

where the lands lie, be printed in it, and this is the only one in Cayuga County.

"The machine for picking wool, Jehial Clark's, is excellent. The carding machine is next used, and turns out the wool in complete rolls. It can card 112 pounds per day, and one man attends both. Four shillings per pound is given for wool. Carding, picking and greasing wool, the grease furnished by the owner of the wool, is eight pence per pound. There are upwards of twenty carding machines in this County, and great numbers of sheep are driven to the New York markets. The Linseed Oil Mills, Hyde & Beach's, can press fifteen gallons of oil in a day, and with great effort, a barrel. The flax-seed is broken by two mill-stones, placed perpendicularly, like those of bark-mills, and following each other in succession. Seed costs from two to seven shillings per bushel, and each bushel produces three or four quarts. The oil sells at the mill at nine shillings a gallon. Oil is also expressed from the seed of the sunflower. One bushel makes two gallons. It is excellent for burning and makes no smoke. Oil is also made here from *Palma Christi*.

"At a mill north-west from Auburn, on Lot 37 Aurelius, a spring rises perpendicularly out of the level earth. It produces two hogsheads a minute and immediately forms a mill stream. A few yards below is a fulling-mill. The water is uncommonly good and cold. I found in it a honey-comb fossil, like those at the Sulphur Springs, at Cherry Valley, and near Geneva. This spring is called the Cold Spring. There are two or three others near it, and the creek formed from them, called the Cold Spring Creek, contains excellent trout; about a mile from the Cold Spring there is a sulphur spring. From the fossil found at the Cold Spring and the coldness of the water, it must run over sulphur. There is a sulphur spring on the margin of Cayuga Lake."

A Literary Association was formed in Auburn in 1812. A small library was procured and meetings held for the discussion of previously assigned topics. John Sawyer was the first President, and A. H. Howland, David Brinkerhoff and Eleazer Hills, the first trustees. A similar association was also formed in 1838, of which Stephen A. Goodwin was the first President, William Richardson, Vice-President, S. B. Dennis, Secretary, and B. F. Hall, Reader; Dr. Frank H. Hamilton, Peter Myers, Dr. Erastus Humphreys, William Hopkins and S. S. Dennis, were the Executive Board. In 1841 the association was duly incorporated, and was efficiently continued for about ten years, and its organization maintained until the war of the Rebellion.

Lectures and the discussion of assigned topics were regularly maintained, the lectures mainly delivered by our own citizens, and the discussions were by the members of the association. They were largely attended. It was before the era of lecture bureaus or of professional star lecturers, and the main purpose of the association was the edification and improvement of its members. The debates were free and so also were the lectures as a rule; but when, as was sometimes the case, expenses for foreign lecturers were incurred, a fee was charged to meet them. So unused were our people then to pay for literary entertainments that the attendance was usually so small as to discourage their continuance, even at the small admission fee of twelve and a half cents, and the interest in the association so rapidly declined when the public was charged for admission to its meetings that its discontinuance followed.

MILITARY ORGANIZATIONS.—On the declaration of war in 1812, the military organization of the County was very imperfect. In the town of Aurelius a regiment was enrolled, commanded by Colonel John Harris, of Cayuga. The men were unprovided with suitable arms or equipments, and undisciplined. Three of the companies of this regiment were organized in Auburn and were better disciplined and supplied than the balance of the regiment. Captain Bradley Tuttle commanded an independent cavalry company, Captain Henry Ammerman an infantry company, and Captain John H. Compston a company of artillery; the latter was supplied with two six-pounder brass pieces.

Soon after war was declared the regiment was mustered and volunteers called for, resulting in the formation of two volunteer companies, commanded by Captain David Eldridge and Captain Henry Brinkerhoff. Those two companies and Captain Compston with his artillery, were soon after forwarded to the army commanded by General Stephen Van Rensselaer, near Niagara. The infantry companies participated in the attack by our forces upon the village of Lewiston, and a party volunteered to cross the river into Canada under Colonels Scott and Wool; but so many refused to do so that those who did cross were, after heroic resistance, overcome and captured. Captain Compston did not arrive in time to participate in the battle. The battery remained about three months on the frontier and engaged

in several skirmishes, in one of which a gun was lost. Its term of service was three months, at the end of which the battery returned to Auburn.

During the war the roads through Auburn were frequently traversed by troops and heavy supply trains. The great western turnpike passing through Genesee street, which was then unimproved, was the great line of military travel and it was rendered nearly impassable during the wet seasons by heavy truckage over it; yet the passage through the village of large masses of troops to and from the West, that often encamped here and procured supplies, made the business of the place active and profitable while the war lasted.

Buffalo was captured and burned by the enemy in the winter of 1813 and the interior of the State was thus laid open to their incursions. They were expected to invade Western and Central New York and a wild panic seized the people. Fugitives fled eastward and spread intense alarm; and the "loveliest village," it was expected, would be one of the objects of the enemy's attention and consequently it participated in the general fear. The news reached them in the evening that the "British were coming," and a sleepless and very active night followed. Major Noah Olmstead ordered out the companies of Captains Ammerman and Tuttle, to march on the following day westward, and a general search was made throughout the village for every available fire-lock, of which, in proper order for efficient use, few only could be found. The cavalry company was better supplied, and was soon formed and put under way, followed in the morning by two infantry companies, in which very many of our citizens were volunteers. At Cayuga they halted to await the mustering of the regiment, which, under the excitement of the occasion was promptly effected, and the rude, undisciplined and poorly armed force moved forward to meet the veteran red coats. A voluntary reconnaissance had been made as far as Canandaigua by public-spirited citizens, who found the alarm groundless, that there were no movements of the enemy toward the east and the patriotic band gladly returned to civil life. A company of regulars was recruited in Auburn for service in the war of 1812-'15, and also a company of riflemen commanded by the brave and impetuous Captain John Richardson. The latter company participated in several severe battles and incited by the daring

heroism of their captain, were, at all times, distinguished for bold and resolute deeds on the Niagara frontier and especially at the sortie from Fort Erie, in which the advance works of the enemy and a large body of prisoners were captured.

At the close of the war of 1812, Auburn contained about 200 buildings and 1,000 inhabitants. For the population of the place there was relatively a very large number of stores and taverns, there being some thirty of the former and six of the latter. The taverns were Demaree's, Farmers' Inn, the Centre House, Tracy's, the Western Exchange and Pomeroy's, and among the stores were those of Hyde & Beach, Robert and John Patty, store and tannery, Joseph Colt, Samuel Compston, Horace Hills, and George Leitch.

Between Genesee street and the Outlet, at this time, was a nearly unbroken wood, and an apple orchard occupied the space between the Exchange and the court house. State, Dill and Water streets were then a swamp and covered with shrubs and bushes, which were being gradually removed and the sloughs reclaimed by drainage. Few of the present residents unfamiliar with the condition of Water, Dill and State streets, at that time, can form any true conception of their forbidding aspect, nor did those who then saw the morass, anticipate that, within a single life-time, neatly laid and thoroughly drained streets and large and imposing buildings, would adorn the wild and forbidding swamp.

CHAPTER XXIII.

HISTORY OF AUBURN, (CONTINUED.)

VILLAGE INCORPORATED—FIRST OFFICERS—
IMPROVEMENTS—BIBLE SOCIETIES—SABBATH
SCHOOLS—COTTON-MILL—PAPER-MILL—
MILITIA SYSTEM—FIRST MARKET—VISIT OF
LA FAYETTE—GROWTH OF THE VILLAGE—
SPECULATIVE PROGRESS—EXTRAVAGANT EXPENDITURES ON STREETS, BUILDINGS AND PUBLIC WORKS—OWASCO CANAL—RAILROADS—
AUBURN COLLEGE—CRASH OF 1837—ITS CONSEQUENCES—THE PATRIOT WAR—VISITS OF CLAY, VAN BUREN AND ADAMS—WOOLEN-MILL.

IN 1815, Auburn was the largest village in Central or Western New York. Rochester and Syracuse had not then been incorporated as

villages, Buffalo had been reduced to ashes and Geneva and Canandaigua were behind the "loveliest village" in population and general business activity.

Hitherto it had been under the town government of Aurelius; but in April, 1815, it was incorporated as a village, with ample powers for the necessary improvement of the place. The first president was Joseph Colt, and the first trustees were Enos T. Throop, Bradley Tuttle, Lyman Payne and David Hyde.

Protection of the village from fire and the improvement of the streets and walks were among its first official acts. A fire engine was purchased in New York and shipped by boat up the Hudson. At Newburgh the boat was ice-bound, and the engine brought thence by team, which required fifteen days.

Auburn had a notorious reputation for mud. Its walks, where any were found, consisted of slabs irregularly laid in the spring, but regularly consumed for fuel in the winter, and her streets were a sea of mud during the wet season; hence the ordinances of the trustees for the protection and improvement of the place were seconded by the hearty coöperation of the citizens. For a further view of this subject see "Village Government."

THE CAYUGA BIBLE SOCIETY was formed at a public meeting, in Auburn, February 22d, 1815, more than one year before the formation of the American Bible Society, and the auxiliary Bible Society, in June, 1817. The object of the latter was the gratuitous distribution of the sacred Scriptures among the poor of the County. In 1818 the first Sabbath School in Auburn was begun by Dr. Richard Steel, Henry Ammerman and Noble D. Strong, for the religious instruction of the colored people of the village. It was organized in the face of much ridicule and opposition, but the men having the enterprise in charge, were not to be turned aside by the idle badinage of the thoughtless or prejudiced crowd. They were men of clear heads and pure hearts and their enterprise led not only to the success of the colored schools, but one for the white children as well, which was speedily followed by others. The hearty approval of the whole religious public was soon secured, and Sabbath Schools were soon instituted by the churches generally.

COTTON-MILL.—The first manufactory of cotton goods in Auburn is due to the enterprise of Elijah Miller and John H. Beach, who in 1814 began the erection of the cotton-mill at Clarksville. It went into operation in 1817. The mill, in 1822, was sold to a company, of which Alvah Worden was President, and Robert Wiltsie, Secretary. It was chiefly occupied in the manufacture of ticking. Robert Muir, George B. Throop and Nathaniel Garrow, bought the property in 1827. Though for a time the mill was operated profitably, its financial affairs finally became so embarrassed as to necessitate its sale. It then passed through several hands, by none of whom was its prosperity restored until it was purchased in 1853 by L. W. Nye, by whom and the lessees, Howlet & Bailey, it was run with highly satisfactory results.

THE FIRST PAPER-MILL.—Thomas M. and George C. Skinner and Ebenezer Hoskins, erected, below the cotton-mill just described, the first paper-mill in Auburn, which was put in operation in 1829. It made chiefly fine writing papers, which found a ready market for several years; but in 1837 they, in common with nearly all business men, were forced to close out their business and their interest in the property was transferred to the Cayuga County Bank in 1840. The subsequent lessees of the mill were L. W. Nye and Charles Eldred, who were succeeded by David S. West, Henry Ivison and Chauncey Markham. A company was formed in 1849 with a capital of \$20,000, the trustees of which were David S. West, L. W. Nye, John C. Ivison, David Foote, Henry Ivison, Aurelius Wheeler, Asahel Cooley and Russell Chappel. The business department of the company was placed in charge of S. H. Henry, and William H. Barnes superintended the manufacturing department. In 1854 there was a reorganization of the company with an increased capital, and its business was greatly enlarged. The two large publishing houses here of Derby & Miller and Alden, Beardsley & Co., were large consumers of the paper produced by this company. In 1858 the mill was destroyed by fire and the business discontinued.

The first Auburn Bank was organized in 1825, the instruments being procured by the liberal subscriptions of our citizens.

In 1828 a memorable effort was made in Auburn and throughout the country, to promote the

due observance of the Sabbath by organizations, the object of which was to prevent Sunday travel. State, central and local auxiliary societies and a large combination of individuals were formed to effect this object. The incidents and results of this movement are given in the article relating to "Travel and Transportation," to which the reader is referred.

The militia system of the State was, at this time, very imperfect. It was regarded by our citizens as the merest farce, and unsuccessful efforts were made to reform it by a change in the laws of the State. Failing in that, a few public-spirited men attempted to supply the deficiency by voluntary efforts to raise, equip and drill an artillery regiment, to comprise five companies, one from each of the towns of Auburn, Brutus, Scipio, Locke and Genoa. The Auburn company was commanded by Captain William H. Seward. The regiment was finally organized in 1829 with Mr. Seward as Colonel; John Wright, Lieutenant-Colonel; Lyman Hinman, Major; Oscar S. Burgess, Adjutant; John H. Chedell, Quartermaster; Nelson Beardsley, Paymaster; Frank L. Markham, Surgeon; Dr. Blanchard Fosgate, Surgeon's Mate. The regiment was denominated the 33d Artillery. The organization was kept up about 13 years, when it was disbanded.

FUSILEERING. — The military system of the State was regarded as so farcical and inefficient that an attempt was made to so scandalize it as to shame the authorities into the adoption of measures for its improvement. For this purpose bodies of *Fusileers*, so called, were formed and rigged out in the most fantastic style. They were mounted, the better to carry and display their bulky and varied trumpery of immense wooden swords six to eight feet in length, their straw valises the size of small cotton bales, their bedaubed and clay faces and calico uniforms of every conceivable size and shape, the whole forming a most ridiculous burlesque when mounted and piled upon nags, that were as unique in deformity as were the loads they bore.

These Fusileers exhibited their fantastic drill and discipline and their ridiculous uniforms, on occasions of the militia parades, drawing immense crowds of spectators, and so incensing the legal "trainers" as, in some cases, to lead to their expulsion from the field. Though the burlesque was ridiculous in the extreme, it led to the

revision of the laws and to the improvement of the militia system.

THE FIRST MARKET in Auburn was opened in 1820, by Edward Patten, and the business is still continued here by his descendants.

LA FAYETTE made a tour of the country in 1825, accompanied by his son George Washington La Fayette. His reception in Auburn was very enthusiastic. Vast crowds from the village, the County and adjoining counties, came to greet him. He was met at Cayuga by a reception committee in carriages, and an escort of cavalry and mounted citizens. He rode in a barouche drawn by six beautiful chestnut horses, supplied for the occasion by the Sherwoods, who were then the great stage proprietors of this route. An imposing display of military companies, Revolutionary soldiers and Free-Masons lined the road in front of Fort Hill, across which an evergreen arch was thrown, bearing the words :

"Hail Patriot, Statesman, Hero, Sage!
Hail Freedom's Chief; hail Gallia's Son!
Whose laurels greener grow with age,
Won by the side of Washington."

On passing the arch a salute of artillery was fired from the hill above them, the bells of the village pealed their welcome, and deafening cheers were given by the thousands that lined the way-side. It was a bright and beautiful day in June, and everything conspired to give *eclat* to the imposing event. It is related that on reaching the Western Exchange, the General recognized in the crowd an old soldier who had served under him and rushing to him, he threw his arms about him and heartily kissed him, to the great amusement of the crowd.

He was received by Colonel John W. Hulbert, in an elegant and patriotic speech, to which the General made a graceful and fitting response. Introductions and greetings followed, succeeded by a repast, served in a shaded field in the rear of the hotel. Toasts were drank from the wine cups, and, as was the usual practice of the times, accompanied by volleys of artillery and martial music. A ball followed in the evening which was visited by the Marquis, from which at eleven o'clock, P. M., he departed in a carriage for Syracuse, escorted as far as Elbridge by a committee of citizens. It is now easy enough to take a midnight train to Syracuse; but at that time it was no special luxury to drive twenty-six miles after eleven, P. M., over the hilly and rough roads

which then formed the thoroughfare to Syracuse; yet the General was due there on the following day, and he kept his engagement. From Syracuse eastward, he traveled by way of the grand Erie Canal, whose packet boats were then regarded as the perfection of luxurious travel.

