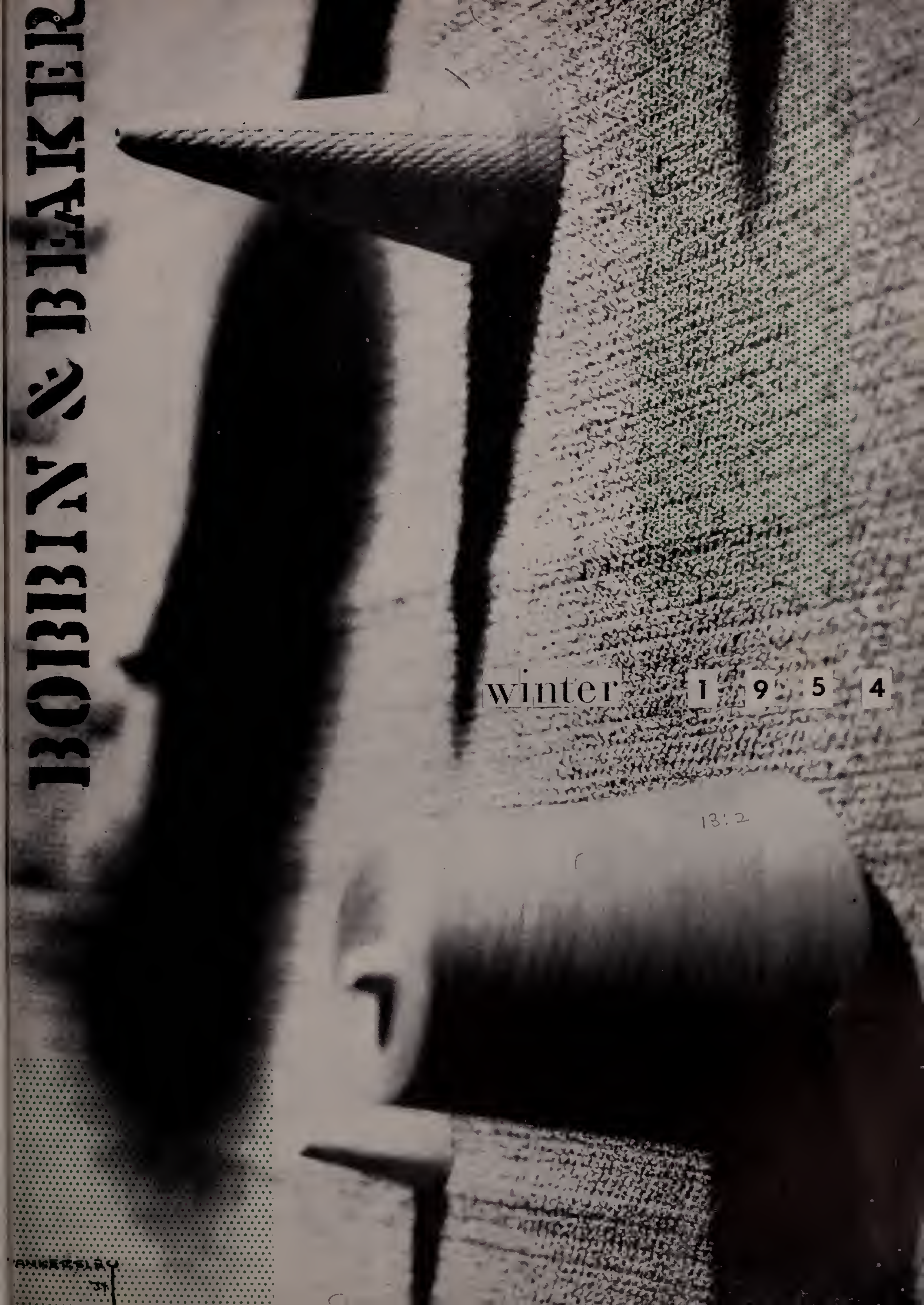
1955

The Bobbin and Beaker Vol. 13 No. 2

Clemson University


BOBBIN & BEAKER
winter 1954
13:2

THE

Bobbin & Beaker

Official Student Publication
Clemson Textile School

VOL. 13 WINTER 1955 NO. 2

The Staff

Faculty Advisors

In This Issue

THE COVER: You see on this cover a movement of forms playing shadows upon a "determined" field of texture. This in itself, objects and texture, suggests the content of the magazine—textile matter. The composition speaks of this in a way, not revealing the actual disposition of the matter inside, thus a phantom interest of what lies within, instills the individual to choose this magazine from a similar group when it perhaps might otherwise lie un-noticed.—Ladson D. Tankersley.

THE BOBBIN AND BEAKER. Organized in November, 1939, by Iota Chapter of Phi Psi Fraternity, and published and distributed without charge four times during the school year by students of the Clemson College School of Textiles.

Address: The Bobbin and Beaker, School of Textiles, Clemson College, Clemson, South Carolina.

POLICY—

The views and opinions expressed in all guest articles are those of the writers themselves, and must not be construed to necessarily represent the views and opinions of the Editors of this magazine or of the Faculty of the Clemson College School of Textiles.

THE BOBBIN AND BEAKER is a non-profit magazine organized to serve Clemson students and the textile industry. The publishing and circulation costs are financed solely through proceeds received for advertisements. We ask our readers to consider favorably our advertisers when buying.

Let's Visit The Textile School

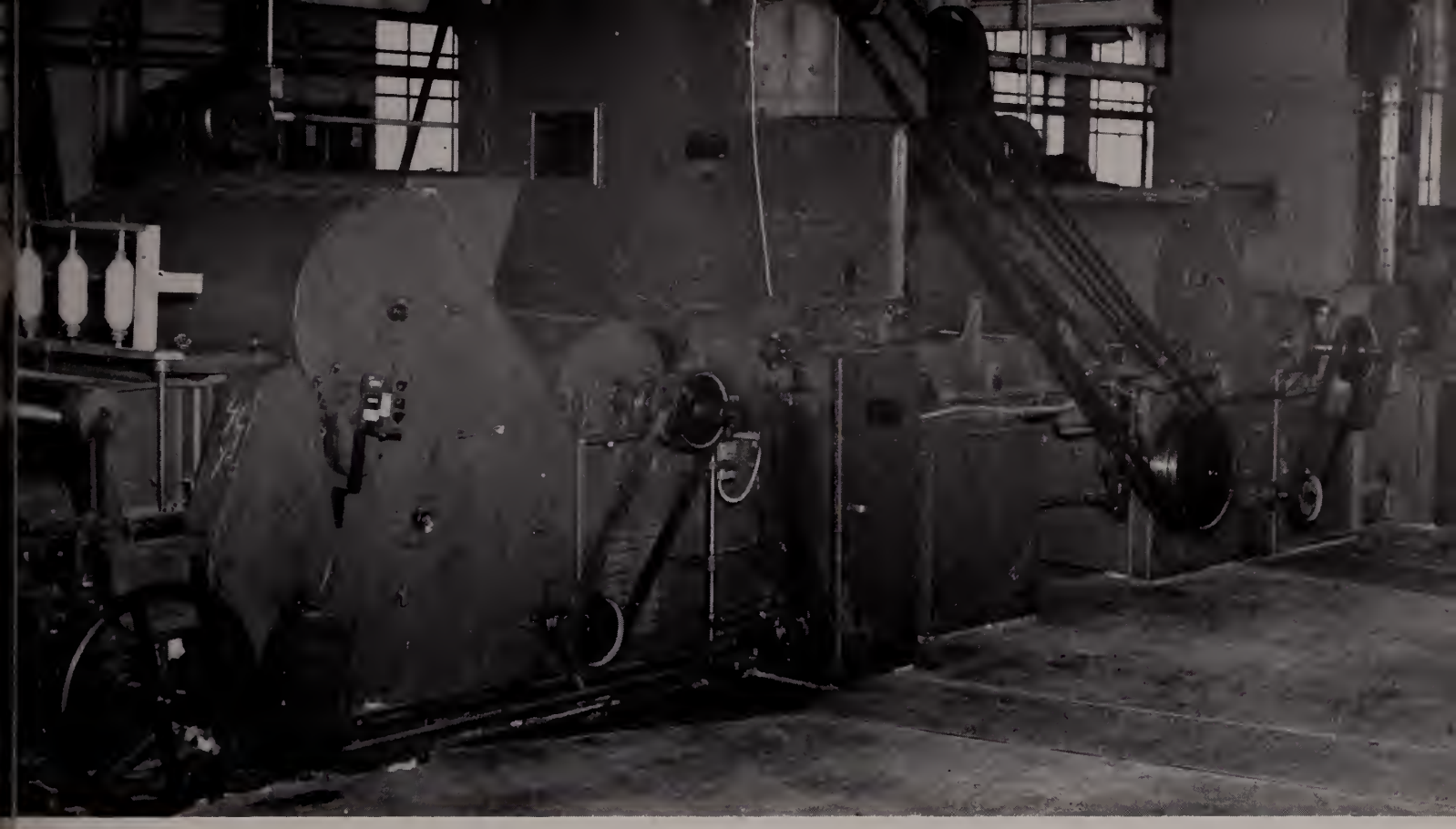
By Marshall M. Clinkscales
John Cothran and Bob Hughey, Photographers

