



Wm. L. Garrison

PROFESSIONAL AND INDUSTRIAL HISTORY

OF

SUFFOLK COUNTY

MASSACHUSETTS

IN THREE VOLUMES

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CONSTITUTIONAL HISTORY
OF
BOSTON, MASSACHUSETTS.

AN ESSAY

BY

C. W. ERNST, A. M.,

SECRETARY OF THE MAYOR'S OFFICE, 1889-90.

COLONIAL PERIOD, 1630 TO 1692.

Two things helped to make Boston a great city: Geographical position, and the character of the founders. Without certain natural advantages the founders of Boston would have failed; for even a Puritan cannot militate effectually against nature. Yet the geographical position and the topography of Boston are not without disadvantages. For the city proper, nature provided a peninsula wholly insufficient to meet the wants of a great community. A large part of modern Boston, that is, the peninsula, known to the Fathers as "the neck," stands on ground that was wrested from salt water. But the harbor is magnificent, and was provided by nature. The advantage of the harbor is its proximity to the fisheries,—an advantage generally underrated by modern opinion. But without the fisheries, Boston and Massachusetts could not have lived. The fisheries led directly to commerce; for in agriculture Massachusetts could not rival the colonies further south. This made Boston from the very beginning a commercial city and the chief port of New England. In the days of the Colony and Province, Boston was the chief port on this continent, the most easily reached and the most generally frequented by English shipping. This supremacy was lost, when the empire west of the Hudson river became the

granary of the United States and Europe. For it is easier and cheaper to send grain from the fresh-water lakes to New York than to Boston. Nature provided a way to New York; it barred the way to Boston. And the gain on the voyage to European markets was more than offset by the greater cost of carrying freight from the great wheat farms to Boston. Even steel rails, steam, and the Hoosac tunnel have not destroyed this advantage, as compared with the easier and shorter road to New York. Nor is the port of Boston favorably placed for easy commerce with the South, which produces cotton, or even with Pennsylvania, which supplies our coal.

These comparative disadvantages put Boston to a sharp test, and helped to develop its character. Boston was obliged to work hard, and to mix its toil with farsighted intelligence. The character of Boston is best shown in its institutions, and not the least, perhaps, in the general organization and management of the community. Whoever wishes to understand and appreciate Massachusetts, should read her laws, and ascertain what they effected. Our public laws, after all, are the quintessence of our public life no less than of our joint ambition and public morals. They are the outcome of what the community for the time being wants. To the historian they are the backbone of all researches. The sources for a constitutional history of Boston, therefore, are the town orders and the town records, interpreted by the acts of the town officers, on the one hand, and by the Massachusetts statutes and records, on the other. The first period of Boston, in the history of its constitution the most important, begins with the settlement under the patent, in 1630, and ends with the granting of the Province Charter, in 1691-92. The chief sources are the second and seventh Report of the Boston Record Commissioners (ed. of 1881); the Colonial Laws of Massachusetts, edited, after the editions of 1660 and 1672, by W. H. Whitmore (1889 and 1887); and the Records of the Governor and Company of Massachusetts Bay (1853-4, 5 vols. in six parts.)

THE PATENT OF 1629.

The men and women who founded Boston and Massachusetts came here to improve their condition. But they came as English subjects, not prepared to lose any advantage that relation might afford. The chief attraction in New England were the fisheries, famous along the Atlantic coast of all Europe, and the certainty that the land hunger of the English race could be appeased in the new world. The land laws of

England, and its controversies in church and state, made the new world attractive. But the immediate precedent for the New-England enterprise was the success that had attended the charter of the East-India company. Perhaps it is not unjust to affirm that the charter of 1600, granted by Queen Elizabeth, has made Queen Victoria the Empress of India, with almost three hundred million inhabitants. Greater triumphs might have been achieved, by the successors of Queen Elizabeth, in New England and America. The beginning was auspicious. On the last day in 1600 "The Governor and Company of Merchants of London trading in the East Indies" was incorporated; on March 4, 1628-9, a better charter was given to "The Governor and Company of the Mattachusetts Bay in Newe England." The East-India merchants were given a monopoly of trade; the Massachusetts Company received a monopoly of trade together with a monopoly of land to be held "in free and common Socage," that is, absolutely, the crown reserving only one-fifth of the gold and silver that might be mined in Massachusetts.

It was an interesting fiction that led the crown to give the present United States to enterprising Englishmen, and the latter to treat the patents of James and Charles as a valid title in the land that became New England and America. Yet so strong is the attachment of Americans to the forms of law that the present boundary of Essex county, Massachusetts, to the north was established in the patent of 1629, when Charles I. gave to the Governor and Company of Massachusetts Bay "all those landes and hereditaments whatsoever, which lye and be within the space of three English myles to the northward of the saide river called Monomack, alias Merrymack." The same patent established the Great and General Court which still controls the public affairs of Boston and Massachusetts, although the authors of the patent thought only of a commercial company, with headquarters in England. The patent intended to constitute the Governor and Company of Massachusetts "one body corporate and politique," that is, a corporation that could sue and be sued, "like any other corporation." The corporation was to have very large rights, except those of sovereignty or semi-sovereignty. The corporation was to have a Governor and Deputy Governor, to be elected annually; and a board of Assistants or directors consisting of eighteen persons, who were to hold monthly meetings; while the corporation at large, meeting four times a year, was to consist of freemen formally admitted as such. In the patent a meeting of

the freemen, the Assistants, and the Governor combined, was called the Great and General Court.

Under the patent of 1629 the Governor and Company of Massachusetts were to be exempt from taxes for seven years, as far as New England was concerned, and in the same respect to enjoy free trade for twenty-one years. The emigrants were to remain English subjects, and might admit "any other strangers that will become our [the King's] loving subjects." The Governor and Company were given leave "from tyme to tyme to make, ordeine, and establishe all manner of wholesome and reasonable orders, lawes, statutes, and ordinances, directions and instructions, not contrarie to the lawes of this our realme of England, as well for setting of the formes and ceremonies of government and magistracy fitt and necessary for the said plantation and the inhabitants there;" but all this was to be done "according to the course of other corporations in this our realme of England," showing that the patent expected the Governor and Company, who were made a close corporation, to remain in England. In reality the Governor and Company, together with the patent, were taken to New England; and the commercial corporation acted from the outset as a semi-sovereign commonwealth, or rather as a quasi-autonomous aristocracy. The Governor was the head; the Assistants were his senators; the citizens were the freemen, and all freemen were citizens, with the active and passive right of suffrage, with all that implied. The belief, commonly entertained (Washburn, *Judicial History of Massachusetts*, 15), that "the government of the company, as established by the charter, was a pure democracy," is not well founded. The early church and the early Commonwealth of Massachusetts were an aristocracy, which prescribed mechanics' wages, did not allow servants to trade, and discriminated against "the poorer sort of the inhabitants."

THE COLONY.