PREPARING FOR A PANIC.—In the fifteen years, between 1820 and 1835 Auburn had rapidly increased in population, having risen from 2233 in the former, to 5363 in the latter year, and improvements of all kinds had increased in a still greater ratio. As before the panic of 1837, there was scarcely any limit to the expenditures for public or private improvements, so, for several years before that of 1837, the expenditures for buildings, street and other improvements, and in the purchase of real estate, had been on the most extravagant scale. Every one believed himself rich, or at least, that he would soon be so. Money was abundant, easily obtained, and very liberally used. As usual, at such times, credits were readily granted, and indebtedness largely increased. The streets were graded and macadamized, and shade trees planted by the concurrent action of the citizens. The wooden bridge over the Outlet on Genesee street was replaced by a costly stone bridge, so imperfectly constructed, that when the supporting wooden arches were removed it fell into ruins. Eighty new residences were erected in 1835, and the same year, the eleven stone stores comprising the Exchange block. The old market and present City Hall, costing about \$30,000, was erected in 1836. The plan had been to locate in the first story all the butcher's stalls, and to confine their business exclusively to this building; but John E. Patten, under legal advice, refused to obey the ordinance, which the courts declared illegal, and the plan was abandoned. The building has recently been refitted for the several city offices. The court house was erected in 1836, costing about the same as the town hall. The Auburn House and Merchants' Exchange, completed in 1839, was another expensive enterprise of this year, undertaken by an association of our citizens. But the ambition, enterprise and resources of our citizens were not bounded by merely local improvements, extensive and magnificent as these were. In 1835, The Owasco Canal Company engaged their earnest attention and they resolved to go forward with the work, to lay, on

the 14th day of October, the foundation stone of the "big dam," which was to raise the waters of the Outlet to a level with the surface of the lake, and that the Hon. Wm. H. Seward be requested to deliver an address on the occasion. Arrangements were made for a grand and imposing procession in which a special and interesting feature was the appearance of the several trades, plying, on appropriate cars, their respective arts. The day was fine and the attendance very large. Mr. Seward's address was one of his happiest, and the liveliest enthusiasm was aroused.

The exercises were followed by a dinner at the American, with toasts, and concluded by a ball in the evening. The construction of the dam was at once commenced and carried up as the water permitted during the next three years to the height of 25 feet. Thirty-eight feet had been the proposed height of the dam. In the meantime the financial collapse of 1837 had come and borne down many, on whom the progress of the work depended, and it was suspended. Had it been otherwise, and had no "Mill River" disaster resulted from the giving away of the big dam, it would have largely added to the water-power of the city, estimated at 700 horse power, and would, in that view alone, have been an important and paying investment, while the proposed navigation of the Outlet would, in the light of subsequent improvements, have been of no practical consequence.

The project of a railroad to the canal at Weedsport and to Syracuse were also suggestions of the vigor and enterprise of our citizens, resulting in the building of the latter. Of the \$400,000 of authorized capital of the latter road, Auburn and its immediate vicinity supplied \$350,000.

AUBURN COLLEGE.—The ambition of the "Loveliest Village" was by no means satisfied with the public, private and internal improvements in which she had so liberally engaged. She also aspired to the honor and literary advantages to be derived from the location of a college here, under the patronage and direction of the Methodist Episcopal Church.

It was suggested by the Oneida Conference and approved by that of Genesee. The plan also met the hearty approval of our principal citizens, including such influential and substantial men as Seward, Garrow, Throop, John Seymour and others. The purpose was really entertained and

earnest and hopeful efforts at one time made to carry it into practical effect. At a meeting called to consider the subject and held at the Methodist Church, in Auburn, \$18,000 were subscribed, a committee to solicit additional subscriptions appointed, and a board of trustees organized. So encouraging were the prospects that the trustees obtained the consent of the Regents of the University to charter a college whenever the proposed conditions were complied with, viz.: A building erected of the value of \$30,000 and an endowment of \$50,000, which the trustees believed, in the then condition of the country, could be readily procured. Such, doubtless, would have been the case if the season of prosperity, so called, had been continued a year longer. As it was, \$40,000 was pledged, a fine site, comprising ten acres, donated, plans prepared and every preparation made for building. But the crash came and the plan of the Auburn College sank in the general ruin.

THE FINANCIAL CRASH OF 1837.—As we have seen, the business prosperity of Auburn for several years previous to 1837 had been unchecked and, on the approach of the new year, the people were animated by the same golden visions by which the last few years had been gladdened. "A Happy New-Year" had come, and the distant rumbling of the coming storm was soon heard. The banks of the State manifested symptoms of distress. On them rested the risks of the general business of the country. They were the dispensers of mercantile and business credits and were sound only as their customers were so. In the fancied prosperity of the previous years and the visionary wealth which floated before the minds of the people, the latter had freely indulged in expensive luxuries, and the large amount of foreign goods which had been consumed had drained the country of specie to meet the large balances of trade; and when, as was now speedily manifest, the banks saw that the large discounts to their customers could not be paid, further accommodations to them became impossible and a general suspension of specie payments by the banks followed, as well as the general stoppage of payment by creditors of all classes. The suspension of specie payments by the banks of the State for one year was authorized by law, and the circulation of bills of a less denomination than five dollars was prohibited.

This latter measure was a source of great inconvenience and compelled corporations and individuals to issue their checks of small denominations, varying from five cents to three dollars, and these checks and notes were the principal circulating medium for years, of which at one time their amount was estimated at \$150,000. A part was lost or worn out and the balance redeemed.

The depression in its worst form continued about five years, during which the decline in real estate was very large, sales being made at one-sixth of the fictitious valuations of 1836. It followed necessarily that large fortunes were swept away, enforced economy in expenses induced, projected enterprises abandoned, and the progress of the village arrested, throwing large numbers out of employment and producing much distress. The village recently so active, so full of hope and visions of greatness, was suddenly deserted, and disappointment and despondency reigned in their stead.

Several of our citizens took an active part in what was called the "Patriot War," the object of which was to revolutionize the government of Canada. The leader of the movement was an enthusiastic Canadian of the name of W. L. McKenzie, an editor of more zeal than discretion, though a good writer and effective speaker. He secured a large number of followers in Canada and made an unsuccessful military demonstration upon Toronto. He then came to the United States with the view of organizing here a military force of sufficient strength to accomplish his purpose. In furtherance of his plans he visited the region bordering upon Canada and organized secret lodges of Patriots or Reubens, one of which, in Auburn, is said to have comprised 700 members pledged to his cause. After perfecting his plans, the proposed invasion was attempted on the 7th day of November, 1838, with a small force, of which about 40 were from the Auburn lodge. They landed at Windmill Point, and after a short conflict with the Canadian forces, were overpowered, and such of them as had landed were taken prisoners, four of whom were Auburn men, namely, E. P. Senter, Oliver Lawton, Asa Priest and Bemis Woodbury. The prisoners were tried and sentenced to death, but Senter and Lawton were pardoned, and the sentences of Priest and Woodbury, commuted to twenty-five years banishment.

Auburn was honored, at different periods, by visits from three eminent statesmen, Henry Clay, President Martin Van Buren, and John Quincy Adams; the two former in 1839, and the latter in 1843. Mr. Clay was welcomed by an eloquent address by Parliament Bronson, Esq., to which he responded in his own peculiarly happy and eloquent style. Mr. Van Buren was addressed by George Rathbun, Esq., and the response from the President was forcible and pleasantly expressed. Ex-President Adams was welcomed to Auburn by Governor Seward, in a classical and beautiful address, and the reply of "the old man eloquent" engaged the fixed attention of an immense audience. The ex-President while here, was the guest of Governor Seward.

THE FIRST WOOLEN-FACTORY.—The site for the mill was selected on the property of the Owasco Canal Company, by the Auburn Woolen Company, of which the following were the officers: John Porter, President; Henry G. Ellsworth, Manufacturer; Joseph T. Pitney, John H. Chedell, Abijah Fitch, E. P. Williams, William C. Beardsley, Bradley Tuttle, and C. D. McIntyre, Directors. The capital was fixed at \$100,000, but was increased to \$158,400 in September, 1851, in order to finish and properly supply the mill.

While the first results of the operation of the business were satisfactory, it soon proved unremunerative to the owners, by whom it was sold to Philadelphia parties at a heavy loss to the stockholders. The mill passed afterwards into the hands of Samuel Bush and an associate. In 1859, C. N. Fearing bought the establishment. Of the present organization of the company, which has existed since 1864, Mr. Fearing is the President, associated with Benjamin L. Swan and William G. Wise, as Trustees. The latter is the Secretary and Treasurer of the Company, and Samuel Laurie is the Superintendent. The capital of the present company is \$200,000 and, under the existing management, the mill has been steadily and successfully operated, and has greatly aided the settlement of the eastern portion of the city and, by its large pay roll, contributed to the advancement of the place.

The Company have a branch mill in the western part of the city, upon the Outlet, which is under the same management, and has added largely to the growth and prosperity of that locality.

CHAPTER XXIV.

HISTORY OF AUBURN, (CONTINUED.)

INCORPORATION OF THE CITY—FIRST CITY OFFICERS—POPULATION—INTEREST IN EDUCATION — FORT HILL CEMETERY—BUSINESS AND THE WAR OF 1861—MERCHANTS' UNION EXPRESS COMPANY—ITS FIRST SUCCESSES—CAUSES AND RESULTS OF ITS FAILURE—FIRST STATE PRISON—AUBURN PRISON—ITS ERECTION AND HISTORY—CONVICT LABOR—SILK CULTURE—CAUSES OF ITS FAILURE—THE ASYLUM FOR INSANE CONVICTS.

ON the 21st day of March, 1848, Auburn was incorporated as a city, having then a population of 8,500, the first Mayor being Cyrus C. Dennis.

Eleven years had now passed since the crushing ordeal of 1837, and the wounds of that disaster had healed slowly, yet but few disabling effects remained, and despondency and inertness had given place to hope and activity. Aside from the general interest felt and manifested in improving the means for public education and those for the institution of the seminary here for the higher education of young ladies, measures were taken for the organization of the Fort Hill Cemetery Association. Twelve Trustees were chosen, namely: E. T. Throop Martin, Thomas Y. How, Jr., James C. Derby, Benjamin F. Hall, William C. Beardsley, Isaac S. Allen, Cyrus C. Dennis, Z. M. Mason, Nelson Beardsley, John H. Chedell, M. S. Myers and John W. Haight. The grounds were duly consecrated with solemn ceremonies on the 7th of July, 1852, Michael S. Myers, Esq., delivering the introductory address. Two odes were sung, one composed by Henry Oliphant, and the other by Rev. J. M. Austin, and a concluding and very appropriate address delivered by the Rev. Prof. L. P. Hickok, D. D.

The grounds were neatly graded and improved and have since been the general burial place of the city, in which repose the remains of many of our honored citizens, including those of two ex-Governors—William H. Seward and Enos T. Throop.

BUSINESS AND THE WAR OF 1861.—The impulse given to the business of the country by the war of 1861, had been unparalleled in all its

previous history. The immense sums which were loaned and disbursed during the decade from 1862 to 1872 for various purposes, by the general government, the loyal States, counties, towns, cities, corporations, individuals and associations, have been estimated at ten thousand million dollars.

This vast sum was rapidly and widely distributed to the families of soldiers in bounties and wages, to producers of all kinds to supply the necessities and the waste of war, to laborers of all kinds engaged in the production of supplies, to manufacturers for whose productions the demand exceeded the supply, to railroads and shippers, whose facilities for transportation were generally inadequate, necessitating new roads and rolling stock, new boats and ships to meet the extraordinary demands. Every miner of coal and worker in iron or wood was constantly employed, as well as those engaged in the manufacture of fabrics and clothing. There was apparently no limit to the demand, and arrangements to supply it were constantly and largely augmented.

Manufacturing centered in the villages and cities, wherein the demand for all sorts of laborers was constant, and to them they flocked from the country in crowds. It is shown by the State Census of New York, that during the period under review, the cities and villages of the State gained seventeen inhabitants where the country gained but one; a convincing proof, if such were needed, of the abnormal condition of the industry of the country, wrought by the incidents of the war.

Accommodations must of necessity be provided in the villages and cities for this vast influx of population, for whom buildings must be provided, and their erection in large numbers gave additional activity to the already over-excited industries, and dwellings, stores and shops of all kinds were augmented in proportion to the increase of customers.

The extreme demand for labor and all its products, advanced their prices to rates hitherto unknown, and the liberal compensation made the laborers free purchasers and good customers of the several dealers, whose business was correspondingly large and profitable.

The ten years under consideration brought a marvelous change in all our cities and villages, and Auburn shared in the general change. During that period her population and material

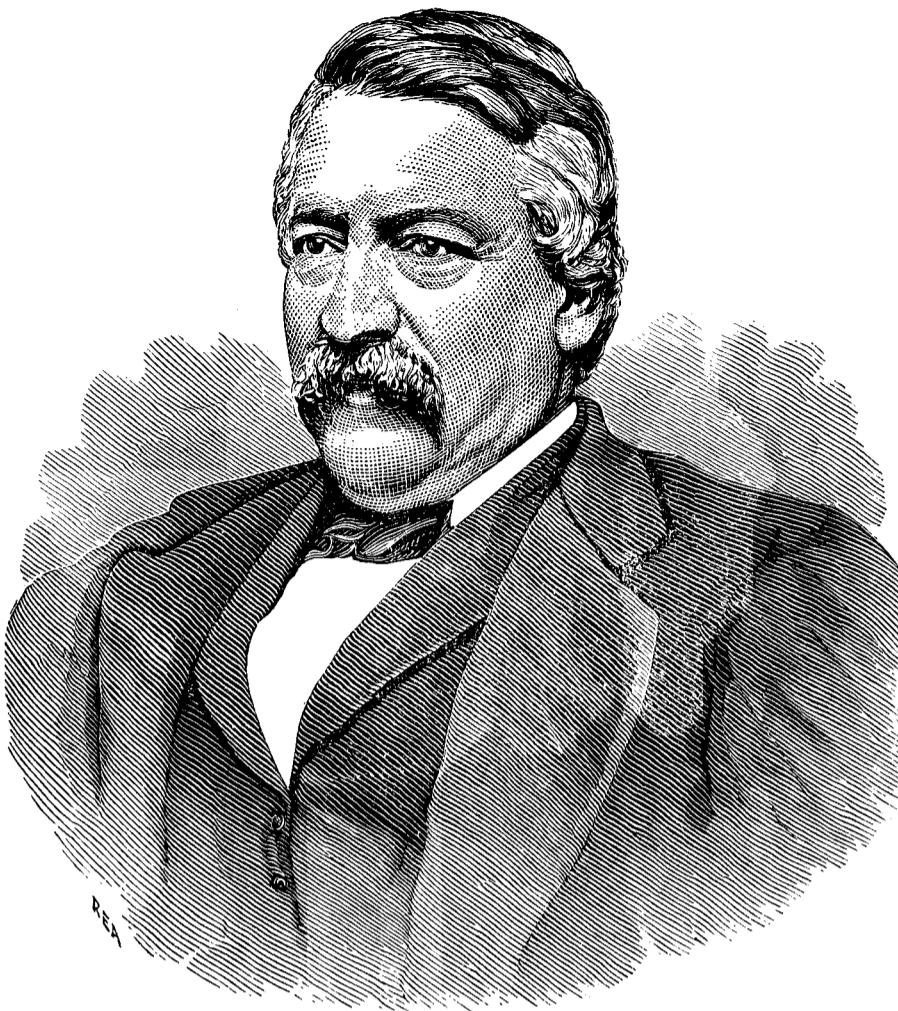
wealth were doubled, and her churches, halls and stores assumed palatial magnificence. The habits of our citizens had also greatly changed, and their average living expenses had more than doubled. Taxes had increased more than four-fold, and to meet the large augmentation of expenses, required a corresponding increase of receipts, or a radical change of habits.

When the reaction of 1873 occurred, a sudden and general check was given to the recent business activity, followed either by a general stoppage or the unprofitable use of the wheels of industry, and throwing out of employment much of the labor hitherto fully employed and liberally rewarded. Few of that class had expected or were prepared for the emergency of enforced idleness. Although for years they had received fully double the usual compensation, their current expenditures had, in nearly all cases, equalled their current receipts, and want and distress immediately followed the stoppage of work.