This photographic essay is designed to illustrate the content and activity of the various laboratories to be found at Clemson's Textile School. It is hoped that in this way the reader who has never visited Clemson will become more familiar with the school and its instruments of training.

Some elements of the textile education progress at Clemson have been necessarily omitted from this story. They are the Jacquard Laboratory, the Junior Dobby Laboratory, the Sophomore Weaving Laboratory, and the Textile Library.

We wish to thank the Department Heads and Professors for rendering aid in the preparation of this article.—Editor.

Cotton Classing Laboratory—The cotton classing laboratory is located on the top floor, the West wing of the building. The long side of the room faces North, giving an excellent light with no reflections. It is used during school session for grading and stapling cotton in the cotton marketing class, and is used during the summer by a special four week cotton classing school. The laboratory is supplied with a set of Universal Standards for grading.



Opening, Cleaning, and Picking Laboratory—In the Opening, Cleaning, and Picking laboratory studies are made of the equipment used to open, blend, and clean the raw materials, and to prepare cotton and other staple fibers for succeeding yarn manufacturing processes. All equipment necessary to perform such duties is provided for in this laboratory. Some of the equipment is as follows:

2—Hopper type blending feeders
A Vertical opener
No. 11 Condensing section
No. 12 Lattice opener

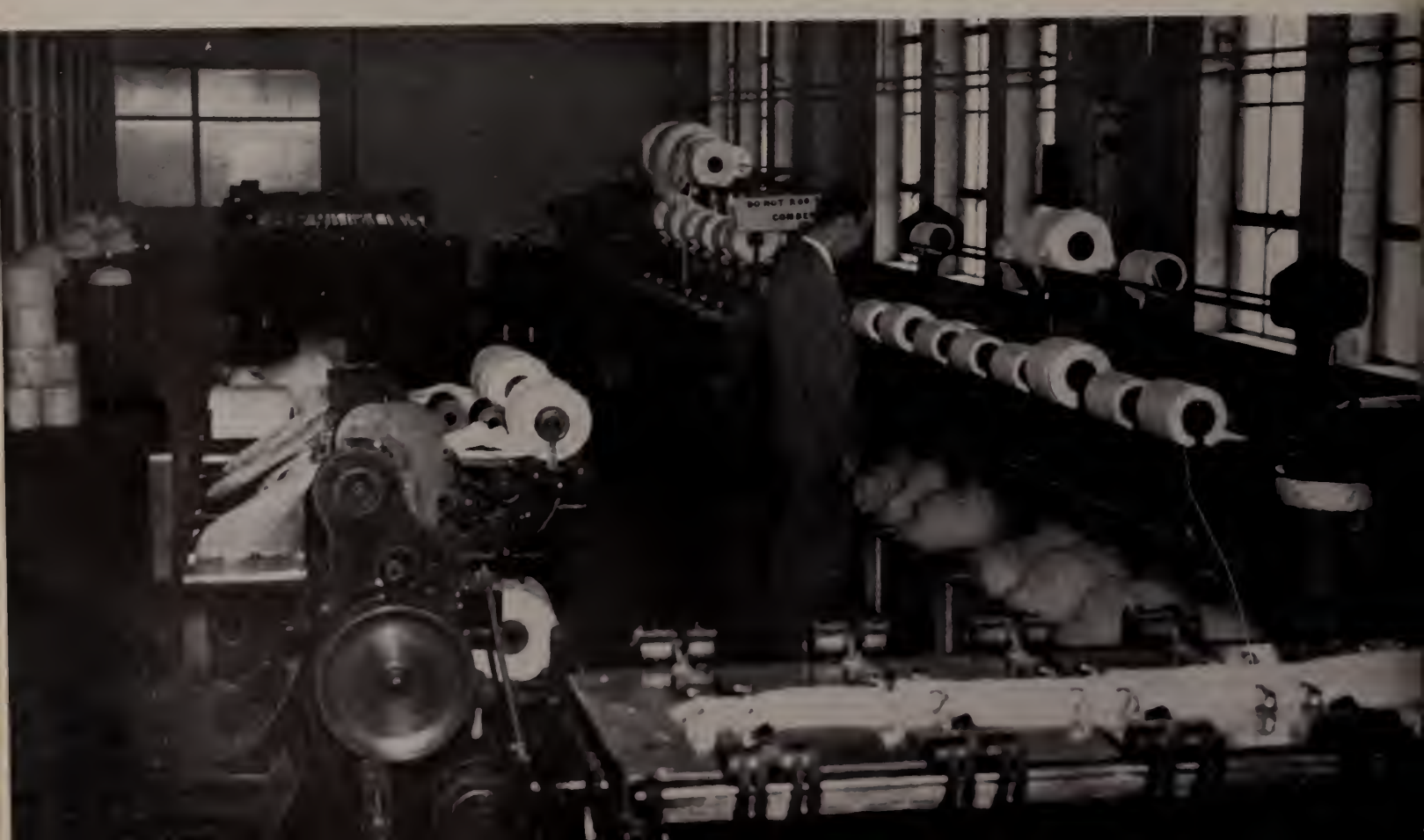
Carding Laboratory—The Carding laboratory consists of the following machinery:

One roller-top card, two revolving flat cards, three conventional drawing frames, one controlled draft drawing frame, and one lap winder.

The objective of this laboratory is to acquaint the student with the carding process, which enables him to learn the primary carding procedure.