The king had intended to create another commercial corporation; from the outset it was a municipal corporation, nominally attached to the crown, in fact separated from king and parliament by the Atlantic ocean and a deeper gulf. In time this municipal corporation became a sovereign commonwealth. Land hunger, or love of wealth, scattered the early immigrants over a wide area, and thus led to the founding of numerous neighborhoods, called towns. The accidental right of towns to distribute all land within their boundaries, increased their number

rapidly. As soon as a town was named or otherwise recognized by the General Court, it was deemed to be incorporated, and even a table of precedency among towns was adopted and retained (3 Mass. Records, 2). Boston ranked fourth in this hierarchy, Salem, Charlestown, and Dorchester having precedence. The ruling minds had brought from England certain notions of the realm being subdivided into shires or counties, which consisted of several towns each, beside boroughs or cities. These notions received a new application and development in Massachusetts, where the town obtained some of the rights of the English shire, notably that of direct representation in the General Court. Yet our Massachusetts counties began with a copy of the English lord lieutenant (2 Mass. Records, 42). The Massachusetts town became important at the expense of the county, and in Rhode Island it became the rival of the State itself. Outside of New England the county is the political unit; in New England the town is the chief element to make good citizens and good states. Easily the chief town in New England is Boston, whose rank has never been disputed. Yet the great importance of the New-England town is an accident. A French governor and company of Massachusetts might have begun with the laying out of counties; Governor Winthrop and his company wanted land, but on it they wanted actual settlers with a church and a constable. The church and the constable became the attributes of the New-England town; the county was an afterthought, occasioned by the arrangement of judicatories. When Massachusetts established its first counties, in 1643, there were thirty towns, and these were grouped in four "sheires," namely, Essex, Middlesex, old Norfolk, and Suffolk.

The theocratic element in early New England is easily overrated and misjudged. In those theological days it was easy for the patent of King Charles to profess that the conversion of the Indians to the Christian religion was the principal end of the plantation in New England. The king himself could have added with perfect truth that the chief end of the patent and all it implied or occasioned was the glory of God. But let no one imagine that such utterances meant any disregard of secular interests. Strict Calvinism and sound business go very well together. Sound business and ecclesiastical rivalries do not. For this reason it was sound business and legitimate, not to say necessary, that the founders of Massachusetts, who were also the founders of Boston, insisted upon uniformity in church matters. Had they begun each town with two or three churches, or with none at all, the great experi-

ment they made would have failed. They came here to improve their condition, that is to say, to flourish as they could not in England. They knew what they wanted, and they were right in excluding dissent, until the safety of Massachusetts was well assured. It was better for the dissenter to be exiled than for the infant town and colony to fail, in order that men with a windmill in their heads might be let loose upon a community that had harder work to do than to concoct schemes of reform or discuss rival theologies. The early settlers were strong; but one system of theology was all they could bear. And it was all the infant town and country could bear.

The glory of the Fathers is not their development of theology or theoretical jurisprudence, but the fact that they succeeded in building a great city, a multitude of happy towns, and a great commonwealth in the wilderness which offered few attractions beyond good water, a wholesome climate, free land, and ready access to abundant fisheries. This glory will not diminish upon a comparison of the natural advantages that favor other cities and States in this nation. It is an open question whether the relative sterility of the agricultural lands of Massachusetts was a help or a hindrance in the founding of the State. It compelled hard work, and thus tended to produce a hardy race. It led men to seek wealth by commerce, and thus prevented them from leading the narrower life of prosperous farmers. The very struggle for existence bound the founders more closely together; for partners in business quarrel more easily in days of success than in times of struggle and adversity. The early settler wanted prosperity for himself; but he knew that individual prosperity cannot endure in a loose and ill-governed community. Hence the double endeavor of the founders to build their own fortunes together with the orderly government of the settlement at large. These practical interests were paramount, and left no time for theories. Theories may have suffered; the founders of Massachusetts were not, perhaps, very systematic; but their experiment succeeded, and that under circumstances which would have disheartened almost any other set of men. This is their honor; this honor is among the many inheritances of modern Boston and Massachusetts, that they have prospered in everything that makes life attractive, where a race less sturdy, less ambitious, and less gifted would have failed.

To be sure, the Fathers brought with them the very flower of English civilisation, which had just passed through the Elizabethan

age; they had the English Bible, which gave to New England the purity of its speech. But what was uppermost in the minds of the New-England Puritan was dissent from king and prelate, deep distrust of crown law, and an ardent desire to do better in the new world than seemed possible in the old. In all constitutional questions the New-England fathers were opposed to the dominant doctrines preached and practised in old England. With inexpressible joy they found themselves unopposed, in New England, by royal pretensions and ecclesiastical authority. This relief gave strength to new endeavors; here the freedom-loving Puritan could be his own king, lord, and parliament. What wonder that he clung to such an opportunity with the full tenacity of a tenacious race, kindled by new ambitions. But it is not true that he brought with him a full set of municipal and state institutions. The institutions he left were tottering; royalty and popular self-government were arrayed against each other; and nobody could know what the outcome might be. All that was settled in the minds of the emigrants was that they proposed to establish, if possible, a New England with the tyranny and foolish traditions of old England left out. In reality they had to build anew; their chief advantage was that they were not called upon to tear down and clear the ground before they could begin the new building. But the plan for the new building in America was their own; the plans brought from the old world would not answer. The municipal laws of Elizabeth and Charles were bad; they legalized "select" bodies that made municipal government in England a failure.

COLONIAL SUFFRAGE.

The patent did not define in detail the grounds on which the corporation of the Governor and Company of Massachusetts might enlarge itself, but authorized the incorporators to admit whom they pleased. The members of the corporation were called freemen. New freemen were admitted by vote. Beside the freemen there were "inhabitants," who were not voters, but owed allegiance to the corporation, or Commonwealth, and in theory to the king. Thus, both in theory and practice, the constitution was aristocratic. The Governor exemplified this trait, which still survives. The corporation was a pure democracy; but the corporation was not the whole enterprise, and from the outset had attached to it many persons who were not freemen. Freemen was a term borrowed from the municipal corporations of England, which

admitted freemen by a vote of the ruling body, itself elected by the freemen. In London a prerequisite of freemen was their admission to a city guild, usually procured by purchase. As the New-England company consisted of Puritan church members, it was natural that they were slow to admit any but church members, except as inhabitants occupying a subordinate position. This prerequisite, that the freemen of Massachusetts must be church members, was relaxed as soon as it was safe to indulge in greater latitude. In defense of the requirement it should not be forgotten that the patent had created a close corporation. The East-India company, not a wholly dissimilar body, was never expected to admit all comers to membership. At any rate the Massachusetts company acted lawfully and from legitimate self-interest. It did not set out to be an asylum for the refugees of mankind.

The opinion that church membership conferred the rights of a freeman, is not well founded. It required a formal vote of freemen, or their authorized representatives, to admit new freemen. In 1611 this right was conferred upon courts where at least two magistrates were present; and they could admit as freemen such church members only as were "fit," the magistrates deciding what constituted fitness. The provision was distinctly aristocratic, and was administered in that spirit. In 1664 the right of admitting freemen reverted to the General Court, which required applicants to be Englishmen, twenty-four years of age or more, "settled inhabitants in this jurisdiction," householders, taxpayers in their own name, "orthodox in religion," and not vicious in their lives; or, "that they are in full communion with some church amongst us." In English municipal corporations the rights of a freeman could be acquired by marriage with the widow or daughter of a freeman; this law was never adopted in New England, possibly because the daughters of New England usually declined to marry men not freemen in their own right. The religious test of freemen disappeared with the patent, the Province charter of 1691 establishing other requirements than those deemed prudent in Colony days. The sterner requirements of the first comers, who laid the foundation and were responsible for its strength, had been complied with, and Massachusetts was the result.

