

# THE SACO-LOWELL BULLETIN

MARCH 1928



A RECENT INSTALLATION  
OF HIGH SPEED WARPING.

*In This Issue*

HIGH SPEED WARPING  
DEVELOPMENT OF LONG DRAFT SPINNING

# ANNOUNCEMENT

## *of a Program of Plant Consolidation*

*which will greatly benefit the operations of the Saco-Lowell Shops and strengthen its ability to serve the industry*

**T**HE Directors of the Saco-Lowell Shops, at a meeting held Wednesday, February 1st, voted to close that part of the Company's property in Lowell, Mass., formerly known as The Lowell Machine Shop, and to consolidate operations in its three remaining plants. This move does not disturb in any way the operation of the Kitson Machine Shop, also located in Lowell. The great bulk of the Company's production is Cotton Machinery and very little of this is made in the plant to be closed. The consolidation, therefore, will cause no disturbance or interruption of the current production of Cotton Machinery, and in fact will strengthen the Company's ability to handle its business to the best possible advantage.

The Company has been operating four plants—The Kitson Plant, also located in Lowell, manufacturing Opening and Picking Machinery; the Plant at Newton Upper Falls, Mass., producing Cards and Drawing; the Plant at Biddeford, Maine, manufacturing Spinning, Roving and Twisters; the Lowell Plant, which is to be closed, producing a miscellaneous group of minor items in the Company's line of Cotton Machinery, together with Bradford and French Worsted and Spun Silk Machinery. Production of Worsted Machinery will be suspended or curtailed pending the completion of the program of consolidation. Closing the Lowell Plant will not interfere in any way with the Company's production of its line of Cotton Machinery.

A considerable part of the machinery in the Lowell Plant, comprising the best and most modern tools, will be transferred to

the active plants, thus adding to the economy and efficiency of their operations, and insuring the maintenance of the Company's well-known high standard of quality and precision in its product.

The calculations made by the Management, based upon a very thorough survey of the Company's plants and facilities, indicate clearly that large and permanent savings will result from this program of consolidation and that the Company's ability to handle a large volume of business in an efficient and economical way will be greatly strengthened.

The Company has a very strong current asset position today and is easily able to finance the very moderate cost of its proposed consolidation program without any strain on its cash resources, which are large and ample for all its needs. It is confidently expected that operations during the first year following the completion of consolidation will reflect savings in excess of the cost of consolidation, and these savings will continue in even larger amounts in subsequent years.

The closing of the Lowell Plant will be carried out in a carefully planned and orderly manner, thus avoiding any disturbance in current operations and securing the best practicable utilization of the resources and personnel of the Lowell Plant in the other plants of the Company.



*President*

wood cones, 200 wood section beams, \$81,000.

“The saving outside of floor space and carried stock is:

Beam waste saved per week . . .	105 lbs.
Creeling waste saved . . . . .	84 lbs.
Spool waste saved . . . . .	53 lbs.
	242 lbs.

which, figured at \$.25 per lb, is \$60.50 per week.

Amount saved on waste per year	\$3,146.00
Labor saving per year . . . . .	19,344.00
	\$22,490.00

“Net annual return on investment 27.4%.

“Number of hands used in the spool rooms under old system: 138 hands at \$1,590.00 per week is cost of .00795 per lb. Number of hands under new system, 100 at \$1,218.80 is cost of .00609 per lb.—both figured on 200,000 lbs. per week. This is a saving of .00186, which on 200,000 lbs. is \$19,344.00 per year. Number of employees saved—38.

“We do away with 50,000 wood and fiber spools, the depreciation of which is \$1,250.00 per year.

“A test was run on 16 looms, 8 looms

on warps made by each system, with the following results:

OLD WARPERS	
Loose ends . . . . .	29
Knots . . . . .	167
Gouts . . . . .	29
Kinks . . . . .	9
	234

Or 78 stops per day on 8 looms or 9.6 stops per loom per day.

