

ORGANIZATION OF CORPORATIONS.

AMERICAN LINEN COMPANY.

President : Jefferson Borden.

Clerk and Treasurer : Walter Paine 3d.

Directors : Jefferson Borden, Philip D. Borden,

Richard B. Borden, George B. Durfee, Walter Paine 3d.

Annual Meeting—2d Wednesday in February.

AMERICAN PRINT WORKS.

President : Jefferson Borden.

Clerk : Thomas J. Borden.

Agent and Treasurer : Thomas J. Borden.

Directors : Thomas J. Borden, Jefferson Borden,

Nathan Durfee, George B. Durfee, John S. Brayton.

Annual Meeting—1st Tuesday in August.

ANNAWAN MANUFACTORY.

President : Jefferson Borden.

Clerk and Treasurer : Thomas S. Borden.

Directors : Holder B. Durfee, Jefferson Borden,

Wm. B. Durfee, Wm. Valentine, R. B. Borden.

Annual Meeting—1st Tuesday in August.

BARNARD MANUFACTURING COMPANY.

President : Louis L. Barnard.

Clerk and Treasurer : Nathaniel B. Borden.

Directors : L. L. Barnard, Stephen Davol, Wm. H. Jennings, A. D. Easton, Arnold B. Chace, Robert T.

Davis, Simeon Borden, James M. Aldrich, N. B.

Borden, Alphonso S. Covell, John Campbell, Jos. A.

Bowen, Wm. H. Gifford.

Annual Meeting—3d Thursday in January.

BORDER CITY MILLS.

President : S. Angier Chace.

Clerk and Treasurer : George T. Hathaway.

Directors : S. A. Chace, David T. Wilcox, Job T.

Wilson, Chas. P. Stickney, Elijah C. Kilburn, Ches-

ter W. Greene, Geo. T. Hathaway, James A. Hath-

away, Isaac Smith, George Parsons, H. B. Durfee.

Annual Meeting—4th Wednesday in October.

CHACE MILLS.

President : Augustus Chace.

Clerk and Treasurer : Joseph A. Baker.

Directors : Augustus Chace, Cook Borden, James

Henry, George W. Grinnell, Robert K. Remington,

Edward E. Hathaway, William Mason, Charles P.

Stickney, Joseph A. Baker.

Annual Meeting—In October.

CRESCENT MILLS.

President : Benjamin Covell.

Clerk and Treasurer : Alphonso S. Covell.

Directors : Benjamin Covell, Daniel A. Chapin,

Wm. B. Durfee, Alphonso S. Covell, Griffiths M.

Haffards, Joseph Brady, David F. Brown, John F.

Nichols, Lafayette Nichols.

Annual Meeting—2d Wednesday in February.

DAVOL MILLS.

President : William C. Davol.

Clerk and Treasurer : Wm. C. Davol, Jr.

Directors : William C. Davol, Chas. P. Stickney,

Foster H. Stafford, Frank S. Stevens, Jonathan

Slade, John P. Slade, Wm. W. Stewart, Edward E.

Hathaway, W. C. Davol, Jr.

Annual Meeting—in April.

DURFEE MILLS.

President : John S. Brayton.
Clerk : Hezekiah A. Brayton.
Treasurer : David A. Brayton.

Directors : John S. Brayton, David A. Brayton,
 Israel P. Brayton.
 Annual Meeting—2d Wednesday in October.

FALL RIVER BLEACHERY.

President : Jefferson Borden.
Clerk and Treasurer : Spencer Borden.
Directors : Jefferson Borden, Spencer Borden,

Richard B. Borden, Philip D. Borden, Bradford D. Davol, Charles P. Stickney, Thomas Bennett, Jr., George B. Durfee, Crawford E. Lindsey.

Annual Meeting—last Monday in May.

FALL RIVER IRON WORKS COMPANY.

President : Jefferson Borden.
Clerk and Treasurer : Robert C. Brown.
Directors : Jefferson Borden, Holder B. Durfee,

John S. Brayton, William B. Durfee, Richard B. Borden.
 Annual Meeting—1st Tuesday in August.

FALL RIVER MANUFACTORY.

President : Holder B. Durfee.
Clerk : John S. Brayton.
Treasurer : S. Angier Chace.
Directors : Holder B. Durfee, John S. Brayton, S.

Angier Chace, Christopher Borden, James M. Anthony.
 Annual Meeting—2d Tuesday in March.

FALL RIVER MANUFACTURERS' MUTUAL INSURANCE COMPANY.

President : Stephen Davol.
Secretary and Treasurer : Isaac B. Chace.
Directors : Stephen Davol, S. A. Chace, D. A. Brayton, T. J. Borden, Jefferson Borden, Wm. H.

Jennings, Walter Paine 3d, I. B. Chace, P. D. Borden, R. B. Borden, E. C. Kilburn, Andrew G. Pierce, George T. Hathaway, T. F. Eddy, George B. Durfee.

Annual Meeting—1st Wednesday in March.

FALL RIVER MERINO COMPANY.

President : Frank S. Stevens.
Clerk and Treasurer : Seth H. Wetherbee.
Directors : Frank S. Stevens, Foster H. Stafford,

Robert T. Davis, Wm. Mason, Samuel M. Luther, Danforth Horton, John D. Flint, Samuel Wadington, Samuel W. Flint, S. H. Wetherbee.

Annual Meeting—4th Thursday in January.

FALL RIVER PRINT WORKS.

President : Linden Cook.
Clerk and Treasurer : Andrew Robeson.

Directors : Linden Cook, Charles P. Stickney, Andrew Robeson.

Annual Meeting—4th Wednesday in January.

FALL RIVER RAILROAD.

President : Joseph R. Beauvais.
Clerk and Treasurer : Thos. B. Fuller.
Directors : J. R. Beauvais, C. R. Tucker, G. A. Bourne, Geo. Wilson, G. S. Phillips, L. L. Kollock,

W. R. Wing, of New Bedford; R. T. Davis, J. D. Flint, of Fall River; L. S. Judd, of Fairhaven; and J. H. Perry, of Boston.

Annual Meeting—1st Wednesday in December.

FALL RIVER SPOOL AND BOBBIN COMPANY.

President : Cook Borden.
Clerk : Bradford D. Davol.
Treasurer : Nathan B. Everett.
Directors : Cook Borden, F. H. Stafford, Wm. H.

Jennings, Stephen Davol, David Bass, Jr., Wm. Lindsey, Walter Paine 3d, Joseph Healy, Geo. T. Hathaway, S. A. Chace, Aug. Chace.

Annual Meeting—last Tuesday in October.

FALL RIVER STEAMBOAT COMPANY.

<i>President</i> : Charles P. Stickney.	Philip D. Borden, S. Angier Chace, Daniel Brown,
<i>Clerk</i> : Thomas J. Borden.	Augustus Chace, T. J. Borden, Walter Paine 3d,
<i>Treasurer</i> : Charles P. Stickney.	Robert K. Remington, Geo. B. Durfee.
<i>Directors</i> : Charles P. Stickney, Stephen Davol,	Annual Meeting—1st Tuesday in February.

FALL RIVER, WARREN AND PROVIDENCE RAILROAD COMPANY.

<i>President</i> : Onslow Stearns.	<i>Directors</i> : Onslow Stearns, Chas. F. Choate, Bos-
<i>Clerk</i> : John S. Brayton.	ton ; J. S. Brayton, T. J. Borden, Fall River ; Benj.
<i>Treasurer</i> : John M. Washburn.	Finch, Newport ; E. N. Winslow, Hyannis.
Annual Meeting—2d Monday in March.	

FLINT MILLS.

<i>President</i> : John D. Flint.	meon Borden, Wm. Carroll, Frank L. Almy, William
<i>Clerk and Treasurer</i> : Geo. H. Eddy.	T. Hall, Gardner T. Dean, George H. Eddy, Junius
<i>Directors</i> : John D. Flint, Wm. H. Jennings, Si-	P. Prentiss, Samuel W. Flint, Danforth Horton.
Annual Meeting—1st Monday in November.	

GRANITE MILLS.

<i>President</i> : William Mason.	Stickney, John S. Brayton, Iram Smith, John P.
<i>Clerk and Treasurer</i> : Charles M. Shove.	Slade, Charles M. Shove.
<i>Directors</i> : Wm. Mason, Edmund Chase, Chas. P.	Annual Meeting—4th Monday in October.

KING PHILIP MILLS.

<i>President</i> : Crawford E. Lindsey.	Henry, S. Angier Chace, Edwin Shaw, Philip D.
<i>Clerk</i> : Azariah S. Tripp.	Borden, E. C. Kilburn, Benj. A. Chace, Simeon Bor-
<i>Treasurer</i> : Elijah C. Kilburn.	den, Chas. H. Dean, William Lindsey.
<i>Directors</i> : C. E. Lindsey, Jonathan Chace, Jas.	Annual Meeting—last Thursday in October.

MANUFACTURERS' BOARD OF TRADE.

<i>President</i> : Walter Paine 3d.	<i>Secretary</i> : Simeon B. Chase.
<i>Vice-President</i> : Geo. T. Hathaway.	<i>Treasurer</i> : Isaac B. Chase.
Annual Meeting—3d Friday in January.	

MANUFACTURERS' GAS COMPANY.

<i>President</i> : ———	gustus Chace, Chas. P. Stickney, David A. Brayton,
<i>Clerk and Treasurer</i> : Chas. P. Stickney.	Wm. C. Davol, Jr., Foster H. Stafford, Thomas
<i>Directors</i> : S. Angier Chace, ———, Au-	F. Eddy, Joseph A. Baker.
Annual Meeting—3d Monday in June.	

MASSASOIT STEAM MILLS.

<i>President</i> :	<i>Directors</i> : ———, S. Angier Chace, Holder
<i>Clerk</i> : Charles Durfee.	B. Durfee.
<i>Treasurer</i> : Holder B. Durfee.	Annual Meeting—3d Monday in May.

FALL RIVER AND ITS INDUSTRIES.

MECHANICS MILLS.

<i>President</i> : Stephen Davol.	Borden, George B. Durfee, Tillinghast Records,
<i>Clerk</i> : James M. Morton, Jr.	Southard H. Miller, James M. Morton, Jr., John B.
<i>Treasurer</i> : George B. Durfee.	Hathaway, F. S. Stevens.
<i>Directors</i> : Stephen Davol, Job B. French, Thos. J.	Annual Meeting—1st Thursday in February.

MERCHANTS MANUFACTURING COMPANY.

<i>President</i> : James Henry.	gustus Chace, Robert S. Gibbs, Chas. H. Dean,
<i>Clerk and Treasurer</i> : Wm. H. Jennings.	Crawford E. Lindsey, Jas. M. Osborn, Richard B.
<i>Directors</i> : James Henry, Wm. H. Jennings, Au-	Borden, Robert T. Davis.
Annual Meeting—4th Wednesday in January.	

METACOMET MILL.

<i>Agent</i> : Thomas S. Borden.	Owned by the Fall River Iron Works Co.
----------------------------------	--

MONTAUP MILLS.

<i>President</i> : Geo. B. Durfee.	Borden, Wm. L. Slade, Holder B. Durfee, William
<i>Clerk and Treasurer</i> : Isaac Borden.	Valentine, Bradford D. Davol, Weaver Osborn, Geo.
<i>Directors</i> : Geo. B. Durfee, Isaac Borden, Thos. J.	H. Hawes, Wm. H. Ashley, Benj. Hall.
Annual Meeting—4th Monday in October.	

MOUNT HOPE MILL.

<i>Agent</i> : Jefferson Borden, Jr.	Owned by American Print Works.
--------------------------------------	--------------------------------

NARRAGANSETT MILLS.

<i>President</i> : Holder B. Durfee.	ter H. Stafford, Daniel McCowan, David T. Wilcox,
<i>Clerk and Treasurer</i> : James Waring.	Samuel Watson, James P. Hillard, Robert Henry,
<i>Directors</i> : Holder B. Durfee, James Waring, Fos-	Samuel Wadington, Wm. Beattie, Geo. W. Nowell.
Annual Meeting—In October.	

OLD COLONY RAILROAD COMPANY.

<i>President</i> : Onslow Stearns.	port; Oliver Ames, Easton; Samuel L. Crocker,
<i>Clerk</i> : George Marston.	Taunton; Jacob H. Loud, Plymouth; J. S. Brayton,
<i>Treasurer</i> : John M. Washburn.	T. J. Borden, Fall River; R. W. Turner, Randolph;
<i>Directors</i> : Onslow Stearns, Uriel Crocker, Chas.	E. N. Winslow, Hyannis; P. S. Crowell, Dennis.
F. Choate, F. B. Hayes, Boston; Benj. Finch, New-	Annual Meeting—4th Tuesday in November.

OLD COLONY STEAMBOAT COMPANY.

<i>President</i> : Onslow Stearns.	Pierce, Jr., Boston; Benj. Finch, Newport; T. J.
<i>Clerk</i> : Chas. F. Choate.	Borden, C. P. Stickney, Fall River; Albert Terrill,
<i>Treasurer</i> : John M. Washburn.	Weymouth; Oliver Ames, Easton; Wm. Borden,
<i>Directors</i> : Onslow Stearns, C. F. Choate, Silas	New York.
Annual Meeting—4th Tuesday in June.	