The right of suffrage in America is municipal rather than imperial. In Massachusetts, where the supreme authority—the General Court—has always been jealous of its prerogative, a municipal character of the

suffrage has never been wholly avoided. When the "Company" established by the patent became too numerous for all freemen to take part in the Great and General Court, each Town was invited to send deputies. This arrangement began as early as 1634 (1 Mass. Records, 118), and added to the dignity of towns, all being treated alike. When the General Court resumed the right of conferring the freedom of the colony, it required applicants to present proper credentials from the clergy as to character, and from the other town officers as to secular qualifications, like domicile and freehold. But domicile could not be acquired without the formal consent of the selectmen, thus giving them, at least indirectly, great power over the admission of freemen. Applicants for the freedom of the colony had to acquire also a freehold before they could be considered, and the freehold was likewise conferred by the towns. Even the temporary presence of strangers required the consent of the selectmen. Admission as an inhabitant and as a freeman was thus carefully guarded, and it was guarded through the towns and their selectmen. The Boston Town Records show how carefully this was done. Anybody was free to go, but not to come (Col. Laws, 1660, ed. Whitmore, 50, 2). It was the Town through which men entered the "Company" of Massachusetts, and through which they exercised their rights as freemen.

The number of freemen appears to have been from one-twentieth to one-tenth of the population. In 1675 Boston was estimated to have a population of about 4,000; in 1679, when it demanded more deputies to represent it in the General Court, a Town Meeting asked indignantly: "Shall twenty freemen [rural towns of twenty freemen were entitled to two deputies, the maximum number of any town] have equal privilege with our great Town, which consists of near twenty times twenty freemen" (7 Boston Rec. Comm., 134). A full list of all freemen is given in the Massachusetts Records (ed. Shurtleff, 6 vols., 4to, 1853-54), and to every living freeman it may be safe to count about fifteen "inhabitants" or persons. These latter were so important that at an early day they received privileges of value. In 1641 the General Court provided that "every man, whether inhabitant or foreigner, free[man] or not free[man], shall have liberty to come to any public court, council or Town Meeting, and either by speech or writing to move any lawful, seasonable or material question, or to present any necessary motion, complaint, petition, bill, or information whereof that meeting has proper cognizance, so it be done in convenient time, due order and re-

spective [respectful] manner" (Mass. Col. Laws, 1660, ed. Whitmore, 50). The right to vote, of course, was reserved to the freemen. The General Court was always chosen by freemen only. But the rest of the community was carefully and prudently deprived of every pretext for banding together as against the Town or Colony. The Town Meeting was the public platform where anything could be ventilated that touched the community. This same right is now exercised by the city council, the direct successor and heir of the historic town meeting.

THE MASSACHUSETTS TOWN.

A kindly star stood over the birth of the Massachusetts town. The Massachusetts town was not created, like a city, by the General Court, but was born at a happy moment. The supreme authority was glad to acknowledge the town, and to help in making it an instrument for good, both to the town itself and to the country. Our counties are artificial corporations, and have never lost their artificial character; the town was the immediate neighborhood of men and women that had one mind, one church, and one common endeavor. A General Court not composed of the Massachusetts Company might have laid out towns and regulated their settlement; the General Court of Massachusetts recognized what the early founders of towns did for themselves, and added its approval and aid. The first comers of the Massachusetts Company settled where they thought best, and always made a church the centre of their establishment. A settlement of ten freemen might send a deputy to the General Court, and every town was free to distribute the town lands, the General Court not being able to make allotments throughout the Colony. It tried to establish boundaries between towns, but acted only in appealed cases. So it fell to many of the Company to become founders of towns as well as of the commonwealth; and to each town fell the inestimable privilege of allotting its forests and fields to the freemen or those fit for freedom. At the same time each town was a church, and every settlement of fifty householders had a school. A happier beginning of towns the world had not seen. Nor has the star set that stood over the infant Boston and sister towns.

As early as 1635 the General Court gave the towns of Massachusetts a general charter: "The freemen of every town, or the major part of them, shall only [exclusively] have power to dispose of their own lands and woods, with all the privileges and appurtenances of the said towns, to grant lots, and make such orders as may concern the well ordering

of their own towns, not repugnant to the laws and orders here established by the General Court; as also to lay mulets and penalties for the breach of these orders, and to levy and distrain the same, not exceeding the sum of twenty shillings; also, to choose their own particular officers" (1 Mass. Rec., 172). Under this wise law, most of the towns were founded without the special aid of the colony. Groton, one of the most interesting of all towns, was established under a special grant from the General Court (3 Mass. Rec., 388), as were others. The Groton petitioners were required to look out "for the speedy procuring of a godly minister among them," but however essential the ministry, and however close the union of church and town, the civil authority was distinctly superior to the spiritual powers. New churches required the approval of three magistrates and the ministers directly interested in a possible rival; and the Body of Liberties, about 1641, contemplated that no church censure should affect the civil standing or office of the offender (l. c., 47). Every church was a pure democracy, entirely independent, and the equal of every other church, yet subject to the civil power, the supremacy of which was in fact never questioned, at least not with impunity. When for any reason, spiritual or litigious, a new church was to be formed by seceding members, the consent of the town meeting and the County court was required, under severe penalties (see the order of 1679 in 5 Mass. Rec., 213). The power of the clergy was moral and intellectual, and it was gladly recognized, in its proper exercise, by the people. It was the intellectual leaven for the entire community, doubly useful in an aristocratic society. The church is democratic. Society is not.

THE TOWN OFFICERS.

The principal officer in each town, at the beginning, was the constable. The constable was an inheritance from England; the selectman was a product of the Massachusetts town and its peculiar necessities. The term "selectman" does not appear in the Body of Liberties, 1641, while the constable was a familiar figure from the very outset. He was essentially a town officer, and the original collector of taxes. In 1638-9 a general oath was prescribed, the constable, who was chosen by the town for one year, swearing that he would "carefully intend the preservation of the peace, the discovery and preventing all attempts against the same," and that he would duly execute all warrants issued by lawful authority (1 Mass. Records, 252). He was the chief

executive officer of the town in all police matters; he was to "whip or punish any to be punished by order of authority," to arrest offenders, to supervise the licensed sellers of beer or wine, to provide standard weights and measures, to serve as election officer, to levy all fines, to employ night watchmen, to serve as coroner, and not to refuse the office of constable "on penalty of five pounds, and, if in Boston, ten pounds." Every town was required to have at least two constables. It was not an accident that the duties of constables were the first to be codified by the General Court (see the code in 4 Mass. Records, part 1, 321-7). His badge of office was "a black staff, of five foot long, tipped at the upper end about five inches with brass" (Col. Laws, 1660, ed. Whitmore, 140). In short, during the Colony period the constable was to Boston all that is now performed by the constables of the City, the sheriff of Suffolk County, and the Board of Police. History tells us that in previous centuries the office of constable, both in France and England, was truly exalted. In Boston and Massachusetts a mere shadow remains. From the beginning it was the least popular of all offices.

