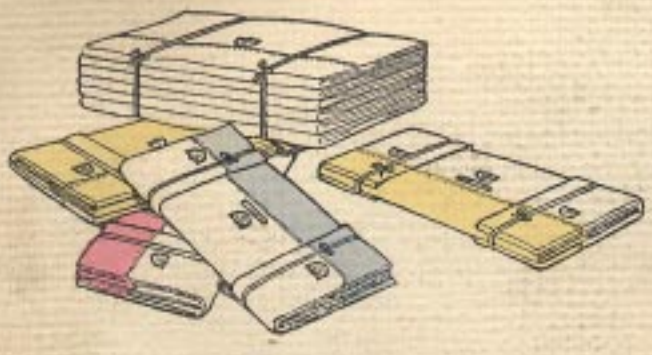
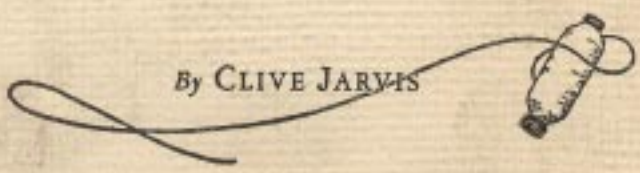
# The STORY of PEQUOT





By CLIVE JARVIS

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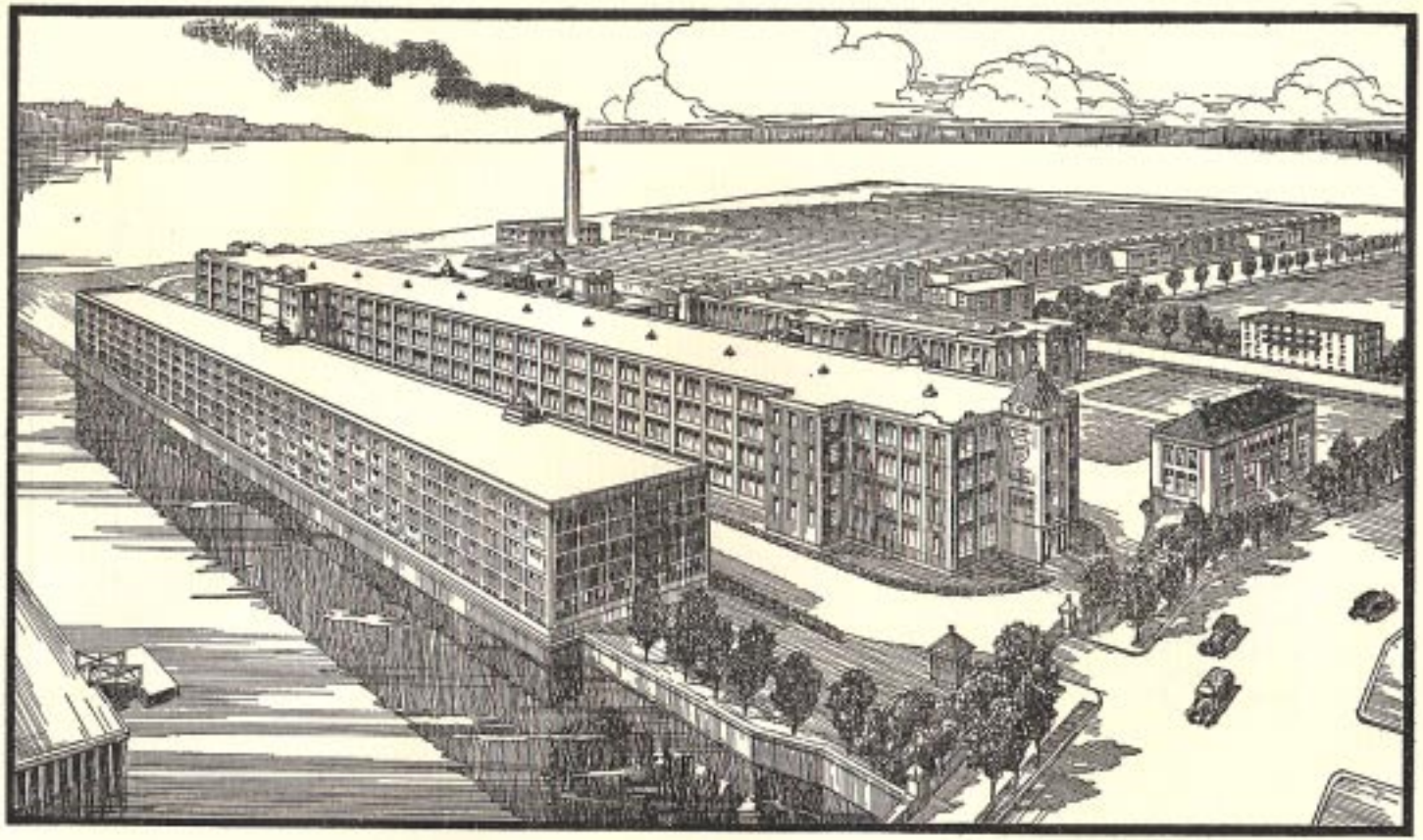


THE HOME OF PEQUOT

*The great mills of the Naumkeag Steam Cotton Company*

# THE STORY OF PEQUOT

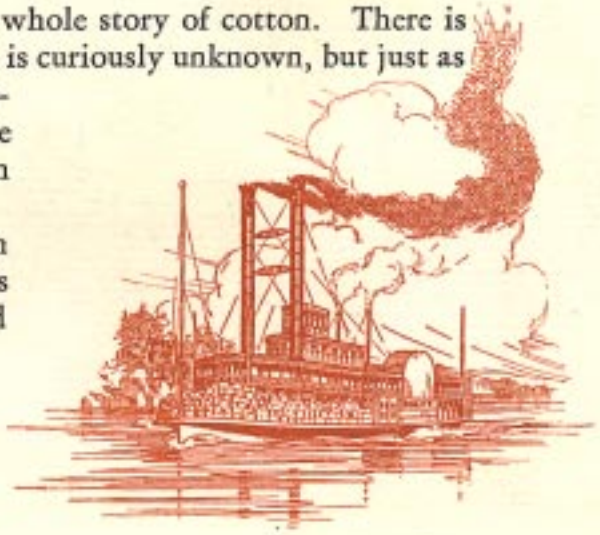
BY CLIVE JARVIS

COTTON bales piled along the levees of the Mississippi; stern wheelers lazing down the river to New Orleans, with bulging cargoes of cotton; snatches of banjo music; picturesque gentlemen in plush hats and plum colored breeches, leaning on their sticks—all these elements of the Old South where cotton was king, have been woven, time and again, into the romantic idylls of our literature.