A rapid decline in property followed from the fabulous values of the ten years of inflation, and many fortunes were thus blotted out, or largely diminished. The general effect has been to amass the wealth of the city and country in fewer hands, in those of the cautious and conservative class, who, familiar with the laws of business and the reactions inseparably following excessive overtrading, kept themselves aloof from the hazardous and speculating ventures in which were engulfed the fortunes of the less cautious and discriminating.

Auburn suffered much less from the reaction of 1873 than from that of 1837, mainly for the reasons of the greatly increased wealth of her citizens, their less relative liabilities for works of public or private improvements and the generally sound condition of the banking institutions of the country. Hitherto the banks of the country, being on a specie basis, felt, and generally gave way from the effects of commercial distress among the first, and withheld from the manufacturing and commercial classes their usual accommodations at just the times when those accommodations were indispensable to them. The banks in 1873 were non-specie paying and by carrying their customers over the tidal wave of reaction, saved very many of them from commercial ruin.

THE MERCHANTS' UNION EXPRESS CO.—This enterprise originated in Auburn. It was based



[Photo by Ernsberger & Ray.]

J. Lewis Grant

JUSTUS LEWIS GRANT was descended from New England ancestors. His father, Justus Fales Grant, was born at Wrentham, Mass., July 4th, 1799. The maiden name of his mother was Hannah Hale, and they were married at Dunstable, now Nashua, New Hampshire, about 1816. Mr. Grant's father was an edge tool manufacturer, and a superior mechanic. Justus Lewis was born at Nashua, N. H., November 4th, 1818. When he was eleven years of age, in 1829, his father located in Auburn, and engaged in the establishment of Joseph Wadsworth, in the manufacture of scythes, hoes, &c., with whom, and his son Samuel, he continued until his death, in 1845. He died suddenly of paralysis. The writer of this sketch has often heard Mr. Grant, when referring to the sudden death of his father, express the fear that he too might die suddenly and of a similar disease. J. Lewis Grant was twice married. His first wife was Miss Betsey Allen, whom he married Dec. 5th, 1835. They settled in Michigan where, in the fall of 1838, his wife died, and the same year he returned to Auburn. On Oct. 27th, 1839, he married Abby Janette Mills.

Mr. Grant was systematic and methodical in his habits. He kept a diary, from which we take the following extract:

"During the four years succeeding our arrival in Auburn, I passed most of my time at school, under the kind and intelligent teaching of Mr. Jonah J. Underhill. At the age of fourteen, my father desired me to assist him in the support of his family. With assurances from him that I might choose any other trade or profession in the spring, I entered the trip hammer shop under his instruction. My proficiency was even greater than I had dared to hope. I was well pleased with the business, and was satisfied to adopt that trade in preference to any other."

Here he continued until he was twenty-three years of age.

Mr. Grant was a natural mechanic, and rapidly became an expert worker in metals. His subsequent successes as a railroad man are largely due to the practical knowledge thus obtained, which supplemented and perfected his natural genius. His first railroad experience was on the Auburn and Syracuse Railroad, in September, 1841, under the superintendence of E. P. Williams, as freight conductor. His capabilities as a mechanic were soon so manifest that he was appointed locomotive engineer of that road, and was afterwards entrusted with the charge of its entire motive power, a very responsible trust, but one which he discharged with singular acceptance and success.

In August, 1850, he was appointed "Superintendent of motive power" of the Rome and Watertown Railroad and took up his residence in Rome, where he remained some six years; when, in February, 1856, he was called to Toronto, Canada, to take charge, as General Superintendent, of the Northern Railway of Canada. Here he remained and successfully discharged his duties until December 31st, 1862, when the bitterness of feeling which grew

out of our civil war led to the demand that he should take the oath of allegiance to the British Crown. This he refused to do, and resigned his position and returned to Auburn, purchasing the Van Tuyl farm, intending to devote his life to rural quiet.

But that was not to be. He was too thorough an expert in railroad affairs and the value of his services as such too widely known, to permit his retirement. On the importunity of the late Dean Richmond, he consented to take the Superintendency of the Buffalo & Erie Railroad, on May 6th, 1864. That position he was induced to resign in August of that year, to assume the General Superintendence of the Merchants' Union Express Company, whose business was then widely extended. This position, chiefly office work, and very different from his previous experience, was not congenial to him, and he resigned to enter again his chosen field, as President of the Southern Central Railroad, an enterprise which had engaged, from its inception, his liveliest interest, and to the success of which he had devoted his time and means. His next and last railroad experience was as Superintendent of the Cayuga Lake Shore Road. He was at the time of his death, and for some time previously had been, Superintendent of the Auburn Water Works Company.

The death of Mr. Grant was sudden and sad. He was returning from the west accompanied by his wife and daughter, Mrs. Parish. He was apparently in his usual health and geniality of spirits. The train had passed Rochester, and, expecting his son Herbert, and son-in-law, Mr. Parish, to pass them, was standing in the rear doorway to greet them. He was there stricken with apoplexy, and immediately expired, Oct. 19th, 1878, aged 60 years.

Mr. Grant left a widow, three sons, Julius Herbert, J. Lewis and Albert Edward and one daughter, Ivola Janette, Mrs. Parish. He had lost by death one son and two daughters.

It was in his social relations in his home and the community, that the beauty and excellence of his character conspicuously shone. He was eminently social, kind and generous. No one could know him intimately, who had a mind to perceive and a heart to feel, and not be impressed with his kind and genial spirits. Blessed with a peculiarly happy temperament himself, it was his delight to make others happy, and few if any of our citizens had more or warmer friends. For one who through life had been engrossed with other pursuits, he possessed and cultivated in an unusual degree a literary taste. He was fond of poetry and has written and published many pieces of merit. To the interests of the Universalist Church, of which he was a member, he devoted all the activities of his generous nature, and there his loss will be more deeply felt than anywhere else outside of his own family. It is rare indeed that we find united in one person the same business capacity, and the same genial and happy social temperament that distinguished J. Lewis Grant.

upon the conviction that the merchants of the country, being the principal patrons and supporters of the express business could, by a concert of action, establish and successfully maintain an express company in their own interests and greatly lessen the exorbitant charges which had hitherto been exacted by the old express companies controlled by few men whose profits had been very large.

At a conference of Elmore P. Ross, William C. Beardsley, John N. Knapp, and Elliot G. Storke, a prospectus was adopted, in which the necessity, plans, purposes and benefits of the proposed organization were fully set forth, and the proposal made to form a joint stock association, under the laws of New York, of the merchants and business men of the country. The plan was received with great favor and was carried into effect in the spring of 1866 by the following organization: Elmore P. Ross, President; William H. Seward, Jr., Vice-President; John N. Knapp, Secretary; William C. Beardsley, Treasurer; Theodore M. Pomeroy, Attorney; the Executive Committee comprised the following gentlemen: H. W. Slocum, Elmore P. Ross, Elliot G. Storke, William C. Beardsley, Clinton T. Backus, William H. Seward, Jr., John N. Knapp and John A. Green, with sixteen prominent merchants, located at the principal commercial cities of the country as local trustees of the company.

The nominal capital was fixed at \$20,000,000, on which such assessments only were to be made as might be necessary to meet the demands of the business as it developed.

The plan was submitted to the business men of the country and the subscriptions were so liberal as to compel the limiting of the amount of individual subscriptions and to the speedy closing of the books. The stock was widely distributed, and the number thus interested in making the enterprise successful was very large.

Equipments were speedily supplied and contracts for transportation upon the railroads made. Agents, messengers, superintendents and other necessary officials were procured, largely from the experienced men of the old companies, and the business of shipping goods by express began in the autumn of 1866.

The old express companies, the Adams, American and United States, had long held the monopoly of express transportation. They had

worked in harmony, each company having particular routes, the goods received by either company were, when necessary, forwarded to their destination by transference to the others.

The new company had, therefore, to meet the competition of three thoroughly organized and wealthy companies, entirely familiar with the business, and determined to retain it by crushing out the proposed competition. The competition was therefore sharp from the beginning. That competition was manifested in the extremely low rates at which the old companies offered to transport goods, so low indeed that before the struggle ceased goods were transported by express on passenger trains, at about the rates of ordinary freight carriage, and the mass of goods thus thrown upon the express lines was so enormous as greatly to embarrass and delay the passenger trains, by overloading them and by the delays at stations in discharging and loading goods. The number of coaches loaded with express goods often exceeded those occupied by passengers.

The managers of the principal railroad lines soon saw that they could not long sustain the draft thus made upon them for freight carriage and that they must adopt some method to close the fight. They shrewdly adopted a method of doing so and at the same time one that, while it lasted, paid them well. They advanced the rates of transportation of express goods from three to six hundred per cent., the effect of which increased enormously the losses of the several companies and made it a question of time only, when ruin or a compromise must ensue. After a plucky and resolute contest of over two years during which the Merchants' Union had covered with its express lines nearly all the Northern States, and had drawn from the stockholders and expended some five millions of dollars, and the resources of the competing companies were also greatly depleted, a compromise and final union was effected, by which the Merchants' Union and American Express Companies were merged under the name of the American Merchants' Union, and a satisfactory division of assets and shares in the profits were mutually arranged. The combined companies are now operated under the old title of the American Express Company.

The plan of the Merchants' Union was at once bold in conception and vigorous in execution. It

was a very strong organization, composed as it was of some ten thousand of the principal merchants and shippers of the country ; men of means, whose patronage was regarded as a surety of success. It would clearly have been so but for the difficulty not fully anticipated, of transportation. That difficulty was fatal, and rendered the contest a hopeless one from the time of the imposition of such enormous freight charges.

No organization which has originated in Auburn, has ever given to the city a wider public reputation, or, while it lasted, engaged more generally the interest of our citizens. It was an earnest and zealous effort to break up the control of powerful and exacting monopolies, and has effectually demonstrated the dangers of their existence and the difficulties of their eradication.

THE AUBURN PRISON.

The prison system of this State was first instituted eighty-two years ago, by the erection, in the city of New York, of the Newgate Prison, first brought into use in 1797. Previously thereto various severe punishments had been inflicted upon the criminals of the State, the stocks, public whippings and brandings, and the death penalty were inflicted for some sixteen enumerated offenses. This extremely rigorous and cruel code, an inheritance from the barbarous statutes of England, was offensive to the enlarging humane spirit of the age and the suggestion to substitute for it confinement in the State Prison was received with satisfaction. Such confinement, it was believed, would accomplish a three-fold object : the humane treatment of felons, the relief to society from their depredations, and, in many cases, their reformation.

But the plan of organization first adopted, owing to inexperience, was by no means perfect. It included the employment of the convicts at hard labor during the day, and their confinement at night in squads of from ten to twenty in one apartment. It was soon found that the great leniency with which the convicts were treated and the abundant comforts with which they were supplied, rendered their confinement of no particular terror to evil doers. The social intercourse of their lodgings, in which were mingled old and hardened offenders with tyros in crime,

had the effect to deprave the latter, becoming to them schools of vice, with expert teachers, who gloried in instructing them in the arts and devices of criminal practice. Such prison discipline did not deter from crime nor reform the convicts.

The contrast between the sanguinary code which had recently existed and the freedom and comforts of a prison home as then supplied, made the latter utterly ineffectual. Convictions were greatly increased, and within ten years, Newgate Prison was filled, and the necessity existed of pardoning the less notorious criminals to make room for the newly convicted, and to such an extent was this necessary that the reports show the pardons and convictions in 1809 to be equal.

This large number of criminals regularly let loose upon society created alarm and led to the adoption of measures for the erection of a new prison, the site of which was fixed at the village of Auburn. It was commenced in 1816 and completed in 1820. The main building and cells and apartments were, however, so far completed in 1817 as to admit of the reception of convicts, but the work-shops were yet incomplete.

The convicts first received were employed in the erection of the prison and when that was finished, in job work of various kinds, the same as that done by the jobbing shops of the village, and under the supervision and in behalf of the State. The contract system had not then been instituted.

Defective as the first experiment at Newgate had proved it was, nevertheless, continued in Auburn, and was followed by the same results, the insubordination and demoralization of the convicts. The prisons of the State were not realizing the public expectation, and a change was demanded. The trouble, it was believed, arose mainly from the laxness of discipline and the promiscuous mingling of convicts in their lodging rooms. These were the convictions of those most thoroughly conversant with the practical workings of the system then existing. There was, nevertheless, in the public mind a morbid sensitiveness upon the subject of rigid convict discipline and much controversy over the question. As to the seclusion of the convicts in separate cells at night there was great unanimity

and the north wing of the prison was, therefore, constructed on this plan, and each convict completely isolated from his fellows at night. In the day time he was kept at work by the careful surveillance of his keepers, and enforced silence maintained. The rules of silence, diligence and order were enforced by the thorough use of the "cat."

The "cat-o'-nine-tails" was the instrument chiefly used in flogging convicts. That employed in the prison had, however, but six tails, lashes or strands. These were distributed along the broad edge of a triangular piece of flexible leather, which, at its point, was fastened to a handle about two feet long. The lashes were about eighteen inches long and were formed of hard waxed shoe thread and would cut the flesh like "whips of steel." In the hands of a muscular officer, anxious to subdue refractory convicts, they were cruel instruments, but effectual in securing obedience. A bath of brine, applied to the lacerated skin after flogging, was not, at first, a very soothing anodyne, though its ultimate effects might be beneficial.

This arrangement of cells and change of discipline was made by William Britton, the first agent, who died in 1821. He was succeeded by Captain Elam Lynds, by whom the most rigorous discipline was enforced. Under his administration the whip was not spared and the "ways of the transgressors were emphatically hard." He abolished the table system, compelling the convicts to take their meals in their cells, and the manner of marching to and from the shops now in use was of his introduction. Under his administration the experiment was made of classifying the prisoners into three divisions—those who were serving second, or more terms, formed the first class, and were doomed to solitary confinement; the second class, the next in hardness, were alternately confined and permitted to labor; and the least hardened were regularly employed. It was a very dangerous experiment to make, and one, the result of which, led to its speedy abandonment. Of the eighty-three men of the first class, who were immured in solitary cells, five had died in less than a year, and another, in a fit of delirium, had leaped from the upper gallery to the floor of the wing.

Such a system, so destructive of the mental and physical powers, could not long be maintain-

ed, and the law authorizing it was repealed in 1825.

The outside public, influenced by distorted and exaggerated accounts of the cruelties practiced in the Auburn Prison, became much excited and the influence of the popular sentiment penetrated the thick walls of the prison itself, and led to the positive refusal of some of the officers to inflict upon certain convicts the punishment demanded of them. This humanity was, however, exceptional; the rule being a ready compliance, on the part of subordinates, with the exactions of their superiors. In December, 1825, a female convict died, as was alleged, from the effects of brutal whipping, leading to the appointment of a Legislative Committee of Investigation and to a change in the agency of the prison. Gershom Powers became the agent.

Mr. Powers took the middle ground between the extremes of lenity and severity, and the prudence and wisdom of his administration won the popular approval, while the discipline and efficiency of the prison was fully maintained. In order that the officers and the public might at any time and unobserved by those in the shops, see what was going on within them, he caused passages to be constructed around them with narrow slots, through which those in the passages could see the convicts and the officers while they were themselves unseen. Through these passages only the visiting public were admitted. Two benefits were claimed for this, a satisfaction of the public suspicion, and a secret scrutiny of the interior affairs of the prison, the latter leading to a more faithful discharge, by subordinates, of their duties.

The prison for the ten years from 1828 to 1838 was very satisfactorily managed by the agents, Levi Lewis and John Garrow. At this latter date Elam Lynds, to the great surprise and indignation of the people, was again appointed agent. He at once signalized his advent by the introduction of very obnoxious changes; he again abolished the table system of feeding the convicts, took from them knives and forks, and compelled them to adopt the Turkish mode of eating with their fingers. This unnecessary and barbarous exercise of tyranny aroused anew public indignation. Public meetings were held and denunciatory resolutions passed; a serial publication, entitled the *Chronicles*, was anonymously issued, in

which the barbarities practiced in the prison were severely rebuked.

Agent Lynds was indicted by the grand jury and strenuous efforts were made for his removal. About this time a convict was choked to death by a piece of meat lodging in his throat, attributed to eagerness to eat, impelled by extreme hunger, and hence that the convicts were not properly supplied with food; or, that not having a knife and fork to properly divide his food, the accident arose from that cause.