While the constables of Boston were town officers by election, and the usual medium of communication between the public authorities and the inhabitant, they were virtually state officers executing state law. The selectmen were primarily and essentially town officers, dealing with town affairs, and but indirectly concerned in the execution of state laws. The name "selectmen" originated in Charlestown. The Boston Town Records first used it on November 27, 1643 (2 Boston Record Comm., 76). Their first election by that name took place in Boston on December 10, 1645, when they were chosen also for the first time to serve a whole year (i. e., 86), the previous elections having been for six months. The first entry in the Town Records (i. e., 2) calls them "the 10 to manage the affaires of the towne." They were called, also, overseers of the town's occasions, townsmen, or deputies. The Body of Liberties, 74, called them "select persons," in 1641, and limited their number to nine. A year later the General Court ordered "that the selected townes men have power to lay out particular and private wayes concerning their owne towne onely," damage, if any, to be paid by the said "townes men," or, in case this was not satisfactory, "then by 2 chosen by the townesmen & two by the party" (2 Mass. Records, 1). The Colony Laws of 1660 (ed. Whitmore, 157) changed "the selected townes men" to "the Select Townes-men," and "the said



E. S. Converse

townes men " to "the sayd Select men," a form apparently preferred by the general laws, while the Boston men soon spoke of "selectmen" and wrote as they spoke. It was the special business of the selectmen to deal with the "prudential" affairs of the town. The constable carried out orders, both general and special; the selectmen gave orders as well. The constable was bound by the letter of the law; the selectman was to consult prudence and equity as well as the letter of the law.

The Boston city charter (Acts of 1854, chapter 448, section 2) vests in the City Government "the administration of all the fiscal, prudential, and municipal concerns of said city." The same term "prudential" is found in the Body of Liberties, 66: "The freemen of every township shall have power to make such by-laws and constitutions as may concern the welfare of their town, provided they be not of a criminal, but only of a prudential nature, and that their penalties exceed not 20 shillings for one offense" (Col. Laws, 1660, ed. Whitmore, 47). In 1642 the General Court used the same term in alluding to "the chosen men" or selectmen of every town, and described them as "appointed for managing the prudential affairs of the same" (2 Mass. Records, 6). In 1646 the following was called a prudential law: "Every township, or such as are deputed to order the prudential affairs thereof, shall have power to present to the Quarter Court all idle and unprofitable persons, and all children who are not diligently employed by their parents" (3 Mass. Rec., 102). The term passed into the general laws of the Colony, the Province, and the Commonwealth, and still survives. The Colony Laws of 1660 (ed. Whitmore, 195-6) authorize towns to "make such laws and constitutions as may concern the welfare of their town, provided they be not of a criminal, but of a prudential nature, and that their penalties exceed not twenty shillings for one offense, and that they be not repugnant to the public laws and orders of the country;" also, "to choose yearly, or for less time, a convenient number of fit men to order the planting and prudential affairs of their towns, according to instruction given them in writing." The term appears to be the coinage of Nathaniel Ward, the "Simple Cobler of Agawam," and was first used as the opposite of "criminal." Criminal and other matters reserved for state jurisdiction were not touched by the selectman, who was confined to town affairs, many of which were not provided for in the bylaws or orders, yet called for action. These matters were to be prudently dealt with by the selectmen, and came to be called the prudentials of the town. When the law was silent, and

the town meeting had not spoken, the selectmen were yet bound to act where the welfare of the town was concerned; they administered also the bylaws of the town and the general laws, except those relating to law courts, crimes, and state affairs. These municipal interests were aptly called prudential affairs, as distinct from affairs of the commonwealth, on the one hand, and from those confided to constables, on the other. The Massachusetts towns still have the right to make "such necessary orders and by-laws, not repugnant to law, as they may judge most conducive to their welfare . . . for directing and managing the prudential affairs, preserving the peace and good order, and maintaining the internal police thereof" (Mass. Publ. Stat., ch. 27, sec. 15). The terms "selectman" and "prudential" mark the transition from English to Massachusetts law, and show how little our towns, their prudential affairs and selectmen, owe to English precedents. A new thing usually finds for itself a new name. Yet the men who managed English municipal corporations in the time of Elizabeth and James I. were usually called "select" bodies, and the founders of Massachusetts knew that term.

In the beginning none but freemen could serve as constables, selectmen, or other town officers. The order of the General Court, passed on March 3, 1635-6 (1 Mass. Records, 172), is sufficient evidence on this point. In 1647 "inhabitants" who were not freemen, but had taken the oath of allegiance, and were at least twenty-four years of age, were made eligible for town offices, and received the right to vote, but a majority of the selectmen and of all companies must be freemen (2 Mass. Records, 197). Voting inhabitants were allowed, also, to take part in the distribution of lands, which was the chief business of towns (Col. Laws, 1660, ed. Whitmore, 195); but later on, apparently in 1658, these inhabitants, not freemen, were required in addition to be householders and rated "at twenty pound estate in a single country rate" (l. c., 196). In 1670 this property qualification of voting inhabitants not freemen was raised to eighty pounds (Col. Laws, 1672, ed. Whitmore, 148). In 1680-1 the property requirement was abolished, and persons who had served as town officers were given the municipal suffrage during life (5 Mass. Records, 306). The Province charter of 1691 did away with the patent and its freemen, and gave the suffrage to freeholders and other inhabitants with a property qualification. Boston had meanwhile become a prosperous town of some 5,000 inhabitants, and the capital of a happy commonwealth. The foundation of future greatness had been laid so well that it still lasts.

It is this which entitles the colonial period of our municipal institutions to peculiar respect. To belittle those days, seems ungracious and unfilial; to measure them by the ideas and achievements of our time, seems to be little less than impertinent. Noble minds will be glad to find in the institutions of our great city the fruit which it took centuries to bring forth, and to remember with grateful regard the early husbandman that cleared the ground and planted the seed, in order that future generations might be happy in their great state and splendid city. If the founders failed in one thing more than another it was in regard to streets and highways. The land hunger of the founders led them into serious errors. Towns were settled at pleasure, and each town distributed its lands indiscriminately. The highways between towns, and the streets in towns, were an afterthought. In consequence Boston suffers today, though millions have been spent to correct the error of the past. This error was fundamental. Each town was required to lay out its own streets, and in 1634-5 the Court of Assistants was required to lay out the highways between towns. Of course, they failed; and then the towns were required to lay out and construct country highways. In 1642 the selectmen were authorized to lay out all town ways; the laying out of highways between towns was to be done upon an appeal to the county courts. This did not answer, and as early as 1649 the General Court took a hand in a special order (? Mass. Records, 271). As the expense of highways was borne by each town, the road making was bad, the planning worse. The cost of the town ways was borne by abutters, the result being narrow and inconvenient alleys, not deserving the name of streets.

In 1641, upon a threat from the General Court, the highways in Boston had the benefit of every team in town for one day; the "richer sort of inhabitants" were to supply one man for three days, the "men of middle estate" for two days, "the poorer sort" for one day (? Bost. Record Comm., 62). In 1650 the repair of the highway to Roxbury was farmed out for seven years, at £15 a year, "to be sufficient for carte and horse" (l. c., 99). And as late as 1700 a happy land owner reported to the town that he could not get to his land, there being no way. The town acted upon the old tradition that "every allotment should have a way laid out to it by a committee chosen and authorized by the town for that purpose" (↑ l. c., 240, 242). The towns were first settled, and then a highway found to other towns; in the towns the lands were distributed first, and the ways to them laid out after-

wards. Penn and Pennsylvania showed how to do these things better, the roads and ways being laid out first, and the lands occupied afterwards. Massachusetts was less wise, partly perhaps because the soil was naturally adapted to good roads, and for that reason permitted neglect; but the consequences have been serious, in Boston they continue to be embarrassing. At an early day Massachusetts shipping found its way wherever there was a promise of profit; as a road builder the colony was a failure. It seemed wholly indifferent to a highway that might have bound Plymouth more closely to Boston, or Connecticut more closely to Massachusetts. Indeed, the road-building age came very much later, and the great economic and moral value of country roads and easy commerce between towns is still underrated. Yet the wealth of a community depends largely on local traffic.