"Way down South" is still the land of cotton. Cotton remains the reigning monarch there. He is, in fact, the greatest of American monarchs. The story of cotton and the history of the South are bound inextricably together. The romance of the cotton fields is one of our national idylls.

But that is not the whole story of cotton. There is another tale—one that is curiously unknown, but just as fascinating and picturesque. That is the story that is written here.

It has been written in response to letters which, every day, find



*Down the Mississippi*

their way to the offices of the Naumkeag Steam Cotton Company. They come from educators, teachers, students, housewives, all over the country. They ask "Does the romance of cotton end when it leaves the South? Isn't there another story that could be told about the journey of cotton from the bales that leave the South to the cloth that is sold in every town and city all over the world?"

There is, and you will find it in the pages that follow.

**A Word of History**

ABOUT the time that John Alden and Priscilla Mullins were enjoying their little joke at the expense of Captain Myles Standish, the first cotton was planted in Virginia. Almost at the same time the first shipload of negroes was landed at Jamestown by the Dutch, to begin their work in the cotton fields.

By the time of the Boston Tea Party, the industry had grown greatly. But it was not until the War of 1812 that the manufacture of cotton goods in America received its first really great impetus. Manufacturers are in the habit of measuring the size of mills in terms of the number of "spindles" they contain. Just what a spindle is you will learn later. Meanwhile, it will give you an idea of comparative growth to realize that there were only 4500

*Negroes land at Jamestown*

spindles in this country in 1805; that twenty years later there were 800,000; before the Civil War 5,200,000; and today over 37,000,000!

A long list of ingenious inventions for the aid of power spinning began with Powell's power loom in 1814. This was followed by Jenckes Ring Spindle in 1830. These two inventions so stimulated the cotton manufacturing industry in the United States, that even before the outbreak of the Civil War spindles were using 442,700,000 pounds of cotton, and were making a product worth, even in those days, $116,000,000 per year.

Most of these spindles were in New England. Since the Civil War, however, cotton manufacturing has shown a tendency to move toward the cotton fields of the South. But New England still leads the industry and today, just as before, the finest textiles are turned out by the mills that were established even before Nathaniel Hawthorne wrote "Tanglewood Tales" or "The House of the Seven Gables."

"Pickin' Cotton"

FROM the early days of spring, when the first sturdy green leaves open to the hot southern sun, until the early autumn when the cotton bolls burst and seem to cover the land with an unmelting snow, the cotton planter jealously watches the progress of the plant that means so much to his prosperity.

*The Custom House: Salem*

Cotton picking time brings the liveliest activity. Black faces look up from the white background; busy black fingers pluck the precious white fluff from the cotton bolls and cram it into the waiting sacks—later to be weighed at the end of the day when the picker is paid his well earned wage. One hundred pounds or more means, for the picker, an extra flitch of bacon.

Next, the cotton is gathered up and carted to the gin where the seeds are removed and the cotton wrapped with a jute covering and bound with iron straps. This makes a "gin bale" which weighs about 500 pounds. Before this bale is started on its long journey to the distant mills, however, it is taken to a press in which it is squeezed until it is reduced to about a third of its original bulk. In this form it is known as a "compress bale." It is now ready for shipment to one of the great distributing centers of the country—from which it will later travel to any part of the world that may happen to be its destination.

Whether by barge, steamship, or railroad, many thousands of these cotton bales in their tawny jute jackets find their way to historic Salem, where their destiny is to be made into Pequot Sheeting.

*The House of the Seven Gables*

THE buildings of the Naumkeag mills which make Pequot sheet-

ing, sheets, and pillow cases, lie little more than a step from the harbor of old Salem. It was from this harbor that the frigate Essex, built and equipped by the loyal citizens of this Massachusetts town, set sail to fight on the high seas for the young and struggling government at Washington and for the protection of American commerce.

Almost as close is the birthplace of Nathaniel Hawthorne, and the Custom House where he claimed to have discovered the burlap wrapped package containing the manuscript of his most famous novel. And the House of the Seven Gables is but a step further on.

It would be difficult to think of historic Salem as doing anything unromantically—even to the very necessary and important business of making sheets and pillow cases. Into the bargain, any great manufacturing operation like the spinning and weaving of cotton carries with it its own romance. It is time that we saw just how these myriads of machines and workers go about the problem of converting raw cotton into the finished perfection of a Pequot Sheet. So let us, for the moment, leave historic Salem behind and begin our trip through the many departments which contribute to the bustling activity and smooth efficiency of the Naumkeag Mills.

THE first port of call is the cotton storehouse. Here is the raw material from which Pequot Sheets and pillow

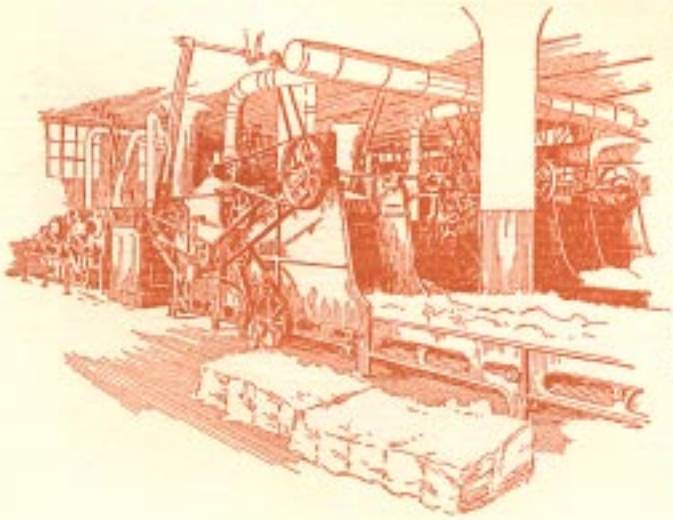
*Cotton Bales in Storage*

cases are made. There are usually about ten thousand cotton "compress bales" stored in this vast, low ceilinged room—and there must be, for the mills use 60,000 pounds of cotton in every working day.

The compress bales would probably strike you as very unpromising raw material They look like giant pieces of burst popcorn—for the jute covering tears easily and when it does a square foot or more of cotton flowers out and tries to escape from the tight steel bands that make the bale. You can't imagine how this tangled mass of fluff can ever be sorted out, straightened, and somehow given texture and strength and finish.