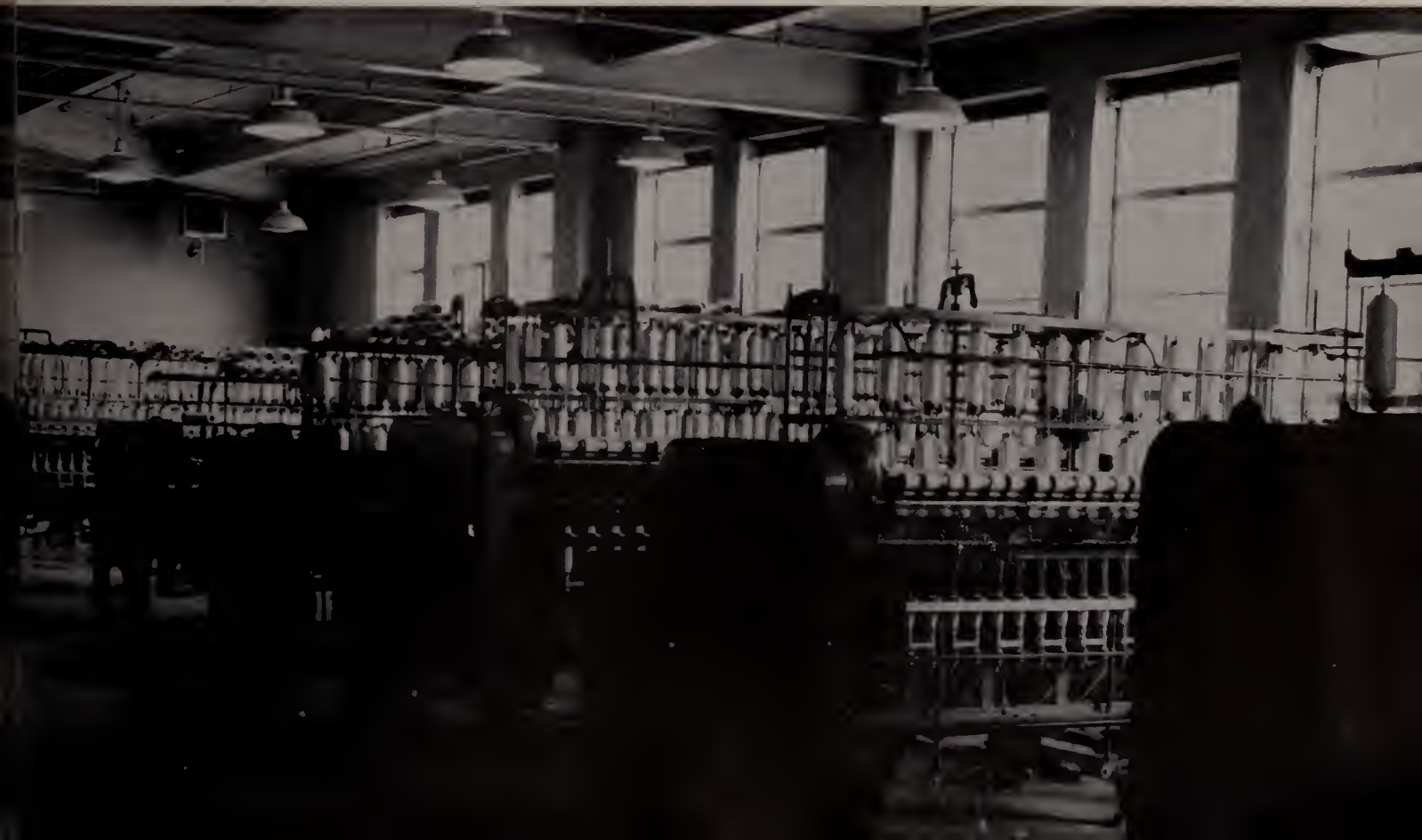
Roving Frame Laboratory—The roving frame laboratory is equipped with seven roving frames. Three of these frames are conventional frames and four are long draft. Two of the long draft frames have been converted from their original conventional style to their present long draft status, and the other two frames are new. With this set-up, practically any combination or range of drafts prevalent in modern roving processing can be accomplished.

Combing Laboratory—The combing laboratory has all the necessary equipment to instruct the student in the combing procedure. It has a long and a short piecing comber, two sliver lappers, one ribbon lapper, and one drawing frame. By observation the student learns to readily distinguish between combed and carded sliver. Primary mechanical motions of the comber are explained, while practical experience in operation of the various machines is the objective of this course.



Physical Testing Laboratory—The purpose of the Physical Testing laboratory is to give the student an understanding of the most important machines and techniques used in physical testing of fibers, yarns, and fabrics. Sample selection and a statistical analysis of experimental results, along with the applications of testing in modern textile research are stressed.

Spinning Laboratory—The spinning laboratory is used for practical instructions in spinning and twisting. It is equipped with thirteen spinning frames and five twisters. They are short frames, having from thirty-six to eighty spindles each, the short frames being excellent for instructive purposes. These frames include the various long draft systems. Sixty winding spindles complete the machinery layout.



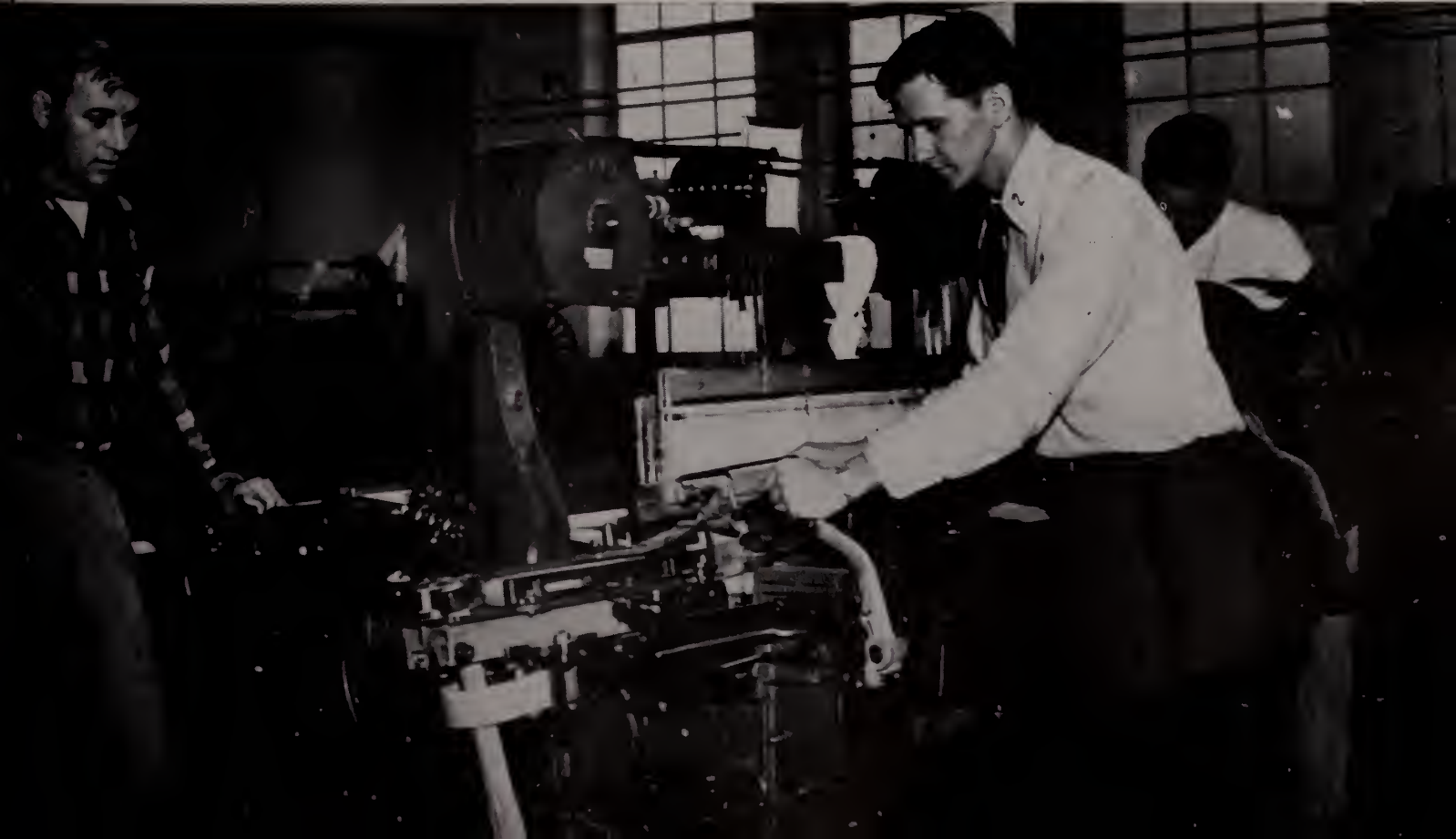
Warp Preparation Laboratory—The warp preparation laboratory contains new warp preparation equipment which includes a spindle-drive rayon warp and a seven-can rayon slasher. Supplementary slashing equipment includes a fifty gallon stainless steel size kettle, and beam handling hoist and carrier system.

With this equipment it is possible to warp and slash all types of yarn including nylon, viscose and acetate rayon, spun rayon, cotton, wool and blends of these fibers.

Knitting Lab: The knitting lab is equipped with machines to give a B. S. degree in knitting. It teaches a thorough understanding of semi-automatic and automatic knitting machine located in mills today.