The public clamor now rose louder than ever and was so decided and emphatic in its tone as to compel the resignation of Captain Lynds and those of the inspectors who had been his special advocates and supporters. He was succeeded by Dr. Noyes Palmer, by whom the old order of things was restored, and the public agitation quieted.

The use of the "cat" * in our prisons was abolished in consequence of the death, from whipping, of a convict, who, it was claimed, had feigned sickness to avoid labor. The excitement which grew out of it led to the substitution of the shower-bath, yoke, paddling, † and other forms of punishment.

GOVERNMENT OF THE PRISONS.—For twenty-eight years, from 1818 to 1846, the control and management of the prisons was invested in a Board of five local inspectors, appointed for two years by the Senate, on the nomination of the Governor. Those inspectors appointed all the subordinate officers of the prisons, and directed their general management. By the Constitution of 1846 this plan of government was changed, and the prisons of the State, were placed in charge of three State inspectors, holding their offices for three years, one of whom annually retired and a successor was chosen. In practice this change was really no improvement over the previous system. The prisons that had hitherto been self-sustaining and had often shown balances in favor of the State, were, from year to year exhibiting increasing deficiencies, and large annual ap-

* Under the present prison system the Superintendent of Prisons can employ any method or degree of punishment which he may deem necessary. The existence of this power is, of itself, a check upon disobedience.

† Spanking with a paddle, or flat piece of wood, three feet long, two feet of which is used as a handle. The blade part of the paddle is about three and a half inches wide and one foot long, covered with leather, with which the convicts were punished upon their naked bodies by blows of from twelve to eighteen in number.

propriations were required to meet them. These deficiencies at length attained alarming magnitude and so clearly indicated dishonesty and fraud, that a very capable committee of investigation was appointed by the Legislature with full power to probe to the bottom the prison affairs of the State. That committee consisted of Louis D. Pillsbury, George R. Babcock, Sinclair Tousey and Archibald Niven. They commenced their investigations in June, 1876, and made their report to the Legislature in December following. Their report embraced over eight hundred pages, containing the questions propounded and the answers given by the various officers and contractors in the different prisons, and corroborating testimony of convicts.

They summarize the sources of the pecuniary losses of the State as follows:

"First"—In the great lack of discipline among the convicts, which put it in their power to do much or little of the labor required of them in a given time.

"Second"—This state of things prevented the agent and warden, or other authorized officials, from making contracts for convict labor on terms as favorable to the State as if the convicts were under proper discipline.

"Third"—Contractors of doubtful pecuniary responsibility were thus enabled to contract labor because a lack of discipline lessened the competition for such labor.

"Fourth"—Contractors were not required to pay promptly for convict labor; nor was ample security, in many cases, required of them.

"Fifth"—Property belonging to the State has been sold on credit to irresponsible persons, without security.

"Sixth"—Purchases for the prisons have been made at large and even exorbitant prices.

"Seventh"—Extravagant prices have been paid for work done at the prison and for materials furnished, in and about the manufacture of lime, iron, &c.

"Eighth"—Too many employés have been receiving pay for services which were unnecessary and could have been dispensed with.

"Ninth"—A general want of economy in nearly everything connected with the prison.

"Tenth"—Prison officials have received and appropriated State property to their own use without making compensation therefor.

"Eleventh"—Extra services and traveling expenses, unauthorized by law and unnecessary, swell the indebtedness."

These several specifications were fully sustained by the testimony, and so strong a case was presented in the general facts of the deficiencies

and in the preliminary report of the commission, that the proposal to so change the Constitution of the State as to confide the care of the prisons to one superintendent was triumphantly endorsed and Louis D. Pilsbury was appointed Superintendent of the prisons of the State. Mr. Pilsbury had long been connected with the management of the Albany penitentiary, of which his father had been the founder, and which had won and held the reputation of being one of the best managed penal institutions of the country.

The superintendent appointed the wardens, physicians and chaplains who were removable at his pleasure; the comptroller appointed the clerk, and the several wardens appointed their subordinates in their respective prisons and were held responsible for their internal administration.

Thoroughly informed of the previous mal-administration of the prisons by months of the closest scrutiny into their affairs as a member of the committee of investigation, and prepared by education and experience to correct existing defects and abuses, Mr. Pilsbury entered vigorously upon the work. He had no untested experiments to make; he was an expert, a thorough professional in prison management and discipline, which was quickly manifest in the improved regularity and order with which the prisons were in all respects managed. There were no divided councils. He alone was umpire, and he assumed and, so far, has judiciously discharged the great responsibility. In the two years of his administration he has reduced the annual prison deficit nearly \$500,000, made the Sing Sing Prison, which had been the greatest leech upon the treasury, self-supporting, and Auburn Prison, it is believed will, during the ensuing year, show a balance in favor of the State.

The tax levied upon the people of the State to meet the deficiencies in the several prisons for the last ten years, has been as follows:

In 1869-----	\$595,774.45
1870-----	461,304.99
1871-----	470,309.23
1872-----	405,881.84
1873-----	597,289.01
1874-----	588,537.42
1875-----	545,549.69
1876-----	704,379.85
1877-----	369,688.08
1878-----	229,971.83

Thus reaching in 1876 the enormous aggregate of \$704,379.85.

The two months of December and January indicate that, under the administration of Hon. William J. Moses, the present Agent and Warden, Auburn Prison will yield a revenue instead of showing a deficit, as the receipts for those two months exceed the disbursements by over \$1,700. The average cost of every description per convict in the Auburn Prison for the month of December, as compared with the prisons at Sing Sing and Clinton, was as follows:

State Prison Expenditures:

Auburn-----	\$10,429.63
Average per convict -----	8.94
Sing Sing-----	15,888.19
Average per convict -----	9.49
Clinton -----	10,643.02
Average per convict -----	17.14

For Ordinary Support:

Auburn-----	\$5,527.07
Average per convict -----	4.75
Sing Sing-----	9,301.00
Average per convict -----	5.56
Clinton -----	7,339.37
Average per convict-----	11.85

The prison at Sing Sing offers, in its superior facilities for cheap transportation, advantages to the contractor not possessed by the Auburn Prison, and for that reason, with equal economy and efficiency of internal administration, should make the better exhibit, but instead, the foregoing figures indicate the reverse, and show that the cost of maintaining a convict in Sing Sing during December, was \$14.85, in Auburn, \$13.69, a difference in favor of the Auburn Prison, \$1.16 per convict. "Reform" in prison administration is thus clearly shown to have been inaugurated and the efforts of officials in our penal institutions are directed earnestly to secure both their economical and efficient management, enforcing discipline and order and as a concomitant, securing profitable industry, profitable to the contractor and the State. The great need and the real progress of prison "reforms" are shown by the following expressive figures, which need no comment:

STATEMENT of Earnings, Expenditures and Deficiencies of the Auburn Prison for the years 1875-'76-'77 and '78, together with a statement

CITY OF AUBURN.

of the Earnings, Expenditures, Deficiencies and Surplus for January 1876-'77-'78 and '79:

Years.	Earnings.	Expenditures.	Deficiency.
1875	\$76,557.20	\$192,944.50	\$116,387.30
1876	78,025.99	194,505.28	116,479.29
1877	80,615.22	179,865.13	99,249.91
1878	116,641.18	150,820.42	34,179.24

Years.	Earnings.	Expenditures.	Deficiency.	Surplus.
1876	\$6,568.74	\$17,189.31	\$10,620.57	
1877	6,730.86	16,038.16	9,307.30	
1878	9,170.87	13,298.95	4,128.08	
1879	11,411.47	9,749.53		\$1,661.94

CONVICT LABOR.—When the Auburn Prison was erected the village contained only about one thousand inhabitants, of whom a sufficient number were mechanics and artisans to meet the demands of the business which centered in the place. The convicts, who exceeded them in number, were mainly employed upon the same kinds of work, and were, so to speak, employés of the State, gathered from the entire prison district, and their labor put in direct competition with that of a small village. That competition took the bread from the artisan class, and was too serious to be patiently borne. It drove many of them to other localities, or employments, as a means of livelihood.

At first these complaints were local only, for the effects of the competition were local; but with the increase in the number of convicts and the introduction of the contract system a greater amount and variety of goods were manufactured, which were sold in the general wholesale markets, when a broader and more general complaint arose, and efforts were made to employ the convicts upon such work as would not compete with the general industry of the country. The manufacture of silk, it was believed, would meet the case and prove advantageous to those employed in it directly, and indirectly to the country and State in the production of cocoons.

In 1841, under the agency of Henry Polhemus, the test was made and continued for several years. It was entered upon with much hopefulness and enthusiasm. The measure had been urged upon the Legislature by Governor Seward as one calculated to relieve the embarrassments attending the question of convict labor, and the experiment was fully authorized by law. The results of the limited tests which had been made

in the production of silk in this country had been satisfactory. The quality of the article and the profits of its production were alike encouraging. John Morrison, an expert in silk production, was, at this time, in partnership with Josiah Barber in the carpet business in Auburn Prison. He strongly favored the enterprise and his knowledge and experience had much influence in settling the question of silk production in the prison. He could intelligently direct the several necessary processes from the culture of the mulberry on which to feed the worms to the final preparation of the article for market. The production of the mulberry was, of course, the first step to be taken; buds of the trees were procured and their culture at once commenced, and as rapidly extended as the shrubs could be procured. Cocooneries were erected and the feeding of the worms began. The first results were entirely satisfactory, the operations being directed by the intelligent advice of Mr. Morrison. The silk produced was of good quality, met a ready sale and gave a good profit to the producers. The experiments so far made were on a small scale only; but the first successes stimulated enterprise. Bounties on cocoons were offered by the Legislature and agricultural societies and their production extended with marvelous rapidity. In 1841 a sufficient supply of cocoons had been produced to justify the authorities of the prison in beginning their enterprise. The prices first paid for cocoons were from three to four dollars per bushel. The product per acre of the trees was estimated at one hundred bushels, and the pecuniary promise of the new industry was very flattering. The facilities for the manufacture of silk at the prison were from time to time increased and the vacant prison grounds devoted to mulberry trees. So far everything promised the most complete success and the liveliest hopes were excited. All the cocoons offered were promptly taken, and their cultivation was rapidly and largely extended. Cocooneries were multiplied. Breeding and feeding silk worms became a general occupation—a real mania, and speculation in the eggs and plants ran wild. Single buds were said at one time to have been sold at a dollar. The furor extended from county to county and from State to State, and the supply of cocoons offered was very large.

The silk produced at Auburn was at first of

excellent quality and found a ready market at seven dollars per pound, yielding a profit of twenty-five per cent. to the manufacturers. But with an increase in the business difficulties were encountered in the peculiar character of prison labor. The convicts were continually changing and it was difficult to secure a sufficient number of faithful and skillful men. The quality of the product of such labor could not fully be maintained, and from that cause and for other reasons not explained, the Auburn silk lost favor and was reduced in price from seven to five dollars per pound. At the latter price it could not be produced except at a loss, and the experiment of silk manufacture in the prisons of the State, from which so much had been expected, was reluctantly abandoned. The inflated bubble of speculation in the mulberry was thus suddenly burst and very heavy losses were sustained by those who had engaged in it.

With the abandonment of silk culture the authorities settled upon the old and varied industries, in which the convicts of the State have since been employed. Complaints against it are still heard in the resolutions of political conventions; but the necessity for its continuance is so imperious and the difficulties of employing the thousands of convicts, except in the usual mechanical industries, are so great, that the discontinuance of the present system can only take place when some practical substitute for it shall have been tested and its success fully established.

PRISON DISCIPLINE.—As the Superintendent of Prisons is at full liberty to employ any method of discipline which he may deem best, this fact of itself operates as a check upon insubordination, and, with the other judicious changes which have been introduced, have reduced the cases of discipline to one-tenth their former number, while better order and greater industry and fidelity have also been obtained. The rules as to commutation of the time of service in the prison for good conduct, or the forfeiture of that favor for misdemeanors, are rigidly enforced, and constitute the strongest incentive to good conduct. Insubordination or mischievous behavior, is sure to lengthen their confinement which, being well understood, insures general obedience. The "hard cases" are confined for short periods on short rations of bread and water in dark cells.

The cell in which the murderer Barr hung himself, is an especial terror to such, and confinement in it twenty-four hours humbles them more than severe physical chastisement. The average period of confinement in such cells before full penitence, is less than two days, and in very obdurate cases it is extended to eight or ten days. The "cap," not a source of pain, or physical discomfort, but a badge of dishonor, is also, for certain offenses, effectually used. Severe physical discipline is very seldom required. The prevailing sentiment among the convicts is strongly in favor of good order as the best means of securing their own comfort and lessening their terms of confinement.

The spirit of riot and mischief, so prevalent a few years ago, has been checked by the strict yet just and humane rules now in force, and by the regular employments to which the convicts are now subjected. The chaplain, Rev. William Searls, who holds toward the convicts more intimate and confidential relations than any of the other officers, expresses his decided conviction that the work furnished the prisoners "has done more to produce the good order we now see in this prison than anything else that can be named." He adds that "labor is as much an auxiliary to virtue as it is a means of support," and that "work is the cure for the unrest and disorder in the prisons of the land."

The following will show that the panacea of labor is thoroughly applied.

EMPLOYMENT OF CONVICTS.—There were few idle convicts of the 1,146 confined in Auburn Prison on the first day of January, 1879; 876 were on contract, 231 on State work, 22 sick, or infirm, and 31 unemployed. At that date 562 convicts were employed at fifty cents per day, 113 at forty-two cents, and 184 at forty cents.

PRISON OFFICIALS AND SALARIES.—The number of officers now (January, 1879,) in charge of the Auburn Prison is 61; in October, 1876, it was 80. There are now

1 Agent and Warden,	salary,	\$3,500
1 Physician,	"	2,000
1 Chaplain,	"	2,000
1 Clerk,	"	2,000
1 Principal Keeper,	"	1,500
1 Store Keeper,	"	1,200
1 Kitchen Keeper,	"	1,200
1 Hall Keeper,	"	1,200

1 Yard Master and Engineer,	" -----	1,200
32 Keepers, each,	" -----	900
1 Sergeant of Guard,	" -----	900
19 Guards, each,	" -----	780

THE EDUCATIONAL CONDITION OF CONVICTS.—Academical, 38; collegiate, 13; high school, 32; common school, 531; no education, 149; read and write, 270; read only, 160.

HABITS.—Intemperate, 416; moderate drinkers, 342; temperate, 435. The number less than 35 years of age is 803. In the present prison family Cayuga has twelve representatives. Of the inmates 309 are of foreign birth; England supplying 48; Germany, 58; and Ireland, 95.

PRISON BUILDING.—This is situated on the west side of State street, bordering the Owasco Outlet on the south and Wall street on the north. It is in the form of a parallelogram, one thousand feet from east to west, with a breadth of five hundred feet. The central building fronting State street is three hundred and eighty-seven feet wide. The walls on State street are fourteen feet eight inches high. On Wall street they vary from twenty to twenty-six feet; west wall twenty-eight to thirty-one feet; south wall, inside, thirty feet six inches, outside, thirty-five to fifty-one feet. The thickness of the walls varies from four to five feet. The offices of the agent and warden, the clerk and the superintendent, the dwelling for the warden, and the main and keepers' hall are in the main building. The walls are surmounted by a wide stone coping, bordered by an iron hand-rail. On this coping during the day the guards patrol over designated sections, bearing loaded rifles.

The workshops and interior buildings are arranged in the form of a hollow square, inclosing a spacious court-yard, in which are walks and drives, leading to the several shops. The interior shops and buildings are separated by a driveway from the outer walls. The cells occupy the intermediate space in both wings, facing toward the outer walls, and the latter are supplied with windows, affording light and the means of ventilation. The cells are constructed of solid masonry, are three feet eight inches by seven feet, and seven feet in height. From each cell ventilating tubes extend to, and connect with pipes in the roof, effecting thorough ventilation. There

are five tiers of cells, access to which is obtained by galleries. The number of cells in the north wing and its extension, is eight hundred and thirty, and in the south wing, four hundred and forty-two, a total of twelve hundred and seventy-two. The mess-room is sixty-seven by one hundred and ten feet, with a seating capacity for twelve hundred and forty-three. The chapel is of the same size and will seat an equal number.

