



ASHRAE

American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc.

**La Crosse Area Chapter
1996 - 1997**

April 2, 1997

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Mr. Robert J. Lavick
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Subject: Gold Ribbon and Log Book of TIME Award
15th Entry - History of a System

Dear Mr. Lavick:

I am enclosing the La Crosse Area Chapter, 15th entry, for the Gold Ribbon and Log Book of TIME Award. The La Crosse Area Chapter is delighted to submit the History of a System "Premium Quality Footwear," a product of LaCrosse Footwear, Inc., which uses many ASHRAE fundamentals to provide a worldwide product.

Thank you.

James M. Ritter, P.E.
Chapter Historian
La Crosse Area Chapter

CHAPTER MAY NOT ACT FOR SOCIETY

HISTORY OF A SYSTEM

PREMIUM QUALITY FOOTWEAR

The Early Years

LaCrosse Footwear, Inc. designs, manufactures, and markets premium-quality footwear, crafted in America by skilled workers who are proud of their company. The company celebrated its 100th anniversary on January 23, 1997.

The company was first established in 1897 as La Crosse Rubber Mills Company by a group of local citizens in La Crosse, Wisconsin. Led by Albert Hirshheimer, Michael Funk, and George Zeisler, the company started with 25 employees working on 160 steam-powered sewing machines.

These men conceived an idea that the climatic conditions in that period of time caused transportation problems, since roads were not designed for the weather conditions. The mode of transportation was the horse and buggy and weather conditions in winter and spring were icy, muddy, and not to the horses' liking. If some device could be developed to help keep the horses' feet somewhat warm, it would improve transportation in that terrible climate.

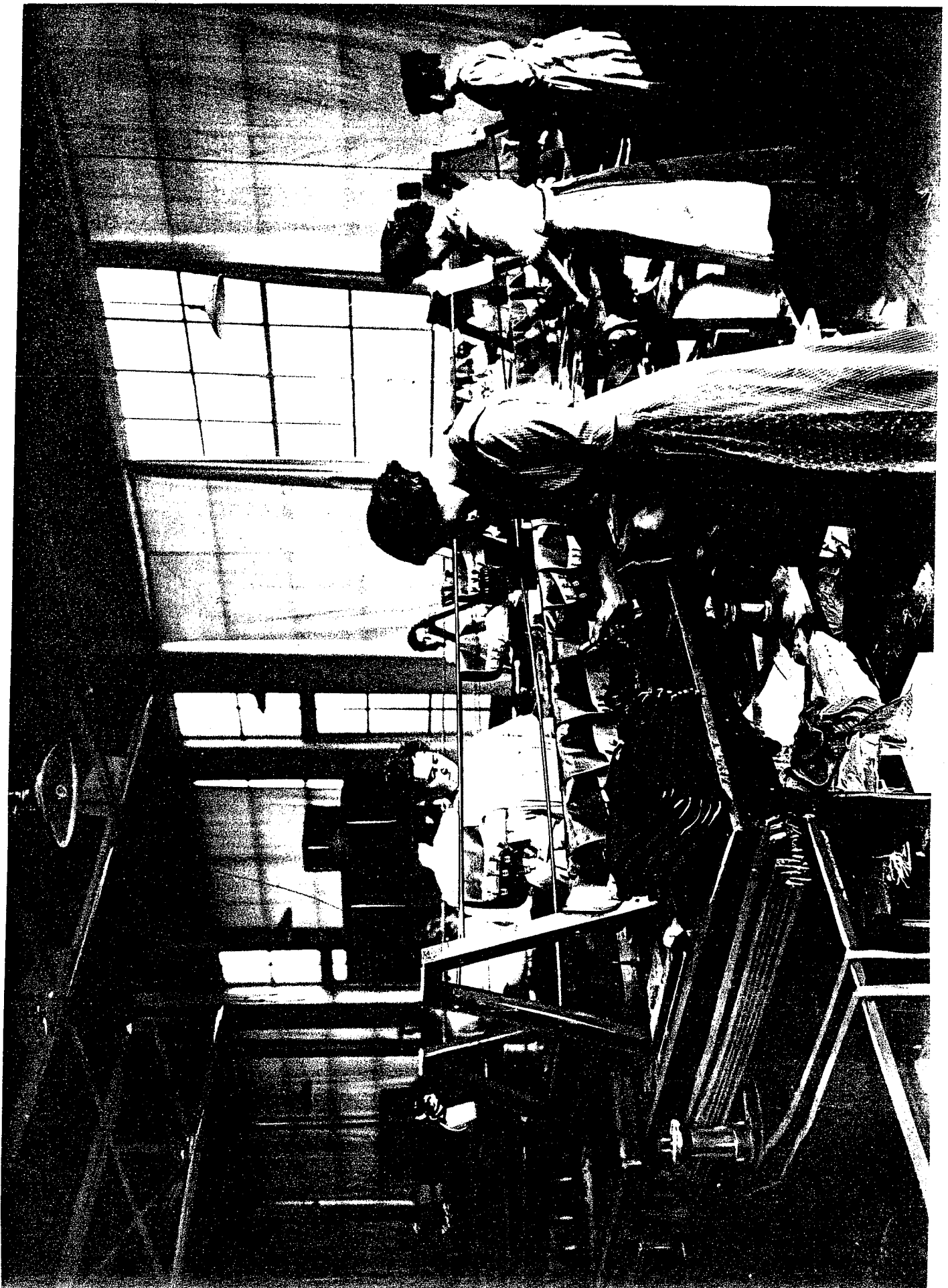
The first product of the Company was rubber horse shoes. The concept was so successful that it did not take long to discover the value of rubber footwear to humanity. The Company soon switched from producing horse shoes to making rubber-coated fabrics and raincoats. From the beginning, La Crosse Rubber Mills Company stressed "quality goods, workmanship, and honest values."