TOWN vs. COUNTY.

The Massachusetts Act of 1854, chapter 448, popularly known as the City charter, prescribes that "the City Council [of Boston] . . . may choose a register of deeds whenever the City shall be one county." This clause is still valid, except that the register of deeds would be appointed by the mayor, and confirmed by the board of aldermen, were Boston and Suffolk County now united in one. The charter of 1854 merely repeats the language of the original City charter, which was signed in 1822. And the expectation so expressed was uttered as early as 1677, when the Town of Boston instructed its deputies in the General Court to see that Boston might be a corporation, a county as well as a town. A similar petition, "in the name & in the behalf of the towne of Boston," was discussed by the General Court in 1650, when the proposition was rather encouraged, provided a suitable plan were presented in terms. The ideal in the minds of both Boston and the General Court was to make the capital of Massachusetts what London was to England. This was not realised, though the Boston City Government of today has the power of County Commissioners, including that of laying County taxes, in consideration of which right Chelsea, Revere, and Winthrop, though in Suffolk County, do not pay County taxes and have no County property. Repeated efforts have been made to merge the whole county in Boston, but they have failed. Yet the interesting fact remains that Boston, always ambitious, has generally desired to be more than part of a county, and less than subject to County as well as State authority. Unconsciously, perhaps, the Boston of 1893, in aspiring to metropolitan

grandeur, remembers that from the beginning Boston was paramount in Suffolk County. All that is now known as Suffolk County, except Charlestown, Roxbury, and Dorchester with South Boston, was a part of Boston from 1630, or very early days, to 1739, when Chelsea was set off. But Suffolk County, in the same year, included Roxbury and Dorchester, Hingham and Hull, the whole of the modern Norfolk County, and until 1731 had included a good part of Worcester County, beside Woodstock, now in Connecticut.

It was Boston jealousy of County authority that led to the establishment of the City as a corporation. As soon as Suffolk County was established, in 1643, it was given a County Court, and this Court was given jurisdiction in many matters that concerned the Town of Boston very closely. The County Court had charge of the house of correction, and appointed its master; it performed the judicial duties now vested in the Overseers of the Poor and the Commissioners of Public Institutions; it granted liquor licenses; and was the executive body superior to the Selectmen. As the County Court met but four times a year, one can imagine the difficulties that would arise in the administration of many Town affairs. This difficulty increased when the Colony became a Province; for as early as 1692 (1 Prov. Laws, ed. Goodell, 66) the General Court provided that all orders and by-laws of towns should be presented to the justices in quarter sessions, being the previous county courts, and should not be binding until approved by said courts, the judges of these courts in Suffolk County being appointed by the Governor, with the advice and consent of the Council. This law stood until 1822. The last edition of "The By-Laws and Orders of the Town of Boston," issued in 1818, carries on its very title-page the statement that the ordinances of the Town are "duly approved by the Court of Sessions." Such an arrangement led to unavoidable delays and uncertainties,—the very thing to be avoided in the administration of affairs, where prompt action is the condition of success and public approval.

To put an end to these delays and uncertainties in administration, the Town of Boston became a City, and the General Court passed the famous Act on the Administration of Justice within the County of Suffolk, section 11 of this Act, which was signed on February 23, 1822, providing that "The Court of Sessions, within and for the County of Suffolk, be and the same is hereby abolished: And the Mayor and Aldermen of the City of Boston, for the time being, shall have all the

powers, and perform all the duties, which before, and until the passing of this Act, were had and performed by the Court of Sessions, excepting as otherwise provided for." In other words, the executive authority of the Town of Boston, as far as vested in the cumbersome Court of Sessions, which met four times a year, was transferred to the Mayor and Board of Aldermen, who were prepared to act every day in the year. For the first time in its history of nearly two centuries the municipal government of Boston received in part the benefit of the great principle laid down in the Constitution of the Commonwealth (Declaration of Rights, art. XXX): "The legislative department shall never exercise the executive and judicial powers, or either of them; the executive shall never exercise the legislative and judicial powers, or either of them; the judicial shall never exercise the legislative and executive powers, or either of them."

The sequel showed that it would have been better, had this distribution of power been fully applied to the government of Boston. The memorable Acts of 1822 separated the judiciary from the legislative and executive branches of the municipal government, and so made a city government possible. The City Council, and especially the Board of Aldermen, were not fully shorn of executive power until 1885. It took two hundred and fifty years to apply to Boston the rule laid down by John Locke that administrative, legislative and judicial duties, or any two of them, should never be exercised by one body, if government is to be free and pure. The same principle had been expounded nearer home by the immortal John Adams. Yet what is so simple in principle, is rarely and reluctantly applied to the government of a great city, as if a great city could be well governed on principles different from those applied to a country that means to be both great and free. The history of Boston as a municipality is an interesting and deeply instructive illustration of the same principle of government which Montesquieu considered to be the chief glory of the English constitution, — a principle still further developed in the government of the United States. Under this principle the law-making and money-appropriating power, the executive, and the administration of reasonable justice, are a check upon each other, yet bound to cooperate, in order that the citizen may derive from government the highest good, while bearing the least burden compatible with the legitimate interests of the body politic, outside of which there is neither citizenship nor, perhaps, property, neither peace nor public morality. Government is constituted in order that man may

be as free, as powerful, and as ambitious as the government of which he forms part.

BOSTON THE CAPITAL.

The seventeenth day of September, 1630, is commonly mentioned as the birthday of Boston, when it was first named by the Governor and Company of Massachusetts Bay, under the patent of 1629. On the 19th of October, 1630, the first General Court on this side of the Atlantic was held in Boston. It has been the capital of Massachusetts since then, not merely in name and by law, but in feeling and fact. Until 1798 its town house was the capitol of the State, and from the beginning the most eminent men of the commonwealth have been glad, also, to serve the city or town. The Town Records preserved to us begin on September 1, 1634, with the name of Governor Winthrop, who served as one of the Boston selectmen, and the first entry is "only a declaration of the Common Lawe." The General Court, later on, resolved formally that the Governor "make his abode in Boston . . . that so he may be the more serviceable to the country in generall" (3 Mass. Records, 374). With few exceptions the General Court has always met in Boston, at the beginning as the guest of the First Church, in which town meetings were held as well, the church and the town being one. During the Province period and the second half of the Colony, as soon as Boston had a town house, the General Court was the guest and friendly partner of the town. Even since Boston became a city, members of Congress were glad to serve it as city officers. This municipal spirit was marked from the outset.