"Staple"

THE first question I asked when I started on my own trip through the Naumkeag Mills was "What is a cotton fibre, anyway?" I had heard it talked about, but I'd never seen it. How could one fibre be disentangled from a large bale? I found that it takes considerable skill to do that. Yet sample fibres must be taken from every bale, to make certain that their average length (called "staple") is satisfactory. No cotton is considered fit for Pequot Sheets and pillow cases unless it is at least one and 1/16 inches long. The man who pulls



*In the Opening Room (page 9)*

out and inspects the fibres from every bale is called a sampler. He takes a handful of raw cotton, pulls it into the shape of a thick ribbon, and tears it in two. Then he takes one of the torn edges and pulls at it slowly. Out comes a film of thin, curling wisps. These are the cotton fibres. It is out of these ridiculously small bits of fluff that the great Naumkeag Mill eventually produces sheets so strong that it would take a force of 160 pounds to the square inch to burst them in a testing machine.

It is time to see just how this miracle is accomplished.

Bale Breaking

THE first machine is the bale breaker—and there are four of them in a row. Ten bales are torn open and piled in front of each breaker. Workmen pick up armfuls of the dusty matted cotton from each bale in rotation, to make certain that cotton which may have come from one locality is so mixed with other cotton that the product is uniform. They pile these armfuls of raw cotton on a slowly moving belt, and in a moment the armful that you are watching disappears into the maw of the breaker.

The bale breaker accomplishes the preliminary of breaking up the matted cotton. A spiked roller tears the matted cotton into pieces about the size of your fist, and another belt carries these tufts to a series of preliminary cleaners called vertical openers and

The Pickers (page 10)

lattice cleaners, for the baled cotton contains particles of dust and seed which must be completely removed before it can be carded or spun. And so four machines take a hand in this process—whirling the cotton about, shaking it and removing about 60 per cent of the dust and seeds. The loose product emerges from the end of the fourth machine, pours like a cotton waterfall to another conveyor belt and a moment later falls into a pipe where a blast of air shoots it at fifty miles per hour to another building. The first step in the process of making Pequot Sheets has been completed. And 1100 pounds of dust and seed are left behind in the opening room every day.

**The Pickers**

BUT the first cleaning that the raw cotton gets is nothing compared to the going over that the pickers give it. The pickers whirl the cotton about, and beat it down loosely on a set of grid-bars. More dust and seed fall through the bars, and the mat of clean cotton passes over a barrel-like screen where more small particles of dust are removed. Now the cotton emerges, white and fluffy, from this process, and is wound into a roll, called a "lap," which is about forty inches wide and eighteen in diameter. It looks like a huge roll of absorbent cotton—a hundred times larger than any you buy in a drug store.

You might think that the mill now considered the raw cotton clean enough to use.

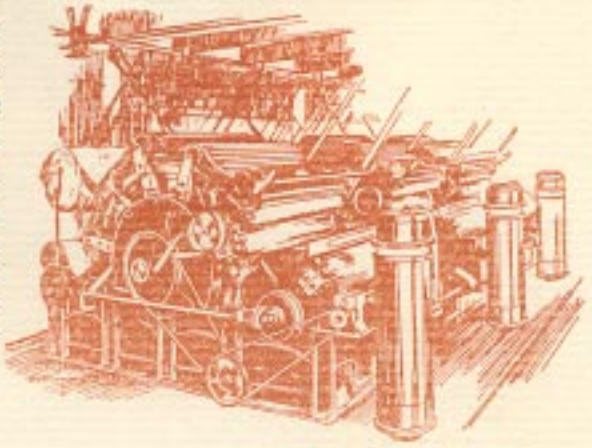
*The Finisher Laps*

But it doesn't. The whole thing has to be done over again. Four laps are fed, simultaneously, into a second picker, called a "finisher picker" and exactly the same thing happens all over again—except that the laps which the finisher picker turns out are denser and clean even to the satisfaction of the most exacting.

But we haven't made any progress yet in getting these fibres *sorted*—all pointing one way, and agreeing among themselves, you might say, about their future destiny. They are clean, it is true; but they are still tangled and matted. Obviously, the next machine has a hard job on its hands. Those fibres must be in better order before anything more can be done with them.

THAT is the card's job, and it does it to perfection. The lap from the finisher picker is carried to the carding machine, and there this soft mat of cotton is passed over one small and two large cylinders, covered with thousands of fine wire teeth. These slowly moving teeth catch in the fibres, comb them roughly parallel, drop off those that are too short, and deliver, at the other end of the machine, a gleaming, shimmering pearly cobweb of cotton fibres that are slowly drawn together into one rope-like but untwisted strand about an inch in diameter. This is called the sliver, and if you're going to

The Cards



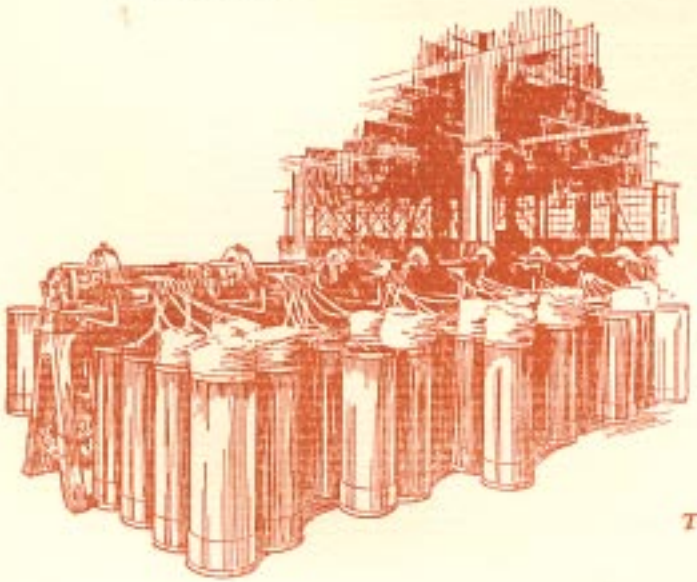
*The Cards*

pronounce the word, make it rhyme with *driver*, not with *river*. The sliver is the first thing resembling a thread that the process has yet produced. Essentially, all the rest of the spinning process consists of reducing the diameter of the sliver, and increasing its strength, by twisting its loose fibres more and more tightly together.

But before this spinning process can rightly be begun —the sliver—which the card has coiled up neatly in a tall can that looks like an umbrella stand—must have its fibres straightened out still more. Although they are no longered matted or tangled, they are only roughly parallel, and there are quite a number of irreconcilables that may be pointing the wrong way altogether.