The Footwear System

Manufacturing rubber boots is done by hand and very labor intensive. Each boot passes through the hands of more than 100 people from start to finish. To begin the process, the raw materials, rubber imported from Malaysia and Indonesia and other products, are gathered in a warehouse where they can be used to start the footwear process.

There are over 250 formulas used for manufacturing the different styles of footwear at LaCrosse Footwear, Inc.

The raw materials are moved from the storage area to the compound room. Here, particular batches are thoroughly mixed and forced through rolling cylinders called a mill. The mixing machine is known as a Banbury mixer.



This picture shows boot assembly before the early 1940's. This is a "shoe making bench." Each person assembled the entire boot. If they made a mistake, they bought the boot. Today we use an assembly line approach.

Rubber is applied to various types of fabric using a coating calender. This rubberized cloth is laid up on a cutting table where multiple layers are cut at one time using a die. Depending on the desired pattern, different dies are used.

An outsole calender is used to roll out rubber in sheets. One of the rollers has a tread pattern engraved in it. The outsoles are cut from these sheets on a Wellman cutter.

Some parts require zippers, buckles, eyelets and rubber cement. This is done in the Quarter room.

The various parts are moved to the shoe room where they are assembled onto lasts which slowly move around a making unit or "Jack". The insole, outsole, heels, and upper ankle parts are all assembled at this point. The boots are now nearly finished.

They are carried on a conveyor to the Last and Lacquer Department to be lacquered, vulcanized and stripped from the lasts. During vulcanization, the correct amount of heat and pressure are applied to insure that a quality, leak proof, and attractive boot evolves.

Boots are then water tested and repaired, if necessary, and move on to the packing room. After they are packed in the correct, attractive boxes, they are moved to the shipping room.

From the shipping room, the finished, packed product is moved to the warehouse where it will reside until the customer requests delivery.