When the first town house was built, on the spot where the Old State House now stands, at the head of State street, in the place previously occupied as a market, the General Court contributed "Boston's proportion of one single country rate,"—one penny in the pound of assessed valuation,—on condition that the said house should be forever free for the keeping of all Courts, the General Court included (4 Mass. Records, part I, 327). When repairs were ordered in 1667, the selectmen of Boston could charge half the cost to the Commonwealth, one-quarter to the County, and the remainder to the town of Boston (4 Mass. Rec., part II, 351). A similar arrangement was had in 1671 (l. c., 486). This illustrates the very friendly relations between Boston and Massachusetts. Yet the Commonwealth has always guarded its supremacy. Only in 1681 Boston received permission to send three deputies to the

General Court, while every other town sent two (5 Mass. Records, 305). Again and again Boston asked to be made a city, and was always refused. It asked that at least the county and Boston be made one; instead the county authorities were given the right to hear cases appealed from the Boston selectmen or town meeting; but this cruelty was inflicted by the Province, in 1692 (1 Province Laws, ed. Goodell, 66, 136). Professional lawyers, in particular, have not been the firmest friends of city charters in Massachusetts, and our legislation has been kinder to towns than to cities. Indirectly the great ambition of Boston may have strengthened this strange sentiment, which treats a town as an ideal government, and a city as a government that needs watching.

Boston as a town or city has always taken a lively interest and an active part in larger affairs. Here is an entry from the Town Records of January 21, 1681: "At a meeting of the freemen of this town, upon lawful warning. Upon reading and publishing his majesty's declaration, dated 26th of July, 1683, relating to the Quo Warranto issued out against the charter and privileges claimed by the Governor and Company of the Massachusetts Bay in New England: It being put to the vote, Whether the Freemen were minded that the General Court should make a full submission and entire resignation of our charter and privileges therein granted, to his majesty's pleasure, as intimated in the said declaration now read: The question was resolved in the negative, *ne-nimè contradicente*" (1 Boston Rec. Comm., 164). The same proud spirit induced the town as early as 1659 to separate town and general elections. "It being judged convenient that the freemen should meet distinctly as to what concerns them, it is therefore ordered that the selectmen shall for the future appoint the times of meeting for the freemen distinct from the general town's meetings" (2 Boston Record Comm., 149). The freemen alone voted for the General Court; but a more liberal suffrage in town affairs had prevailed since 1617. Since 1660 the municipal and general elections in Boston have been held on separate days, and the separation is wise, as it prevents the general election from being influenced by the municipal contest. Voters usually feel stronger on what they know than on what they believe; and the financial interests involved in a Boston city election are at least fourfold the sums expended by Massachusetts in the course of a year. It was convenience and pride that led Boston, in 1659, to separate its town and general elections.

BOSTON SELECTMEN.

The character of the Boston selectmen is significant, and shows that municipal pride is always conservative. First in the list is the incomparable John Winthrop; his great opponent, Harry Vane, did not serve, though he was made governor. But the incorruptible Bellingham, who served thirteen years as Deputy Governor, and ten as governor, was eight times chosen selectman. He was the last survivor of the original patentees named in the charter of 1629. Governor Leverett was chosen selectman in 1651; he was justly popular for his military character, but was defeated for the governorship when he accepted the knighthood from Charles II. His father, Thomas Leverett, had served as selectman before him. John Coggan was elected, although he practised as an attorney. Of Hutchinsons there were, in Colony days, William, Edward, and Elisha, to be succeeded, during the Province period, by the elder Thomas, William, and Thomas, the governor, thus beginning with the husband of Mistress Ann, and ending with the remarkable historian who now receives tardy justice. Elisha Hutchinson was joined by Elisha Cooke, another selectman, in making a desperate defense of the original patent. Among the great families of Massachusetts the Hutchinsons should be named with the Winthrops and the Quineys. William Coddington, twice chosen selectman, was treasurer of the colony, founded the colony on Rhode Island, and served it as governor. William Hibbens served for years as selectman and assistant. James Penn was the first marshal-general of the colony; William Tyng was treasurer of the colony, and nine times chosen selectman. John Hull filled the same positions, and is the father of the Massachusetts coinage. Thomas Savage was a selectman, and six times speaker of the house of deputies. Thomas Clarke was thrice selectman, and five times speaker. Robert Keayne, finally, was the father of the first town house in Boston, of the artillery company, and of the longest will ever filed in Massachusetts. One is tempted to think that Massachusetts was founded by the best Englishmen when England was at her best; that Boston attracted what was best in Massachusetts; and that the best men of Boston served as selectmen. Most of the selectmen were merchants; in 1669 all were. It would have been wise to give to such a town the self-government of a city; but it was not to be.

The Boston selectmen acted with much dignity, and soon outshone all other local officers. As early as 1637 the town voted to pay all the charges at the selectmen's meetings (? Boston Record Comm., 20); in

1644 the constables, who collected the tax, were ordered to "pay unto Robert Turner for diet for the townsmen [the selectmen] £? 18s." (l. c., 63); shortly after the order was to "pay unto Robt. Turner for dyet, beere, and fire for the select men, 18s." (l. c., 68). This sort of expense continued until 1884, when the "act to improve the civil service of the Commonwealth and the cities thereof" provided that no city in the State should pay any bill incurred for "wines, liquors, or cigars," and that refreshments for a member of the city government should not exceed a dollar a day, if paid by the city (Acts of 1884, ch. 320, sec. 13). The selectmen imposed fines long before the law gave them authority to do so (l. c., 2), and notified "all that have businesses for the townsmen's meeting to bring them in to Mr. Leveritt, Mr. Willyam Ting, or to Jacob Elyott, before the town's meetings" (l. c., 16). A surprise of the selectmen by demagogues was thus prevented. As early as 1651 the Selectmen issued an order "that if any Chimney be on fyer, so as to flame out of the top thereof, the Partie in whose possession the Chimney is shall pay to the Tresurer of the Towne, for the Towne use, tenn shillings" (2 Bost. Rec. Comm., 106). This ordinance was retained in the code of 1702, the first digest of the Town bylaws in print, and is an interesting illustration of the legislative power exercised by the selectmen. This power was not expressly conferred by the town, but was implied. It was exercised repeatedly (l. c., 98, 104, 116, 145-7), and a large part of the first town code, printed in 1702, consisted of bylaws made by the selectmen. The General Court never favored such power, but hard necessity compelled the General Court of 1847 to restore to "the mayor and aldermen of any city in this commonwealth" the exercise of a certain legislative power which the Boston selectmen under the colony had exercised very freely. The Regulation of the aldermen requiring a driver to remain with his team (Rev. Regul. of 1892, ch. 6, sec. 14) has the force of a city ordinance. This power was conferred by the Act of April 23, 1847. But it was exercised by the selectmen on June 1, 1658, and was accepted as good law by the Court of Sessions in 1701. In a word, the colonial selectmen exercised nearly all functions that a town meeting could exercise; but they acted so prudently as never to lose the support of the town. The town meeting as a great political engine, not only in municipal affairs, was the product of the provincial period. There was no room for the town demagogue under the colony, for the reason that the town had entire confidence in its selectmen and their power to regulate all prudentials.