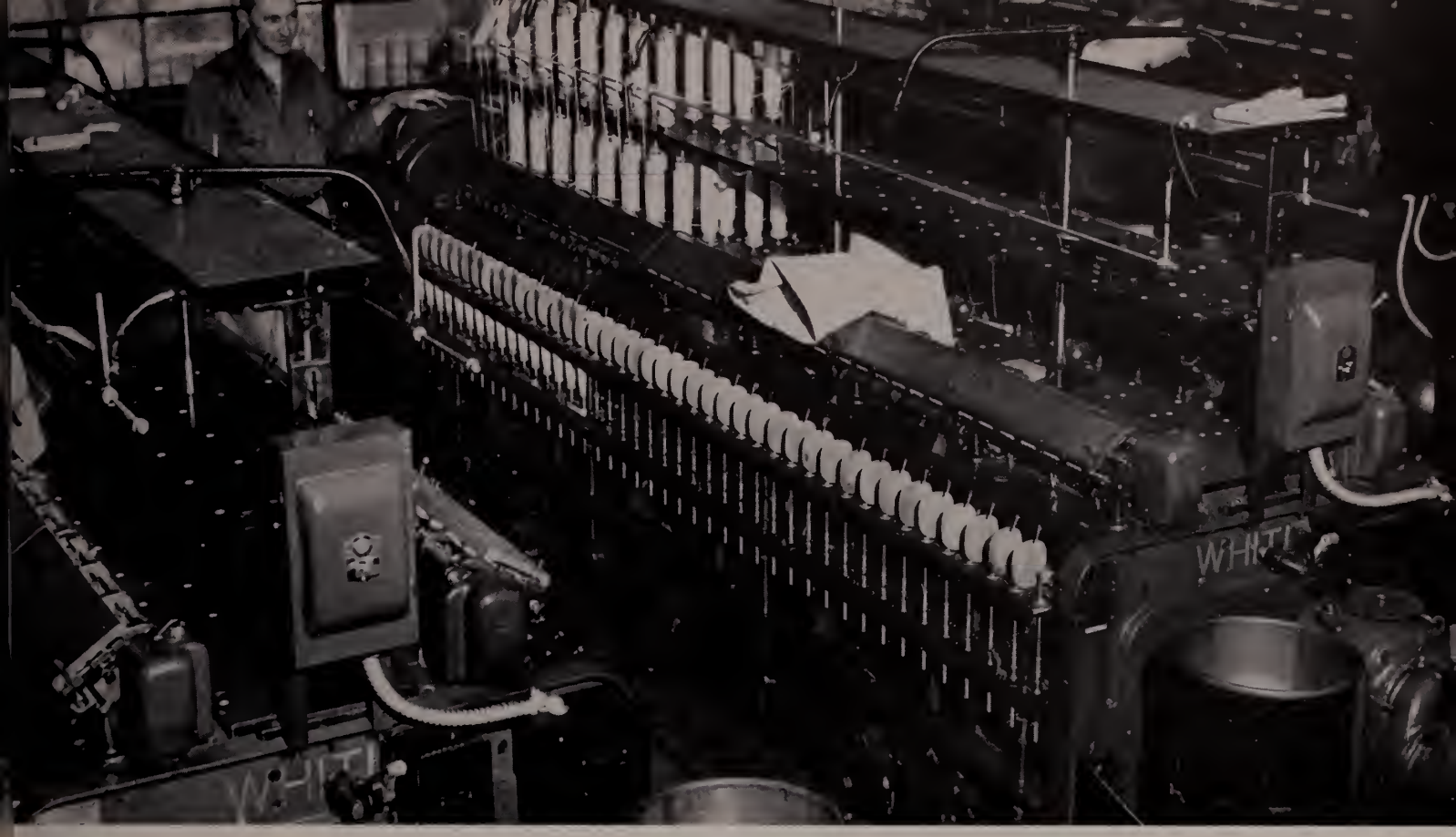
Dobby Laboratory (Senior)—The Senior Dobby Laboratory is used to teach Fabric Development to Senior students. Two students working as a team are required to design, make all calculations, and other data necessary for a fabric they have designed or for experimental fabrics submitted by the instructor. They are also required to tie on their own warps and make necessary adjustments on the looms so as to produce good quality cloth.

Cam Loom Laboratories—The Cam Loom laboratories contain twenty-one cam looms. Studies of the construction, mechanical operation, and adjustments of the cam loom are made. Also, analytical study of the loom, adjustment and timing of the shedding motion, picking motion, beating-up motion, gearings, speeds, and production.



Organic Chemistry Laboratory — The organic chemistry laboratory is located in the basement of the East wing of the building. The laboratory is equipped with the usual apparatus for carrying on experiments. Various experiments which are directly related to textiles are carried out.

Microscopy Laboratory—The Microscopy laboratory is designed to train the student in the use of the basic microscopic analysis of textile materials. This training includes not only the mechanics of manipulating the microscope but, more important, the study of all types of commercial textile fibers. These fiber types are examined for their individual characteristic which gives the student a means of recognizing different types of fibers, an understanding of the variety of features that can be studied by a microscope, and an ability to interpret and understand magnified images. The standard chemical laboratory compound microscope is used in all examination tests, it is also the basic instrument in conjunction with the necessary accessory equipment, used in micrometry, elementary cross-sectioning and polarized light analysis.



The U. S. Department of Agriculture, Production and Marketing Administration, operates a cotton fiber and spinning research office and laboratory on the first floor of the Clemson College Textile School Building. This laboratory is under the direction of Mr. J. M. Cook. Operations of this organization consist of fiber work, processing through weaving and finishing tests. Sources of the cotton run in this laboratory are various government cotton growing plots throughout the country, tests for government cotton ginning laboratories and various textile mills and cotton breeders who send in samples to be tested on a fee basis.

Fiber Friction in Textile Processing

By
Dr. J. H. Langston
Prof. of Textile Chemistry
School of Textiles
Clemson College

Variations in the surface character of the different textile fibers have long been recognized as being responsible, at least in considerable part, for the differences in certain of the physical properties of these fibers and for their different behavior in textile processing operations. Obviously, the smooth surfaces of nylon, the striated surface of viscose, the convoluted character of cotton, the scaly surface of wool fibers, etc., have different frictional characteristics which are reflected in the properties of the fibers.

Although the exact nature of the frictional forces between fibers is not known, it is thought that the ordinary mechanical frictional inter-action may be complicated by such factors as electrostatic attraction due to charges generated between the fibers and by cohesive forces operating between fiber molecules. These factors are probably components of the force which is referred to hereafter simply as "cohesion."

Due to the correlation between the scaly surface (high potential friction) of wool and its important practical felting and shrinking properties, a great deal of work has been done toward clarification of the relationships involved. Measurements of the coefficients of friction have been made using many different methods and techniques but all depending in principle on determining the force required to make the fibers slip or slide past one another or past the other friction element involved. Of course it is necessary to define rather carefully the conditions of measurement in any given case, i.e., whether the friction is between fiber and fiber, or fiber and metal, fabric, or some other frictional material. The fiber direction is also important, the with-scales value being quite different from the against-scales friction. This condition holds true with all animal hair fibers.

In the case of cotton and other fibers where the hair length is too short for easy handling by the friction-measuring devices used on the longer hair fibers, other techniques must be used. As yet there is no perfectly satisfactory means of determining exact coefficient of friction of cotton fibers, although the methods in use do allow for comparative evaluations. Actually, there is great variation in frictional measurements on cotton (as on all fibers) depending on conditions of growths, the diameter (and, therefore, surface area) of the fiber, whether or not natural wax is removed before measuring, etc. Really adequate measurement of fiber friction must wait until every component of the total forces involved is recognized and the effects actually being measured are thereby clearly defined.

Measurement of the coefficient of friction of a fiber does not necessarily indicate the pattern of frictional behavior of these fibers during textile processing. This is due to the paradoxical requirements for fiber behavior during drafting and spinning. Up to the front roller the fibers should slip past one another readily (low dynamic friction) so that they may be paralleled easily. From this point on, however, fiber cohesion should be great (high static friction) to hold the drafted sliver together and, by high cohesion, to reduce the amount of twist necessary to give yarn strength. Some work has been done in the Clemson Textile School toward developing an instrument to measure the frictional force operating between fibers during the drafting process. From a practical point of view this is, of course, a most important aspect of fiber friction which is not always represented accurately by the conventional measurements of dynamic frictional coefficient on single fibers or on fiber bundles under artificial conditions simulating drafting.