"Drawing"

BUT there isn't much cotton to an inch of the sliver. It looks substantial, but for all its rope-like thickness it will pull apart at the lightest touch. Nor are the fibres sufficiently parallel. Here is where the next machine contributes its vital share. These are the drawing frames, and the process which they perform is, as you might imagine, called "drawing." Into the first of these *eight* slivers from the cards are fed. They

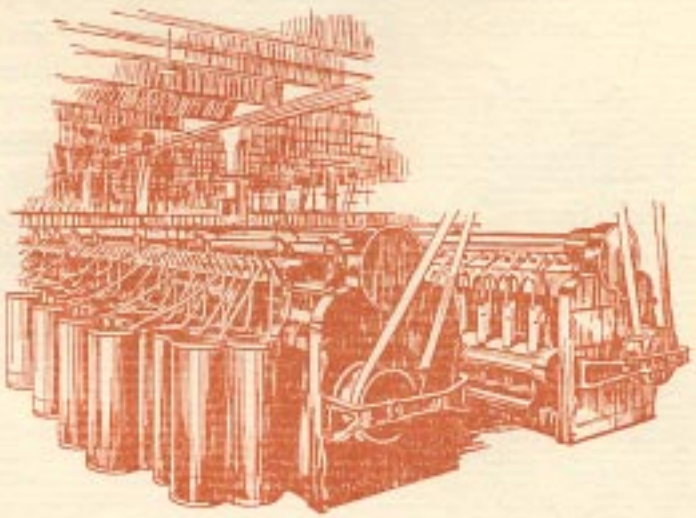


*The Drawing Frames*

emerge as one—still called a sliver, but combining the cotton from eight slivers that came from the cards. And in the process something very important has happened. These slivers have passed through four sets of rollers, about an inch and a quarter in diameter, travelling at progressively faster speeds. The sliver meets, and passes between the slowest set of rollers first. Then it meets the second, faster set and the effect is to pull many of the fibres parallel. But not all. That accounts for the third and fourth sets of rollers, each of which contribute their small effect toward the eventual complete straightening of all.

Now of course the effect of this drawing, if only one card sliver had been fed in, would be to reduce considerably the diameter of the emerging sliver. That is why eight slivers were fed in at the back of the draw frame. They have been condensed into one; still a sliver, still untwisted, still the same diameter, and same weight yard for yard. But naturally, there are more yards.

Then the process is repeated all over again. This time, six of the *new* slivers are put through a draw frame and emerge as one. The fibres are now pretty generally, as you can imagine, headed in the right direction. But there is still a good deal to be done to per-

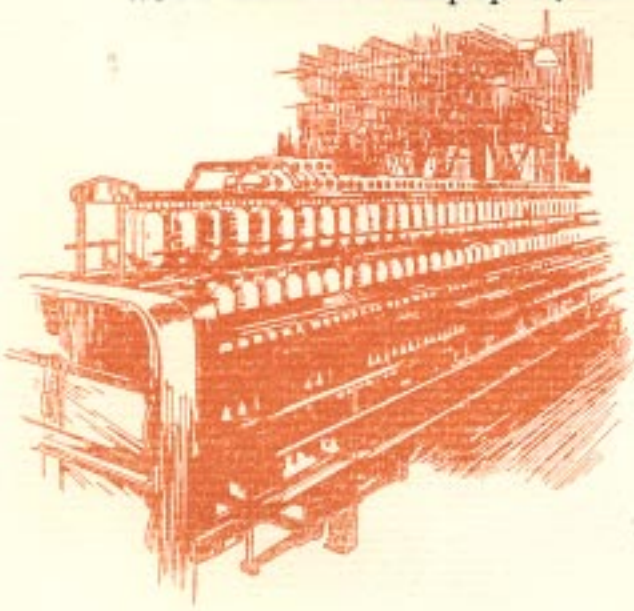


*The Slubbers*
*(page 14)*

suade the last obstinate one. And this sliver, although it contains forty-eight (eight times six) of the original slivers that the card delivered, is the same diameter and no stronger than before.

Roving Frames

THE sliver must now go through three more machines to make it into something that can be spun into strong smooth thread. These machines are called roving frames, but the first of them is usually referred to familiarly as the slubber. The slubber takes the sliver and passes it through three sets of rolls, moving, as was true of the other machines at progressively faster speeds. But instead of coiling the product into our now familiar umbrella stands the slubber reduces the sliver to the diameter of a lead pencil (it was about an inch thick before, you remember), gives the fibres ever so slight a twist, so that if you saw them under a microscope it would look like a steep spiral, and winds the result—about twelve hundred yards of it, on a bobbin. The sliver has now become "roving."



*The Ring Spinning Frames (page 15)*

Two bobbins of this roving are now fed into a new, intermediate machine. (Are you following all these mathematics? There were forty-

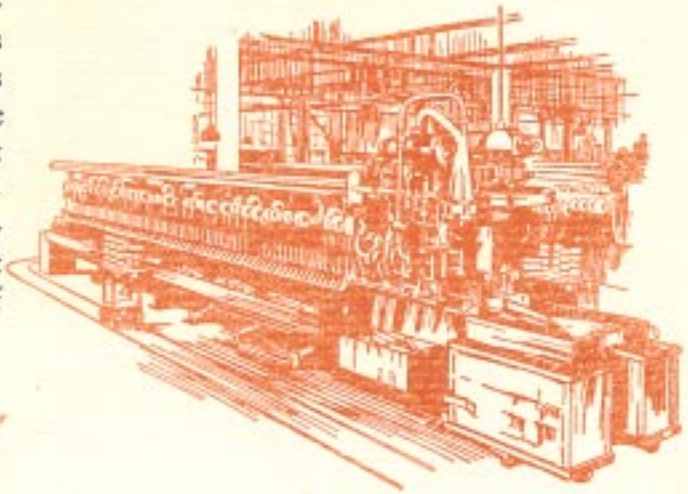
eight original slivers in each roving, so when we combine them we shall have the equivalent of ninety-six.) These rovings go through the progressive speed rolls and emerge as one—smaller, stronger, twisted just a little more.

The fly frame now takes this product—doubles it again (that means the fibres from twice ninety-six or 192 slivers) and draws it again, and rewinds it on bobbins. The cotton is now about the diameter of the lead in a pencil, and looks like something which it would be fair to call *thread*.

Spinning at Last

WE have come to the heart of the spinning process now. Everything that has been done to the cotton in that first bale we saw has been done with the idea of cleaning it and laying the fibres parallel, in material of convenient size. It has taken nine machines to do that so far—the opener, two pickers, the card, two draw frames and three roving frames. Now, at last, we are ready.