OSBORN MILLS.

<i>President</i> : Weaver Osborn.	Charles P. Stickney, Joseph Osborn, John C. Milne,
<i>Clerk and Treasurer</i> : Joseph Healy.	Joseph Healy, Edward E. Hathaway, Geo. T. Hatha-
<i>Directors</i> : Weaver Osborn, Frank S. Stevens,	way, Benj. Hall, George W. Gibbs, Chas. H. Dean.
Annual Meeting—last Tuesday in April.	

POCASSET MANUFACTURING COMPANY.

<i>President</i> : Samuel R. Rodman.	<i>Agent</i> : Stephen Davol.
<i>Clerk and Treasurer</i> : Bradford D. Davol.	<i>Directors</i> : Stockholders, who meet quarterly.

Annual Meeting—last Monday in January.

RICHARD BORDEN MANUFACTURING COMPANY.

<i>President</i> : Thomas J. Borden.	<i>Directors</i> : Richard B. Borden, Thomas J. Borden,
<i>Clerk and Treasurer</i> : Richard B. Borden.	Philip D. Borden, A. S. Covell, Edward P. Borden.

Annual Meeting—2d Tuesday in November.

ROBESON MILLS.

<i>President</i> : Charles P. Stickney.	Linden Cook, Wm. C. Davol, Jr., Frank S. Stevens,
<i>Clerk and Treasurer</i> : Louis Robeson.	Samuel M. Luther, Louis Robeson.

Directors : Charles P. Stickney, Wm. R. Robeson, Annual Meeting—1st Monday in February.

SAGAMORE MILLS.

<i>President</i> : Josiah C. Blaisdell.	Flint, James W. Hartley, Geo. T. Hathaway, Jos.
<i>Clerk and Treasurer</i> : Geo. T. Hathaway.	McCreery, James A. Hathaway, Job T. Wilson.

Directors : J. C. Blaisdell, L. L. Barnard, John D. Annual Meeting—4th Monday in October.

SHOVE MILLS.

<i>President</i> : John P. Slade.	Josiah C. Blaisdell, Isaac W. Howland, Charles M.
<i>Clerk and Treasurer</i> : George A. Chace.	Shove, H. B. Allen, Asa Pettey, Joseph E. Macomber,

Directors : John P. Slade, Geo. A. Chace, William Mason of Taunton, Edmund Chase, Lloyd S. Earle, Clark Shove, George W. Slade.

Annual Meeting—in February.

SLADE MILLS.

<i>President</i> : William L. Slade.	Dwelly, Wm. Valentine, Frank S. Stevens, Richard
<i>Clerk</i> : John C. Milne.	B. Borden, Benj. Hall, James M. Osborn, Jonathan

Treasurer : Henry S. Fenner.

Directors : Wm. L. Slade, S. Angier Chace, Jerome Slade, John C. Milne, Daniel Wilbur.

Annual Meeting—last Tuesday in January.

STAFFORD MILLS.

<i>President</i> : Foster H. Stafford.	<i>Directors</i> : F. H. Stafford, Wm. C. Davol, Chas. P.
<i>Clerk and Treasurer</i> : Shubael P. Lovell.	Stickney, Robert T. Davis, Edmund Chase, Danforth

Agent : Foster H. Stafford.

Annual Meeting—4th Tuesday in January.

TECUMSEH MILLS.

<i>President</i> : Augustus Chace.	T. Lincoln, Andrew M. Jenning, Samuel Wadington,
<i>Clerk and Treasurer</i> : Simeon B. Chace.	D. T. Wilcox, John Southworth, S. B. Chace.

Directors : Augustus Chace, Cook Borden, Jona. Annual Meeting—4th Tuesday in October.

TROY COTTON AND WOOLEN MANUFACTORY.

<i>President</i> : Jefferson Borden.	<i>Directors</i> : Jefferson Borden, Stephen Davol, Thos.
<i>Clerk and Treasurer</i> : Richard B. Borden.	J. Borden, John S. Brayton, Richard B. Borden.

Annual Meeting—1st Tuesday in February.

UNION BELT COMPANY.

President : Richard B. Borden.
Clerk and Treasurer : A. S. Covell.
Agent : William H. Chace.

Directors : R. B. Borden, W. Paine 3d, B. D. Davol, Wm. H. Chace, A. S. Covell, E. C. Kilburn, T. J. Borden.

Annual Meeting—3d Thursday in January.

UNION MILL COMPANY.

President : John B. Anthony.
Clerk and Treasurer : S. Angier Chace.
Directors : John B. Anthony, S. Angier Chace,

Wm. Mason, Elijah C. Kilburn, Charles P. Dring, Foster H. Stafford,

Annual Meeting—3d Monday in January.

WAMPANOAG MILLS.

President : Robert T. Davis.
Clerk and Treasurer : Walter C. Durfee.
Directors : Robert T. Davis, W. C. Durfee, John

D. Flint, Stephen Davol, Foster H. Stafford, Wm. H. Jennings, Geo. H. Eddy, Lloyd S. Earle, Simeon Borden, Alphonso S. Covell, John H. Boone.

Annual Meeting—4th Monday in January.

WEETAMOE MILLS.

President : Job B. French.
Clerk : John E. Blaisdell.
Treasurer : William Lindsey.
Directors : Job B. French, Elijah C. Kilburn,

Josiah C. Blaisdell, Francis B. Hood, Henry C. Lincoln, Wm. Lindsey, John P. Slade, Wm. H. Ashley, Charles H. Dean.

Annual Meeting—4th Wednesday in January.

SKETCH OF EACH CORPORATION.

The following somewhat detailed notices of the different corporations, embodying facts, figures, and general information, which could not well be introduced in the course of the narrative, it is believed will be of value as well as of interest.

THE FALL RIVER MANUFACTORY.

As full an account as was possible of the organization of this mill, which shares with the Troy Cotton and Woollen Company the credit of initiating the manufacture in Fall River, has been given in preceding pages. The factory erected in 1813 was enlarged in 1827, and again in 1839. In 1868 it was entirely destroyed by fire. During the next year the present mill, considerably larger than the original structures, was erected.

The Fall River Manufactory was incorporated in 1820, with a capital of \$150,000. The destruction of the records unfortunately prevents the same detail of its first year's experience that has been furnished of the Troy. Dexter Wheeler, who was David Anthony's most active associate in putting up and equipping the first factory, was a mechanic of very good ability. He died in 1836, at the age of fifty-nine. It is unfortunate that memory preserves no more facts of a man who is regarded by many as having exerted a paramount influence in developing the early enterprise of the place. That he was

something of an inventor as well as machinist, the contrivance and actual operation of the power-looms made by him sufficiently evidence. During his practical solution of the weaving problem, tradition says, he labored so incessantly, giving neither mind nor body rest for consecutive days, that a temporary aberration was the result.

The present factory of this corporation is of stone, 275 feet long, 73 feet wide, and five stories high, with a flat roof. It is built directly across the stream, and utilizes the fall by two turbine wheels of 140 horse-power each. As a supplementary motor the mill also operates a Corliss engine of 300 horse-power, fed by two upright boilers. The mill contains 600 looms and 25,992 spindles. Its production is print cloth, of which 7,000,000 yards are annually made, consuming 3000 bales of cotton. Provision is made against fire by the constant readiness of two large force-pumps, and stand-pipes and hydrants connected with the city water-works.

The present list of stockholders of this company numbers forty-seven. The company owns thirty-eight tenement houses for its operatives. Dr. Nathan Durfee was president of the company up to the time of his death.

THE TROY COTTON AND WOOLEN MANUFACTORY,

incorporated in 1814, has a capital of \$300,000. The several alterations of the mill structures have been fully detailed. The factories of the Troy Company front on Troy street, running from Bedford to Pleasant street, and occupy half of the block upon which the United States Government is now erecting a fine public building for the post-office and other purposes. The number of looms operated is 932, and of spindles 38,928, producing 10,250,000 yards of print cloth, and working up 4000 bales of cotton in a year.

THE POCASSET MANUFACTURING COMPANY

has a present capital of \$800,000. As the third cotton-manufacturing enterprise in the place, its large agency in the general development has been frequently observed in the course of the general narrative.

The original stockholders of the Pocasset were eight in number, namely, Samuel Rodman, Abraham Bowen, Oliver Chace, Clark Chase, William Slade, Nathaniel B. Borden, Nathaniel Wheeler, and Edward Bennett. The capital was fixed at \$400,000, but was increased to \$800,000 in 1849. The company own two factories, namely, the Quequechan Mill for the manufacture of print cloths, and the Pocasset Mill, for the manufacture of sheetings and shirtings.

The Quequechan Mill commenced operation in 1826. It is built of stone, 319 feet long, 48 feet wide, and five stories high, with a pitch roof, and contains 16,392 spindles and 492 looms.

The Pocasset Mill commenced running in 1847. It is also built of stone, 208 feet long, 75 feet wide, and five stories high, with a pitch roof and a square tower on the end which fronts the street. It was the first of the wide mills, so called, and contains 20,352 spindles and 422 looms. The machinery is run by a Corliss engine and three turbine wheels. The fire apparatus consists of two force-pumps, stand-pipes, hydrants, sprinklers, and complete connections with the city water-works. The company owns fifty-four tenements and employs 550 operatives.

The present number of stockholders is twenty-one.

THE ANNAWAN MANUFACTORY.

Abraham Wilkinson, Benjamin Rodman, Bradford Durfee and their associates were incorporated February 8, 1825, under this name, which claims historic interest as that of one of King Philip's most famous captains. One of the lower water privileges on the Fall River stream was purchased of the Fall River Iron Works Company, and a brick mill, with finished stone in the lower stories, immediately erected under the supervision of Major Bradford Durfee. This mill building, extending from bank to bank of the stream, is still standing, and is 181 feet long by 46 feet wide, and five stories high, including basement. The machinery is run by a turbine wheel, assisted occasionally by a small engine of 50 horse-power. The Annawan contains 10,016 spindles and 192 looms, and works up about a thousand bales of cotton annually in the production of 2,150,000 yards of print cloth. Its fire apparatus consists of one rotary force-pump, hydrants, and connections with the city water-works. It is lighted by gas from the works of the Fall River Gas Company. Thirty-two tenements are provided for the accommodation of the operatives. The capital stock was originally divided into thirty-two shares, and taken by thirteen subscribers. The present number of stockholders is twenty-eight.

THE METACOMET MILL,

owned exclusively by the Fall River Iron Works Company, was erected in 1847. The factory is placed on the west bank of the Fall River stream, just below the lower fall. It is built of stone, 247 feet long, 70 feet wide, and five stories high, with basement and a barn roof. The machinery, of which about two thirds is American, is arranged for the manufacture of print cloths 64 by 64. It contains 23,840 spindles and 591 looms, and manufactures about 6,500,000 yards of cloth annually, from 2500 bales of cotton. The motive power is a single Corliss engine, rated at 375 horse-power, and turbine wheels which carry about one third of the machinery. The steam is generated in three upright boilers of 180 horse-power each. Protection from

fire is furnished by a steam pump, wheel pump, stand-pipes, and connections with the city water-works. The mill is lighted by gas from the Fall River Gas Works. The company owns fifty-six tenements.

THE AMERICAN LINEN COMPANY,

incorporated in 1852, for the manufacture of linen fabrics, owns two mills, both built of Fall River granite. The No. 1 Mill, 301 feet long, 63 feet wide, and four stories high, with a barn roof, was erected in 1852, and designed for the manufacture of linen fabrics. In 1858 it was decided to change the production to cotton print cloths, and the mill was accordingly enlarged by the addition of another story, the other dimensions remaining as before. The No. 2 Mill, built in 1866, was 393 feet long, 72 feet wide, and five stories high, with basement, and a barn roof. On the 29th of June, 1876, a destructive fire broke out in the fourth story of this mill, used as a mule-room, and before it could be mastered burned out the upper two stories, besides occasioning considerable damage to the lower rooms. Immediate preparations were made for rebuilding, and within four months the mill was in operation again. A flat roof was substituted for the barn roof, which had proved so dangerous in case of fire.

The mills contain 82,512 spindles and 1956 looms. Each mill is dependent on the other—the No. 1 Mill, not being suited to the long mules used in the manufacture of cotton goods, is occupied for the carding, warping, spinning, and spooling processes, while in the lower three stories of the No. 2 Mill is done all the weaving, and in the upper two stories the weft spinning, etc.

The machinery is driven by two double and one single Corliss engine, the steam for which is furnished by sixteen tubular boilers.

Eight thousand five hundred bales of cotton are worked up annually into 21,000,000 yards of print cloths, 64 by 64. The company employs 1000 hands, and has provided 110 tenements for the accommodation of their families.

Protection against fire is furnished by two powerful steam pumps, stand-pipes, hydrants, and sprinklers in each mill; connections with city water throughout, and a hose company detailed from the operatives in the mill.

James P. Hillard has been superintendent for many years.

The present number of stockholders is seventy-five.