The requirement of low friction at one stage of the process and high friction from the same fibers at another stage is further complicated by the fact that too great a difference in static and dynamic frictional coefficients would result in uneven drafting, giving thin places where the fibers have started to move and thick places where initial movement is slower. Obviously the requirements of maximum static friction values, minimum dynamic friction values, and the least possible diference between the two are impossible to achieve, and practical yarn manufacture is the result of finding a suitable compromise between these contradictory conditions.

The basic frictional relationships among fibers may be modified by the presence of lubricants, either those occurring in natural fibers or those added (as spinning aids, etc.) in natural or synthetic fiber processing. The fundamental functions of lubricant ma-

terials are no more clearly defined than the nature of fiber friction; but, stated simply, a satisfactory fiber lubricant should reduce friction while maintaining or increasing cohesion during the process of yarn manufacture.

The frictional characteristics of yarn after its manufacture should be such as to facilitate the weaving process. In sewing and knitting, low kinetic friction is desirable to allow high speed of movement without damage to yarn, needle, or fabric. Sufficiently high static friction is necessary, however, to prevent the yarn from dropping off the spools or cones. Many commercial lubricants are available to fit specific requirements.

Reducing fiber friction by lubrication is not the only means of varying this property. At times it is desirable for various reasons to increase friction by adding anti-lubricants. Yarns so treated have greater slip resistance in woven or knitted goods, and sometimes, a decreased luster, which may be desirable.

Many different agents have been used for this purpose, ranging from powdered glass or carboard to synthetic resins. The most important and interesting of these agents, however, is colloidal silica which has been used to a considerable extent in the spinning of woolen and worsted yarns. It is claimed that the use of this material results in increased efficiency in carding and spinning with improved tensile strength, greater uniformity, reduced fly, increased production by reduction in twist, and a reduction in the number of ends down during spinning. On this basis, a higher grade yarn can be spun from relatively low grade stock. Sometimes a mixture of silica and lubricant is used to produce a desired balance of properties.

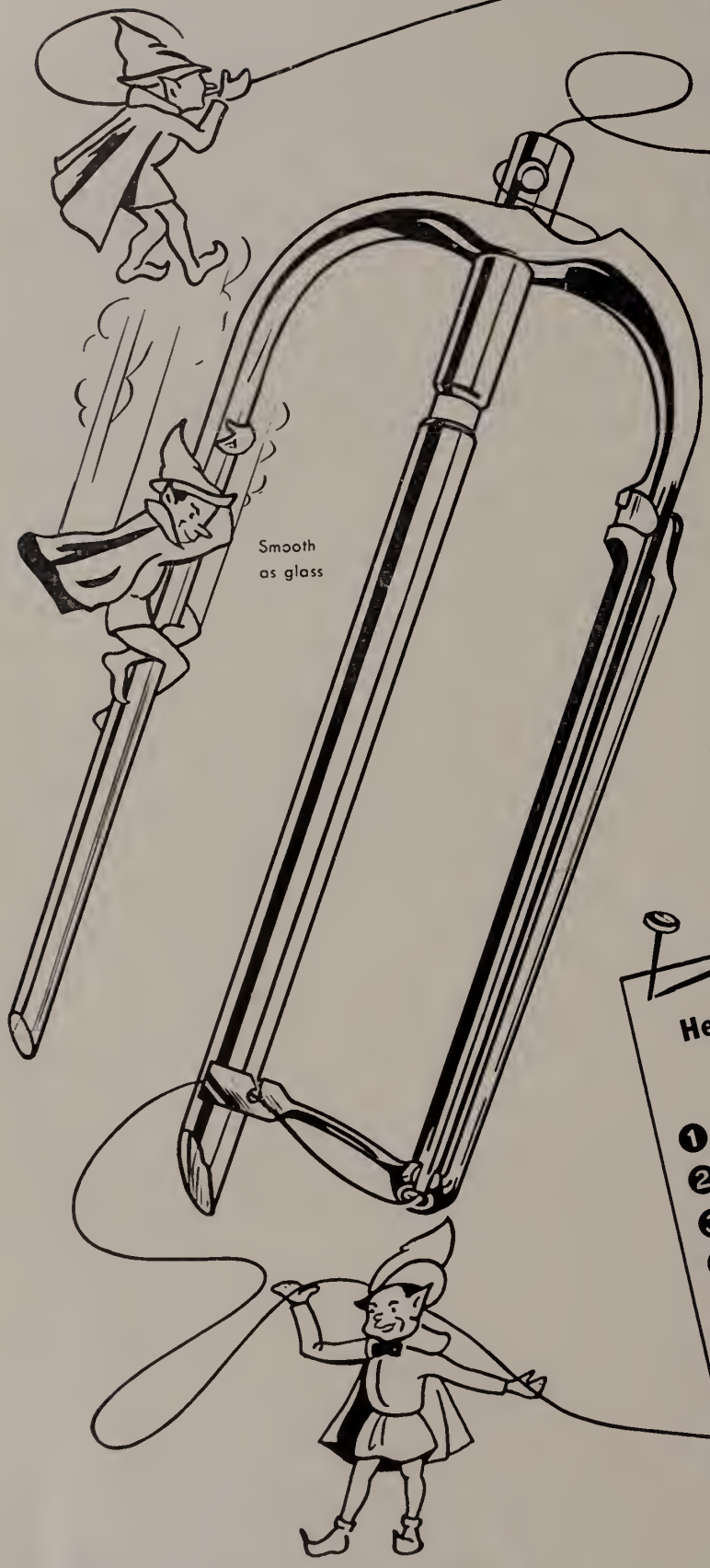
There is evidence that the use of colloidal silica on cotton gives results similar to those produced on wool, although the conditions for optimum results have not been standardized. Some tests indicate that there is tremendous variation in the effect of silica on different varieties of cotton, and that the amount of silica added, the method of its application, and the size of silica particles are all important in determining the ultimate effect.

It is interesting to note that one mill has been producing quality yarns from silica-treated cotton for a number of years, using a purely empirical treating process. This is an important practical indication of the results that might be expected from the use of carefully determined optimum conditions for silica treatment.

The Clemson Textile School, under the sponsorship of the U. S. Department of Agriculture, has published a general survey of the literature on fiber friction and has investigated the application of colloidal silica and other agents to cottons under a

(Continued on page 15)

Ideal Goldflyers* Won't Choke Up



Your troubles from choked hollow legs are over when you use Ideal Goldflyers. Fibres can't hang up on their beautiful smooth-as-glass finish. Flyer legs can't choke up to cause slubs or roving doublings. Ideal's Goldflyer finish is baked on and is guaranteed never to flake off or wear to a rough surface.

Ideal's Goldflyer finish is an addition to Ideal's matchless repair service. Specify it on your next repair (or reconditioning) order and you will get super-smooth running work and better quality roving.

Here's the Full Ideal Repair Service

1. Straightening noses
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3. Blocking flyers and pressers
4. Rebuilding worn parts of flyers to factory specifications
5. Heat tempering flyers to give extra rigidity
6. Selecto-speed** balancing for your operating speed
7. Plus super-smooth Goldflyer finish. RCK (Black), or Rayon(Bright) finishes optional.

Ideal Machine Shops, Inc.

Bessemer City, N. C.

Write, call, or wire for full information.

**Patented
*Trade Name

29th Year of Continuous Service to Textile Mills

Clemson Knitting Department Stresses Versatility

T. F. Ballentine

Mr. Ballentine finished Clemson in the class of 1954. He returned to school this fall to accept a position as Instructor of Knitting for a period of one year. He now teaches all knitting courses offered at Clemson.

In recent years, an art, as ancient as some of the old master paintings that hang in our museums, has come of age. Although the manually accomplished version of the art of knitting still flourishes, by far the majority of it is done by machinery. The art of knitting has indeed come a long way and it continues to grow daily. It is becoming an increasingly important factor in the field of wearing apparel for both men and women.

The greatest advance in the knitting industry was caused by the appearance of the now commonplace, "miracle fibers." Perhaps the first real "miracle fiber" was nylon which made its debut at the New York World's Fair just before the Second World War. Although rayon was conceded to be a better yarn than silk for hosiery manufacturing, nylon quickly replaced it as soon as it became available to the textile industry. Nylon now holds almost complete dominion over the other synthetic fibers in this phase of textiles. The synthetic trend grew steadily with the appearance of orlon, dacron and other yarns that were quickly adapted to knitting. Each has secured its niche in the textile industry.