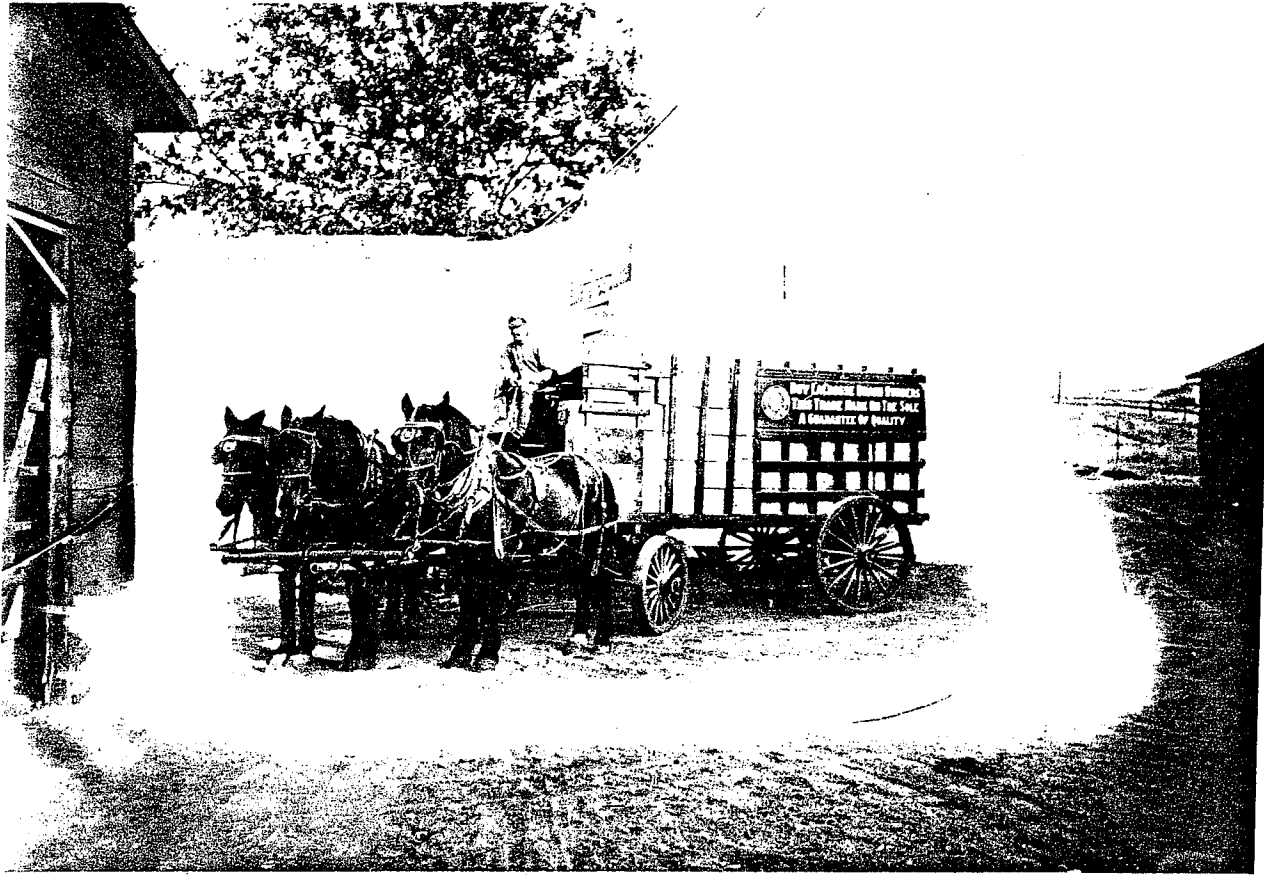
The Later Years

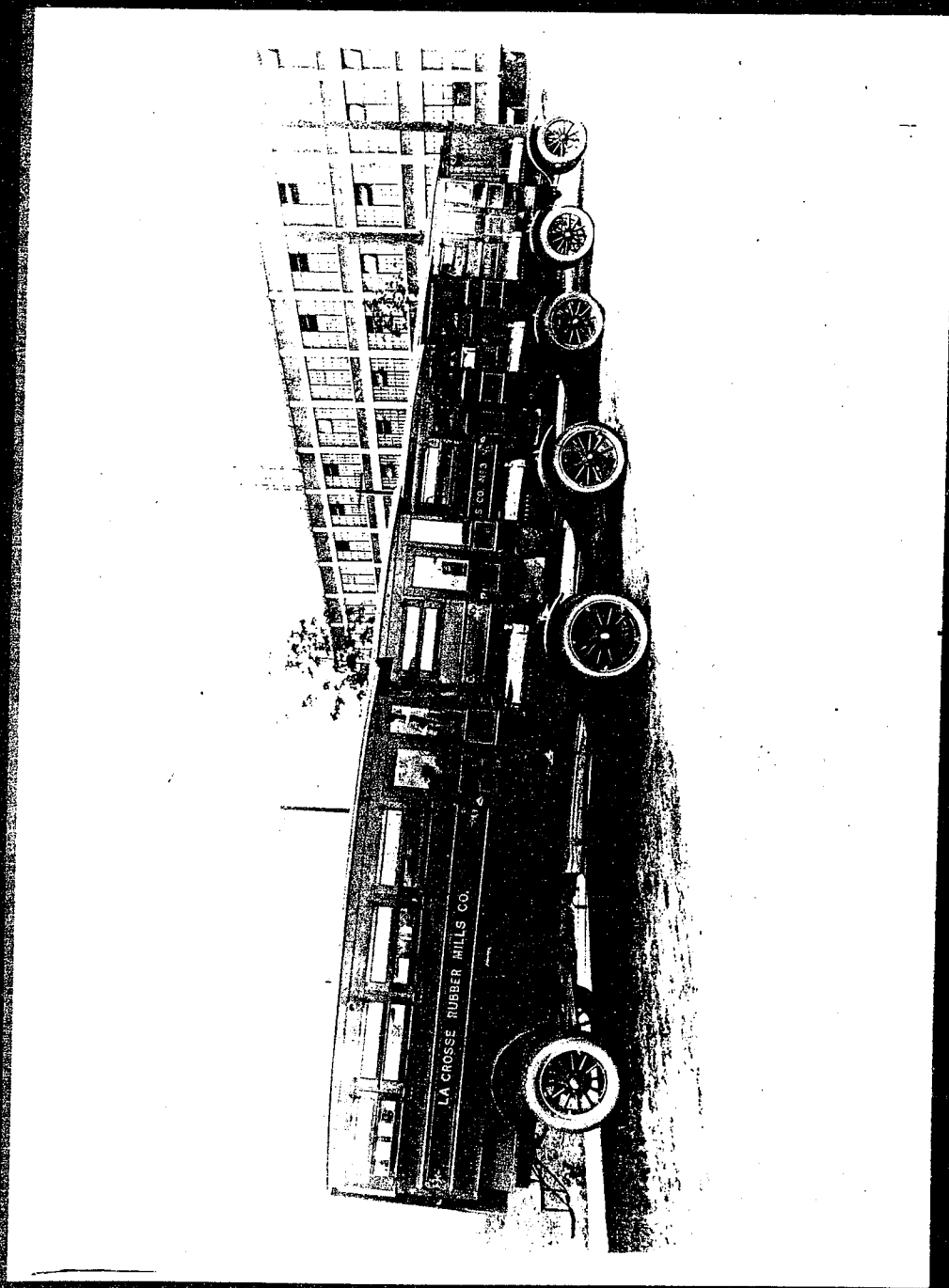
As time moved on, the La Crosse Rubber Mills Company met with the changing times. Rubber-coated fabrics and raincoats were discontinued. Canvas and rubber footwear were produced to meet the customer demand.