Ample arrangements have been perfected within the prison for extinguishing fires by the proper distribution of twelve hydrants, a supply of hose, and the organization of a fire brigade.

The sanitary condition of the prison has recently been much improved and the general health of the convicts is excellent. At this writing (February 8th, 1879,) there are but six invalids in the hospital, less than one-half the yearly average.

HOW THE PRISONERS ARE FED.—The following will show the great variety and liberal amount of food supplied to the convicts, for which we are indebted to the Hon. William J. Moses, the agent and warden of the Auburn Prison:

Gross daily consumption of meats, breadstuffs, vegetables, &c., based upon the number of inmates, which, at present writing, is 1,140.

Sunday.—1,900 lbs. flour, 30 lbs. coffee, 60 lbs. sugar, 30 gals. milk, 8 gals. molasses, hash, 200 lbs. corn beef, 15 bushels potatoes and 6 barrels of apples.

Monday.—1,300 lbs. corn beef, 34 bushels potatoes, 5 bushels onions, 1,900 lbs. flour, 12 gals. molasses, 5 gals. vinegar.

Tuesday.—600 lbs. pork, 22 bushels potatoes, 22 bushels turnips, 15 bushels beets, 6½ bushels beans, 1 bushel carrots, 1,900 lbs. flour, 12 gals. molasses, 5 gals. vinegar.

Wednesday.—1,100 lbs. fresh beef, 28 bushels potatoes, 1,900 lbs. flour, 6 bushels onions, 3 bushels turnips, 2 bushels carrots, 40 lbs. rice, 12 gals. molasses, 5 gals. vinegar.

Thursday.—600 lbs. pork, 39 bushels potatoes, 6½ bushels beans, 1,900 lbs. flour, 25 heads cabbage, 12 gals. molasses, 5 gals. vinegar.

Friday.—300 lbs. codfish, 17 bushels potatoes, 5 bushels onions, 1,900 lbs. flour, 15 gals. milk, 400 lbs. corn meal, 1 bushel turnips, 1 bushel carrots, 12 gals. molasses, 5 gals. vinegar.

Saturday.—1,100 lbs. fresh beef, 35 bushels potatoes, 40 lbs. rice, 1,900 lbs. flour, 3 bushels

turnips, 2 bushels carrots, 12 gals. molasses, 5 gals. vinegar.

In addition to the ordinary daily rations there are also furnished for the use of the inmates the following articles :

Per month.—Pepper-sauce, 12½ pepper-pods, 210 lbs. mustard, 210 lbs. pepper, 20 bbls. salt, 50 lbs. hops, 100 lbs. malt, 60 lbs. saleratus.

Per ration.—1,000 pickles, 15 bushels pickled beets.

During the season they are also supplied with :

Per ration.—2,800 ears green corn, 1,700 lbs. beet greens, 40 bushels tomatoes, 600 heads cabbage, 20 bushels parsnips, 450 doz. eggs (Easter Sunday.)

Upon the three holidays during the year the following extra rations are issued :

4TH OF JULY.—1,100 lbs. ham, 700 lbs. halibut, smoked, 350 lbs. cheese, 400 lbs. crackers, 40 lbs. coffee, 80 lbs. sugar, 25 gals. milk, gingerbread, (in the making of which is used 1,000 lbs. flour, 40 gals. N. O. molasses and 35 lbs. spices,) 10 barrels apples.

THANKSGIVING.—90 gals oysters, 30 lbs. butter, 400 lbs. crackers, 350 lbs. cheese, 40 lbs. coffee, 80 lbs. sugar, 25 gals. milk, 10 barrels apples, and gingerbread of same quality as above.

CHRISTMAS.—1,200 lbs. chickens, 400 lbs. crackers, 350 lbs. cheese, 40 lbs. coffee, 80 lbs. sugar, 25 gals. milk, 10 barrels apples, rusks, (in the making of which is used 1,000 lbs. flour, 160 lbs. sugar and 10 gals. of milk.)

NEW YORK STATE ASYLUM FOR INSANE CONVICTS.

This institution is situated in the Fourth ward of the city of Auburn, on a tract of land containing about eight acres, fronting on Wall street, and enclosed on all sides by a stone wall, twelve feet high. The original structure was commenced in 1857, and opened for the reception of patients February 2d, 1859. It then comprised a center, or administration building, with a wing on either side for patients, accommodating about forty each. An additional wing has since been attached to the west end of the building, making the present total capacity of the asylum one hundred and sixty. The front of the building is of stone and the rear of brick, the whole presenting an imposing structure, consisting of a central

building, forty-four by sixty-six feet, three stories high and a basement, with wings on either side, one hundred and twenty feet in length, and terminating in their extremities in a transept sixty-six by twenty-five feet. The wings and transepts have each two stories and a basement.

The enlargement, commenced in 1873, is a continuation of the south transept of the west wing, except that it is wider ; it is about one hundred feet long and terminates in a transept, which is about seventy-five feet in length. In its external appearance the new wing corresponds, approximately, to that of the original structure, but varies somewhat from the old building in its internal arrangement. It comprises three stories, in the lower one of which are located the patients' kitchen, employés' dining-room, store-rooms, &c., and a small ward for working patients. On the first floor of the central building are located the offices, reception room and dispensary ; the second and third floors comprise the superintendent's apartments ; and the basement is devoted to a business office, waiting-room, kitchen, etc.

The wings and transepts are set apart entirely for the use of patients. They consist of a corridor, or hall, about twelve feet wide, running the entire length, with single dormitories opening therefrom, on one side in the old wings, and both sides in the new one. These dormitories are about eight by ten feet, and about thirteen feet high, having an average of about one thousand and forty cubic feet or space, and each is lighted by a large window, protected by an iron grating, and looking out upon the beautiful flower garden and grounds. The basement halls underneath the corridors of the old wings serve as passage-ways, and contain the main steam and water pipes leading to the wards and kitchens.

Immediately in the rear of the central building, and connected with it by corridor, is a two-story brick structure, ninety feet in length by forty in breadth, in the lower story of which are located the bakery and dormitories for the employés who are not occupied in the wards ; the second story contains the chapel, sewing room, store-room for goods, and the officers' quarters. Vegetable cellars are located beneath a portion of this building. The out-buildings, excepting the coal shed, are of brick and comprise a laundry, boiler-house, repair shop, meat and ice-house, barn and wagon house, green-house and piggery.

This institution was created as an asylum for insane convicts and received only that class of patients up to 1869, when its corporate name was changed, by the Legislature, to that of "State Asylum for Insane Criminals ;" the object of the change being to provide for the confinement therein of an additional class, namely, the so-called "criminal insane," i. e. "Persons accused of arson, murder, or attempt at murder, who shall have escaped indictment, or who shall have been acquitted on the ground of insanity." By the same act provision was made whereby persons of this class could be transferred to this institution from the other asylums of the State. This institution was an experiment, being the first and only one of the kind then, or now, in the United States.

The first superintendent was Dr. Edward Hall, of Buskirk Bridge, Washington county, N. Y. He was appointed in November, 1858, and continued until June, 1865, when he was superseded by Dr. Charles E. Van Auden, of Auburn, N. Y., who in turn was superseded by Dr. J. W. Wilkie, also of Auburn, February 17th, 1870. The latter died in office, March 13th, 1876, and the vacancy thus created was filled by the appointment of the present superintendent, Dr. Carlos F. Mc Donald, formerly superintendent of the Kings county lunatic asylum, near Brooklyn, N. Y.

The scope and aim of the institution is, the protection of society from the violence of dangerous lunatics, the relieving of the inmates of ordinary asylums from contact with objectionable associates, and, at the same time, to secure kind care, and proper hospital treatment for the insane of the criminal class.

The present standard of the institution, as a hospital for the criminal insane, not only proves its utility, but has demonstrated the complete success of the experiment.

The present number of inmates is one hundred and twenty-one, one hundred and nine men and twelve women, of whom ninety-three are convicts and twenty-eight unconvicted.

The buildings used for the confinement of insane convicts are in the same general inclosure as the prison proper, to the west of which they are located, being separated therefrom by a high wall. The grounds surrounding them are beautifully laid out and adorned with trees and shrubbery.

The following table shows the annual per capita cost of maintaining patients since the opening of the Asylum :

Year.	Average No. Present Dur- ing the Year.	Total Current Expenditures.	Total Cost Per Capita.
1859 -----	27 1-73	\$16,387.07	\$606.615
1860 -----	48 1-2	17,491.50	360.649
1861 -----	62	14,173.85	228.610
1862 -----	78 2-3	12,674.01	161.110
1863 -----	80 1-10	12,035.80	150.259
1864 -----	79 1-12	13,942.07	176.296
1865 -----	72 2-3	16,699.18	229.542
1866 -----	70 1-5	15,937.15	227.024
1867 -----	74 6-17	16,933.94	227.974
1868 -----	75 5-8	17,876.61	230.146
1869 -----	79 1-2	13,954.92	175.546
1870 -----	78	19,879.39	254.864
1871 -----	67 6-100	19,332.66	288.288
1872 -----	84	22,174.37	263.976
1873 -----	90 5-100	22,354.08	248.240
1874 -----	95 1-2	23,200.73	242.938
1875 -----	105	25,163.60	239.653
1876 -----	100 1-2	29,511.23	293.644
1877 -----	98 1-2	23,979.37	243.445
1878 -----	113 3-4	23,027.30	202.437

The present officers of the Asylum are : Louis D. Pilsbury, Superintendent of Prisons, Manager ; Carlos F. MacDonald, M. D., Superintendent ; W. A. Gorton, M. D. Assistant Physician ; John Grant, Supervisor ; Rev. William Searls, Chaplain.

CHAPTER XXV.

AUBURN MANUFACTURES.

THEIR EXTENT AND IMPORTANCE—DESCRIPTION OF THE PRINCIPAL MANUFACTORIES.

THE manufacturing interests of Auburn are varied and important as to value and magnitude. They furnish the staple of its commerce, and give life and activity to its other industries. They give direct employment to nearly one-seventh of its entire population, besides requiring the services of about nine hundred convicts in the State Prison; thus demanding the labor of a number equal to nearly one-fifth of the population, or, taking the statistical average as a basis of

calculation, of one from each family. With these facts before us it is not difficult to understand how vitally is the prosperity of Auburn affected by the activity or depression of its manufactures, which, from its position with respect to the great highway of travel and commerce, must continue to be its great dependence.

The Owasco Outlet, which flows centrally through the city and has a total descent within its limits by a succession of falls and rapids of about 180 feet, furnishes a splendid hydraulic power, which has been very largely utilized, there being no less than ten dams within the limits of the city, each furnishing power to one or more establishments. The New York Central and the Southern Central railroads open up accessible markets, and furnish avenues of transportation not only for the products of the manufactories, but also for the raw material consumed in them, and coal from the Pennsylvania mines, which is used in some of the larger establishments to generate steam, as an additional motor to the water from the Outlet, which, in some instances, is found to be inadequate.

Auburn, besides furnishing the capital for these enterprises, also furnishes a very large proportion of that employed in conducting the operations of the OSWEGO STARCH FACTORY, which is by far the largest establishment of its kind in the world, and which may very properly take the lead in this chapter on the manufactures of Auburn, which is and has been from the inception of that enterprise the headquarters of the concern; the financial office and a majority of the directors being located here.

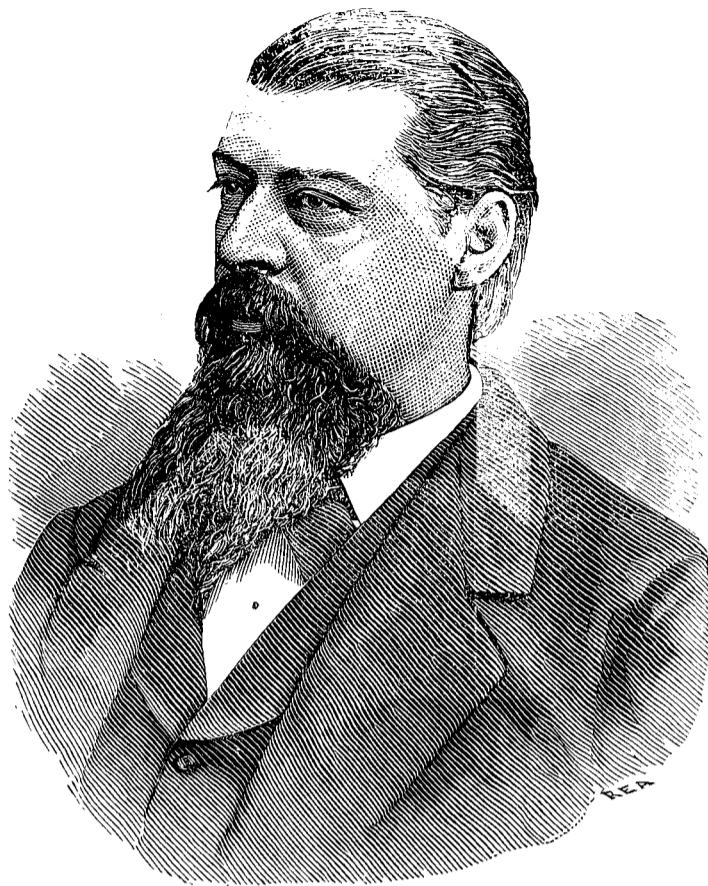
THE OSWEGO STARCH COMPANY was the first company organized under the law of February 17th, 1848. Their organization and incorporation date from March 29th of that year. The incorporators were Erastus Case, Sylvester Willard, M. D., Roswell Curtis, Nelson Beardsley, A. H. Goss, Alonzo G. Beardsley, Theodore P. Case and Augustus Pettibone of Auburn, and Thomas Kingsford of Oswego, of whom Dr. Willard, Nelson and Alonzo G. Beardsley and Theodore P. Case are living and connected with the company. The capital, which at the organization was \$50,000, has been increased from time to time to \$500,000. Dr. Willard was elected president at the organization of the company and has performed the duties of that office with singular ac-

ceptance ever since. At the twenty-fifth annual meeting of the Board of Directors, he was unexpectedly presented with an elegant and costly *epergne*, as an evidence of the esteem in which he was held by his associates and in recognition of his services in that capacity for a quarter of a century. He also acted as treasurer from the organization till January, 1858, when the duties of that office devolved upon Alonzo G. Beardsley, who succeeded Albert H. Goss in the secretaryship, January 20, 1849, and who is still the incumbent of both offices. Nelson Beardsley has held the office of vice-president from the date of organization to the present time. In 1874, Wm. P. Beardsley of Auburn, was appointed assistant treasurer of the company, which office he now holds. The present directors are Sylvester Willard, Nelson Beardsley, Alonzo G. Beardsley, Wm. Allen, Theodore M. Pomeroy and Wm. H. Seward of Auburn, Thomson Kingsford of Oswego, Edwin B. Morgan of Aurora, and Edward C. Chapin of New York city.

The manufactory was established in Oswego in the spring of 1848, and went into operation in the fall of the same year. The works were placed under the supervision of Thomas Kingsford and his son Thomson, to whose energy, perseverance and business capacity the great success which has attended the enterprise is mainly due. Since the death of his father, the supervision of the works has devolved entirely upon Mr. Thomson Kingsford, who possesses in an eminent degree those qualities which distinguished his father's management. At the Centennial exhibition this company made an elaborate display of its products, which, for the elegance and expensiveness of the cases inclosing their exhibit attracted more attention than any other thing of that character.

D. M. OSBORNE & COMPANY'S MOWER AND REAPER WORKS.—This is decidedly the most important industry in the city of Auburn as respects the number of hands employed, the amount of local material used, and the amount regularly distributed to the labor and commerce of the city. Its eight hundred and fifty employés, many of them heads of families, would with those dependent upon them, form a village of respectable size, and constitute a very important factor in the progress and prosperity of the city.

The funds disbursed by this company are drawn mainly from distant States, or from for-



[Photo by Squyer & Wright.]

