briefly presented during the initial four months training period. This includes training in our Purchasing, Production Control, Maintenance, Designing, Accounting, Quality Control, Training, and all other service departments.

An insight into the interworking of the above departments enables the trainee-supervisor to see how his manufacturing operations fit in the goal—production at a profit.

At the completion of four months training, the trainee and management consult and decide for what type of work the man is best suited. The possibilities range from research or sales to production. Since most of you men are interested in production, we might well continue with the production man’s training. He will start at the opening room and learn to operate and fix breakers, pickers, cards, and fly frames. To attain skill on these jobs requires another nine months.

The weave room man has the same set-up but with emphasis on warp preparation, weaving, and loom fixing. Finishing plant men work from the grey room through shipping. After being exposed to such a systematic on-the-job training program along with evening school, a man is ready for and is given an opportunity at supervisory responsibilities which vary with the individual from second hand to departmental superintendent. It may well be brought out here that, due to the magnitude of our operations, a second hand at Dan River is comparable to the overseer in a small mill.

The conclusion that may readily be inferred from the above discussion is that scientific selection and a comprehensive training program provide unlimited opportunity for a young man if he is willing to “put forth the effort”.

Trainee-Supervisor applicant taking a mental alertness test. When a good overseer walks his job, he must spot such items as weight levers not level, neps in webs, or poorly set harness. He then plans his work to immediately rectify the condition.

FALL, 1947
of these must be obtained from an aggregate of the subjects taken at Clemson College.

Scholarship is only the first step. Those with the necessary points are submitted to the members of the chapter to be voted upon; however, no voting ensues until the character and personality of each individual candidate has been taken into consideration.

Phi Psi Fraternity is not only a student activity, but it continues to be of benefit to the members throughout his life in the textile business.

Carefully weigh the requirements and decide for yourself if the extra effort for good grades is worth the advantages derived from Phi Psi.

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Plants:

Easley, S. C. Liberty, S. C.

Mr. J. E. Sirrine Passes

Mr. Sirrine was a modest man. It was his request that there be no dedication service upon the completion of the textile building which bears his name. When the Textile Foundation in South Carolina was named in his honor, he felt it best that he discontinue soliciting funds, but continued his duties as Chairman of the Board for the improvement of the building.

Mr. Sirrine was responsible for much of the capable conviction that more competent instructors were needed to supplement those already in the educational field.

Mr. Sirrine was responsible for much of the capable construction in the textile industry and efficient production of textiles. He was skillful in selecting executives. It was men like him who proved that the South could be and is the best location for cotton and other textile industries.

His gifts are numerous, not only in the form of his great work and philanthropy but the example of his life is worthy of emulation. He never knew of failure, and believed inherently in honesty, thrift and hard work. Even during the last few years of his life when he was ill in health, and finally maimed and partially blind, he continued to come to his office for work. He had done so much good work during his life, and he knew there was much more that he could do for the textile industry of which he was proud.

Ed. note: We wish to thank some of Mr. Sirrine's many friends, Mr. A. S. Bedell, and Mr. L. W. Burdette of the J. E. Sirrine Company; Dr. R. F. Poole and Mr. J. C. Littlejohn of Clemson College as well as the P. & N. and D. & S. Magazine and the Greenville News for their help.

QM Training Available

every type of rough treatment a boot would undergo in combat. If the tests or experiments disclose shortcomings or defects the item is returned to the laboratory for additional development.

"Finally, before it is issued to the Army as a standard item, the article is tested under actual or simulated combat conditions. Oversea reports on supply items are carefully studied, the article is modified if necessary, and then when the experts are certain that the item is the best possible from every consideration, its specifications are standardized, and it is procured, stored and issued." 

Several colleges throughout the country have been given projects by the Quartermaster General involving the textile, agricultural, and chemical fields. This plan works for the mutual benefit of the schools and the Army.

It is interesting to note that Captain James T. Rhoden, QMC on the Quartermaster Board at Camp Lee, Virginia, graduated from Clemson in 1937 in Textile Industrial Education.

In view of the needs of the Quartermaster Corps for college graduates in textile fields and the establishment of the Quartermaster ROTC at Clemson College, it is felt that an added opportunity for a career has been made possible for the Clemson graduates in Textiles, Agriculture, and Chemistry.

Note: We wish to thank Colonel Albert J. Thackston, Jr., Inf. and Major Walter F. Hall, QMC, for their help in preparing this article.
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