THE UNION MILL COMPANY,

incorporated in 1859, will be remembered as the first result of a movement to establish industries upon the basis of general subscriptions of the com-

munity. At this period steam had been introduced as a motive power into but few mills in Fall River.

In the summer of this year, Mr. Hale Remington conceived an enterprise which developed into the organization of the Union Mill Company and the erection of the No. 1 Mill of that corporation.

Mr. Remington invited Mr. David Anthony, Mr. S. A. Chace, and Mr. Oliver Chace to join him. Mr. Anthony was quite advanced in years. He had been one of the early manufacturers of the town, but had retired from active business. He was of sound judgment, and his early experience made him a good adviser.

These gentlemen together fully decided upon the practicability of the movement. Mr. Oliver Chace owned a large tract of unimproved property in the southerly part of the city. He wished the mill located upon it. This land was carefully inspected, but no site was found quite satisfactory to Mr. S. A. Chace.

The latter then looked over the town and selected the site upon the Quequechan River, and having taken his associates to that location, they at once agreed with him in his choice.

Mr. Oliver Chace fully concurred in the wisdom of the choice, but withdrew because he wished all his investments to benefit his landed estate.

The other gentlemen purchased the land and matured their plans for the erection of a print-cloth mill of about 15,000 spindles, and the organization of a corporation with a capital of \$175,000, in shares of \$1000 each. This stock was soon pledged by about twenty gentlemen, whose subscriptions varied from one share to twenty. Mr. Josiah Brown was employed as architect and draftsman, and much advice was given by Mr. William C. Davol.

The erection of the mill building was commenced in the month of August and was completed in December. The cotton machinery was built by Marvel, Davol & Co., of Fall River, and William Mason, of Taunton; the engines by the Corliss Steam Engine Company, of Providence. The whole establishment was completed and in operation early in March, 1860.

The corporation was organized under the General Statutes on the 31st day of December, 1859, by the election of S. Angier Chace, president; David Anthony, treasurer; Simeon Borden, clerk; and S. A. Chace, David Anthony, Hale Remington, William Mason, Charles O. Shove, and Charles P. Dring, directors.

The enterprise proved signally successful, and has led to the starting in Fall River of more than 1,000,000 cotton spindles, and a relative growth of the city in every direction.

In 1865 the company erected its No. 2 Mill, of about 30,000 spindles,

without any increase of the capital stock. Twenty shares of the stock have since been purchased by the company, and the capital reduced to \$155,000.

The present number of stockholders is thirty-one.

THE GRANITE MILLS,

so called from the material of their two fine structures, was the first enterprise established during the dark days of the war.

For several years, Charles O. Shove, Esq., had contemplated the erection of a cotton-mill. In the early part of 1863, with the co-operation of Edmund Chase (with whom he had had many conferences upon the subject) and others, he took the preliminary steps for the organization of a company with a capital of \$225,000, divided into shares of \$1000 each.

A charter was secured under date of March 3d, 1863, by which William Mason, Southard H. Miller, Charles O. Shove, and their associates were incorporated as the "Granite Mills."

William Mason was elected president; Charles O. Shove, treasurer; and William Mason, Lazarus Borden, Edmund Chase, Samuel Hathaway, Charles O. Shove, and Charles P. Stickney, the first board of direction.

A mill site was purchased, comprising the lot fronting on Twelfth street, and extending from Pleasant to Bedford street, and the construction immediately commenced of a factory 328 feet long by 70 feet wide, and five stories high, with a barn roof. Prudential considerations, due to the uncertainty which prevailed in business circles at the time, led the managers to contract at first for machinery for but half of the mill. In May, 1864, however, it was determined to increase the capital stock to \$400,000, and to put the whole mill into complete running order. Two months later (July, 1864), the stock was further increased to \$415,000, but reduced again in 1871 to \$400,000. The plans, specifications, drawings, and indeed the estimates for the establishment in its entirety, were tabulated by Mr. Shove, the prime mover of the enterprise.

Owing to some delay in receiving the machinery, and the enormous price to which cotton advanced, the mill did not commence running until January, 1865, and the first lot of cotton manufactured into print cloths netted the company a loss of \$60,000. But better times soon dawned, the mill began to run at a profit, paid up its indebtedness, remunerated its stockholders handsomely, and in 1871 it was determined to build a new structure on land bought on the north side of Bedford street, and quite contiguous to their first purchase.

This mill, also of granite, is 378 feet long, 74 feet wide, and five stories high, and when finished was considered one of the most perfect in the city,

harmonious in proportions, stately in appearance, and complete in detail. Every provision for the comfort and safety of the operatives, and the manufacture of the raw cotton into the finished cloth, that industrial science could suggest, was adopted, and experts regarded the two mills as models and standards of excellence. But experience, "that dear school for learners," taught that perfection had not yet been attained. On the morning of September 19th, 1874, a fire started in the mule-room of the No. 1 Mill, which soon got beyond control, and the dense black masses of smoke, terrifying the operatives in the upper stories, created a panic, which prevented their using the means of escape at hand, and numbers threw themselves from the upper story to the ground. Twenty-three persons were killed and thirty-three wounded in this dreadful calamity. The upper stories of the mill were burned before the fire was subdued.

As soon as the débris could be cleared away, the mill was rebuilt with a flat roof, however, instead of the barn roof, which through its inaccessibility had proved itself a very fire-fiend, and every additional safeguard furnished that experience or wisdom could suggest. Five distinct means of escape are now provided on every story of the mill. Tanks of water are placed overhead, and sprinkler pipes liberally distributed to every part of the structure. There are five stand-pipes to each mill, and hydrants connected with the city water-works, besides two powerful force-pumps, one in each building, connected by a pipe underground, so that both can be used on one mill should necessity require. The recurrence of another such calamity thus seems to have been put beyond the possibility of a contingency.

The company owns about eleven acres of land, and has built nearly one hundred tenements for the accommodation of its operatives. The machinery of the No. 1 Mill, mostly of American manufacture, is propelled by a double Corliss engine of 650 horse-power, fed by twenty-four cylinder boilers. Water for steam purposes is drawn through a canal from the upper Fall River stream. The engine of the No. 2 Mill is also a double Corliss engine of 750 horse-power, with twenty-four cylinder boilers for the generation of steam. The machinery, spinning-mules, and fly-frames are English, the remainder American. The No. 1 Mill contains 33,856 spindles and 860 looms; the No. 2 Mill, 44,664 spindles and 1008 looms. Nine thousand bales of cotton are used in the annual production of about 21,500,000 yards of print cloths, 64 by 64. The company employs 900 operatives, with a monthly payroll of \$22,000. The mills are lighted by gas from the Fall River Gas Works. The present number of stockholders is sixty. In July, 1875, Charles O. Shove, the originator of the enterprise, who had managed the manufacturing and

financial departments of the company from the beginning, died after a short illness, and his son, Charles M. Shove, was elected his successor.

THE ROBESON MILLS.

For some years previous to the death of Andrew Robeson, Sr., in 1862, the subject of a cotton-mill to be erected at some future time was frequently discussed by himself, William R. Robeson, Samuel Hathaway, and Linden Cook. The idea did not assume tangible form, however, until some years after the death of Mr. Andrew Robeson, Senior. In 1865, it was determined to realize the project, and to erect a mill upon land belonging to the Rodman estate on Hartwell street, a short distance above the upper or Troy dam. A meeting for organization was held December 1st, 1865, at which a board of directors was chosen, consisting of Andrew Robeson Jr., Charles P. Stickney, Samuel Hathaway, William C. Davol, Jr., Linden Cook, Samuel Castner, and Josiah Brown. Samuel Hathaway was elected president, and Linden Cook treasurer. The new corporation took the name Robeson Mills, from Andrew Robeson, Sr., and was duly incorporated February 20, 1866. A brick mill, three stories high, with a French roof, 222 feet long and 76 feet wide, was erected during the year 1866, after plans furnished by Josiah Brown, architect. It was filled with American machinery, and commenced running in March, 1867. In 1875 the mill was considerably enlarged, by taking off the French roof, carrying up the walls two stories higher, and finishing with a flat roof. The mill now runs 21,632 spindles and 552 looms, and manufactures annually 6,500,000 yards of print cloths 64 by 64, from 2500 bales of cotton. The motive power is furnished by two Corliss engines, a high-pressure of 160 horse-power and a low-pressure of 217 horse-power. The steam is generated by eighteen cylinder boilers. Water is conveyed directly to the mill by a canal dug from the stream. The mill is lighted by gas from the Manufacturers' Gas Company. The fire apparatus consists of two force-pumps, stand-pipes, hydrants connected with the city water-works, and sprinklers distributed through the three upper stories and picker-house. The company owns about seven acres of land, and has provided thirty-three tenements for its operatives. The present number of stockholders is twenty-five.

THE TECUMSEH MILLS.

The demand which arose at the close of the war for cotton fabrics of all kinds gave an immense stimulus to the business, and led to the enlarging of the mills already in existence and to the building of still others. The "Tecumseh Mills" was a direct outgrowth of this demand and the improved prospect for all business enterprises. Some steps looking to the formation of

the company were taken in the latter part of 1865, but the first regular meeting for organization was not held until February 17, 1866. An act of incorporation, under date of February 8th, 1866, had been secured, by which Augustus Chace, James W. Hartley, John P. Slade, and their associates were incorporated as the "Tecumseh Mills Company," with a capital of \$350,000 in shares of \$1000 each. This stock was taken by eighty-nine subscribers. Land was purchased on Hartwell street, bordering also on the Quequechan River, a short distance above the upper or Troy dam, and immediate steps taken for the erection of a mill of about 20,000 spindles. Augustus Chace was elected president, Isaac B. Chace treasurer, and the following board of direction, namely: Augustus Chace, James W. Hartley, Louis L. Barnard, Lazarus Borden, Jonathan T. Lincoln, Cook Borden, and Danforth Horton. The necessary contracts were made, and in the course of the year the mill was erected, filled with machinery, and put in operation.

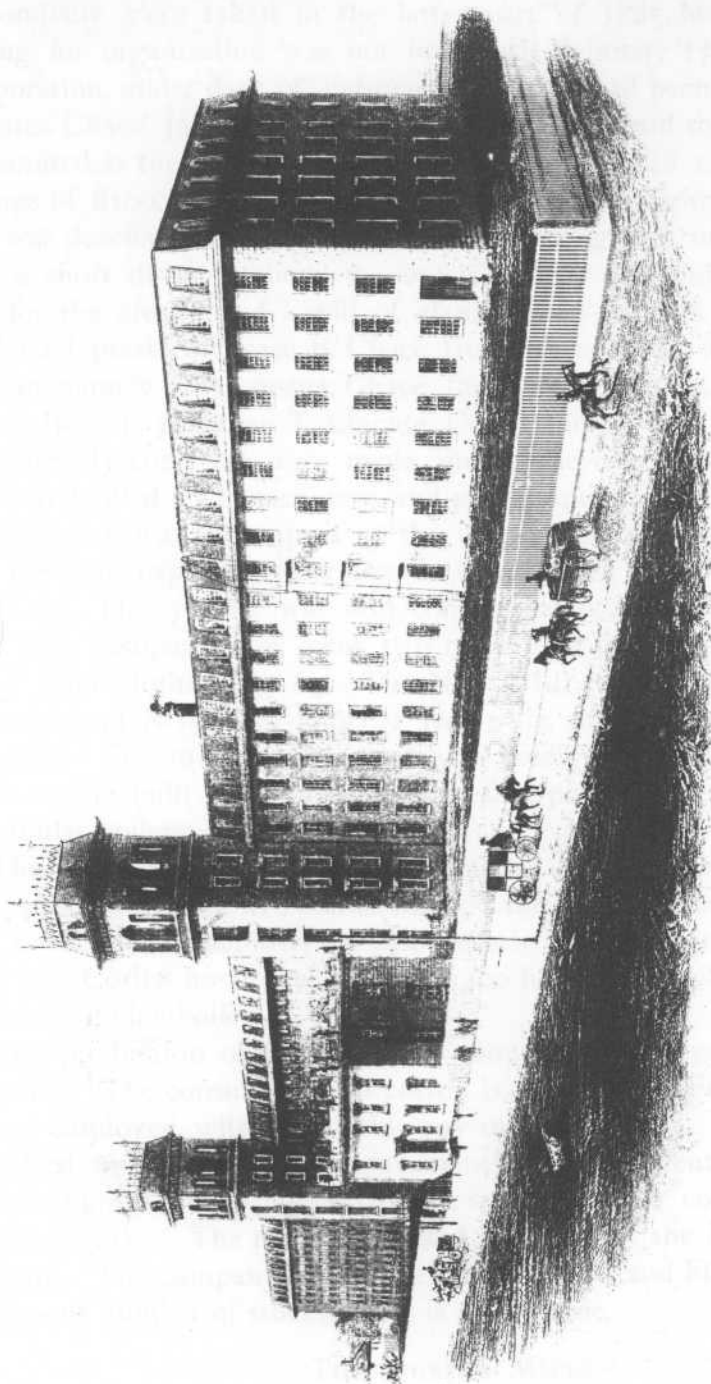
In 1872 it was determined by the corporation to build another mill of about the same capacity as the first, on land bought for the purpose on Eight Rod Way. This project was also consummated, and the mill started up in 1873. The company now owns two mills, built of granite, for the manufacture of print cloths 64 by 64. The No. 1 Mill contains 20,480 spindles and 480 looms, and is 196 feet long, 72 feet wide, and five stories high, with a pitch roof. The machinery is mostly of foreign make, and is driven by a Corliss engine, built at Taunton, of 400 horse-power. Steam is supplied by four tubular boilers.