Essentially, the spinning frame repeats the treatment which the roving frames have already given the cotton. But the ring spinning frame works faster and twists harder than the roving frames. It takes two bobbins from the last roving frame (that means the fibre of

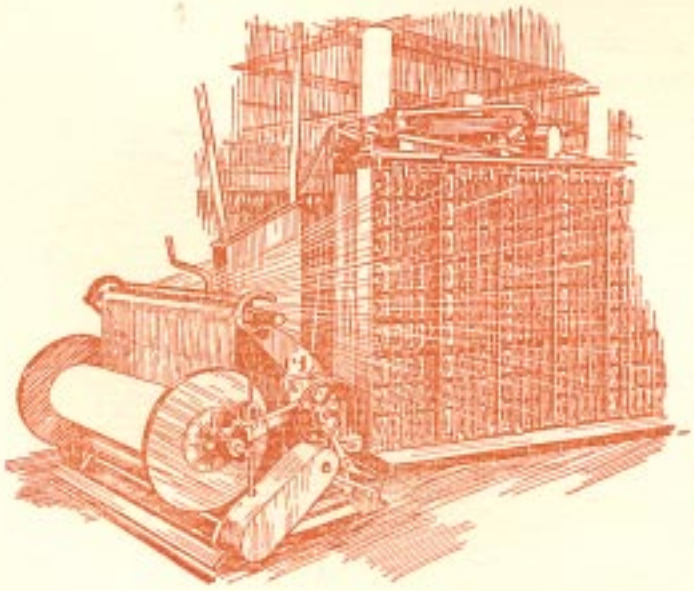


*The Spooler* *(page 17)*

384 slivers) and draws them out one final time. Now, after seven of these straightening processes, the last obstinate fibre has given in, and lies neatly and exactly parallel with every other fibre. But the spinning frame adds the touch which gives the whole process its name. It *spins* the thread—that is, it gives it a good hard twist so that the fibres of the thread, although parallel, are closely intertwined. And then it winds the thread speedily and tightly on a whirling bobbin. This bobbin revolves on a *spindle*—a word you very frequently hear of in connection with cotton mills.

The full bobbins that come from the spinning frame mark the end of one great process. The thread is spun. But there are still things to do before we can begin with weaving this thread into cloth.

For there are two kinds of thread in every cloth. One is called the warp; this runs the length of the piece. The other is the filling thread, and weaves in and out, over and under the warp, at right angles to it. The bobbin of thread from the spinning frame is now quite ready for the loom if it is to be used as filling thread; but the thread to be used for the warp has a few more complications ahead of it still.



*The Warper and Creel* *(page 17)*

For one thing, it is possible to wind only about

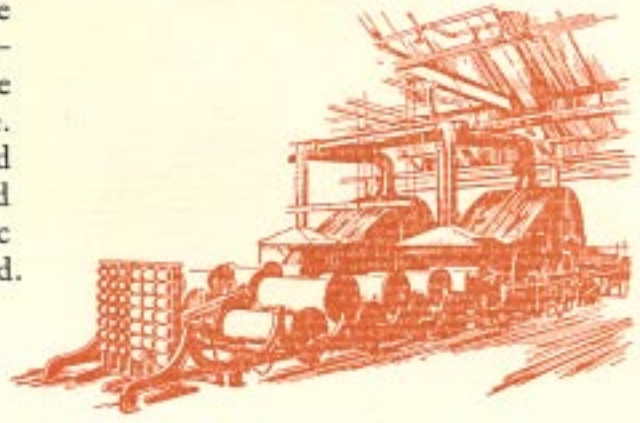
4,000 yards of thread on a bobbin; yet the practicalities of weaving make the necessary length for warp thread 24,000 yards. Obviously, the lengths from several bobbins must be tied together—or spooled.

Spooling

THE spooler has a mind of its own—it thinks. Methodical, seemingly slow, actually very speedy, it takes full bobbins, knots their ends together, winds a 24,000 yard length of thread on a new spool-like sort of holder, which, when full, is called a cheese, and discards the empty bobbin. It takes twenty minutes to wind a cheese. The cheese is ready now for the process which makes you see, for the first time, just how a fabric is going to be created out of these delicate threads.

The Warper

THE warper and the creel look like a huge musical instrument of some sort. Actually it is one of the most relentlessly business-like machines in all this incredibly busy mill. It has a large V-shaped frame in which are placed about 350 cheeses. Threads from these cheeses are drawn through the machine and when everything is in readiness the warper begins to wind these threads on a large drum at the front—the closed end of the V of the machine. This drum is called a section beam, and looks like a gigantic spool of sewing thread.



*The Slasher*
*(page 18)*

The warper when it runs at full speed, winds these 350 threads from the cheeses onto the section beam at the rate of 1650 feet per minute.

A Bath in Starch

BEFORE the weaving process can begin the warp threads must be strengthened. This is accomplished by giving them a bath in boiling starch—a process that is known as dressing.

A machine called the slasher accomplishes this. The threads from several section beams are drawn simultaneously through a box filled with starch, then over steam heated cylinders to dry them and finally are wound on to the loom beam. This whole process is carried on at the rate of ninety-nine feet per minute.

Looms

NOW a modern power loom is so wonderful a machine that before we get lost in watching its complexities, we'd better reduce it to its simplest terms —which are really quite simple—and see how, in theory, it works.

When a tailor sews two pieces of cloth together he does it by inserting his needle through them, drawing the thread under the cloth; then coming up through again with his needle—