In 1659 the town ordered "that there shall be a moderator chosen annually, to regulate publick towne meetings," the first moderator so chosen being William Davis (l. c., 152), who served as selectman for fifteen years, being elected as early as 1641, and for the last time in 1675. The dignity of being permanent moderator of the town meeting fell to Thomas Savage, deputy, speaker, assistant, commissioner for Boston, captain, major, and commander in chief of all the forces against the Indian enemy. The office of moderator was of Massachusetts origin, and is first mentioned in the Body of Liberties, 71: "The Governor shall have a casting voice whensoever an Equi vote shall fall out in the Court of Assistants, or general assembly, So shall the presedent or moderator have in all Civil Courts or Assemblies" (Col. Laws, 1660, ed. Whitmore, 49). The law of Massachusetts still prescribes that "At every town-meeting, except for the election of national, state, district, and county officers, a moderator shall be first chosen" (Public Statutes, 1882, ch. 27, sec. 58), and great power is vested in him. The early law of Massachusetts made his duty equal to his power (Col. Laws, 1660, ed. Whitmore, 45, 49, 143, 198. St. 1893, ch. 417, sec. 263-5). The term moderator was borrowed from the English university debates; thence it passed to the ecclesiastical meetings of the English dissenters, and to New England.

COLONIAL BOSTON.

In Colony days Boston was bounded in the north as Suffolk County is now; Lynn was the boundary to the north, Charlestown to the north-west, but until 1649 Charlestown included Malden with the present municipalities of Everett and Somerville. In the south Boston reached down to Plymouth colony, and still shares its jurisdiction over Hull and a part of Hingham with Plymouth county (Publ. Stat., 1882, ch. 22, sec. 12). But Dorchester and Roxbury were independent towns, like Boston; and Roxbury was not merged in Boston until 1868, Dorchester until 1870, Charlestown until 1874 (Boston Municipal Register, 1890, p. 6). Until 1804 South Boston was a part of Dorchester. In Colony times, Cambridge included Newton, Needham was a part of Dedham, Milton was a part of Dorchester, but Braintree and Quincy were originally owned in part by Boston, which reached in the south-west to Weymouth (1 Mass. Records, 217, 291). This ceased in 1640. Brookline, on the other hand, was a part of Boston until 1705, Chelsea, which included Revere and Winthrop, until 1739. Boston clearly

began with metropolitan proportions, but began to lose in 1640, and to regain in 1801. Boston used to choose constables and surveyors of highways for both Muddy River (Brookline) and Rumney Marsh (Chelsea); and continued to do so after President Dudley and his Council had made Muddy River nominally independent of Boston (? *Bost. Rec. Comm.*, 190, 200). The President and Council ordered in 1686 "that henceforth the said hamlet of Muddie River be free from towne rates to the town of Boston;" but the latter voted at the annual town meeting in 1689-90 "that Muddy river inhabitants are not discharged from Boston, to be a hamlet by themselves, but stand related to Boston as they were before the year 1686." After 1640, then, colonial Boston included the peninsula up to the Roxbury line; also East Boston, Breed's Island, the islands in the harbor proper, Chelsea, Revere, Winthrop, and Brookline. The Boston commissioners, a municipal court established in 1651, were given jurisdiction over the larger Boston in 1674 (*Col. Laws*, 1672, ed. Whitmore, 21, 217).

The principal business in early Boston was to get possession of land. The earliest records, if any, of the distribution are not extant. The Town Records begin with September 1, 1634, and abound in allusions to the distribution of greater Boston, the peninsula being mostly occupied or allotted by that time. In the year following "it was by general consent agreed upon for the laying out of great allotments unto the then inhabitants" (? *Boston Rec. Comm.*, 22, 6). Under this authority, either implied or assumed, the selectmen entered on the Town Records allotments made at Muddy River (Brookline), Rumney Marsh (Chelsea), and Pullen Point (Winthrop), and amounting to about five thousand acres. At Brookline, Thomas Leverett and Thomas Oliver received 115 acres each, William Colburn 160; they were selectmen. John Cotton, the minister, received 250 acres; the poorer sort, as they were called, at the rate of four or five acres per head (l. c., 6), the table of distribution thus giving a clear account of the size of families, except that the leading men received land in keeping with their social position. The Book of Possessions, being part 2 of the Boston Record Commissioners' second volume, undertakes to show how the peninsula was divided among the early settlers. These accounts, reduced to a map by Mr. George Lamb, are the delight and despair of the antiquary. They show how soon the Boston Puritan found his boundaries too narrow. Breed's Island was annexed to Boston in 1634, or three years before East Boston. As soon as it became Boston property, the felling

of trees in the island was forbidden, and the island distributed among "the inhabitants and freemen of this town, according to the number of names in every family" (l. c., 2). Truly, the early comers were a great land company. In Boston the work of the land company was nominally done by allotters; the real allotters were the selectmen.

The allotters or selectmen used great skill in the distribution of estates; but for this the new office would have been abolished. But it grew steadily, and still enjoys many prescriptive rights, though men of the law tell us that a town or city has no powers, save those conferred by the General Court. Yet the Boston selectmen, who had divided a principality, were told by the town meeting of 1641 that "there shall be no more lands granted unto any inhabitants that shall hereafter be admitted into the town, unless it be at a general town's meeting" (2 Bost. Rec. Comm., 65). But inhabitants were admitted by the selectmen, and the freemen of 1641-2 continued to distribute land "amongst the present inhabitants," great latitude being allowed in the distribution (l. c., 67). The final order for distributing what land remained, was given by the town on March 4, 1641-2 (l. c., 67). In the most critical trials the new institution of selectmen was found equal to all demands. Less competent men distributing the vast estate of a great town and future city, might have come to blows; a less orderly community than the Puritans of Boston might have resorted to crime. The early history of Boston is not the least honorable, and, perhaps, the most instructive. The town established itself before the General Court gave a general charter; indeed, this general charter, greatly to be honored, simply gave the approval of law to what the people had worked out for themselves with extraordinary skill and foresight. In 1651 the owners of land on the peninsula were allowed to buy and sell it at pleasure, and the year following the General Court passed the order that all sales of real property must be effected by written deeds, provided the deeds were duly acknowledged and recorded (3 Mass. Rec., 280). But the town of Boston ordered that "no inhabitant shall let any house, housing or land to any Forriner without the consent of the selectmen" (2 Bost. Rec. Comm., 103). An order like this may look timid; it was needed, and it strengthened the attachment of the founders to their new home.

STREETS AND WAYS

How did they appoint this home? The founders attempted to draw a line between public highways and the town ways. After Boston had distributed its lands, both in the town proper and in the country, the General Court declared "that the selected towne's men have power to lay out particular and private ways concerning their towne onely" (2 Mass. Rec., 4), the result being that the town ways in Boston were as badly planned and built as the public highways from town to town. The selectmen would have alienated the town, and imperilled their very existence, had they systematically ordered streets and caused them to be properly built. First the settlers received the land they wanted; then the town decided that "every one shall have a sufficient way unto his allotment of ground, wherever it be, and that the inhabitants of the towne shall have libertie to appoint men for the setting of them out, as need shall require, and the same course to be taken for all comon high ways, both for the towne and countrie" (2 Bost. Rec. Comm., 7). Surveyors of highways, on the other hand, were authorized by the General Court as early as 1635-6 (1 Mass. Rec., 172), but were not appointed in Boston until later. In 1637 special surveyors were chosen "for the high wayes towards Roxbury and . . . to the Milne" (2 Bost. Rec. Comm., 16), though the office is mentioned earlier (l. c., 10); general surveyors were apparently first chosen in 1638 (l. c., 35). Throughout the days of the Colony surveyors and selectmen were kept apart, the result being confusion, not only as to highways and town ways, their laying out and construction, but also as to the very title in these thoroughfares. This confusion continues to the present time, when the city has a board of survey as well as a board of street commissioners, beside private owners of land, to lay out streets and highways. This confusion was complete by 1640, or as early as the town had distributed all the land within its reach.