The No. 2 Mill contains 21,686 spindles and 534 looms, and is 200 feet long, 74 feet wide, and five stories high on the south, six on the north, with a pitch roof. The machinery is also mostly of foreign manufacture, and is driven by a Corliss horizontal engine of 400 horse-power. Steam is generated in fifteen cylinder boilers.

The production of both mills is about 12,000,000 yards of print cloths per annum. The consumption of cotton is 4500 bales. Four hundred operatives are employed, with a monthly pay-roll of \$12,000. The company has all the best and most recent improvements for the prevention of fire, including force-pumps, stand-pipes, hydrants, sprinklers, and connection with the city water-works. The mills are lighted by gas from the Manufacturers' Gas Company. The company owns nine acres of land and fifty-three tenements. The present number of stockholders is ninety-nine.

THE DURFEE MILLS

probably present the finest view to the eye that seeks something like artistic effect in this great congregation of factories. They consist of two very large



Woolen Mill, Manchester, N.H.

five-story structures at right angles with Pleasant street, occupying a large square beautifully grassed, and fronted by a handsome iron fence. The buildings, including a spacious office structure which stands between them, are of granite. The company was organized in 1866, with a capital of \$500,000, and named after Major Bradford Durfee, whose son, since deceased, was the principal stockholder and original president. Mill No. 1 was erected the same year, and its companion in 1871. The company runs 87,424 spindles and 2064 looms, being the largest capacity of any corporation in Fall River. Its production is print cloth, of which 23,000,000 yards are annually made, consuming 9500 bales of cotton, and employing 950 operatives. The number of stockholders is seven.

THE DAVOL MILLS COMPANY

was organized December 1st, 1866—nineteen persons contributing the entire capital of \$270,000—and named after one of the conspicuous promoters of cotton manufacturing, William C. Davol. A site was selected above the dam and on the west side of the pond, in such proximity to the latter as to assure a convenient supply of pure water for steam purposes. Ground was broken for the foundation, April 1st, 1867, and on the 11th of March, 1868, the first yard of cloth was woven. The mill structure is essentially different in design and material from the Fall River type of long, straight granite factories. The mill proper forms two sides of a quadrangle, the picker, engine, and boiler houses constituting the remainder. The mill and out-buildings are of brick, the former four stories high, flat roof, and with its two sections 457 long and 73 feet broad. The machinery is entirely of American manufacture.

The production of the Davol Mills is shirtings, sheetings, silesias, and fancy fabrics. The shirtings stand very high in the retail market, and at the Centennial Exhibition elicited not only the highly commendatory award of the Commissioners, but the admiration of the visitors and particularly of the European experts. The company now numbers thirty-five stockholders.

THE MERCHANTS MANUFACTURING COMPANY,

organized October 24th, 1866, operates the largest distinct mill in Fall River, and few larger are known to us in New England. The promotion of this conspicuous enterprise was due to the great business energy and tact of Mr. William H. Jennings, who, after digesting carefully his scheme, secured all the capital (\$800,000) in the brief period of two days. The site selected for the factory was the lot now bounded by Bedford and Pleasant, and Thirteenth and Fourteenth streets, then owned by the heirs of N. B. Borden and other parties. This property was purchased in preference to the Wardrobe estate, at first decided upon, but finally considered to be too limited in area.

On the 2d November, a permanent organization of the company was arranged, W. H. Jennings being chosen treasurer and corporation clerk, and James Henry, W. H. Jennings, Augustus Chase, L. L. Barnard, Robert S. Gibbs, Charles H. Dean, Crawford E. Lindsey, Robert K. Remington, and Lafayette Nichols, directors. At a subsequent meeting James Henry was made president, and Mr. Jennings, clerk.

Ground was at once broken for the erection of a factory, Lazarus Borden superintending the design as building architect, Tillinghast Records being master mason, and James B. Luther, master carpenter. The design contemplated a structure of Fall River granite, 397 feet long by $92\frac{8}{12}$ broad, six stories in height, including a Mansard roof, with a capacity for 54,324 spindles and 1242 looms. The work of building pushing on rapidly, in January, 1867, Mr. Jennings, accompanied by Lazarus Borden, embarked for England, for the purpose of purchasing the picking, speeding, and spinning machinery in Manchester. The mill was completely finished during the last days of 1867—the English machinery arriving coincidentally—turned out its first cloth in February, 1868, and in the early fall was in full operation. Its production has been print cloth, 64 by 64.

In connection with building matters, the company purchased twelve additional acres of land on Pine, Davis, Plane, Cherry, and Locust streets, and on a part of it erected one hundred tenement houses for its operatives.

The business proving successful, at a special meeting, January 2, 1871, the stockholders authorized their directors to proceed at once to the erection of an addition to the mill structure, it being considered better to enlarge the original building than to build a distinct mill. The new erection was commenced early in the spring, Samuel Luther supervising the masonry, and David G. Baker the wood work. Early in 1872, the addition was completed and filled with English machinery in full operation. The Merchants Mill, thus extended, contains, under one roof, 85,570 spindles and 1942 looms.

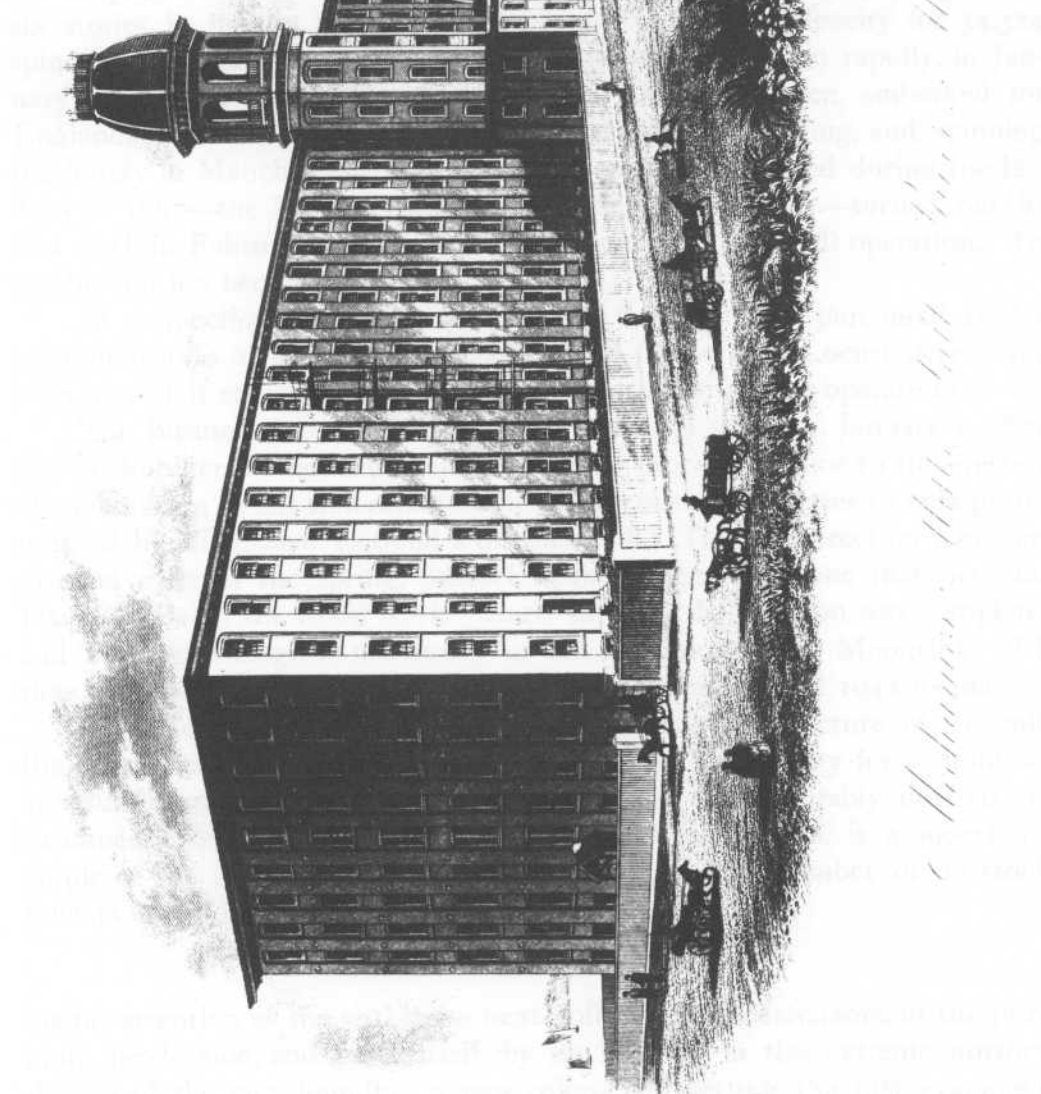
The Merchants, in all features of perfection, the structure of the mill, the excellence and amplitude of its machinery, the simplicity for so immense an establishment of its labor organization, and the admirably devised and sustained economy of its successive stages of production, is a superb example of the industrial triumphs of Fall River. The number of its stockholders is two hundred and fifty.

THE MECHANICS MILLS

claims attention as the enterprise next following the Merchants, in the print-cloth production, and particularly by its location in the extreme northern district of the city, founding a new colony and setting the first example of erecting a mill at any distance from the stream.

On the 21 November, a preliminary organization of the company was approved, W. H. Jennings being chosen treasurer and correspondence clerk, and James Henry, W. H. Jennings, Augustus Chase, L. L. Bernard, Robert S. Gibbs, Charles H. Dean, Clifford E. Felt, William K. Huntington, and Labornie Nichols, directors. The first meeting of the directors was made productive, and Mr. Jennings was chosen president.

Ground was broken on the 12th of December, 1887, and the building was completed on the 1st of March, 1888. The building was the first of its kind in the city, and it was the first of its kind in the state.



THE FALL RIVER AND ITS DEVELOPMENT

By a special charter granted by the Legislature of Massachusetts, May 25th, 1868, Thomas J. Borden, Stephen Davol, Lazarus Borden, and their associates were incorporated as the Mechanics Mills.

The charter was accepted, and the corporation organized July 1st, 1868, and the following officers were chosen, namely: President and agent, Thomas J. Borden; clerk and treasurer, D. H. Dyer; directors, Thomas J. Borden, Stephen Davol, Lazarus Borden, Job B. French, Southard H. Miller, B. M. C. Durfee, Tillinghast Records, James M. Morton, Jr., and A. D. Easton.

The original scheme was to build a mill 375 feet long, 92 feet wide, and three stories high. At a meeting of the stockholders, held July 9th, 1868, it was determined to increase the size of the mill by the addition of two stories in height, and a wing on the rear for opening and picker rooms, engine-room, and boiler-house, the mill to contain 53,712 spindles and 1248 looms. The capital stock was fixed at \$750,000, divided into 7500 shares of \$100 each. The stock was largely distributed among parties of small means, there being in all 328 stockholders, 188 of whom owned from one to ten shares each, and 73 owned from eleven to twenty-five shares each, making 261 stockholders, no one of whom owned over \$2500 of the stock, and averaging less than \$1000 each. The organization of the Merchants Manufacturing Company in 1867, with a capital of \$800,000, and about 250 stockholders, and of the Mechanics Mills in 1868, with a capital of \$750,000, and 328 stockholders, were the development of a new feature in the ownership of manufacturing property in Fall River, all previous enterprises of the kind having been associations of parties of considerable wealth, while these two were the result of bringing together in large amounts the funds of parties of very moderate capital, and enabling them to receive all the advantages in the conduct of the business that persons of ample means, associated together in small numbers, derived. The Mechanics Mills scheme was in other aspects somewhat of an innovation upon the previous practice in Fall River. All of the cotton-mills of any magnitude previously built had been located near, and took their supply of water, either for power or for making steam, from the outlet of Watuppa Lake to tide-water. The location selected for the Mechanics Mills was in the northerly section of the city, bordering upon the Taunton River, at its junction with Mount Hope Bay, about one and a half miles north of the outlet of the Quequechan River.

This section had previously been occupied solely by private residences there having been no mechanical or manufacturing establishments in the vicinity. A wharf, about 400 feet long and 100 feet wide, was built at the westerly side of the mill site, where all coal for the use of the mill is landed within a few rods of the boilers.

Water for the boilers was obtained by digging a well 18 feet diameter, inside, and of sufficient depth to secure a permanent supply.

For two or three years this mill was entirely isolated from the other manufacturing establishments of the city, and was regarded by the operatives as being quite out of town, but the rapid extension of the cotton industry has resulted in the erection of five other mills still farther north, making six factories in that neighborhood, aggregating 225,528 spindles and 5448 looms. This colony of mills is about two miles north of those lying along the stream, and constituting the central group. As a third group of five mills is located in the vicinity of Laurel Lake, about the same remove south of the centre of the city, the extreme distance from the most northerly to the most southerly mills of the city is over four miles.