FREDERICK VAN PATTEN.

FREDERICK VAN PATTEN, of Auburn, was born in the town of Victory, Cayuga County, N. Y., September 22d, 1836. At an early age he attended district school, and later was sent to Syracuse, where he made rapid progress for the limited time there. At the age of sixteen he became an apprentice with Mr. Joel G. Northrup, of Syracuse, to learn the machinist's trade, remaining three years. He then went to Hartford, Conn., where he found employment in Colt's Armory. Soon his ability was recognized and he was placed in charge of one of the most important departments of that establishment. Here he remained until 1861, when he was induced to accept a position with the Remingtons, the celebrated manufacturers of fire-arms, of Ilion, N. Y. He remained with them until 1864, when he went to

Auburn, and was made Superintendent of the celebrated E. D. Clapp manufactory, or the Fifth Wheel Works, of Auburn. In 1867 he became a partner in that establishment, but still continues the superintendency. He has aided in the development of the works, and the quality of their productions is now unequalled by any other similar establishment in the world. In 1857, Mr. Van Patten married Miss Caroline Hass, of Bridgeport, Conn., who died in 1871. The fruit of this union was two daughters. In September, 1876, Mr. Van Patten married Miss Libbie Steel, of Ilion, N. Y.

Mr. Van Patten's life has been sedulously devoted to his business and he has consequently gained a thorough knowledge of it in all its branches.

strong competition; the business annually increased, and the mechanical neatness and perfection of their goods gave them precedence over their rivals. Markets were sought for their products throughout this country, and their home trade largely increased. At the same time successful efforts were made to sell abroad, and a large and profitable trade was established.

The goods which they manufacture embrace nearly every variety of agricultural hand implements, extending to several hundred varieties, and including hay and manure forks, and straw and spading forks, grain, grass and bush scythes, socket, shank, planters, cotton, mortar and street hoes, cast-steel and malleable iron garden rakes, hay, straw and corn knives, grain cradles, scythe snaths and hand rakes. All the implements made by this company are of the latest and neatest designs, combining beauty of appearance and convenience and durability in use. The stock used and the mechanics employed are the best of their class, and the goods produced deservedly rank with the best anywhere made.

The company have ample facilities for the rapid, cheap and perfect production of stock. Their buildings have been from time to time extended and now cover several acres. They control two water-wheels equaling four hundred horse-power; and the most complete machinery is employed, adapted to each special class of work.

The goods of this company are very widely distributed throughout the United States and Canada, the principal nations of Europe, in South America, New Zealand and Australia.

It is an interesting fact that the forks, hoes, &c., made by this company, are sold to the old and mechanically famous nations of England, France and Germany, and are preferred by their farmers to the clumsy and heavier tools of their own production.

When put in competition with similar productions of the world, as the goods of this company have been on two notable occasions—at our own Centennial and the Paris Exposition—they received on both occasions medals of the highest merit. At all the fairs where an exhibit of their goods has been made they have been awarded first premiums; but a more significant proof of their superiority is found in the continually increasing orders from the same locality, where,

after having been thoroughly tested by practical use, they have been approved and "more of the same sort" called for. "The annual product of this company of hand tools is believed to be the greatest in variety and quantity of any factory in the world."*

The present officers of the company are T. M. Pomeroy, Vice-President; C. M. Howlet, Treasurer; E. C. Denio, Superintendent.

THE E. D. CLAPP MFG. CO.—This business was commenced in a small way in 1865, by E. D. Clapp & Co., in a part of the City Mills, on Mechanic street. The mechanical supervision of the work was in charge of Mr. F. Van Patten, a mechanic of rare ability and large experience in the armories at Springfield, Hartford, and Ilion. Mr. Clapp had been a carriage maker, and was familiar with the wants of that trade.

The first articles made were thill couplings, and to these were soon added fifth wheels. Mr. Van Patten and M. S. Fitch were admitted to the firm, and the business, within the first four years, had outgrown the limited quarters on Mechanic street. The firm, in 1869 erected a large three-story factory on Water street, ample, it was believed, to meet the demands of their business for many years to come.

Here new lines of goods were added, including stump-joints, kingbolts, and the Miner, Stevens' and Saunders' patent coupling, the latter being the only patent thill coupling of the hundreds invented, that has ever become a standard article in the trade. Their business so increased as to demand the work of two sets of hands, the factory running, for the most part, night and day.

Mr. Fitch retired from the firm in 1873 and the business was continued by Messrs. Clapp and Van Patten.

The factory, ample as it had been considered, was found inadequate to meet the demands of their augmenting business, and they erected, in 1874, a much larger factory, on extensive grounds, on the corner of Genesee and Division streets, directly on the line of the Southern Central R. R., affording facilities for the convenient receipt and distribution of their large amount of freight.

The rapid growth of the business now necessitated a further enlargement and, in 1875, an addition was erected 40 by 100 feet. A growth so rapid and continuous, for so long a period, and

* Great Industries of the United States, page 698.

during such severe and general commercial and manufacturing depression, resulted from potent and peculiar causes. The manufacture of forged carriage irons by machinery is of comparatively recent origin. Before 1860, the forging of small pieces of iron in dies, by drop-hammers had been done in New England to a limited extent only. The war gave a great impetus to the science of drop forging for gun-work, and at its close, the experience thus gained, was directed largely to improvements in the manufacture of carriage hardware. Mr. Van Patten was entirely familiar with that form of forging and die-sinking and prepared to successfully adapt it to the new industry; while the practical experience of Mr. Clapp in carriage-building, enabled him wisely to direct the kind and style of work to be done.

Hitherto this work had been done by hand, with less perfection and at much greater cost. A blacksmith shop and carriage shop had been necessary complements of each other. Now, very little hand forging for carriages is done, and only in remote localities.

This radical change in the methods of ironing carriages, is largely due to the persevering and intelligent efforts of Messrs. Clapp and Van Patten, who have made and generally introduced a more varied and practical assortment of carriage forgings than any other manufacturers in this country. They have introduced and are continually introducing new lines of goods; have invented and patented new articles and processes of manufacture, and secured the control of patented articles, which have acquired great popularity in the trade. Their Centennial exhibit embraced nearly four hundred pieces, which were the most complete and perfect of their kind exhibited, and were models of practical utility and mechanical perfection. Fifth wheels have been a specialty of their business, of which they can produce over 100,000 per year, without diminishing the production of their other goods.

A stock company was organized August 1st, 1876, comprising some of the most conservative and substantial citizens of Auburn. The paid up capital was \$150,000, and the management of the business remained with the old firm, who were the largest stock-holders. The following named gentlemen comprised the first board of trustees: E. D. Clapp, F. Van Patten, Charles Standart, Byron C. Smith, James G. Knapp,

William B. Woodin, C. C. Dwight, J. N. Knapp, L. E. Carpenter, D. E. Clapp, P. S. Hadger, and W. H. Meaker. The officers were, President and Treasurer, E. D. Clapp; Vice-President, L. E. Carpenter; Secretary, D. E. Clapp; Superintendent, F. Van Patten. The same trustees and officers have since been continued.

The business of the company soon demanded further accommodations and, in 1878, a large store-house was erected over the trestle-work at the north end of the company's grounds, and the foundations laid for new buildings, both on Genesee and Division streets, and brick offices were erected. Work is in progress on a three story brick building, 40 by 80 feet, fronting on Genesee street. When the buildings now in process of erection are completed, the factory will be of the following dimensions: Main building used for forge room and iron house, 281 by 40 feet; machine shop 40 by 80, three stories high and basement; office and warehouse, 70 feet on Genesee street, and extending back on Division street, 236 feet, to the track of the Southern Central Railroad, store-house and pattern-rooms on the north side of lot, 50 by 40 feet. The quadrilateral will be thus enclosed by buildings, the exterior frontage of which will exceed 800 feet.

The company have a large wholesale and retail coal trade and a trestle about 250 feet long, a part of which is covered and used as a freight depot. Huge drop hammers, which vary in weight from 500 to 1,500 pounds, and rise and fall by means of friction rollers, from seventy to ninety times a minute, executes their work with great perfection and dispatch. These drops and the dies which form the pieces, are all made in the factory. The red-hot iron is pressed by the blows of the drops into steel dies or moulds, which give the shape intended. Of some kinds from 3,000 to 4,000 pieces can be thus forged in a day. They are afterwards finished and fitted ready for use.

The company employ about 150 men and finish fully double the product which was possible but a few years ago. Hayden and Smith are the sole agents for the sale of their goods, which are sold in all parts of the United States, in Canada and Australia, and which include every piece of forged iron used in ironing a carriage, in a form and finish ready for application to the wood-work. Among the principal pieces are thill couplings,

fifth wheels, king-bolts, axle clips, perch plates, stump-joints, joint-ends, steps, shifting-rails, body-loop ends, slat-irons, king-bolts, and axle-clip ties, fancy-bolts, top-props, etc. These are supplied in complete sets, or in detached parts as desired. No other manufacturers supply, as do this firm, complete sets of forged iron work for carriages. The sets for top buggies contain over one hundred pieces of hardware.

EMPIRE WRINGER COMPANY.—In April, 1872, a cöpartnership firm was organized to manufacture and sell clothes-wringers, under the above title. The cöpartners were : C. M. Howlet, H. N. Lockwood, John S. Fowler, Jacob Brinkerhoff, J. N. Starin, H. V. Quick and L. G. Barger. C. M. Howlet was appointed manager and the firm commenced the business of manufacturing clothes wringers under the patents obtained by J. Brinkerhoff.

Subsequently Messrs. Starin and Quick sold their respective interests in the business to C. M. Howlet, N. B. S. Eldred and A. S. Lee. In 1874, Mr. Eldred sold his interest to L. W. Ney and Mr. Lee to C. M. Howlet. On September 1st, 1876, C. M. Howlet and E. C. Denio purchased the entire business pursuant to the conditions of the original cöpartnership.

In December, 1876, a company was incorporated under the laws of this State, with a capital of \$64,000. The president and manager was C. M. Howlet and the secretary, E. C. Denio; Jacob Brinkerhoff, general sales agent and Henry J. White superintendent of the manufactory.

During the year, 1876, 24,000 wringers were made and sold. During the same period, patented folding cots and washing benches were added to the product, and in 1877 the manufacture of the Empire steel-band, barbed fencing was introduced. Of the features which have given deserved popularity both to the wringers and steel band fencing of this company, they have the monopoly, under exclusive and definite patents.

The special merits of the Empire Wringer and the enterprise of the company in making them known have led to their rapid and wide introduction, not only in this country, but also in many foreign countries, in South and Central America, New Zealand, Australia, Sweden, Norway, Russia, France and Austria and to England and Germany. Large shipments are made monthly, upon regular standing orders.

The development of this business to its present magnitude has, it will be noticed, taken place during a period of general commercial depression, indicating at once unusual merit in the goods produced and skill in their commercial management.

The power is derived from the Outlet, in the seventh ward. The capacity of the manufactory is one hundred wringers and five miles of fencing per day; force employed from forty to forty-five hands.

MESSRS. SHELDON & Co., are very extensively engaged in the manufacture of the *anchor brand axle*. This business was established by Barber, Sheldon & Co., in 1865, in the prison, at which time they employed one hundred convicts in the manufacture of axles and the *Cayuga Chief* reaper and mower. In 1866, this company, Burtis & Beardsley and Reynolds & Co., each of whom were manufacturing the *Cayuga Chief*, consolidated and formed a stock company under the name of the *Cayuga Chief Mfg. Co.*, with a capital of \$500,000, and carried on business in D. M. Osborne & Co.'s shop No. 2, opposite the prison, where the castings and malleable iron used in the construction of the machines manufactured by the latter firm are now made. In 1869, Charles L. Sheldon, Franklin L. Sheldon (deceased,) and Henry Morgan, members of the firm of Barber, Sheldon & Co., purchased Eugene C. Barber's interest, and in 1875 the reaper and mower establishment was merged into that of D. M. Osborne & Co.

Messrs. Sheldon & Co. employ 240 convicts and 100 citizens, the latter of whom are mostly engaged in their rolling mill, forges and machine shop, located at Hackney Falls, now in the Seventh Ward of the city. The rolling mill is situated on the west side, and the machine shop and forges directly opposite, on the east side of the Outlet. The machine shop was formerly occupied by the *Auburn Tool Co.*, and owned by Geo. Casey, of whom it was bought in 1870, by the present firm, who added some sixty feet, repaired it, and at the same time erected a large forge shop. They have just completed (1878) a second forge shop, 100 by 40 feet, to meet the requirements of their increasing business, which now probably exceeds that of any other three similar establishments in the world. They consume daily about twenty tons of iron and steel,

the former of which is made in their own shops, and make 180,000 sets of axles per annum. Their works in the prison are propelled by power furnished by the prison dam, which has a fall of eight feet, and a 150 horse-power engine. In March, 1877, they put a 250 horse-power engine into their machine and forge shops, the heavy machinery, to which additions have recently been made, requiring more power than was furnished by the water from the Outlet, which has, at this point, a fall of twelve feet. The goods made by this firm have, from their excellence, gained for them a good reputation in the markets of this and other countries.

DUNN, SALMON & Co., of Syracuse, commenced the manufacture of boots and shoes in the prison in 1865, in which year they succeeded McDougal, Fenton & Co. They have an invested capital of \$250,000. They contract for the labor of 200 convicts at fifty cents per day. They give employment to 250 persons, twenty-five to fifty of whom are resident citizens, and are making sixty-five cases of goods per day.

JOSIAH BARBER & SONS, manufacturers of woolen goods and carpeting, on Washington street and the Outlet. This is one of the oldest business establishments in the city. It was started in 1829, by Josiah Barber, who came in that year from Hudson, Columbia county, where he had carried on the woolen business some twenty years, having been preceded in the same business by his father. He commenced operations in the prison, where he continued till 1857, being associated for several years with John Loudon. In 1846-'47 he erected the buildings he now occupies, on the site of the saw and carding-mills of Samuel Dill. The carpet-mill is 150 by 50 feet, five stories high, and the woolen-mill 238 by 54 feet, four stories high, both being built of brick, and standing one on either side of the Outlet. The woolen-mill contains ten sets of cards and forty-eight broad looms, and the carpet-mill six sets of cards and twenty-six power carpet looms. The machinery is driven by water from the Outlet, which furnishes a power equivalent to 500 horses. In 1859, his sons Wm. C. and Geo. E. Barber, were admitted to partnership, and the business has since been conducted in the above name. The capital invested is \$350,000. They employ 250 to 280 hands, about two-thirds of whom are females. Their

pay roll amounts to \$8,000 per month. The product of their looms in 1877 was 340,000 pounds of woolen goods and 150,000 pounds of carpets ; 520,000 pounds of wool being consumed in the manufacture of the former, and 180,000 pounds in that of the latter.

HAYDEN & SMITH, manufacturers of and dealers in carriage and saddlery hardware. This business was established in 1830 by C. & P. Hayden, and was probably the first manufactory of saddlery hardware of any importance in the United States. Previous to 1830, and indeed for several years thereafter, nearly all these goods were imported from England. In 1833, Cotton Hayden died and the business has since been conducted by Mr. P. Hayden, who resides in New York. He has been associated with different partners, the principal of whom have been Wm. A. Holmes, who became a book-keeper in the establishment in 1836, and a partner in 1840, which relation he held till 1850 ; Geo. J. Letchworth, who became clerk in 1844, and succeeded Mr. Holmes in the partnership in 1850, and continued till 1873, when Byron C. Smith, the present resident and courteous manager, who entered the establishment as clerk in 1852, succeeded to the partnership. O. P. Letchworth, son of Geo. J. Letchworth, who was also a member of the firm, dissolved that connection in January, 1876, by selling his interest to the remaining partners, at which time the firm name was changed from Hayden, Letchworth & Smith to Hayden & Smith.

The firm have employed prison labor almost uninterruptedly since the business was commenced, beginning with only six men. They now employ the labor of 125 convicts, for which they pay fifty cents each per day, besides that of twenty-five persons, in various capacities, outside the prison. The value of their manufactured goods is about \$100,000 per annum. Their factory is in the prison ; and their office and ware-rooms at No. 9 East Genesee street. They make a specialty of wood hames, of which they manufacture annually about 100,000 pairs, comprising some two hundred varieties. They are shipped to all parts of the civilized world.