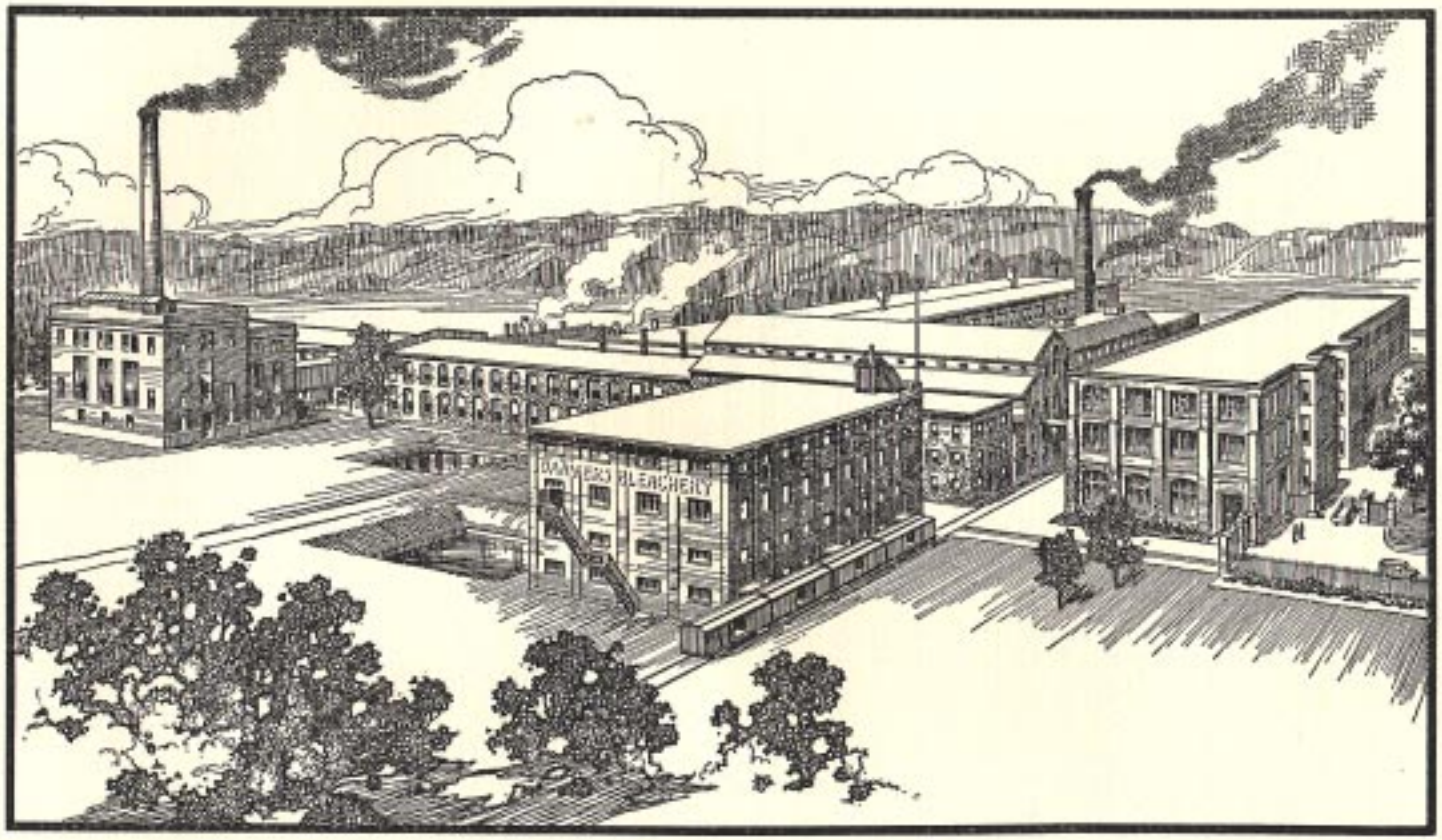
*In the Weaving Shed*

then down again, up again, and so on. If anyone were foolish enough he could weave in exactly that way. He could laboriously weave his filling thread first over, then under, then over, then under alternate warp threads all the way across the length of the piece. But he would very soon go crazy and without accomplishing much, either.

But suppose we stretched 5800 warp threads fairly tight, and then took the odd numbered threads and, keeping them taut, raising them about 15 degrees above the horizontal. And suppose we lowered the even numbered warp threads fifteen degrees below the horizontal. That would form a long, tapering V of thread. We could then lay one filling thread in the notch of this V with one gesture. Then suppose we reversed the odd and the even threads so that the *even* were *up* and the *odd* were *down*. We should lock that one filling thread in the interlacing of the warp. We should have a new V, with its notch just one filling thread further away from the notch of the first. In that notch we could lay another filling thread, and once again, then, reverse the odd and even warp threads. Slowly but surely, by this method we could weave a fabric.

A modern power loom is nothing more than a device to do this trick at an incredibly rapid speed.

*Inspecting Brown Goods* *(page 21)*




THE DANVERS BLEACHERY

*In this subsidiary plant, Pequot Sheets and Pillow Cases are given their final finish*

The raising and lowering of the threads is done by two horizontal rods of wood about a foot apart and connected by hundreds of strings each one with a small eye or hole in its center, that is, half way between the two sticks. One set is for the even threads, another for the odd. This is a "harness."

The actual weaving process goes ahead so fast that you can hardly see it happen. The filling thread, still on the bobbins where we left it some time ago to watch the spooling and warping of the warp threads, is placed in a shuttle, and, when the loom is running at full speed, shot back and forth from one side to the other by a catapult, so fast that you cannot see it move. You hear it when it lands—the noise in a weave shed is deafening—but see it, you can not.

And looms are just as completely "fool-proofed" as any other machinery in the mill. Should one of the warp threads break, the loom halts instantly, and will not start again until the break has been repaired. But this precaution is seldom necessary. The looms crash on almost unceasingly. You watch them with your sharpest eyes, but all you can see is a mysterious line where the material you are watching has ceased to be merely a number of disrelated parallel threads and has become, without letting you see how, a *sheet* of fabric—a Pequot Sheet of finest cotton, still brownish in color, still unfinished, but a *sheet* just the same.

Inspecting

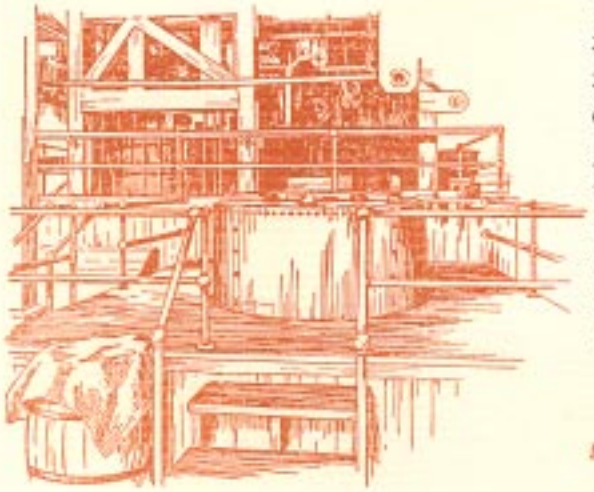
BUT weaving is not all. You may think that the tightly rolled product that the loom produces is quickly bundled up and sold. Not so. The most

minute inspection of every inch of sheeting is first made to make certain that no imperfections have crept into the product which the Naumkeag Mills have made a standard everywhere.

Now suppose the sheeting has passed the final inspection. Is it ready to be bundled, shipped and sold? Far from it. Although our cloth is woven, it still has ahead of it almost as many processes as were necessary to transform that original cotton bale into fabric. There is a world of difference between raw cotton cloth, no matter how fine the quality, and the perfection of a finished sheet fit to be labelled Pequot. So let's take the company car to the neighboring town of Peabody—three and one half miles from the Mills, to the plant of the Danvers Bleachery: a subsidiary of the Naumkeag Steam Cotton Company. There we shall see how much more work is necessary to produce a Pequot Sheet.