The location of this northerly group of mills being two and a half to three miles from the granite quarries in the easterly part of the city, and very accessible either by rail or tide-water to the brick-yards of Taunton, all of these six mills have been built of brick.

The Mechanics Mills was the first new mill in the country provided with slashers for dressing warps—a system which has since almost entirely superseded the old method of dressing, as it can be operated for about one quarter the expense, a larger percentage of reduction in cost of production than has been made in any other department of cotton manufacturing since the invention of the self-operating mule.

The following changes have occurred in the officers of the corporation since its original organization :

February 3d, 1870, James M. Morton, Jr., was chosen clerk; February 2, 1871, Thomas J. Borden was chosen treasurer, and resigning the office of president, Stephen Davol was chosen to that position; February, 1876, Thomas J. Borden resigned the office of treasurer, and George B. Durfee was elected to fill the vacancy.

Two of the original directors, Lazarus Borden and B. M. C. Durfee, have died, and Mr. A. D. Easton resigned. These vacancies have been filled by the election of John B. Hathaway, George B. Durfee, and Frank S. Stevens.

The erection of the mill commenced in the summer of 1868, and was completed and the machinery set up by June, 1869, the establishment being in full operation in December. The company has about twelve acres of land, exclusive of mill site and wharf, and has built one hundred and twenty-six tenements. The fire-prevention of the mill is ample, comprising Parmelee's automatic sprinklers in the upper three stories and the opener and picker rooms, connected with the city water-works, as well as stand-pipes, front and

rear, one each side of the tower and one in the tower, extending to the roof, all operated by a powerful force-pump. In addition to this extraordinary provision, the mill yard has its hydrants, always in working order, and a large supply of hose and apparatus is in easy recourse.

THE "STAFFORD MILLS"

was organized under the General Statutes of Massachusetts, December 12th, 1870, with a capital of \$500,000, in shares of \$100 each. Foster H. Stafford was elected president and agent, and Shubael P. Lovell clerk and treasurer, with the following board of directors: F. H. Stafford, Samuel Hathaway, Charles P. Stickney, Robert T. Davis, William C. Davol, William L. Slade, Danforth Horton, Edmund Chase, and Weaver Osborn.

On the 18th of March, 1871, this corporation was dissolved, and the subscribers, twenty-two in number, reorganized under a special charter granted by the commonwealth to Charles P. Stickney, Samuel Hathaway, Foster H. Stafford, and their associates, as the "Stafford Mills," with a capital of \$550,000. The persons chosen officers in the first organization were elected to the same positions under the special charter.

The company assumed the name of "Stafford Mills," in honor of their president, who was the projector of the enterprise, and whose long experience, untiring devotion to the business, and proved skill and success had justly earned him the confidence and esteem of his associates.

Mr. Stafford is one of the few practical manufacturers of to-day, whose life has compassed almost the whole range of cotton manufacture from its beginning in this country.

Having entered the mill when a boy, scarcely more than seven or eight years of age, he has been connected with it in various capacities for more than fifty years. Coming to Fall River in 1842, he was for ten years the superintendent of the old Fall River and Annawan manufactories. When Mr. Lazarus Borden resigned the superintendency of the Metacomet Mill, that, too, was joined to these, and he continued in the charge of all three until 1859. Desiring then to enter into business for himself, he removed to Pawtucket, and with his brother commenced the manufacture of thread. In 1859 the new enterprise of the Union Mill was projected, and the managers, in casting about for some one to superintend the operations, speedily placed themselves in communication with Mr. Stafford, and the success of that experiment was due in no small degree to the practical knowledge and skill of Mr. Stafford. After ten years' service at the Union Mills, during which a second mill was built, of twice the capacity of the first, without any increase of capital or assessment on the stockholders, dividends paid amounting to

several times the original subscription, and the stock increased more than five-fold in value, leading the way for many enterprises of a similar character which have followed—Mr. Stafford resigned his position, and with Mr. Samuel Hathaway and others organized and put into successful operation the new enterprise of the "Stafford Mills."

Land was purchased at a spot known as White Brook, at the junction of the old Bedford road and Pleasant street, not far distant from the upper part of the Quequechan River. Work on the foundation was begun in April, 1871, and some portions of the machinery were started the next January. The mill is built of granite, 374 feet long, 70 feet wide, and five stories high, with an L for engine-house, boilers, picker-house, etc. Stairways are placed at each end, and thus the whole space is rendered available, while safe means of ingress and egress are afforded. As Mr. Stafford quaintly says, "Towers don't pay dividends"—the tower was omitted. The machinery is partly foreign, and occasioned considerable delay in starting up the mill on account of its non-arrival. The engine is a double Corliss of 600 horse-power, and is supplied with steam by twenty-four cylinder boilers. Water is drawn from the Quequechan River, the Brook water not proving quite clear enough generally for manufacturing purposes, though it could be used if a better supply were not near at hand.

The mill contains 34,928 spindles and 860 looms, and manufactures 10,000,000 yards of print cloth, 64 by 64, per annum. It is lighted by gas from the Manufacturers' Gas Company, and has all the modern appliances for protection against fire.

The company, instead of buying land and building tenements for their operatives, adopted the plan of loaning the necessary capital to those owning land in the neighborhood and taking leases of the houses erected by them; thus securing the accommodations required, helping the land-owners near by, and saving so much of an investment in unproductive real estate and depreciation in buildings. One hundred and twenty-four tenements were built and leased on these terms, and within a few years the money loaned was repaid, and the ownership fully vested in the original proprietors of the land—a specimen of co-operative ownership which might perhaps be profitably followed in other communities and in other departments of trade. The company now owns about fifteen acres of land, including its mill site. The present number of stockholders is forty.

THE WEETAMOE MILLS COMPANY

is the outgrowth of the prosperity of the mills of the decade of 1860 to 1870. The first steps in the organization of the company were taken by D. Hartwell Dyer, Esq., who opened the books for subscription to a capital stock of \$550,000. He met with such success that \$100,000 was offered in excess of the amount named. The first meeting for organization was held December 29th, 1870, and the following board of direction chosen: L. L. Barnard, Job B. French, Jonathan I. Hilliard, Josiah C. Blaisdell, William Lindsey, Francis B. Hood, Henry C. Lincoln, E. C. Kilburn, and D. H. Dyer. L. L. Barnard was elected president, and D. H. Dyer treasurer. The act of incorporation is dated February 24th, 1871. The number of original subscribers was two hundred and seventy-five. Land for a mill site was purchased on the banks of Taunton River, near Slade's Ferry, and the new corporation assumed the name of "Weetamoe," after the Queen of the Pocassets, who was drowned near by, in crossing the river. Another tract of land, north of Mechanicsville, was purchased for tenement houses. Work on the mill building was begun in March, 1872, and within ten months the looms were running off cloth. The plans were all drawn by Mr. Dyer, who, more or less connected with cotton-mills from his boyhood, in later years had turned his attention to the architecture of mill buildings, and the preparation of plans and specifications for the same.

The mill is of brick, 320 feet long, 74 feet wide, and five stories high with basement. It has a flat roof, and an L for engines, boilers, etc. Most of the machinery, looms, spoolers, cards, etc., is American, but a small portion English. The engine is a double Corliss of 500 horse-power, and steam is furnished by five sections of the Harrison boiler. The water for steam purposes is supplied by wells dug on the premises. The mill is lighted by gas from the Fall River Gas Works. There are sixty-five tenements, the outer walls of brick, for the accommodation of the operatives. The company owns nine acres of land, together with a fine wharf privilege, which is utilized for the landing of coal, cotton, building material, and supplies. The present number of stockholders is three hundred.

THE SLADE MILL

is noteworthy as the first erected of the group of factories located in the southern district of Fall River. The enterprise was initiated by the owners of a large tract of unimproved land a few rods south of the Globe Village, on and about what is known as Cook's Pond (or Laurel Lake)—Messrs. William L. and Jonathan Slade, Benjamin Hall, and the Dwelly heirs—who

entered into a joint agreement, on the 1st of May, 1871, to sell their real estate for the erection of a mill thereon. Before the day was concluded every share of the stock had been subscribed, and probably double the amount could have been raised. The original subscribers were but twenty-seven in number, conspicuous in the list, in addition to those already mentioned as owners of the one hundred and fifty acres of land conceded to the company, being Frank S. Stevens, John C. Milne, W. and J. M. Osborn, Richard B. and Thomas J. Borden, S. Angier Chace, David A. Brayton, B. M. C. Durfee, and William Valentine. On the 13th of May a permanent organization was formed, Mr. William L. Slade being chosen president and James M. Osborn treasurer. Ground was at once broken for a mill, and the structure of brick rapidly pushed forward.

The effect of this new industrial movement was phenomenal. Real estate in the vicinity took an instantaneous upward turn, plots of unoccupied land in every proximate direction being picked up by eager purchasers almost before the owners could name a price, acres that were not valued a few years previously at \$200 going off for \$10,000. The shares of the new company rose from par (\$100) to \$172, before the foundation of the factory had been completely laid.

In the midst of this activity—so surely does one enterprise beget others—other companies were formed, and the King Philip, Osborn, and Montaup Mills soon in process of erection on portions of the land originally owned by the Slade corporation.

The result of this pioneer enterprise has been the establishment of a new village, adding probably 5000 to the population of Fall River, and over \$2,000,000 to its production. One of the finest public-school edifices in the city has been erected on Main street, near the mills, known as the Slade school, and a new church has likewise been built for the Catholic community. The highways, thrown open on its real estate by the company, have been accepted by the city.

The Slade Mill produces print cloth. Its capacity is 10,000,000 yards annually, consuming 4000 bales of cotton. It runs 37,040 spindles and 860 looms. The present number of stockholders is seventy.

THE RICHARD BORDEN MANUFACTURING COMPANY

was initiated early in 1871. The entire capital of \$800,000 was taken by twelve individuals, and May 19th the charter was accepted. At the first meeting of organization, Thomas J. Borden was elected treasurer and corporation clerk, and Richard Borden, Philip D. Borden, Thomas J. Borden, Richard B. Borden, and A. S. Covell, directors. Richard Borden was chosen

president at the subsequent board meeting. At the same meeting it was voted to purchase of Colonel Richard Borden the real estate owned by him, and known as the Borden farm, lying east of the Eight Rod Way and south of the Quequechan, as well as two acres belonging to Cook Borden, adjacent. Portions of the land were afterwards sold for the erection of the Chace and Tecumseh Mills.

The mill, which is one of the most perfect structures for manufacturing purposes in the country, was erected and "wound up" under the personal supervision of Thomas J. Borden, who made the plans of construction and machine equipment. It started full operation in February, 1873, the present number of spindles (1536 having been added to the original design) being 44,064, with 1032 looms. Its production annually is 12,000,000 yards of print cloth. The present number of stockholders is fifteen.

Colonel Richard Borden dying in February, 1874, his son, Richard B. Borden, was elected president, and continued in that office until the early part of 1876, when, by the resignation of his brother Thomas J., he was called to the more active duties of treasurer. Thomas J. Borden is now the president of the company.

THE WAMPANOAG MILL COMPANY

was the result of a preliminary meeting on the 23d of May, 1871, at which Stephen Davol, J. D. Flint, William H. Jennings, L. S. Earl, Walter C. Durfee, and R. T. Davis were associated for the purpose of projecting a new corporation. On the 31st of the same month, the capital of \$400,000 having all been taken up, a meeting of stockholders was held to organize the company, at which Walter C. Durfee was elected treasurer and corporation clerk, and R. T. Davis, J. D. Flint, Walter C. Durfee, Stephen Davol, Foster H. Stafford, Simeon Borden, George H. Eddy, A. L. Covell, L. S. Earl, William H. Jennings, and John H. Brown, directors. At a subsequent meeting R. T. Davis was chosen president.

The land for the mill site was purchased of Messrs. Davis and Flint, fifteen acres in extent, and the construction of the factory at once proceeded. On the 1st of April, 1872, within ten months of laying the first stone, cloth was woven in the mill. The company now owns eighteen acres of land, and has erected thereon ten large tenement houses admirably planned, and a dwelling for its superintendent. The mill has a run of 28,000 spindles and 704 looms, producing 8,000,000 yards of print cloth per annum. Its provision against fire consists of two powerful force-pumps, besides the usual quota of hydrants, all connecting with the city water-works. The present number of stockholders is ninety-eight.

THE NARRAGANSETT MILL

was the third erection of the group in the northern district. Its original promoters were Daniel McCowan, James Waring, A. D. Easton, and others. The capital, originally \$350,000, was on the acceptance of the charter, July 6th, 1871, increased to \$400,000. At the meeting of organization, July 12th, James Waring was chosen treasurer, and A. D. Easton president. The mill was finished and wound up for operation by the latter part of December in the following year. Its capacity is 27,920 spindles and 700 looms, producing print cloth and corset jeans. Its real estate on the east side of North Main street, twenty-one acres, including a tract, also, on the west side of that thoroughfare, was purchased of Job T. Wilson and others. Its present stockholders number two hundred and forty.