This firm are also the exclusive agents for the sale of the carriage hardware made by the E. D. Clapp Mfg. Co. Their capital has been increased from time to time to meet the requirements of their

increased business, till at present about \$200,000 are invested.

In 1876 they increased their facilities and have since then done their own brass founding and nickel plating. Julius Robbin is foreman in the hame shop and N. S. Possons, in the foundry and buckle shop; the former having an experience of eight years and the latter of ten. Mr. P. Hayden, one of the founders of this establishment, has since established similar enterprises in New York city, Newark, N. J., Columbus and Cincinnati, Ohio, Detroit, Mich., St. Louis, Mo., Syracuse, N. Y., San Francisco and Sacramento, Cal., and Galveston, Texas, all of which, except the latter, are still in existence, and some of them doing a much larger business than the parent firm. The Galveston enterprise was started just before the war, and the stock, valued at about \$40,000, confiscated by the Confederate government and worked up into confederate harness. Several who have been educated in this establishment as clerks have started the business elsewhere. Among these are Messrs. Olmsted & Jones, who are now proprietors of the establishment in Syracuse.

SARTWELL, HOUGH & Co., manufacturers of and dealers in boots and shoes, at Nos. 2 and 4 E. Genesee street. This business was commenced in 1866, by Elbridge G. Miles, D. M. Hough, H. J. Sartwell and Wadsworth Hollister, under the name of Miles, Hough & Co., at No. 6 State street. In 1867 Mr. Hollister sold his interest to W. Crocker, when the firm became and has since remained Sartwell, Hough & Co., Mr. Miles having also severed his connection with it. In 1872, feeling the need of more room and power than their old quarters afforded, they removed to their present location. They use a capital of about \$100,000, give steady employment to about one hundred hands, about one-half of whom are females, manufacture a general line of ladies' wear, to the extent of \$150,000 to \$200,000 worth per annum, and do a jobbing business in all kinds of boots and shoes to the amount of \$250,000 to \$300,000 per annum.

FOXELL, JONES & Co., commenced the manufacture of stove hollow ware in the prison, about the middle of October, 1877, Messrs. Foxell & Jones having previously carried on the business at Troy for ten years. The capital invested is about \$50,000. They employ 160 convicts and

seventeen citizens, and are doing a business of about \$100,000 per annum. The motive power is furnished by a sixty horse-power engine. They first contracted for 100 convicts, and subsequently for 165.

NYE & WAIT, carpet manufacturers, located on Factory street, between Wall and Clark streets. In 1852, Carhart & Nye leased Josiah Barber's factory and run it till 1858, in which year they dissolved, and L. W. Nye bought the building erected in 1816 by Elijah Miller and John H. Beach, who, in 1814, purchased of Samuel Dill ten acres, including the fall, on lot 46 of the military tract. This building was used as a cotton factory and was continued as such by Mr. Nye till 1868, in October of which year he leased it to Howlet & Bailey. April 1st, 1869, it caught fire and was partially burned. In 1870 it was rebuilt, the portion not burned, the walls of the north part, being retained and forming a part of the four story stone building used by this firm as a carpet factory, for which purpose it was then fitted up. It is 40 by 110 feet. In 1868 a second building, 48 by 85 feet, also of stone, was erected, the main floor of which is used for the manufacture of worsted for the carpets made by Messrs. Nye & Wait, the latter of whom (Wm. F. Wait) was admitted to partnership March 1st, 1871. Geo. N. Nye, son of L. W. Nye, became a partner October 1st, 1876, without any change in the firm name. They use a capital of \$80,000, employ 100 hands, and make 177,000 yards of extra superfine ingrain carpets and over 65,000 pounds of worsted per annum. The motive power is furnished by water from the Outlet, with a fall of 26.9 feet.

GEORGE CORNING, SR., having contracted for 100 convicts for five years, at forty cents each per day, commenced the manufacture of shoes in the prison, January 1st, 1874. He also employs six citizens who act as foremen. He uses a capital of about \$50,000, and is making about 300 pairs of shoes per day. Mr. Corning was formerly from St. Louis, where he carried on the same business.

DAVID WADSWORTH & SON, scythe manufacturers, on the Outlet, near the west line of the city. This is one of the oldest of Auburn's manufacturing establishments. It was started in 1818, on the site subsequently occupied by the Dodge & Stevenson Manufacturing Company, by

Joseph Wadsworth. In 1829, Mr. Wadsworth bought of Benjamin Sweet the tract of land he now occupies, upon which was an old carding mill. This he converted into a scythe factory and soon after removed his establishment to that locality. He continued till about 1845, when his son, Joseph Wadsworth, rented the property and carried on the works till 1849, in which year it was willed to David Wadsworth, who has since carried on the business, having been associated as partner with Nelson Fitch from 1867 till July, 1872, and with his son, David Wadsworth, Jr., since July 1st, 1876. The present buildings were erected from 1860-'67. These works give employment to 65 men and annually turn out about 30,000 dozen scythes, hay, corn and straw knives, and grass hooks.

THE AUBURN TOOL COMPANY is the outgrowth of an enterprise started in the prison in 1823, by Truman J. McMaster and Hon. Nathaniel Garrow, who then commenced the manufacture of carpenters' planes and plane irons, and carried on the business till about 1833, when Alonzo McMaster and Jacob Young bought the establishment and continued the business under the name of Young & McMaster till 1838, when the property was bought by the firm of Z. J. McMaster & Co., which was composed of Z. J. McMaster Paul D. Cornell and Aurelius Wheeler, who, in 1847, sold to George Casey, Adam Miller, Josiah Douglass and Nelson Kitchell, by whom the business was conducted till 1858, under the name of Casey, Kitchell & Co. In 1858, Mr. Casey bought the interest of his partners and admitted to partnership J. N. Starin, Nelson Fitch, Abijah Fitch, Noah P. Clark and Alonzo G. Beardsley, who carried on the business under the name of Casey, Clark & Co., till October 8th, 1864, when a stock company was formed and incorporated, with a capital of \$75,000, which was subsequently increased to \$100,000, and the business has since been carried on under the name of the *Auburn Tool Company*, the parties last named being the incorporators and the first trustees. George Casey was elected President and has held that office to the present time. Nelson Fitch was elected Secretary and held that office till April 22d, 1868, when he was succeeded by N. P. Clark, who still holds the office. George Casey also acted as Treasurer till June 2d, 1867, when N. L. Casey, who has since held the office, was elected.

The works were removed from the prison August 1st, 1877, and now occupy a depression on the east bank of the Outlet, on Aurelius Avenue. This company employ thirty hands and make about 100,000 planes and plane irons per annum. The motive power is furnished by the Outlet, which has a fall at this point of 17½ feet. George Casey came to Auburn from Dover, Dutchess County, in 1813, and, with the exception of Jasper Trowbridge, has lived here longer than any other resident.

THE AUBURN COLLAR COMPANY manufacture horse collars of various designs in the prison. The business was commenced in 1871, by Crawford Parks and Charles Pomeroy, under the title of the *Durant Flag Collar Co.*, and continued by them till April 5th, 1872, when Byron C. Smith bought Mr. Pomeroy's interest, and C. C. Durant and S. B. Roby were admitted to partnership. In 1873 William H. Meaker bought Mr. Park's interest. Previous to the fire in the prison the company were engaged exclusively in the manufacture of the Durant flag collar, but after the fire, being unable to immediately procure flag with which to resume that business, and having a number of convicts on their hands to provide work for, they began the manufacture of leather collars, and soon after changed their name to the *Auburn Collar Co.*. The partnership was dissolved by limitation in April, 1877. S. B. Roby and Byron C. Smith withdrew previous to this time, the former's interest having been bought by James Gorsline in the spring of 1876, and the latter's by the company. The partnership was continued without further change till Nov. 1st, 1877, when Mrs. Chloe Wasson acquired an interest. July 1st, 1878, Jas. Gorsline retired from the firm and Mrs. Wasson also acquired his interest. The company employ a capital of about \$20,000, and make about a hundred leather and fifty flag collars per day. They contract for fifty convicts, at fifty cents per day, but usually employ a number in excess of that.

THE AUBURN IRON WORKS were built in 1853, by Chas. Richardson, who ran them till 1868. They remained idle till February, 1870, when they were bought by Messrs. Tuttle, Reed and Dennison and put in operation. In March, 1878, Messrs. Tuttle & Reed, the present proprietors, bought Mr. Dennison's interest. The works were built for the manufacture of car axles and

were used for that purpose till 1859, when they were changed to a manufactory of bar iron and horseshoes, which was continued till the close of 1868, horseshoes being the principal article of manufacture. Thirty men are now employed in the manufacture of merchant iron. The capacity of the works is 1500 tons per annum. Their product in 1877 was 1100 gross tons. The motive power is furnished by two engines, one of eighty horse-power and the other of twenty. They are supplied with a fifty horse-power steam hammer.

BEARDSLEY, WHEELER & Co., manufacturers of the Dodge mower and reaper at 19 Water street. These works were formerly occupied by the Dodge & Stevenson Mfg. Co., who commenced the manufacture of these machines in 1858, and continued till 1875, when they went into liquidation. They were bought at sheriff's sale by the above firm, who employ some twenty men about six months of the year, principally in the manufacture of parts to the machines now in use. During the prosperity of the Dodge & Stevenson Mfg. Co., these works gave employment to 300 to 400 hands.

CARD CLOTHING ESTABLISHMENT.—In 1824 Isaac C. Bradford came to Auburn from Cooperstown, N. Y., and commenced the manufacture of card clothing by hand, on Exchange street, nearly opposite the post-office. In 1829 he went East and bought three card-setting machines, and employed a workman here the same year to make others like them. About 1834 his brother became interested with him and they continued the business in company some two or three years. In 1840 the establishment was removed to a wooden building erected for the purpose, which occupied the site of the present three story brick building, which is 54 by 30 feet, was erected in 1853, and is situated near the "big dam." In 1841 Rufus Sargent, the present proprietor, bought an interest in the business and was associated with Horace Hotchkiss, under the name of Hotchkiss & Sargent. In 1842, Edmund Mortimer bought a half of Hotchkiss' interest, and the name was changed to Hotchkiss, Sargent & Co. In 1843, John G. Hopkins bought Hotchkiss' remaining interest, when the firm became Hopkins, Sargent & Co. In 1845, Hopkins sold his interest to the remaining partners, who carried on the business under the name of Sargent

& Mortimer, till February, 1855, when Mr. Sargent bought Mr. Mortimer's interest and has since conducted the business alone. Mr. Sargent uses a capital of about \$20,000, and gives employment to nine hands, the work being done mostly by machinery. There are in use twenty-four card-setting machines, of different styles, adapted to all the kinds of cards in use. They are unique, complicated and ingeniously constructed machines, and perform their work with rapidity and accuracy like intelligent automatons. The capacity of the establishment is about 24,000 square feet of cards per annum. The annual product is valued at about \$35,000. The motive power is furnished by water drawn from the east race, with a fall of twenty-four feet. This is the only establishment of the kind in the State, and there is only one other outside of the New England States, at Philadelphia. There have been fifteen in the State within forty years, but all except this have succumbed.

ISAAC W. QUICK, manufacturer of the improved Hussey combined mower and reaper, on Mechanic street. This machine was the first one to successfully cut grain. It was invented by Ovid Hussey and patented by him in 1837, the same year in which Cyrus H. McCormick took out his patent for the *Virginia Reaper*. McCormick's machine proved a failure, owing to a defect in the cutters. The Hussey machine had from the first the same style of cutters at present in use on all machines. Its manufacture was first begun in Baltimore by Ovid Hussey, and was continued there by him till his death during the war. About 1840, Thomas R. Hussey, brother of Ovid, commenced its manufacture in Auburn, in the old oil-mill which stood on the ground now occupied by the establishment of D. M. Osborne & Co. He subsequently removed to the site of the Osborne House, where he was in partnership with Charles Eldred. After a short time he returned to his original location, where he was burned out, when he removed to Mr. Quick's present location in 1864. November 22d, 1849, Isaac W. Quick and Geo. S. Hall, who were carrying on the grocery business under the name of Quick & Hall, bought a half interest with Hussey & Eldred. In 1850, Eldred sold his interest to the remaining partners. At the death of Hall, in 1854, Mr. Quick bought his interest; and in 1868 he bought that

of Mr. Hussey, since which time he has carried on the business alone. He uses a capital of about \$15,000; gives employment to twelve to fifteen men; and makes about 100 machines per annum.

ROBERT PEAT, furniture manufacturer, on Franklin street. In 1825, Robert Peat, father of the present proprietor, who came to Auburn with his father's family from Hull, England, in 1819, commenced the manufacture of furniture where his son's warerooms now are, on Market street, opposite the city hall, and continued there till his death in 1851, when his sons Robert and Edward Lawrence succeeded him, under the name of R. & E. L. Peat. In 1861, Robert bought his brother's interest and has since conducted the business alone. In 1848, the facilities for manufacturing were increased by renting a place on the site of E. C. Selover's brick building on East Genesee street, where, in February, 1866, they were burned out. The present brick factory on Franklin street, which is 96 by 30 feet, with two stories and basement, was erected and occupied July 4th of that year. The office and warerooms occupy three adjoining buildings, with a frontage of 112 feet on Market street, and extending back forty feet. One is of wood, two stories, and forty feet front; the others are of brick, each three stories high. Mr. Peat employs twenty to twenty-five hands, and annually turns out goods valued at \$25,000. He also deals in furniture manufactured elsewhere. The machinery in the factory is propelled by a ten horse-power engine.

W. W. CRANE, founder and machinist at 27 and 29 Water street. This business was established in 1839, by John Gaylord, who erected the foundry that year and the machine shop soon after 1846, the latter being used by him for fitting up plows, in the manufacture of which he was extensively engaged. Mr. Gaylord continued the business till 1862, when he rented the property to Merrill, Wilder & Co., who first made use of the latter building as a machine shop. In 1875, W. W. Crane, W. C. Locke and Isaac Richardson rented the property, and carried on the business under the name of W. W. Crane & Co. till 1876, when Messrs. Locke and Richardson retired from the firm, and Mr. Crane has since conducted the business alone. He has about \$16,000 invested in the business, and em-

ploys some twenty-four men, about one-half of whom are engaged in the foundry. His monthly pay roll foots up to about \$1,000. He makes steam engines, and Jones' Little Giant Water-Wheel, both to order, of the latter about twenty per annum, for Geo. H. Jones, the patentee. His principal business is jobbing and general mill work. For the last seven months the casts have averaged three to four tons per day.

L. M. WOODCOCK & CO., founders and machinists, commenced business in October, 1876. They occupy the basement of L. W. Nye's carpet factory for a machine shop, and a building 40 by 60 feet, also owned by L. W. Nye, and erected by him in 1876, for an iron and brass foundry. The capital is \$10,000, and is furnished by Nye & Wait, who are members of the firm. They give employment to thirty or forty men, and make a specialty of gear cutting, besides doing a general jobbing business.

THE STEVENS THRASHER WORKS were started in the village of Genoa about 1838, by A. W. Stevens, a native of Genoa, where thirty to thirty-five men have been employed in the manufacture of thrashing machines, of which about fifty have been made per annum. These works were moved to Auburn, October 1st, 1878, into the buildings formerly occupied by the Dodge & Stevenson Mfg. Co., which have been leased for a term of five years. With the increased facilities here afforded, they give employment to fifty men and turn out about 100 machines per annum. It is an important acquisition to the manufacturing interests of Auburn.