The business weathered the economic depression of the 1930's and at the end of the decade, it installed the latest conveyerized assembly-line equipment and shoe-making machinery. In 1941, it received a contract from the U.S. Army to produce 43,200 pairs of arctic, rubbertop overshoes. During World War II, it produced jungle rubber footwear, hip boots, four-buckle overshoes, tennis shoes, and rubbers for use by military personnel.

As the 1950's drew to a close, the La Crosse Rubber Mills was offering 192 different products in eight product groups: insulated footwear, sporting boots, pacs, industrial and general business boots, farm and work overshoes, family fashion overshoes, rubber-soled canvas shoes, and vinyl plastic protective boots.

In 1982, the La Crosse Rubber Mills was purchased by a group of local business men to prevent a hostile takeover. The name was changed to LaCrosse Footwear, Inc. in 1985. That same year, the company introduced the Iceman boot, which pioneered the use of double-insulation





Company owned buses used to transport employees to and from work. A modest fee was charged.

construction in rubber footwear. The popular Iceman boot would be worn by Itidarod dogsled winners and be used on an expedition in China that explored the frigid upper reaches of the Yangtze River. Five years later the company expanded the line with the Ice King, a triple-insulated boot rated to -100 degrees fahrenheit. That was later followed by the LaCrosse Footwear "boot system," a line of rubber bottom performance footwear with interchangeable liners that was designed for use in hunting, fishing, and other rugged outdoor activities.

In 1989, the company signed a contract with the U.S. Government to produce more than 682,000 pairs of vinyl overshoes for U.S. military personnel.

In the 1990's, the company signed a contract with the U.S. military to manufacture 1,000,000 pairs of mustard gas-proof boots for the Persian Gulf Conflict.

As the company looks to the future, there are many new materials being developed, such as urethane - a material that works well in abrasive environments and prevents the boot from cracking, nitrite - a synthetic rubber that provides good slip-resistance and prevents cracking, polyurethane - a foamed material made of two liquid components - polyol and isocyanate - which offers lighter weight, flexibility, thermal protection, chemical resistance, and high wear, PVC - polyvinyl chloride - a synthetic material that is resistant to oils, fats, grease, and chemicals.

The premium-quality footwear process will continue to be alert to new process advancements and will be on the cutting edge to utilize ASHRAE principles so that a premium-quality product is assured.

Respectfully submitted,



James M. Ritter, P.E.
Chapter Historian
La Crosse Area Chapter