THE KING PHILIP MILLS COMPANY.

In the spring of 1871, Messrs. C. E. Lindsey and E. C. Kilburn of Fall River, and Jonathan Chace of Valley Falls, R. I., had several interviews with reference to building a cotton-mill for the manufacture of fine cotton fabrics. Believing that there was an opening for an enterprise of that class, they decided to test the practicability of the scheme by opening books for subscriptions to a capital stock of \$500,000, contemplating a mill of about 36,000 spindles. The matter was put in charge of Mr. E. C. Kilburn, and within a fortnight the whole amount of \$500,000 was taken by forty-seven responsible persons, and an additional \$160,000 asked for. But at the first meeting of the subscribers, held July 14th, 1871, for organization, it was decided to limit the capital stock to \$500,000. A code of by-laws was adopted, and the first board of directors elected, consisting of Jonathan Chace, James Henry, S. Angier Chace, C. E. Lindsey, Philip D. Borden, Charles O. Shove, E. C. Kilburn, A. S. Tripp, Benjamin A. Chace, Simeon Borden, and Charles H. Dean. E. C. Kilburn was elected treasurer, and A. S. Tripp clerk of the corporation. At the first meeting of the board of directors, held the same day, Crawford E. Lindsey was elected president of the corporation.

The act of incorporation bears date September 15th, 1871.

It was at first decided to erect the mill on a tract of land belonging to the late Oliver Chace and his children, situated on the corner of Middle and Bay streets and on Sprague street, containing about twelve acres. But upon digging a well to test the supply of water requisite for steam purposes, it was found entirely inadequate, and the treasurer was instructed to look up other locations. At a meeting of the directors, held September 4th, 1871, negotiations were approved, which resulted in the purchase of twenty-one acres of the

Dodge Farm, so-called, and fifteen acres of the Slade Mills land adjoining, making a tract extending from Laurel Lake on the east to South Main Road on the west, and comprising about thirty-seven acres. Preparations were immediately made for putting in a foundation, and work continued until cold weather put a stop to out-door operations. It was resumed the next April, and the mill carried forward to completion.

The mill building, located on the west shore of Laurel Lake, is constructed of granite, most of which was taken from a ledge on the premises, and is 320 feet long by 92 feet wide, four stories high on the front and five on the rear. The engine and picker house, attached to the main building at the south-east corner, is three stories high, 65 feet long, and 50 feet wide; the boiler-house, on the north side of the picker-house, is one story high, 98 feet long, and 50 feet wide.

The mill was built under the superintendence of the treasurer, assisted by W. F. Sherman and F. P. Sheldon, architects and draftsmen. The mason work was done by A. T. Pierce of Dighton, and the carpentry by L. T. Miller of Fall River. Machinery began to be introduced in October, 1872. The mules were built by Parr, Curtis & Madeley, and the speeders and roving-frames by Howard & Boullough, of Accrington, England. The card and spinning frames were furnished by the Saco Water-Power and Machine Company, of Biddeford, Maine, the looms and shafting by Kilburn, Lincoln & Company, of Fall River.

The mill started up in January, 1873, but on account of delays in receiving machinery from England, was not in full running order until late in the summer. The panic of 1873 occurred just as the first finished goods were put into the agent's hands, but notwithstanding the depression and falling market, they were well received, soon made for themselves a name, and have since maintained an honorable reputation with old and well established manufactories of like productions.

The regular makes are now "King Philips" fine wide sheetings, $\frac{1}{4}$, $\frac{3}{8}$, and $\frac{1}{2}$; "King Philips" fine cambric muslins, and "King Philips" jaconets. There are also manufactured "Laurel Lake Sheetings," and various other kinds of brown sheetings and umbrella goods. The mill runs 37,440 spindles and 776 looms, and works up some 3000 bales of cotton annually in the production of 5,500,000 yards of cloth. It requires about 425 hands to operate its machinery, while its monthly pay-roll amounts to \$12,000. The engine is a Harris-Corliss of 550 horse-power, made by Wm. A. Harris, of Providence, R. I. Twenty-four cylinder boilers are in constant use to furnish the necessary steam. Abundance of water is supplied by the lake, from which a canal leads directly into the engine-room. The fire apparatus consists of two of the

largest size Fulton steam-pumps, and the mill is also connected with the Slade Mills, not far distant, by a six-inch iron pipe, to which the pumps of each mill are attached, so that in case of fire the one can assist the other. The mill is lighted by gas furnished by the Slade Mills, and conveyed through the pipe above referred to, which thus answers the double purpose of a gas conduit, or, in case of fire, by shutting off the gas, it becomes a water conduit. Stairs are at each end of the mill building, and fire-escapes are attached to each story, front and rear. The company owns six houses with four tenements in each, and two blocks with twenty-eight tenements each, making in all eighty tenements; also a house for the superintendent, connected with the mill by a bell, to be used by the watchman in any sudden emergency at night. Mr. B. W. Nichols was appointed superintendent in October, 1872, a position he has filled honorably and successfully to the present time. The stockholders of the King Philip Company number one hundred and forty.

THE CRESCENT MILLS CORPORATION

was organized October 25th, 1871, with a capital stock of \$500,000. The original stockholders numbered thirty. Ground was broken for foundation in the same month, and the work rapidly pushed forward till cold weather, when operations were suspended until spring. The main building is of granite, 339 feet by 74, four stories and attic above the basement. The picker-house building in rear is 85 by 50 feet, three stories high. The first cotton was put in December 21st, 1872, and the first cloth produced February 8th, 1873, and the entire mill was in full operation August 30th, 1873.

The picker-house machinery and roving-frames were built by Messrs. Walker & Hacking, Bury, Lancashire, Eng. The cards, mules, looms, and spinning-frames were built by William Mason, of Taunton, Mass.

The engine was furnished by the Foundry and Machine Company of Taunton, Mass. It is of the Corliss pattern, having the cylinder 26 inches diameter by 5 feet stroke, and working up to 450 horse-power. The twenty-four boilers, cylinder pattern, were made by the Fall River Iron Works Company, and are 30 feet long by 30 inches in diameter. The mill contains 33,280 spindles and 744 looms, manufacturing $\frac{4}{4}$ fine brown sheetings and special styles of fine goods for printing and converting. Three thousand five hundred bales of cotton are used annually, producing 6,000,000 yards of cloth.

The original officers of the corporation were: Benjamin Covell, president; Lafayette Nichols, treasurer; and Benjamin Covell, L. Nichols, D. A. Chapin, William B. Durfee, J. F. Nichols, Joseph Brady, David F. Brown, G. M. Haffards, and A. S. Covell constituted the board of directors.

Mr. Nichols served as treasurer until November 12th, 1873, when he

resigned, and was succeeded by Mr. R. B. Borden. Mr. Borden filled the position until the annual meeting, February 9th, 1876, at which time he also resigned, and Mr. A. S. Covell, the present treasurer, was elected to fill the vacancy.

The land purchased for the mill site is bounded by the Quequechan River, Eight Rod Way, and Pleasant street. It contains about twenty-five acres, and is the centre of a circle of eighteen large mills, and was chosen on account of the valuable water-front, its proximity to so many large corporations, and its consequent prospective value as an investment. Already the Fall River Railroad Company has a large tract of this land for their terminus, and several large lots have been leased to parties for different branches of business. The company numbers ninety-four stockholders.

THE MONTAUP MILLS

was projected by Josiah Brown, Esq., of Fall River. In following his business as a civil engineer, Mr. Brown had been brought in contact in various parts of New England with mills for the manufacture of bags, duck and cotton bats, and conceived the idea that in Fall River, with its numerous cotton-mills, there was an excellent opening for such an enterprise. Having put his ideas in form, and broached the subject to several of his friends, he found them ready to make the necessary investment, and within a week after the books were opened, the whole amount was subscribed, and the preliminary steps taken in the formation of the company. The first meeting was held November 14th, 1871, by the original subscribers, thirty-five in number, and the following board of directors chosen: Josiah Brown, Bradford D. Davol, George B. Durfee, A. D. Easton, William L. Slade, Isaac Borden, George H. Hawes, William Valentine, Holder B. Durfee, and Thomas J. Borden. Josiah Brown was elected president, and Isaac Borden treasurer and clerk of the corporation. The capital was fixed at \$250,000, and the name of "Montaup Mills" adopted as the corporate name, suggested by the Indian name of "Mount Hope." The act of incorporation bears date December 1st, 1871.

Between eight and nine acres of land were bought on the northern shore of Laurel Lake, and as soon as the plans could be drawn, work was begun on the foundation. The mill is built of brick, 242 feet long and 74 feet wide, and four stories high, with a flat roof. An L for a picker-house projects on the east, 77 feet long by 29 feet wide, three stories high. On the west is another L, 30 by 20, two stories high, occupied as an engine and boiler house. Josiah Brown was the architect; John Q. Chace, the mason; and W. T. Wood, the carpenter. The cards were furnished by William Mason, of

Taunton; the drawing-frames by the Whitin Machine Company, of Whitinsville, Mass.; the speeders by Parr, Curtis & Madeley, of Manchester, England; the spinning-frames by Fales & Jenckes, of Pawtucket, R. I.; and the looms by the Lewiston Machine Company, of Lewiston, Maine.

Operations on the foundation were begun February 13th, 1872, and the work advanced with such rapidity that the engine was started January 2d, 1873, and the weaving February 7th, 1873, or in a little less than a year from the first breaking of ground.

The company entered immediately upon the manufacture of first quality seamless bags, cotton bats and duck, running 7200 spindles and 112 looms, from which it can produce 600,000 bags (two-bushel) annually. The company employs 125 hands, and its pay-roll is \$3000 per month. The works are run by a single engine, of 350 horse-power, made by the Corliss Steam Engine Company, of Providence, R. I. Steam is furnished by three upright boilers of 150 horse-power each. A canal from the lake conveys the water directly into the engine-room. The mill is lighted by gas made from oil, and manufactured on the premises. Two Fulton steam pumps, and connections with the city water-works, give ample protection against fire. Fire-escapes upon the front and rear of the mill, and stairways at each end, give ready means of exit in any sudden emergency. The company owns six houses, containing thirty-six tenements, which are rented at moderate rates to the operatives. Mr. John F. Hamlet has filled the office of superintendent since the organization of the company, and has brought to his position a large and skilled experience in this particular branch of cotton manufacture. The company numbers seventy-five stockholders.

THE OSBORN MILLS

enterprise was due to the suggestion of Weaver Osborn, Esq., who, in consultation with Messrs. Easton & Milne and Joseph Healy, proposed the formation of a company with \$500,000 capital for the manufacture of print cloths. The books were opened, and *before night* the whole amount was subscribed, and the same evening "rights" sold at three per cent premium. The first meeting of the original subscribers, thirty-five in number, was holden October 9th, 1871, and the company organized with the following board of directors: Weaver Osborn, Joseph Healy, James T. Milne, Benjamin Hall, Andrew J. Borden, Joseph Osborn, Joseph E. Macomber, George T. Hathaway, John C. Milne, D. H. Dyer, and Edward E. Hathaway. Weaver Osborn was subsequently elected president, and Joseph Healy treasurer and clerk of the corporation. The capital was fixed at \$500,000, and the name of "Osborn Mills," in honor

of the president, selected as the corporate name. The act of incorporation bears date February 1st, 1872.

A tract of land on the eastern shore of Laurel Lake, comprising about fifteen acres, was secured as a mill site, and a smaller lot of five acres, near by, purchased for tenement houses. Plans for the mill were drawn during the winter by D. H. Dyer, architect, and work begun on the foundation April 4th, 1872. The mill is built of granite, from a ledge on the south shore of the lake, and is 318 feet long by 74 feet wide, five stories high, with a flat roof and a basement. A finely proportioned tower at the centre affords means of entrance and exit. An L, on the west, 90 feet by 40, and three stories high, serves as an engine and picker house, to which is attached a boiler-house, 41 feet by 42, two stories high. The mason work was done under the direction of William M. Manley, and the wood work by David D. Grinnell, both of Fall River. The looms and cards were furnished by William Mason, of Taunton; the mules and speeders by Walker & Hacking, of Manchester, England; the spoolers by Payne & Matthewson, of Pawtucket; the warpers by the Hopedale Machine Company, of Hopedale, Mass.; the drawing by the Whitin Machine Company, of Whitinville, Mass., and the shafting by William Sellers & Co., of Philadelphia. The mill building was put up, the machinery placed in position, and weaving commenced (March 10, 1873) in less than a year from the time of beginning work on the foundation. The mill was "wound up" for the manufacture of print cloths 64 by 64, and contains 37,232 spindles and 930 looms. Four thousand two hundred and fifty bales of cotton are used per annum in the production of 11,000,000 yards of cloth. Four hundred and twenty-five hands are employed, and the monthly pay-roll amounts to \$11,000. The motive power is furnished by a double steam-engine of 500 horse-power, made by the Corliss Steam Engine Company, of Providence, R. I. Four upright boilers, 12 feet in diameter, supply the steam, while an abundance of water is secured by a canal from the adjacent lake. The mill is lighted by gas from the Fall River Gas Works. The fire apparatus consists of two Niagara force-pumps, with two stand-pipes and two hydrants connected with the city water-works. The company has provided for its help thirteen houses, containing forty-nine tenements. Mr. Joseph Watters has proved an efficient and practical superintendent from his first appointment, at the formation of the company. The stockholders are two hundred and six in number.