Thus it is easily seen that the growing demands of the industry places proportionately increasing demands on our textile schools. The knitting department at Clemson attempts to cope with these demands by giving the students a complete education in all forms of knitting, designing and garment production. The curriculum calls for six knitting courses that cover all phases of knitting, from hosiery manufacture to bodywear knitting and garment manufacture. This adequately prepares the student for any type of employment he may seek in the industry.

Research is another by-word of the knitting department. In addition to several projects carried on by the textile school, it also helps the neighboring textile mills when and where it is possible. The most recent of these projects is the testing of Agilon, a nylon stretch-yarn produced by Deering-Milliken, which apparently will be a welcome addition to the field of hosiery manufacture. Other mills, both large and small, have called upon the department for advice in producing knitted goods.

The department is also noted for a sideline job of flag-making, notably the state flag. This part is carried on by Mr. J. C. Williams, a technician and part-time instructor. Among the first flags made by Mr. Williams were two requested by our Governor, the Honorable James F. Byrnes. Originally the school was required by law to make these flags at cost for public institutions. The law states that the flag be made of blue cloth with a white palmetto and crescent. The Palmetto is sewn onto the fabric with a stepping-needle machine which attaches the cut-out firmly to the fabric. Anyone may order flags through the Dean of the School of Textiles.

Thus concludes a brief summary of the work done by the knitting department to improve the industry through the system of mill-school cooperation and most important, the well-rounded training of students.

FIBER FRICTION IN TEXTILE PROCESSING

(Continued from page 13)

variety of conditions in an attempt to correlate some of the factors mentioned above. A report of the findings of this investigation should soon be completed.

Although the frictional characteristics of fibers and yarn may contribute to the frictional properties of fabrics which they make up, their effect may be modified appreciably by the design of the fabric. For this reason, a treatment of fabric friction is not considered appropriate in this discussion. However, in certain aspects of fabric finishing as in raising nap, in fulling, etc., fiber and yarn friction are extremely important and cannot be ignored. In these cases the desired balance of frictional properties is obvious and may be varied by the use of the same types of friction-modifying agents as previously mentioned. Fabric friction is very important from the standpoint of wear resistance and may be measured by several methods.

From the foregoing discussion the importance of fiber friction to the textile industry is apparent. It will be of great interest to see what results will come from further investigation of the theoretical and practical aspects of the subject.

Where Are They Now?

Superintendent of Weaving

G. H. Hames '40, Borden Mills, Kingsport, Tenn.
H. R. Hoke '49, Brookford Mills Div., Brookford, N. C.
C. L. Langston '50, Slater Mfg. Co., Slater, S. C.
P. R. Rice, '50, Kingsley Mill, Thomson, Georgia.

Assistant Superintendent of Weaving

R. B. Fulmer '40, Springs Mills, Lancaster, S. C.
M. R. Goodman '47, Burlington Mills Corp., Shannon, Georgia
Emery Bates, Jr. '49, Augusta Weaving Division, Augusta, Ga.

General Overseer of Weaving

C. J. Glenn, '43, Abbeville Mills Corp., Abbeville, S. C.
J. C. Austell '47, Burlington Mills, Roanoke, Va.
W. E. McSwain '49, United Merchants & Mfgrs. Union, S. C.

Overseer of Weaving

W. D. Metts '34, Mills Mill No. 2, Woodruff, S. C.
M. J. Pinson, Jr. '36, Dan River Mills, Danville, Va.
W. R. Martin '47, Pacific Mills, Cayce, S. C.
Joel Phillips '48, Utica-Mohawk Mill, Clemson, S. C.
D. D. Rice, Jr. '48, U. S. Rubber Co., Winnsboro, S. C.
N. V. Smith '48, Springs Mills, Lancaster, S. C.
R. A. Bolick '49, Muscogee Mfg. Co., Columbus, Ga.
G. W. Griggs '49, Cannon Mills Co., Kannapolis, N. C.
J. R. Johnson '49, Startex Mill, Startex, S. C.
A. E. Saylors '49, Matthews Mill, Greenwood, S. C.
R. W. Sistrunk, Jr., '49, Whittier Mills Co., Atlanta, Georgia
J. R. Snipes '49, Gluck Mill, Anderson, S. C.
L. S. Smith '49, Kingsley Mill, Thomson, Ga.
S. E. Ball '50, Appleton Mill, Anderson, S. C.
J. R. Pruitt '50, Woodside Mills, Greenville, S. C.
H. L. Gambrell '51, Galey Mills Corp, Pickens, S. C.

Assistant Overseer of Weaving

H. S. Ackis '41, Johnston Mills, Johnston, S. C.
Wm. Leonhirth '41, Springs Mills, Lancaster, S. C.
H. R. Kinnedy '49, J. P. Stevens, Clemson, S. C.
J. O. Cleveland '50, Orr Mills, Anderson, S. C.
Q. H. Gellers '50, Kendall Cot. Mills, Prosperity, S. C.
J. W. McMahan '50, Burlington Mills, Galax, Va.
C. L. Pace '50, Ossipee Weaving, Elon College, N. C.
J. B. McIntyre '51, Mayfair Mills, Arcadia, S. C.
J. L. Langley, Jr. '52, Consolidated Textile Corp., Lynchburg, Va.
K. F. Sanders '52, Burlington Mills, High Point, N. C.
J. R. Shirley, Jr. '52, Burlington Mills, Burlington, N. C.

Second Hand of Weaving

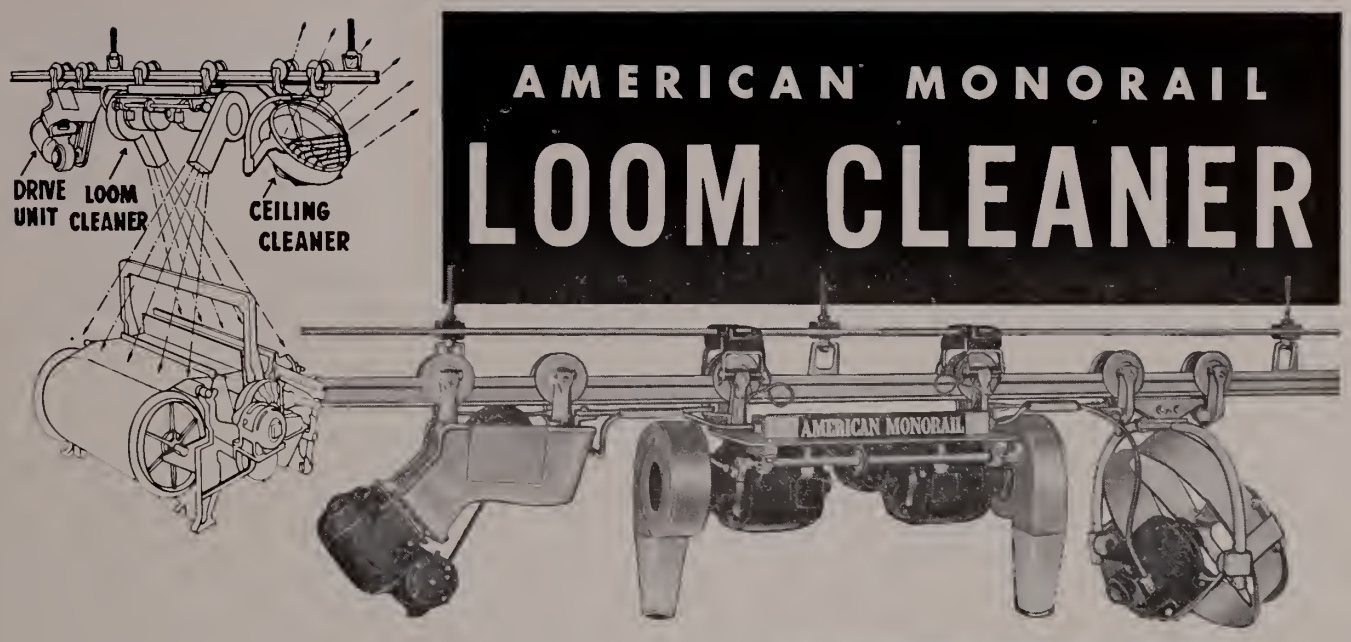
M. C. Elrod '49, Kingsley Mill, Thomson, Georgia
G. E. Uldrick '49, Woven Plastics, Abbeville, S. C.
R. A. Gettys, Jr. '50, Dan River Mills, Danville, Va.
J. D. Hopper '50, Slater Mfg. Co., Slater, S. C.
D. W. McCoy '50, Roanoke Weaving, Roanoke, Va.
C. W. Patterson '50, Laurens Mills, Clinton, S. C.
G. C. Ridenhour '50, Judson Mills, Greenville, S. C.
H. S. West '50, Union-Buffalo Mills, Buffalo, S. C.
B. R. Black '51, Monarch Mills, Union, S. C.
D. H. Campbell '51, Dan River Mills, Danville, Va.
G. R. Isenhour, Jr. '51, Burlington Mills, Franklington, N. C.
A. H. Clarke '52, Slater Mfg. Co., Slater, S. C.
J. V. Roberts '52, Deering-Milliken, Rutherfordton, N. C.
L. J. Sigmon '52, Burlington Mills, Fayetteville, N. C.
R. I. Howard '53, Greenwood Mills, Greenwood, S. C.