At the Bleachery

THIS "bleachery" does far more than bleach. That is only the first thing it does. The material that left the mill for its truck ride to the bleachery was called "brown goods" when it left but when it arrives it is known, curiously enough, as "grey goods," and it is from the "grey room" that the bundles of sheeting start on their new rounds. In the grey room, the ends of bundles are



*A Bleaching Kier (page 23)*

stitched together—and if you will look up at a porcelain ring in one wall you will see the continuous rope of sheeting that is formed this way disappearing rapidly through it into the next room. Those ropes of sheeting are 18,000 feet long, and the ceiling of the bleach room is a maze of them; flying along, crossing and turning through the "pot eyes" that guide them; giving you the general impression of a boa-constrictor that is going in all directions at once.

The first stop which one of these 18,000 foot pythons of cloth makes is in a huge vat, called a kier, where the first bleaching treatment is applied. The cloth stays in this kier overnight, is subjected to steam and bleach, and is hauled out next morning to go through still further rigors. The cloth is put through many separate baths; steaming, boiling, bleaching and washing baths until finally it emerges a gleaming, faultless white.

Now this rope must be converted once again into a cylinder of cloth. Speedy and efficient machines do this, in preparation for the further finishing processes still to come. For the sheeting must be starched and ironed and atomised and folded, ready for the final finishing. Large machines, with many heated drums and other ingenious devices perform these feats—always watched over by operators on the keen lookout for flaws in the sheeting or for wrinkles that may develop dur-

*In the Bleach House*

ing one of these many complex processes. Finally, a waving arm on the last machine lays down the sheeting in billowing folds—all but finished and ready for the sales counter.

If the sheeting is to be sold as "piece goods" it *is* ready. It needs only to be measured, packaged, and stamped with the proud seal which makes it Pequot Sheeting. But if finished sheets and pillow cases are to be made from it, there is further work to do. Sheeting must be torn by hand to the proper length. Threads must be drawn by hand for hemstitching. The edges of the sheets and pillow cases must be hemmed to produce the final finish. That is why there are 350 sewing machines in the finishing rooms of the bleachery, and that in drawing, stitching and other finishing rooms almost 850 men and women are employed.

For the ordinary white sheets, which are still the staple article of commerce, this is all—except, of course, for the folding, labelling and packaging which add the finishing touches. But the Naumkeag Mills have added, now, two new products which are already enjoying an enormous popularity. One of these is colored sheeting; the other is white sheeting with colored hems.

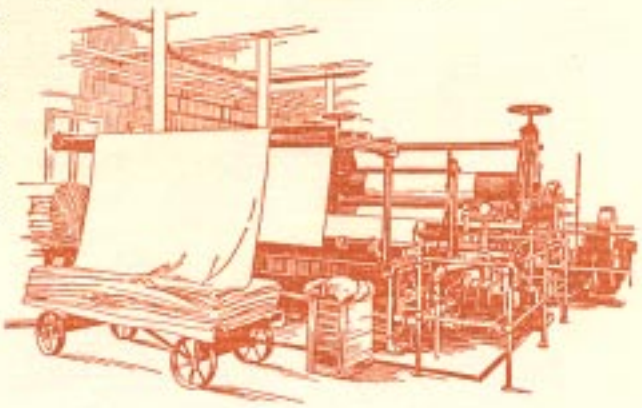
*The Dry Cans*

And so dyeing is now another process which some sheets go through at the bleachery. The "grey goods" are bleached just as before. But instead of being immediately rolled, folded,

atomised and ironed, the sheeting is put through dyeing vats which will produce any one of seven colors —green, rose, orchid, maize, blue, peach or pink. One of the secrets of the amazing soft, smooth, even, glowing color that results lies in one interesting process that the grey sheeting goes through even before it is bleached. That is singeing. To make certain that no lint or nap will interfere with even dyeing, rolls of sheeting are passed rapidly over large, mushrooming gas flames which, without in the slightest degree damaging the actual weave, remove loose surface pieces of cotton which would otherwise produce splotches and streaks when the color is applied.

To add colored hems to white Pequot Sheeting much careful handwork on specially built sewing machines is necessary. Strips of dyed cloth are sewn to the white sheeting with the most painstaking care that skilful operators can give.

The bundling and packaging of Pequot Sheeting is in itself an art. After one final inspection, which eliminates every finished sheet that is not as perfect as human care and ingenuity can make it, the sheets are packaged in a variety of different ways—some in heavy bundles, neatly wrapped, smartly labelled and tied with colored twine, for dry goods stores—others in special gift boxes for sale in such combinations as two sheets and two pillow cases, either white or in matching color combinations



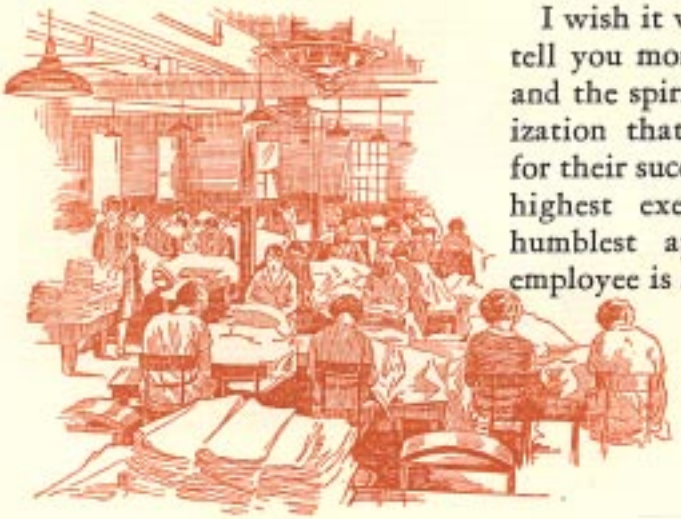
*The Calenders*

The raw cotton, in those unpromising, dusty bales in the great storerooms of the Naumkeag Mills has been converted into the finished triumph of a Pequot Sheet.

"Pequot Quality"

IT took time. Every known device which makes for speed and efficiency is employed by the Mills and the Bleachery, but no process is ever hurried. Nothing is slighted. And if you could follow one wisp of cotton on its career from the opening rooms at the mill to the packaging room at the bleachery, you would find that it took from four to five weeks to complete its journey. It *could* take much less. But the result would not be "Pequot quality." It could not take the Pequot label, which lends as much distinction to sheeting as the hall mark does to silver.

Notwithstanding the time it takes for cotton to go from bale to bedside, the production of the Naumkeag Mills is enormous. Every year the ceaseless looms turn out 25,000 miles of sheeting—enough to girdle the earth at its equator, with a few miles to spare for a hem. And every inch of it is as close to flawless as any product that is turned out by human hands.



*Drawing Threads for Hemstitching* *(page 24)*

I wish it were possible to tell you more of the mills, and the spirit of the organization that is responsible for their success. From the highest executive to the humblest apprentice each employee is actuated by the

same motives of care and pride—by the same desire to contribute his share to the lustre of the name of Pequot. The mill and the bleachery together employ over 2500 men and women.