THE CHACE MILLS COMPANY

was organized in 1871-2, the original promoters of the enterprise being Augustus Chace, George W. Grinnell, and J. M. Earl. The first suggestion

of the new corporation was the effort of a few gentlemen, associated with Mr. John P. Slade, to start a mill a considerable distance south, on the shore of the Quequechan Pond. The locality proposed being considered too far removed from the city, the undertaking resolved itself into another enterprise, which terminated in the formation of the Chace Company.

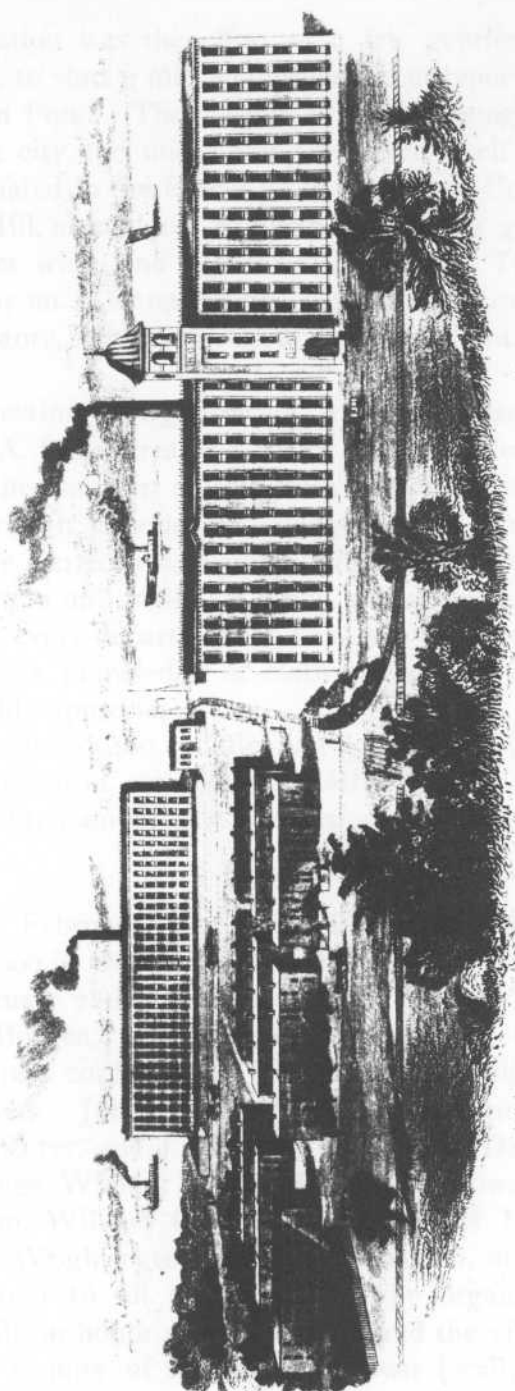
The Chace Mill, located on Rodman street, is a granite structure, 377 feet long by 74 feet wide, and six stories elevation. The engine-house and picker-room occupy an **L**, three stories high, in the rear. In this mill the basement, a full story, remarkably dry, airy, and light, is used for cotton storage.

At the first meeting of organization, Augustus Chace was chosen president, and Joseph A. Baker treasurer. The superintendent, George H. Hills, though probably the youngest man in the vocation in Fall River, has had an exceptionally thorough experience, having, with an early prepossession for cotton manufacture, perfectly acquainted himself with all the details of the industry by entering a mill while yet a boy, and successively working his way up to overseer in every department. This is a very unusual tuition, but it has given Mr. Hills a knowledge of cloth production in all its stages that cannot be too highly appreciated.

This mill contains 43,480 spindles and 1056 looms, producing 12,000,000 yards of print cloth out of 4500 bales of cotton. The company has a capital of \$500,000, distributed among one hundred and ninety stockholders.

THE FLINT MILLS

was organized in February, 1872, with a capital of \$500,000, which was increased to \$600,000 in October of the same year. The act of incorporation bearing date February 28th, 1872, names John D. Flint, Stephen C. Wrightington, Simeon Borden, and William H. Jennings, their associates and successors, as the new corporation. The number of original subscribers was about two hundred. John D. Flint was elected president, Stephen C. Wrightington treasurer, and J. D. Flint, Robert T. Davis, Stephen Davol, William H. Jennings, William T. Hall, Daniel McGowan, Gardner T. Dean, S. C. Wrightington, William Carroll, and Cornelius Hargraves, the board of direction. Mr. Wrightington resigned in March, and George H. Eddy was elected treasurer to fill the vacancy. The organization assumed the name of Flint Mills, in honor of its president, and the village which has since grown up in the vicinity of the mill, is known locally as "Flint Village." Land for a mill site and tenements was purchased on the upper part of the stream, near where it issues from the South Pond, and before frost was out of the ground operations were begun for the foundation of the mill. The



Handwritten text, possibly a signature or name, written vertically along the right side of the page.

mill is built of stone, in accordance with plans drawn by D. H. Dyer, architect, and, unlike most of the cotton-mills in the city, is a wide mill, after the English style, being 300 feet long by 94 feet wide, instead of the usual width of 72 to 74 feet. It is five stories high, with a flat roof, and a finely proportioned tower in front. The machinery is mostly American, and arranged for the manufacture of print cloth 64 by 64. The mill commenced running in April, 1873, and manufactures 12,500,000 yards of print cloths per annum. It contains 45,360 spindles, 1008 looms, and employs 450 operatives, with a monthly pay-roll of \$11,000. The machinery is driven by a double Corliss engine of 650 horse-power. Steam is supplied by five upright boilers of 170 horse-power each. Water is taken directly from the stream by a canal dug for the purpose. The mill is lighted by gas made from petroleum, and furnished by the Wampanoag Mills near by. The fire apparatus consists of two large force-pumps, stand-pipes, hydrants, sprinklers, and connections with the city water-works; also a large tank in the back tower. The company owns forty-two tenements, and about sixty-two acres of land. The present number of stockholders is two hundred and fifty.

THE BORDER CITY MILLS

is the project of George T. Hathaway, Esq., who, after consultation with Messrs. S. Angier Chace and Chester W. Greene, of Fall River, and James A. Hathaway, of Boston, solicited subscriptions to a corporation of one million dollars capital. The stock was taken by about one hundred and fifty subscribers.

The first meeting for organization was held April 29th, 1872, at which the following gentlemen were elected a board of direction: S. Angier Chace, Stephen Davol, Chester W. Greene, E. C. Kilburn, Charles P. Stickney, A. D. Easton, George T. Hathaway, John M. Dean, William E. Dunham, James E. Cunneen, Horatio N. Durfee. S. A. Chace was subsequently elected president, and George T. Hathaway treasurer. An act of incorporation was secured under date of June 3d, 1872, and the name of "Border City Mills" adopted—a name often applied to Fall River because of its proximity to the State of Rhode Island.

It was at first contemplated to erect a single mill of some 75,000 spindles, but the experience of the past seemed to indicate that such a number of spindles could be handled better in two mills than in one, and the final decision was given for the erection of two mills, of about 35,000 spindles each. Thirty acres of land were purchased in the north part of the city, at a point known as Wilson's Cove, on the east bank of Taunton River, and immediate preparations were begun for the erection of the No. 1 Mill. The site chosen

had admirable facilities for the transaction of business, a good depth of water on the west, where a wharf was easily constructed for the reception of building material, coal, cotton, freight, etc., while on the east was the Old Colony Railroad, from which a spur was built directly past the doors of the mills to the wharf, and by which cloth and supplies could be readily shipped north or south.

The mills are built of brick. The No. 1 Mill was located near the shore, and work begun on the foundation in June, 1872, from plans furnished by Josiah Brown, architect and civil engineer. It is 318 feet long, 73 feet wide, and five stories high, with an L for engine and boiler room. It was filled with machinery, mostly of American manufacture, and started up in June, 1873. The No. 2 Mill was located some distance east, quite near the railroad. It was also built of brick, 329 feet long, 73 feet wide, five stories high, with basement and L, and started up in March, 1874. The motive power of each mill is furnished by a double Corliss engine of 565 horse-power. The steam is generated in the No. 1 Mill by four upright boilers, while the No. 2 is provided with twenty-four cylinder boilers. Water is drawn from wells dug on the premises. Both mills are lighted by gas furnished by the Fall River Gas Company. The No. 1 Mill contains 35,632 spindles and 880 looms, and the No. 2 Mill, 36,512 spindles and 880 looms. They consume about nine thousand bales of cotton annually, in the production of 20,500,000 yards of print cloths 64 by 64. Each mill is provided with two large force-pumps, together with sprinklers in each room, as well as stand-pipes and hydrants connected with the city water-works. The company owns twenty blocks, containing one hundred and fifty-eight tenements. James E. Cunneen has been superintendent of the mills since the organization of the company. The present number of stockholders is three hundred and fifteen.

THE SAGAMORE MILLS.

The first meeting for the organization of the Sagamore Mills was held March 6th, 1872. The number of original subscribers to the capital stock, of \$500,000, was one hundred and seven. An act of incorporation was soon after secured, and on the completion of the organization, L. L. Barnard was elected president, Francis B. Hood treasurer, and the following board of direction: L. L. Barnard, F. B. Hood, Josiah C. Blaisdell, James W. Hartley, Charles McCreery, Jonathan I. Hilliard, Joseph Borden, William M. Almy, D. Hartwell Dyer, and Job T. Wilson. A tract of land on the borders of Taunton River, a little north of Slade's Ferry, was purchased, and work on the foundations of the mill begun in July, 1872. The mill is built of brick,

from plans drawn by D. H. Dyer, architect, and is 320 feet long, 73 feet wide, and five stories high, with a flat roof, tower, and basement.

The machinery was started in July, 1873, and is about half American and half English. The engine is of 400 horse-power, the boilers (six sections of the Harrison boiler) of about 50 horse-power each. Water is supplied by wells dug on the premises. The mill is lighted by gas, furnished by the Fall River Gas Company. The fire apparatus consists of two steam pumps, stand-pipes, hydrants, sprinklers, and connections throughout with city water. The company owns thirty-five acres of land and forty-eight tenements. The mill contains 37,672 spindles and 900 looms, and works up annually 4000 bales of cotton into 10,500,000 yards of print cloths. It employs 425 operatives, with a monthly pay-roll of \$10,000. The present number of stockholders is two hundred and sixty-eight.

THE SHOVE MILLS.

The first steps in the formation of the Shove Mills were taken by John P. Slade, Esq., and it was mainly through his instrumentality that the organization was finally effected, a charter secured, and the project brought to a successful issue. During the early stages of the movement, he had frequent consultation with Messrs. Charles O. Shove, George A. Chace, and Joseph McCreery.

The first meeting of the subscribers, thirty-one in number, for the organization of the company, was held March 4th, 1872. The act of incorporation is dated April 2d, 1872. The capital was fixed at \$550,000, and the name of "Shove Mills" assumed as the corporate name, in honor of Charles O. Shove, a prominent cotton manufacturer of the city, and the first president of the new corporation. John P. Slade was elected treasurer, and the following board of direction: Charles O. Shove, Joseph McCreery, George A. Chace, Lloyd S. Earle, William Connell, Jr., Nathan Chace, Isaac W. Howland, Josiah C. Blaisdell, and John P. Slade.

Land for a mill site was purchased on the western shore of Laurel Lake, just within the line of boundary between Massachusetts and Rhode Island, and further purchases beyond the boundary line were made for tenement blocks.