NEW WARPERS	
Loose ends . . . . .	24
Knots . . . . .	142
Gouts . . . . .	24
Kinks . . . . .	6
	196

Or 65 stops per day on 8 looms or 8.1 per loom per day.

“As a summary I would say that we have found that we saved on floor space, on waste, on spools, on yarn carried, and have improved warp due to a more even tension maintaining elasticity in yarn, less stoppage on looms, and though of course we have cones between winders and warpers, there is not anywhere near what you have all over the room under the old system.”

Another set of figures which we recently received from a Massachusetts mill producing broadcloth, is quoted below.

**COST OF OPERATING HIGH SPEED AND LOW SPEED WARPING  
BASED ON 48 HOURS ACTUAL**

*This is on 40C warp 3.80 twist factor on Broadcloth 128 x 68 construction.*

HIGH SPEED		LOW SPEED	
300 yds. P. M. . . . .	53 Beams @ 75% Production	53 Beams @ 65% . . .	57 yds.
3	Number of warpers		13
392	Yards per beam and ends	392 . . . . .	33,000
392	Weight per beam		385
20,700	Total pounds		20,405
3	Warpers per hand		5
\$18.50	Weekly wage		\$19.50
18.50	Cost of warping		50.70
2	Number of creelers		2
\$30.00 Day Pay	Cost of creeling per hundred ends .15		\$31.17
\$5.00	Cost of trucking		\$15.00
\$63.50	Total cost of warping and creeling		\$86.87
.00306	Cost per pound		.00425

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## DEVELOPMENT OF LONG DRAFT SPINNING

**I**T was about two years ago that the textile industry of this country first became definitely interested in Long Draft Spinning. Quite naturally, mill men as a whole were inclined to look askance at this new development and feel that they would rather see how it worked out in the other fellow's mill before taking a chance in their own.

Before Long Draft was discussed to any great extent in this country, two of our engineers travelled throughout Europe investigating the many and varied systems of Long Draft which were being developed there. We were certain that, in time, American mills would be forced to take advantage of the savings made by materially increasing the drafts on their Spinning Frames. Upon the return of our engineers to this country, we installed in our Biddeford Shop a Long Draft laboratory and equipped a number of frames with the most successful of the European systems. After about a year of untiring research and engineering work, we developed a Long Draft System of our own which we were certain was theoretically correct. The object kept in view was to develop a system which would draw the fibres so much more evenly that the draft could be materially increased and at the same time retain or improve on the quality of yarn.

Having reached this point, however, the real difficulty began. We had worked out the theoretical side of our apparatus in the laboratory, and had it running there for months on various counts of

yarn from the coarsest to the finest; but what was going to happen when it was put to the test under actual mill conditions?

As we said above, every mill wanted to see how it was going to work for the other fellow. However, a certain number of our friends offered to give it a try in their mills and a number of sample frames were installed in mills making various products. The results were both gratifying and disappointing. The first thing we found out was that under actual mill conditions our system would spin, with a great deal higher draft, a yarn which in practically all cases was equal to the regular system and in most cases was better. The second thing we discovered was that mechanically we had many improvements to make in order to adapt this system to the operating conditions of the average mill. This meant much re-designing and rebuilding and more experimenting under mill conditions. It was a long-drawn-out process to perfect the mechanical side of this equipment so that it would adapt itself to all existing mill conditions and to the human element of unskilled labor.

We sincerely appreciate the help given our engineering department by our friends in those mills which were progressive enough to see the advantages to be gained by Long Draft Spinning and who tried it out during that pioneering period. Now that our Long Draft System has been perfected and we see our installations realizing material savings for the mills, we feel that in a short time it will

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*The*  
**SACO-LOWELL**  
*Organization*

offers valuable experience to its customers. Specializing in machine operation, the members of this organization have had an unlimited variety of mill problems to face. On the strength of their accomplishment, the Saco-Lowell Shops have grown, developing many products that are now standard in the industry.

We offer a complete line of cotton machinery, each unit of which is a standard in its field.