AMERICAN SOCIETY FOR QUALITY CONTROL

The fifth annual conference of the Textile Division, American Society of Quality Control will be held January 27, 28 and 29 at the Clemson House, Clemson, S. C. Approximately two hundred people are expected to be in attendance, including textile men from England, Canada, Mexico, and from all over the United States.

On January 27, there wil be tours around the various departments of the textile building. On January 28 and 29, several speakers will discuss the various stages of Quality Control.

Details and registration blanks may be obtained by writing Dr. R. G. Carson, Jr., who is General Chairman of the Conference, Textile Building, Clemson, South Carolina.



AMERICAN MONORAIL LOOM CLEANER

prevents lint accumulation on looms and weave room ceilings

The first experimental loom cleaner was placed in operation by American MonoRail in 1948. A similar model was shown at the Southern Textile Exposition, Greenville, S. C., in 1949 and earlier that year was the subject of editorial mention in the textile magazines.

Since that time, much data has been gathered covering the application of loom cleaners under widely varying conditions. Not all experiments were successful. American MonoRail engineers are, therefore, fully qualified to make accurate recommendations based on actual experience.

Here are a few results obtained under the conditions recorded—

Cost of cleaner installation reclaimed in 1.7 years by reduction of manual cleaning in a weave room operating at 77% humidity on synthetic yarn making fine goods.

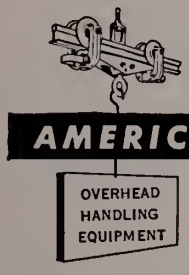
57% reduction of cleaning labor alone in weave room running over 1000 looms—90% humidity—light sizing—making gauze.

In a mill running on broadcloth, loom and ceiling cleaning over 500 looms showed an average of 1% upgrading of cloth. Cleaning labor savings pay for installation every two years.

Before you buy, make true mechanical evaluation of this equipment. Let an American MonoRail engineer offer recommendations at no obligation.

with automatic loom and ceiling cleaning 57% of manual cleaning is eliminated. Ceilings are blown-down once a month instead of every week.

without automatic cleaning lint piles up quickly. Above picture shows accumulation in 16-hour operation.



AMERICAN MONORAIL COMPANY

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Outstanding Seniors

WILLIAM F. HARPER — Frampton Harper, a textile manufacturing major from York, S. C., is well-known throughout the college as well as in the School of Textiles. Being the Cadet Chaplain, Framp is known as the "parson" to most of the troops. A recent honor was to be listed in the 1954-55 edition of **Who's Who in American Colleges and Universities.** He belongs to Phi Psi, a textile honorary fraternity. Other clubs and fraternities of which he is a member are Senior Platoon, Scabbard and Blade, Tiger Brotherhood, and Canterbury Club. He is vice president of Blue Key. Framp's hobbies are reading, hunting, and fishing. After his tour of Air Force duty, he hopes to join a training program in a mill and then decide which type of textile work he will follow. Framp has worked at Rock Hill Printing and Finishing Company and at Sullivan Southern Mill in York, S. C.

WILLIAM A. KEY — Fishing, hunting, and collecting records of modern jazz are the hobbies of Bill Key, textile manufacturing major from Columbia, S. C. He belongs to N.T.M.S. and Phi Psi, a textile honorary fraternity. He is also a member of the Senior Platoon, Student Assembly, and Blue Key. He will be listed in the 1954-55 edition of **Who's Who in American Colleges and Universities.** Bill has been employed by Pacific Mills in Columbia for three summers, working mostly in the weave room. He would like to enter the textile business in production and settle down in sales. As a result of his experience in a mill, Bill has noticed the difference between the way subjects are taught and the way they are applied in the mill.

WILLIAM O. STONE, JR. — Bill Stone, twenty-two year old senior majoring in textile chemistry, is one of the outstanding students in the Textile Department. He was also a member of the Pershing Rifles, Freshman Platoon, and Track Team, specializing in the one-quarter and one-half mile cross country run. Bill will finish in June and plans to enter the dyeing end of the textile business. He will get a Signal Corps commission and will enter the service in January of 1956. Bill finished Newberry High School and hails from Newberry, S. C.

PLEASE!

Help us to keep our files up to date. Our sincere THANKS to all of you who answered our appeal in the last issue. If you haven't answered, please fill in the form below and mail to:

THE BOBBIN AND BEAKER
School of Textiles
Clemson, S. C.

Name _____

Position _____

Mill or Company _____

Local Address _____

The BOBBIN & BEAKER Invites You
To Hear The Discussion Of . . .

THE EIGHTEENTH ANNUAL SOUTHERN TEXTILE EXPOSITION

By Emil Stahl

The week of October 4-8 marked the eighteenth showing of the Southern Textile Exposition in Greenville, S. C. Since its opening in 1915, the exposition has grown larger and larger with each successive year. Over 300 exhibitions of textile machinery, equipment, and supplies were shown this year in Greenville's Textile Hall. Besides the many domestic exhibitions, several foreign countries were also represented — West Germany, Switzerland, and England being included.

The following comments were expressed by a few seniors majoring in textiles after being questioned on what they enjoyed most about the exposition; the outstanding feature that they noticed; and what improvement they would like to see at next year's show.

The majority of those questioned on what they enjoyed in particular answered that they liked talking to the respective company representatives about their product and the various problems that arise in the textile industry. The many Clemson Alumni present gave the show a special added color.

In general, it was thought that the foreign displays were by far the most outstanding new feature. The high speed Ruti loom received the most comment. The German quiller also received favorable comment.

The exposition left a very favorable impression on all, though some thought that in comparison to the amount of new features, there was too much repetition of exhibits that have been shown in previous years.

In regards to possible improvements for future years, many students thought that if one type of textile machinery could be located in one particular section that much confusion would be eliminated. Also that if the hours of the exposition could be lengthened, many more people could come to view the many sights. In place of the many advertising displays, in general it was thought that more space could be devoted to showing of the machinery which is more directly concerned with the business.

Several students commented that the exposition would have been more interesting had there been a few guides to show small groups around. This would eliminate the possibility of over-looking items of importance that might be located in out-of-the-way corners.

I was particularly surprised to find the absence of knitting machinery. In view of the very prominent position which the knitting phase of the industry plays, I believe it would be of the utmost interest to personnel in the field, to have machinery of this type represented at the exposition next year.

Office Notes

By Charles H. Ferguson, Editor

This year, THE BOBBIN & BEAKER is trying to bring you a magazine which will be more interesting to the students at Clemson as well as our other readers. We are adding color by presenting more student personalities, increasing interest by having leaders in the textile field write guest editorials and striving for a better magazine by asking you—the reader— for advice. We can only do this with your cooperation and your willingness to help.

For fourteen years, THE BOBBIN & BEAKER has been a principal link between the School of Textiles and the textile industry. Most of its success belongs to THE BOBBIN & BEAKER staffs of this and past years, plus the gracious assistance given to us by our faculty advisor, but a large part of this success comes from advice written to us from our readers. We encourage you to help us make a better BOBBIN & BEAKER.