No active steps towards building the mill were taken until the fall of 1873, when a foundation only was put in. Work was resumed in the spring of 1874, and the building carried forward to completion, and filled with machinery. The mill is a handsome granite structure, 339-feet long, 74 feet wide, and five stories high, with a basement, a flat roof, and a large square tower running up at the centre. The machinery is mostly American, and

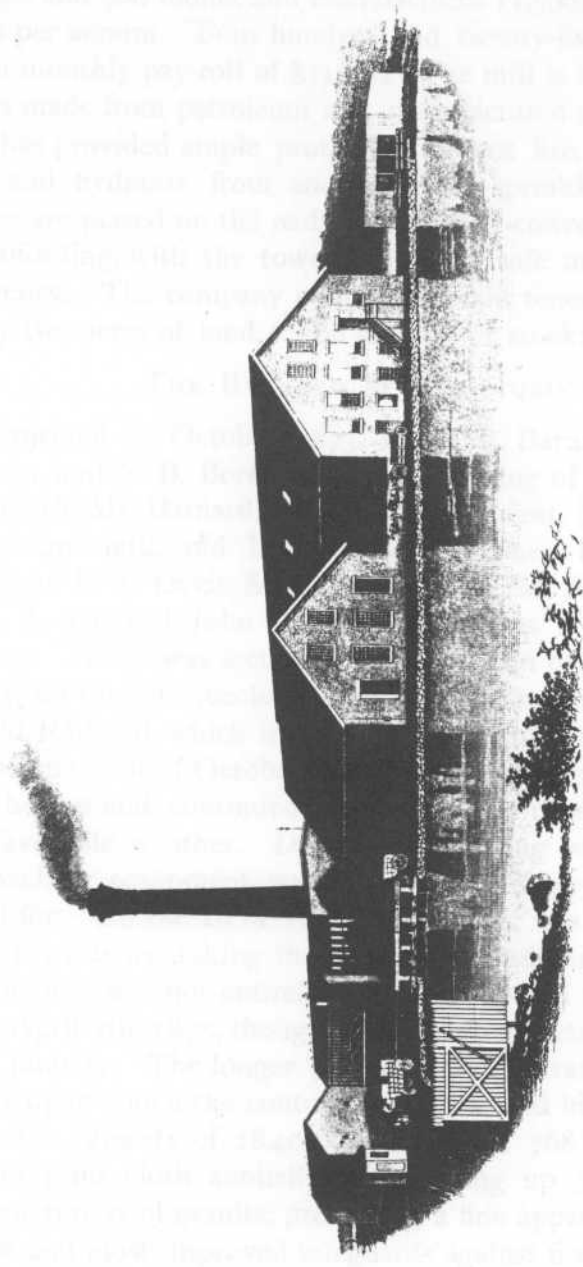
commenced running in April, 1875. The engine is a Harris-Corliss, of 500 horse-power. Steam is generated in twenty-four cylinder boilers, and abundance of water is furnished by the neighboring lake. The mill contains 37,504 spindles and 960 looms, and manufactures 11,500,000 yards of 64 by 64 print cloths per annum. Four hundred and twenty-five operatives are employed, with a monthly pay-roll of \$11,000. The mill is heated by steam, and lighted by gas made from petroleum and manufactured on the premises. The company has provided ample protection against fire, by two force-pumps, stand-pipes and hydrants, front and rear, and sprinklers within the mill. Fire-escapes are placed on the ends and at other convenient places about the mill, thus affording, with the tower, rapid and safe means of exit in any sudden emergency. The company owns forty-eight tenements and one hundred and twenty-two acres of land. The number of stockholders is one hundred.

THE BARNARD MANUFACTURING COMPANY

was projected in October, 1873, by L. L. Barnard, Stephen Davol, W. H. Jennings, and N. B. Borden. At the meeting of organization, on the 14th of that month, Mr. Barnard was chosen president, N. B. Borden treasurer and corporation clerk, and L. L. Barnard, Stephen Davol, W. H. Jennings, A. D. Easton, R. T. Davis, Simeon Borden, J. M. Aldrich, N. B. Borden, A. B. Chace, A. S. Covell, John Campbell, Cornelius Hargraves, and W. H. Gifford directors. A site was secured for the erection of a mill in the eastern part of the city, on the Quequechan River, and in convenient proximity to the New Bedford Railroad, which was then in contemplation.

On the 20th of October foundations were commenced for the engine and boiler houses and continued seven weeks, until suspended by the approach of unfavorable weather. During the ensuing winter the plans for factory and machine equipment were carefully perfected and the machinery contracted for. On the 2d of April, 1874, work was resumed, William R. Huston, of Providence, taking the contract for building the mill structures.

The mill was not entirely wound up and all the machinery in operation before April 7th, 1875, though weaving on a partial scale commenced on the 9th of January. The longer period, however, was but one year exactly from the day upon which the contractor commenced his building operations. The mill has a capacity of 28,400 spindles, with 768 looms, producing 9,000,000 yards of print cloth annually, and working up 3500 bales of cotton. The mill structure is of granite, presenting a fine appearance, and possessed of the amplest and most improved safeguards against fire. The capital of \$350,000 is owned by sixty-nine stockholders.



THE NEW YORK PUBLIC LIBRARY

THE FALL RIVER BLEACHERY.

Up to that extraordinary year in the progress of Fall River (1872) the cloth production of the city had lacked one important element of a business perfect in all its stages—the immediate neighborhood of a bleachery. During the remarkable industrial development of that twelvemonth, however, attention was naturally drawn to an enterprise so obviously essential to local business. Among those who took particular interest in the establishment of bleaching works was happily one exceptionally suited to fashion and conduct a project of the kind—Mr. Spencer Borden. Mr. Borden, the eldest son of Jefferson Borden, one of the two conspicuous original promoters of local progress surviving, had enjoyed advantages for acquainting himself with the technical and scientific branches of manufacture of an exceptional character, having, after two years' tuition in the dye and color department of the American Print Works, spent a like period in Europe, inspecting the advanced systems of Manchester and Mulhouse, and studying applied chemistry and other arts used in cloth production, both at Paris and London.

Early in 1872, Mr. Borden prepared a carefully digested and elaborated scheme for a bleach works, and first submitted it to the owners of the great Wamsutta Mills in New Bedford. It was not only cordially received by them, but when, by their then agent, Mr. Thomas Bennett, Jr., laid before other local capitalists, very favorably entertained by them likewise. Large manufacturers in Rhode Island, and every mill in Fall River that bleached or was likely to bleach its cottons, also welcomed Mr. Borden's suggestion, and every thing seemed to indicate the time had come when this important adjunct of large cotton-manufacturing interests should be called into existence.

Committees to secure a site were appointed, and visited every stream of importance in Fall River, Tiverton, Somerset, and as far off as the Bridge-water ponds, gauging and analyzing the water, and examining the water-shed and freighting facilities.

It was finally decided that the lower privilege of the so-called Sucker Brook, about two miles from the City Hall on Stafford road, near the Rhode Island line, was the most available situation.

The following reasons led to this decision: Upon gauging the stream in May, it was found there were 1250 cubic feet per minute flowing in this brook to the Watuppa Pond. At the time when the people of Fall River desired to introduce water into the city, Stafford Pond, the source of this brook, was found to be the purest water examined, or whose examination was recorded in any of the water reports of the country. This beautiful sheet of water, lying 225 feet above Mount Hope Bay, has no stream flowing into it, is fed

entirely by boiling springs at its bottom, and is so clear that fish swimming far beneath the surface can be plainly seen from above. Its only outlet is the Sucker Brook, which flows a mile and a half, falling 75 feet in the distance, to the site decided upon for the new industry. Again, coming from another valley to the east of Stafford road, a very pure stream flowed into the same hollow land as the Sucker Brook. This, upon being traced to its source, was found to issue from a collection of about twenty springs situate on the so-called Newhall and Dickinson Farms.

Having decided upon this location for the bleachery, the lower twenty-five acres of the Israel Buffington or Howard Farm, including the site of the old batting-mill, run formerly by Mr. Buffington, on this brook, were bought by some of the more prominent promoters of the enterprise. To this were afterwards added the three acres on Newhall Farm, where the springs were situated, a strip ten feet wide connecting that with the first purchase, and, still later, about twenty-five acres of the farm of Isaac Cook: thus securing the whole valley lying along the Sucker Brook, and the brook itself, from the lower side of the Job Estes privilege nearly to Watuppa South Lake, with right to deepen the brook even to the lake.

The books of the company were then opened and the stock so quickly subscribed, that before a stone had been laid it was quoted at 110 in the market. Prominent among the subscribers were Messrs. Jefferson, Philip D. and Richard B. Borden, Stephen Davol, Frank Stevens, C. E. Lindsey, C. P. Stickney, George B. Durfee, Walter Paine (3d), of Fall River; Messrs. Thomas Bennett, Jr., William J. Rotch, Edward D. Mandell, Edward C. Jones, William W. Crapo, Charles L. Wood, Andrew G. Pierce, Joseph Arthur Beauvais, Edward L. Baker, Jonathan Bourne, Jr., Charles L. Hawes, David B. Kempton, of New Bedford; Messrs. T. P. Sheperd & Co., John O. Waterman, George Bridge, and Arnold Peters, of Rhode Island; and Mr. Dempsey, of Lewiston, besides others.

A meeting of the stockholders being held, Jefferson Borden was chosen president, Spencer Borden, agent and treasurer, and Messrs. Thomas Bennett, Jr., Richard B. Borden, Bradford D. Davol, Crawford E. Lindsey, Philip D. Borden, George B. Durfee, and Charles P. Stickney, with the president and treasurer, directors of the corporation. Plans for the proposed bleachery were drawn by the agent and accepted by the directors, Mr. Walter J. Paine performing the architect's functions, the mason work being done by Slade W. Earle, and the carpentry and joinery by Obadiah Pierce.

It was decided to build of stone, and of this material enough fine granite was found on the premises to answer the requirements of construction.

A level having been determined for the ponds, which were to be raised,

the site of the building was excavated thirteen feet below this point, to allow of this grand fall of water into the washing machines, and to fill the kiers and boilers without pumping.

Two entirely separate ponds, of five acres each, varying from eight to eleven feet in depth, were raised—one for the water of Stafford Lake, the other for that from the springs. The buildings were so placed that the front toward the west made the back wall of the Stafford-water dam, that toward the south the back of the spring-water dam, and these walls were built seven feet thick, and laid in cement to the top of the dam, which is thirty feet wide.

Workmen then went to the Newhall Farm, cleared and stoned the springs, and run-ways from them into a stone reservoir one hundred feet square, where they were all collected. Earthenware pipes twelve inches in diameter were laid thence to conduct this water one quarter of a mile to the spring-water pond already mentioned. Meanwhile other gangs of men, with hoes and shovels, cleaned all the mud and stumps out of this spring pond, wheeling every thing that could contaminate the water out upon firm land—a labor which cost above \$4000. As a final precaution against defilement of the pure water needed in bleaching, brick filters were built in each pond, as follows: An arch, of four feet radius and sixteen to twenty feet long, was first laid in good hard body brick. Six inches outside of this another arch was started, and as it rose, charcoal of the size of robins' eggs carefully put into the space between the two arches. The ends were then built up solid, and all water that enters the pipes of the Fall River Bleachery, besides its perfect natural purity, is filtered through two courses of brick and six inches of fine gravel or charcoal. A sixteen-inch pipe supplies the boilers, kiers, and first six washing machines from the Stafford-water pond. A ten-inch pipe of spring water supplies the two final washers, the eight rinse boxes—a feature peculiar to this works and the Lewiston Bleachery, the invention of Mr. Dempsey, of Lewiston—the mangles, sprinklers, and water for the paper-collar combining, of which more later.

Not to go further into minute details, the bleachery was built with twelve kiers, or a capacity of twelve to thirteen tons per diem, all the other machinery being in the proportion necessary to take care of this amount of cloth, and including all that was late and desirable in bleaching and finishing machinery. Besides the experience acquired by the agent in his survey of European works and his scientific studies, the company was most fortunate in the acquisition, before the works started, of Mr. Michael Partington as superintendent—a man whose years of practical intimacy with the business and ability to manage men have been of immense advantage to the undertaking.

The boilers are of Corliss' upright pattern, he being also builder of the engine. This is high-pressure, and with the exhaust steam the kiers are boiled. The dry-sheds at this works are the only ones where cloth is never handled either in hanging or taking down, the whole being done by machinery. They are also the only ones entirely independent of the weather a very important desideratum in a place where one of the first articles of faith with the management is that no satisfactory finish can be gotten upon any cloths but those dried by hanging in air.

The buildings are arranged so that the capacity of the works can be doubled—to twenty-four tons per diem—without additional construction, excepting that of dry-sheds. Already the desire of the managers to please the public is appreciated, and no finish is more popular in market than that of the Fall River Bleachery.

In ten months from the time the axe was applied to the forest, stately buildings rose, ponds were made, and cloth put through the bleaching process. In three of the hardest years the business of the country ever labored under, meeting a panic the first year of its existence, the bleachery has made friends enough to more than fill the machinery it started with, and already kiers, boilers, and folding machines have to be added.

Not only so, but in this Centennial year a new industry has been added to their already large business. Having concluded that a bleachery was the place where paper-collar stock could be most advantageously handled, it was decided to add machinery for this purpose. Usually, goods have been sent to a bleachery brown, gone through the bleaching process, and, when starched and finished, packed in rolls of—say 1000 yards each. In this condition they are shipped to the "combiners," where they are united with paper, and the combined stock calendered until highly finished. The great advantage of doing this at a bleachery is the saving in extra packing and transportation of the white cloth to the combiners. Moreover, when the whole business is done under one roof, certain processes, usually applied before the bleached goods are shipped away, may be omitted without detriment to the quality of stock when combined.

The paper-collar stock finished by this bleachery has met with so good a reception in market, that the company is adding new and more complete machinery to that already in position, the entire paper-collar floor, when complete, being intended to produce 15,000 to 20,000 yards of yard-wide stock per diem. The new machinery is also intended to combine cloth as wide as $\frac{3}{4}$ to $\frac{1}{4}$, which will be of immense advantage to the manufacturer of paper collars and cuffs, allowing him to get a greater number of the strips from which these articles are cut, with only the edge waste incident to all yard-wide muslin.