J. H. WOODRUFF'S BUTTON FACTORY.—This, though a comparatively recent, is a very important and valuable accession to the manufacturing interests of the city. Mr. Woodruff, who is a native of Auburn, commenced the manufacture of composition and pearl buttons in New York city, in the summer of 1876. The following fall he transferred his works to Auburn, to the building in the rear of the post-office, formerly occupied by the *Auburn Paper Bag Company*, employing at first only ten hands. Such has been the rapid development of this business that, at the expiration of the second year, we find him not only giving steady employment to 200 persons, about one-half of whom are females, but reaching out for additional room and increased facilities; the present condition of his business,

he assures us, warranting the employment of an additional hundred hands. When we reflect that this business has been wholly built up during the prevalence of an almost unprecedented financial crisis and business depression, its results are simply astounding, and challenge the annals of manufacturing enterprise for a parallel. Mr. Woodruff is erecting on Logan street, a three story brick building, with basement, 132 feet front, with a wing running back 75 feet, and an independent boiler house 20 by 30 feet. His monthly pay roll exceeds \$2,500; and the product of his factory 5,000 gross per month, all of which are shipped to a distant market. The process of manufacture is an interesting one, but the limits of this work will not admit of a description of it.

THE AUBURN GLOVE AND MITTEN COMPANY, No. 80 Genesee street. The proprietor is Edwin R. Fay, who, in 1869, commenced the manufacture of all kinds of gloves and mittens. He employs thirty persons, about two-thirds of whom are women. The average sales are about \$45,000 per annum.

THROOP'S GRAIN CLEANER COMPANY, was incorporated in 1867, and the business established in Syracuse in that year with a capital of \$100,000, which has been reduced to \$35,000. In 1869, G. E. Throop, the present proprietor, acquired the whole interest, and in 1875 he removed the works to their present location, in the rear of Barber's south factory, by means of a shaft from which the motive power is furnished. Ten men are employed, and from 150 to 400 grain cleaners for flouring mills made per annum, besides considerable custom work in perforating sheet metal.

CALVIN W. CONKLIN, boiler maker, No. 38 Water street, commenced business in 1872. He employs nine men, and makes about thirty boilers per annum, besides repair work. He was associated as partner with Alex. Forbes during the first two years. Mr. Conklin is reputed to be one of the best boiler makers in the State.

CONNIFF & YANTCH, manufacturers of agricultural implements, 43 State street. This business was established some twenty-five years since by Milton Alden & Son, who carried it on about fifteen years, till the death of the elder Alden, when it was sold to Merrill & Wilder, who continued it for two or three years, and sold to S. D. Wackman & Co., by whom it was conducted two

and a half years, till January 27th, 1876, and sold to the present proprietors, John Conniff and Godfried Yantch, who employ a capital of about \$10,000, give employment to ten men, and make a specialty of Alden's patent horse-hoe and cultivator, of which about 400 are made per annum.

THE STONE MILL, at the junction of Genesee and E. Genesee streets, is owned and occupied by Orlando Lewis, who, in company with E. C. Hall, bought the property of Wm. Hills, May 1st, 1865, for \$32,500. In 1870, Mr. Lewis bought his partner's interest, and has since been alone in the management. He came here from Spencer, Tioga county, in 1857, and was engaged in the lumber business previous to purchasing the mill property. The present mill was built in 1825-'6, by John H. Hardenbergh, son of Col. John L. Hardenbergh, the first settler in Auburn. It occupies the site of the old log mill built by the latter soon after his settlement here, and the plank mill, with which that was soon after replaced. The log mill was twenty-one feet square, and is variously stated to have contained one and two run of stones. Its attendant was accustomed, it is said, to gauge his grists, and leave the mill to do its own grinding, allowing it to run in this manner night and day. The second and third mills on this site were each built to meet the increased demands which were in excess of the capability of their predecessors. The present mill contains six run of stones, four for wheat and two for feed, which are propelled by water from the Outlet, with a fall of twelve and a half feet. It gives employment to eight men. Its capacity is 110 to 120 barrels of flour per day of twenty-four hours. Mr. Lewis has twice rebuilt the interior, the last time in 1875, when \$10,000 were expended in supplying the most improved modern mill machinery and adapting it to the manufacture of flour by the new process. It is both a custom and flouring mill, about one-third of its business being custom work.

THE AUBURN CITY MILLS, on Mechanic street, were built in 1838, by Sherman Beardsley, who run them several years. In 1870, Chas. P. Burr bought a half interest of John Y. Selover, who had run them some five or six years. In 1871, Mr. Burr bought Mr. Selover's remaining interest, and formed a copartnership with Chas. E. Thorne, under the name of Burr & Thorne. The mill is a substantial stone structure, containing four

stories besides basement. The main part is strictly a flouring mill, and was provided in 1873 with an entire new set of machinery, with especial reference to the manufacture of flour by the new process. It contains five run of stones, which are capable of grinding about 200 barrels of new process flour per day of twenty-four hours; flour made by the new process requiring about double the time consumed in its manufacture by the ordinary process. In 1875, the addition formerly used as a wheel-house, when an overshot wheel was employed, was converted into a grist-mill, and two run of stones put in, one for flour and one for feed, the former with a capacity of converting 100 bushels of wheat into flour, and the latter of grinding 400 bushels of feed per day. The motive power is furnished by means of a race, which draws water from the "big dam," and gives a fall of twenty-six feet. Five men and a capital of about \$75,000 are employed in operating the mills. This firm were the first to do a strictly flouring business in Auburn. They started that enterprise in 1873, when their mill was supplied with new machinery, and have succeeded in placing Auburn flour in markets in which it was previously unknown. They have thus been instrumental in largely improving the local wheat market. They are buying about 100,000 bushels of wheat per annum; and made in 1877 a little over 20,000 barrels of flour.

THE AURELIUS AVENUE MILLS, owned by John S. Bristol, who acquired possession in April, 1878, consist of a grist and flouring mill, with four run of stones, and a saw mill, containing one muley saw, which are operated by water from the Outlet. They occupy the site of the mills erected by Jehial Clark, in 1798; indeed the massive timbers used in the frame-work of those structures enter into the composition of the present ones, they having been used in the construction of the "Mayflower Mills," by which name they were formerly known. This property has passed through the hands of several different owners, among whom are Edward Allen, Llewellyn and James Davis and Messrs. Coe & Slee.

FRANCIS DITTON, tanner and currier and harness maker and dealer, Nos. 16 and 18 Mechanic street, commenced the harness business in 1858. In June, 1877, he formed a copartnership with his nephew Thomas Ditton, and in that year they erected the building now occupied as a tannery,

at a cost of \$2,000, and commenced the manufacture of harness leather to be used by them in the manufacture of harness. The tannery contains thirteen vats and turns out about six hundred sides per annum. Two men are employed in the tannery and ten in the manufacture of harness and trunks. In July, 1878, Francis Ditton bought his nephew's interest. He purposes soon to enlarge the capacity of the tannery.

S. W. PALMER & Co., manufacturers of snow shovels and laundry machines, the latter consisting of washer, wringer and mangle combined, are located on Mechanic street, near the Auburn City Mills. In 1855, S. W. & J. F. Palmer commenced the manufacture of bench planes. In 1863, J. F. Palmer sold his interest to Charles Coventry. In 1871 the partnership was dissolved, S. W. Palmer continuing the business in company with C. M. Palmer, who compose the present firm. Their capital is about \$10,000. They usually employ ten hands, but have employed twenty during the larger portion of the past year. In 1877 they made 30,000 snow shovels and 10,000 ash sieves. They made during the year 1878, 20,000 wash boards and 1,000 churns. They have made about 50,000 washing machines. They occupy the building erected by Sherman Beardsley, shortly previous to 1840, for a distillery, for which purpose it was used till soon after the beginning of the war, when William H. Halladay converted it into a machine shop and erected the addition now occupied by Isaac W. Quick, and C. J. Schweinfurth.

D. P. G. & W. O. EVERTS & Co., contractors and builders, and proprietors of the sash, door and blind factory, at the "big dam." The business was commenced in 1864, by D. P. G. & W. O. Everts, in the old Selover building, which stood on the site of the brick block now occupied by Sartwell, Hough & Co., on Genesee St. After two or three years they formed a copartnership with Joshua Burt, David Simpson, James E. Tyler, Israel Shoemaker, Josiah Douglass and Adam Miller, under the name of Burt, Simpson & Co., and took a prison contract for the manufacture of sash, doors and blinds, which business was continued under various names till 1873. In the winter of 1868-9, the Everts withdrew from the firm and bought the property formerly owned by the Auburn Tool Company. In August,

1870, the building was burned and their present brick structure, 56 by 45 feet, two stories and basement, with an engine room 28 by 40 feet, was erected the same year at a cost of about \$5,000. In 1869, William S. Everts was admitted to partnership and the firm name was changed to D. P. G. & W. O. Everts & Co. They give employment to nine men. They draw water from the "big dam," and have a fall of twenty-one feet.

JOHN L. SELOVER, proprietor of the planing mill on East Genesee street, opposite Seminary Avenue, commenced business in 1874. The capital invested is about \$2,000. Three men are employed. The motive power is furnished by a twenty horse-power engine.

ANDERSON & DYER, proprietors of the planing mill at 18 Market street, commenced business in 1866, on the site of Sartwell, Hough & Co.'s shoe factory, where they were burned out the same year. They then bought the site they now occupy of Robert Peat, paying therefor \$1,500, and erected the two story brick building the same year. They have a capital of about \$6,000, and employ four men. The motor is a twenty horse-power engine.

H. G. THORNTON, proprietor of the file factory, at 19 Market street, commenced business in 1865. He occupies a brick building 22 by 120 feet, the front half being two stories and the rear half, one story high, erected by him in 1866. He has a capital of \$25,000 invested in the business, employs 25 hands, and makes about 25,000 files of all sizes per annum.

REYNOLDS & CO., manufacturers of steel cultivator teeth and workers in all kinds of sheet metal, are located on Washington street near Barber's mills. The business was established in 1861, on Mechanic street, near the Auburn City Mills, by Asa R. Reynolds and his sons Samuel F., Mark and Napoleon. Mark died in 1862. The business was continued till 1868, when their father withdrew, and C. Eugene and William C. Barber were admitted to partnership, the name was changed to Reynolds, Barber & Co., and the manufacture of the clover leaf plane-irons was added to the business and continued till 1871. In 1869, Samuel F. Reynolds and C. Eugene Barber bought the interest of Napoleon Reynolds, and the following year that of William C. Barber. In 1871 the partnership was dissolved,

and Barber went to Europe as agent for the Champion reaper, of Springfield, Ohio, in which business he is still engaged. Samuel F. Reynolds resumed the business in 1875, and in 1877, C. C. Trowbridge became his partner, and the business has since been conducted under the name of Reynolds & Co. In the latter year they removed to their present location. They employ a capital of about \$10,000, and give employment to some ten men during the winter.

CHARLES F. GUION, manufacturer of sash, doors and blinds, corner of Aurelius avenue and Wadsworth street, commenced business in 1866, in company with C. G. Milk, under the name of C. G. Milk & Co., who carried on the business till the death of Milk in 1870, when Guion bought his interest. He employs a capital of about \$15,000, and generally about twenty persons. The motive power is furnished by the Outlet, which has a fall of eleven feet.

THOMAS PEACOCK, wood worker, at 20, 22 and 24 Dill street, commenced business in April, 1877, at which time he took a prison contract for one year. At the expiration of that time he removed to his present location. He bought the building of the heirs of the late John H. Chedell, paying therefor a little less than \$4,000. The capital invested is about \$10,000. He employs twenty hands, and manufactures 10,000 children's sleds, 15,000 snow shovels, 60,000 wash-boards, and 100,000 fork, hoe and rake handles per annum.

CHARLES H. SHAPLEY, pattern maker, 25 Water street, came to Auburn in the spring of 1865, having served nearly four years in the army, where he was wounded at Winchester, Va., by a rifle shot in the hip, and left unattended upon the field under the supposition that he could not live. After working four years under instructions with Merrill Brothers and B. B. Snow & Co., he commenced business for himself at his present location, February 1st, 1874. He employs one man besides himself and occasionally two.

CHARLES J. SCHWEINFURTH, carver, turner and pattern maker, on Mechanic street, commenced business in 1858, at 89 State street, and in 1866 removed to his present location. He employs three men, and is largely engaged in making pulpits, church furniture, baptismal fonts, &c.

WM. SUTCLIFFE, brewer and maltster, 88 and 90 Clark street, commenced business in 1860, in

company with his father, Henry C. Sutcliffe, and his brother, John, under the name of Sutcliffe & Sons. Henry C. Sutcliffe died January 1st, 1876, and John, in October of the same year, since which time the business has been conducted in the above name. The brewery and malt house is 200 by 60 feet, three stories, and built of brick. The capacity of the brewery is forty barrels per day; and of the malt house 15,000 bushels. This building was erected in 1868, on the site of the one erected in 1860, which had become too small to meet the demands of the increased business. A brick beer vault, sixty feet square, two stories high, was erected in 1874. An addition 86 by 30 feet is now being built to the malt house, which will increase its capacity to 20,000 bushels. Eight men are employed, and about 5,000 barrels of ale and lager made per annum, requiring a capital of \$70,000.

BURTIS & SON, brewers and maltsters, 32 and 34 Water street. The business was started some thirty years ago by Thomas W. Cornell and Cary S. Burtis, under the name of Cornell & Co., who carried on the business some ten years, when Robert Syme bought Cornell's interest and the name was changed to Burtis & Co. After four or five years Burtis bought Syme's interest, and in 1867 admitted his son Edwin C. to partnership. The brewery is 40 by 140 feet, and the malt house 30 by 100 feet, with a capacity of about 20,000 bushels; both are two stories high. Eight men and a capital of \$40,000 are employed, and 2,000 to 3,000 barrels of ale and lager made per annum.

G. S. FANNING, brewer and maltster, 3 and 5 Garden street, commenced business in 1864, in company with Norman H. Kennedy, whose interest he bought in 1868. He employs a capital of \$65,000, and thirteen men. The brewery is 88 by 35 feet, with three stories and basement; and its capacity 7,000 barrels of ale per annum. An addition of 82 by 35 feet is being built for the manufacture of lager, with a capacity of 10,000 barrels per annum. The malt house is 119 by 55 feet, with two stories and basement, and is provided with patent iron kilns. Its capacity is 50,000 bushels. He is now making twenty-five barrels of ale per week.

WM. KOENIG, brewer and maltster, corner of State and Grant streets, commenced business in 1868, in which year his brewery was erected.

He employs three men, and makes about twenty barrels of lager per day.

EDWIN B. PARMELEE, maltster, Barber street, near Washington, erected his malt house in 1875. It is a large stone structure, with a capacity of about 40,000 bushels per annum.

MRS. M. J. SCHICHT, manufacturer of paper and cigar boxes, 13 Hoffman street, office 76 Genesee street, 2d floor. The business was commenced in 1868, by R. Schicht & Co., and conducted by them about six years, when it came into the hands of the present proprietor. The capital invested is about \$4,000. Fifteen to twenty-five persons are employed, mostly girls, and about 1,000 boxes made daily.

THE AUBURN OIL WORKS, Corner of Clark and Monroe streets, J. A. Cook, proprietor. The works were erected in 1864, for an oil refinery, by Burgess Bros., who failed in 1868. In 1869, Mr. Cook leased the property, in company with Enos Laney, whose interest in the stock and fixtures he bought in the fall of that year. In April, 1875, he bought the buildings, and has since increased the capacity of the works four-fold by the introduction of additional machinery. Mr. Cook is also a dealer in oils of various kinds, and is handling about 8,000 barrels per annum. For the last eight years, with but two or three exceptions, each month's business shows an increase as compared with the corresponding months of previous years, and during the whole period has increased from 2,200 to 8,000 barrels per annum. The capital invested is about \$15,000; the number of men employed, four.

COVENTRY & CO., (P. V. R. Coventry and N. H. Kennedy,) cigar manufacturers, Genesee street. This firm commenced business in July, 1874, Mr. Coventry having been engaged in the business some thirty-five years, a part of the time in company with his uncle, Chas. Coventry. They give employment to nineteen persons, and make 200,000 cigars per annum.

THE CENTENNIAL FILE WORKS, 15 Garden street, were established in 1876, by Wm. A. Dolphin and Frederick Tesh, the present proprietors. They employ three persons and make about \$60 worth of files per week. Their principal business is recutting

JOHN ELLIOTT, proprietor of soap and candle factory, 27 Garden street, commenced the business in 1854. He employs three persons, and is