Highlights of our next issue will be two guest editorials: One from Mr. W. J. Erwin, President and Treasurer of Dan River Mills; and one from Mr. E. H. Hines, Jr., General Manager of the McCormick Group, Deering-Milliken Corporation. Also Professor Roscoe J. Breazeale will present an article entitled, "The Challenge" which should prove very interesting.

THE BOBBIN & BEAKER expresses sincere appreciation to Professor A. E. McKenna, who has been our adviser for the past six years. Professor McKenna is head of the Weaving and Designing Department and teaches warp preparation.

Remember, we need your help and look forward to hearing from you.

OUTSTANDING SENIORS (continued)

JOSEPH F. MATTISON — Joe Mattison, a textile chemistry major from Belton, S. C., is one of the few high honor students in the entire college. He is vice-president of Phi Psi and AATCC, textile fraternities, and is co-editor of the Blue Key directory. He will also be listed in this year's edition of Who's Who in American Colleges and Universities. Joe, a Distinguished Military Student, plans to receive his commission in the Quartermaster Corps. He attended summer camp at Fort Lee, Va. He is assistant S-3 on the Cadet Regimental Staff. His summers have been spent working for his father in Mattison's Hardware in Belton, S. C.

South Carolina Mill:
LOOM STOPPAGE Reduced 50% on COTTON yarns

North Carolina Mill:
WEAVERS LOAD Increased 25% on FILAMENT yarns

O-W Lubekote Applicator* installation on slasher of a well-known North Carolina mill. The Applicator is placed **between** the drying cylinder and the split rods. The sized and dried yarn passes over the driven roller which picks up O-W Lubekote in a melted state and transfers it to the warp. In the background is the melting pot reservoir feeding the trough through which the roller revolves. In the foreground are cables supplying automatic speed and temperature control.

In this photograph, the positioning of the Applicator between the slasher cylinder and the split rods can be easily seen. The box-type apparatus in the foreground is the melting pot reservoir feeding melted O-W Lubekote into the Applicator trough.

This mill subjected O-W Lubekote to exhaustive production tests for six months. The results obtained were highly satisfactory and proved beyond doubt that O-W Lubekote processing effected considerable savings in both time and money. For a year now the application of O-W Lubekote has been standardized procedure on all slashers in this mill.

* Patent pending

SIZE the warp—DRY the warp

then use O-W LUBEKOTE on TOP of the sizing!

After the warp is sized and dried — cover it with O-W Lubekote to improve weaving qualities.

O-W Lubekote is a self-drying, plastic, wax-like substance which forms a uniform, smooth, lubricous coating on top of the size. Improves flexibility of the yarn.

Actual mill production tests prove that yarn coated with O-W Lubekote weaves better because it has far greater resistance to abrasion by the harness, reed and shuttle.

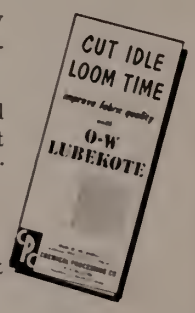
In a major cotton mill in South Carolina, loom stoppage was **reduced** 50% after processing the yarn with O-W Lubekote.

In a major filament yarn mill in North Carolina, weavers' load was **increased** 25% after processing the yarn with O-W Lubekote.

Many large mills have standardized on O-W Lubekote processing.

There's less hanging and breaking, less fly and shedding because O-W Lubekote completely covers the dry, flaky, sizing film and makes the yarn smooth.

O-W Lubekote is applied on top of the sizing — **after the size is dried** — by means of the O-W Applicator* installed right on the slasher.



Use it over any sizing on cotton and synthetic spuns, synthetic filament yarns—without sizing on the higher twist filament yarns.

Write today
for the question and answer booklet **"Cut Idle Loom Time with O-W Lubekote"**

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If you have a specific problem, our technical service department would welcome the opportunity to submit samples to meet your individual needs.

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Dileine P—A non-yellowing permanent type, particularly useful with pastels

Dileine Conc.—A more economical permanent type

The Dileine series are immediately soluble and make perfect emulsions. They are added directly to the dyebath with the dyestuff. No special preparation of the goods is necessary. They are equally effective with either normal or high-temperature dyebaths.

MELEINE SERIES

Meleine—A semi-permanent type for box dyed fabrics. It is applied after dyeing—in the finishing operation—at a controlled padding temperature. It increases the light fastness of many of the lower-priced acetate blue dyestuffs.

Meleine RS—A water-soluble type, highly resistant to dry cleaning. Recommended for jig-dyed fabrics. It is applied in the finishing operation and does not require temperature control. It is excellent for washable fabrics in combination with Dileine Conc., as well as resin-treated fabrics.

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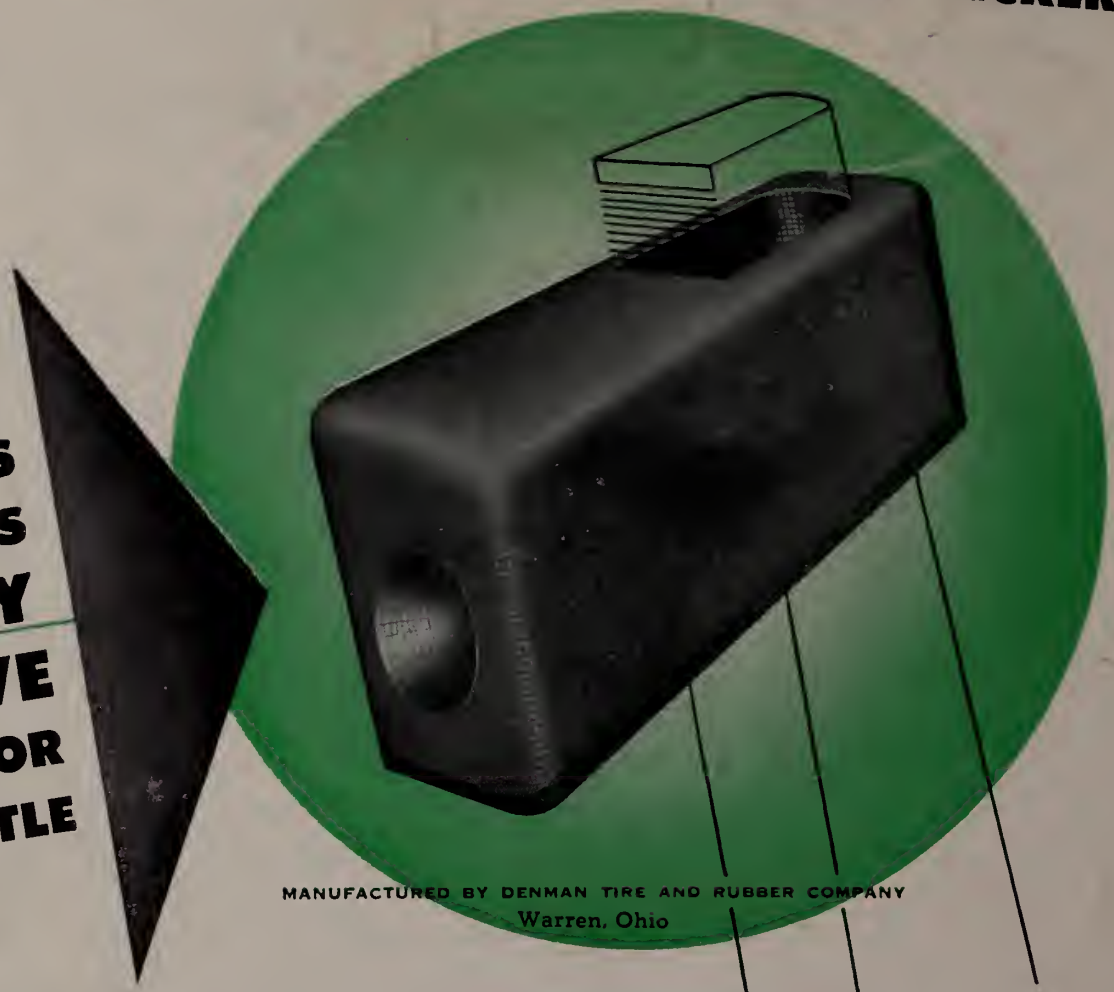

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