That is why Pequot Sheeting is something more than woven cotton. Somehow, into the fibres of the cloth there has been woven the ideals and ambitions of hundreds of minds and many thousand pairs of hands; the spirit of a great organization, whose aim has been to provide for you the finest product that men and machinery can achieve.

*Hemming (page 24)*

# A THUMB NAIL SKETCH OF NAUMKEAG

SALEM, MASSACHUSETTS, was once the greatest maritime town of pre-Revolutionary America. Its eighteenth century inhabitants were able to look haughtily down upon the upstart pretensions of such cities as Boston and New York, which thought that they might, too, some day, be great ports of commerce.

But with the coming of the nineteenth century, Salem's maritime eminence began to disappear. Boston had grown great; New York had grown greater, and Salem's ambitions as a great port began to drift away. Then, to add disaster to ill fortune came an embargo placed upon shipping during the Napoleonic War. This was followed by another embargo during the War of 1812. Idle vessels double lined Salem's wharves now; the seamen that had manned them vanished. Salem was left, a city without a job.

What were her merchants, her ship owners, her ship masters to do now? They were far from anxious to follow their business to the new centers of trade. What could be done with Salem, they wondered, now that ocean vessels no longer sought her out.

Perhaps, they thought, there is something to be made out of this new industry of spinning cotton. Already it had been established on the Charles River at Waltham, on the Merrimack at Chelmsford, and in the new city of Lowell. These small mills were prosperous. Men began to think of a cotton mill for Salem.

In those days water wheels turned the shafts in factories. Salem had the sea at her doors but she had no rivers whose head might furnish power. Salem men took a daring step; they decided to use the sea to bring to their doors the new fuel, *coal*, and use that still-quite-new invention the steam engine, to supply their power.

From that vague idea sprang the Naumkeag Steam Cotton Company — *Naumkeag* for the ancient name of the locality, and *Steam* to indicate the difference between the new mill and any other in New England. Almost single handed, Nathaniel Griffin, a retired ship master, raised the sum of half a million dollars (stupendous in those days!) and the mill rose on its site along the water front at Stage Point on the South River directly opposite the historic Derby Wharf. Production was in full swing previous to 1845.

Throughout the closing years of the nineteenth century and the beginnings of the twentieth, the work of the mill went steadily forward. Changes and additions were unceasing. The 31,232 spindles with which the mill began had been increased by 1914 to

116,554. The separate buildings numbered twenty, not counting the dwellings erected for mill operatives.

The 25th of June, 1914, was a baking day in the midst of a hot, dry spell. At noon an alarm of fire went in from a small manufacturing establishment a mile and a half away from the Naumkeag Mills. The flames spread rapidly out of control and ran a varying course through the city, to reach the mill district late in the afternoon. A few hours saw the twenty buildings of the Naumkeag Steam Cotton Company reduced to a few stark brick walls with tangled masses of junk that had once been machinery sunk into the basements — victims of the great Salem fire, that all but destroyed the city.

An optimistic and progressive board of directors began to rebuild immediately. By February, 1916, little more than a year and a half after it had been levelled to the ground, the Naumkeag Steam Cotton Company was once again in full swing. Every one of its 101,925 new spindles was turning. Looms were at capacity production. The twenty buildings of the old plant had been replaced by four — a storehouse, a spinning mill, a weaving shed and a boiler house — but these four more than equalled the previous twenty, every one of them reinforced concrete construction with brick panels, metal sash and wired glass. The new layout was as efficient and economical as modern industrial design could make it. Steam was gone, except as a name. Electric motors drove all machinery.

In the years since 1916, spindles have been increased to 163,312. The weaving shed now covers an area of nine acres and houses 4037 looms. The four buildings are now five, as a very fine cloth room of approved construction was added in 1924.

Naumkeag engineers continue today in the far sighted policy of keeping the machinery of the mill at its highest state of perfection. Ball or roller bearings save power and the wear of machinery; stainless oils and oilless bearings eliminate much spoilage from oily goods; synchronous motors supply what the electrical engineer calls a high "power factor." Further — machinery in the Naumkeag Mills is replaced *before* it becomes so old that its efficiency is impaired.

The same progressive management now dominates the Danvers Bleachery, where, since the beginnings of production, Pequot sheeting and pillowcases have received their final finishing touches. For twenty years, the Danvers Bleachery has been controlled by the same progressive owners who have made the Naumkeag Steam Cotton Company a model of textile manufacturing efficiency and achievement.

In honor of the name of the goods they produce, these mills are now known as the PEQUOT MILLS.

## A NOTE ABOUT BEDMAKING

PEQUOT sheets and pillowcases, which you have gathered from this booklet, are as perfect as human ingenuity, skill and care can make them. When you have bought them, make sure that you use them properly. Pequot Sheeting on a badly made bed gives no pleasure, and sets our own efforts at naught.

You spend one-third of your life between sheets. To purchase these vital necessities, solely because of seasonal sales, "markdowns" or in random size lots is false economy. Short sheets, in particular, are an inevitable source of discomfort and dissatisfaction. The 108-inch sheet has now come to be recognized as standard. The housewife should keep in mind the fact that the length of sheets, as shown on the label, is usually the "torn length", that is the length *before* hemming, and since sheets have a three inch and a one inch hem the "finished length" is reduced almost five inches, besides which there is the slight, but inevitable shrinkage produced by the first launderings.

Most beds are 78 inches long. Mattresses are between 75 and 76 inches. Since the average thickness of a mattress is 6 inches, two factors govern the comfort, protection and appearance.

The *lower sheet* must be sufficiently long to permit a tuck-in of 6 or 7 inches at each end of the bed, so that the sheet will hold securely and neatly in place.

The *top sheet* must be long enough to tuck in firmly at the foot and to fold back over the other covers at the top by at least 18 inches.

Four sheets to a bed is not too many. In addition to the conventional "upper" and "lower" sheets, many housewives use a third as a mattress cover (thus greatly prolonging the life of the mattress) and a fourth as a counterpane. The "counterpane sheet" is particularly appropriate in communities where dirt, dust, sand or soot are prevalent.

A comfortable, neat, hospitable bed is the reflection of a housekeeper's good taste. Good bedmaking is an art, and the rules of the art are simple. Here is what sheets should contribute to it.

Sheets should contribute to personal comfort and health.

Sheets should provide adequate protection to the individual user and to the bedding with which they are used.

Sheets should conform to the accepted principles of good taste and individual economy.

Sheets that are long enough will give the greatest satisfaction in each of these respects.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UNBLEACHED PEQUOT SHEETING
BLEACHED PEQUOT SHEETING