On the peninsula an interesting attempt was made to set houses back from the street lines, and to have a "pale" in front of every house (l. c., 12, 105); the attempt failed, though a pale of Colony days still remains in front of the Old South meeting-house (7 Bost. Rec. Comm., 60), being the last pale mentioned in the Town Records. At present the term street includes the sidewalks on either side of the street (Boston City Ordinances, 1892, p. 4); in early days the street was "between pale and pale," as now in Commonwealth avenue. The



Stephen Dow

uncertainty of the title in streets and highways led to extraordinary license. The General Court authorized the demolition of houses built "in any towne liberties [streets], preiudiciall to the townes, without leave from the townes" (1 Mass. Rec., 168); and the selectmen, encouraged by such authority, ordered a fine of ten pounds for every eneroachment upon the street line, a fine they could not properly inflict, least of all without special authority from a general town meeting. In 1641-2 the selectmen ordered "for the preserving of all high wayes in this Towne, that none shall dig any sand or clay in any of them, under the penalty of 5s. per load" (2 Bost. Rec. Comm., 67). The condition of these ways may be imagined; in the highways the freeman or inhabitant was required to do very little, in the town-ways nothing at all. For fear of expecting too much of public spirit or private duty, the General Court resolved in 1639 that "it is not intended that any person shall be charged with the repairing of the high wayes in his owne land" (1 Mass. Rec., 280). In the case of gates and rails encroaching upon the highway, county courts or the court of assistants might appoint a committee (2 Mass. Rec., 192). No wonder the General Court appointed, in 1667, a committee "to bring in an effectuall order for keeping in good repayre all streets and highways" (4 Mass. Rec., part II, 350).

The principal highways in early Boston were those leading to Roxbury and Charlestown, communication with Cambridge being neglected until later days. In the beginning, it seems, no allowance for travel to or from Roxbury was made. In 1636 surveyors were appointed to make a "sufficient foote way," apparently along the neck to Roxbury. They seem to have failed, for within a year "Thomas Grubbe and Jonathan Negoose are Chosen Surveyors for the high wayes towards Roxbury (2 Bost. Rec. Comm., 10, 16), and in 1650 Peter Oliver was to "have £15 per annum, for 7 years, to maintaine the High wayes from Jacob Eliots Barne [near the present corner of Washington and Boylston streets] to the fardest gate bye Roxsbery Towns end, to be sufficient for Carte and horse, to the satisfaction of the Countrye" (l. c., 99. See, also, 7 Bost. Rec. Comm., 22). In 1635 Thomas Marshall was chosen to maintain a ferry from "Mih Point" to Charlestown. The town was in 1642-3 called upon to lay out a convenient way to the ferry as well as to the windmill on Copps hill (l. c., 72), but the committee simply reserved a highway through that part of the town, to be laid out in the future, but to be thirty-three feet wide, and as straight as the

lay of the land might permit (l. c., 73). When the water mill was built, it was connected with Copp's hill by a highway "a rod in breadth" (l. c., 95). Other streets had to be built through this part of the town, but only the "highway" was thirty-three feet wide, while the town ways were a rod in width, the ground for them being taken from private owners who were entitled to pay (l. c., 100). One of these ways, given by Thomas Marshall, was relinquished by the selectmen in 1652, to save expense. In other words, in 1650 the town of Boston had begun to buy land for streets, and from necessity bought as little as would suffice for immediate wants. It has pursued that policy ever since. When Boston opened the way to Roxbury it had previously closed, no road led through Roxbury to Muddy River, which was a part of Boston. Only the General Court could solve this difficulty, and appointed in 1645 a committee that laid out the highway, and assessed the cost in part on Boston (2 Mass. Rec., 115). The committee was continued in 1658 (1 Mass. Rec., part I, 327). The owners of the land through which the highway passed, were awarded "meete satisfaction." Boston, then, had to pay dearly for its own ways, and for necessary travel through another town. If any of the streets were paved, it was done at private expense; but it is more likely that colonial Boston had no paved streets (Bost. Rec. Comm., 53, 59, 66, 85, 99, 108, 116, 127). Rather than go to the cost of paving, every cart horse in town was required to give one day's work to street repairs, under the direction of the surveyors of highways.

The earliest houses in Boston were made of mud walls and thatched roofs (2 Bost. Rec. Comm., 10). But frame buildings were put up as soon as the wood could be prepared. At first the logs were sawed in Boston, and the market place, the site of the old State house, was once used as a "sawe pitte." Timber not being abundant, brick making soon began, and after some heavy losses by fire, the General Court required that all buildings in Boston should be of brick or stone, and covered with slate or tiles (5 Mass. Rec., 210, 426); but the law was not permanently enforced, notwithstanding a severe penalty attached (7 Bost. Rec. Comm., 174). To fight fire and for other purposes, a number of conduits, or cisterns, were built, one near the town dock, another near the town house (2 Bost. Rec. Comm., 138, 158). These conduits, copied from English models, proved insufficient, as an attempt was made to feed them from springs which frequently failed. The first fire engine was imported from London in 1678, and was to be

served by paid men (7 Bost. Rec. Comm., 125). So the selectmen, always sustained by the town meeting, contrived to maintain order, to check irregularities, and to pilot the town successfully through many perplexing difficulties. This was achieved by moral force and remarkable judgment. In many cases the selectmen did not even act as a board, but as vested with individual authority. By a singular force of tradition this exercise of individual power on the part of members of a board survives in the practice of the aldermen, who are the successors and heirs of the selectmen. Even the law reflects this anomaly, a paper signed by a majority of selectmen or aldermen being generally received as representing the respective boards. Technically and in strictness, the board of aldermen can act only as a board (Public Stat. of 1882, ch. 28, se. 2; Acts of 1882, ch. 164).

THE TOWN AND TRADE.

The jurisdiction of the town over the business affairs of the freemen and inhabitants was necessarily more limited than over the streets and highways, but not inconsiderable. In 1648 the General Court incorporated the shoemakers of Boston, also the coopers of Boston and Charlestown, giving them a monopoly of their trades, and virtually the character of guilds. This arrangement appears to have failed under the greater individual liberty exercised in a community where nearly everybody was a freeman, who helped directly in electing and defeating governors, and was himself, at least in theory, a part of the General Court. But the system of apprentices was formally adopted by the town. In 1660 a town meeting ordered that "no person shall henceforth open a shop in this town, nor occupy any manufacture or science, till he has completed 21 years of age, nor except he hath served seven years apprenticeship, by testimony under the hands of sufficient witnesses; and that all indentures made between any master and servant shall be brought in and enrolled in the Towne's Records within one month after the contract made, on penalty of ten shillings to be paid by the master at the time of the apprentices being made free" (2 Bost. Rec., 156). Under this order the selectmen of 1667-8 told John Farnum that he could not set up his son in the cooper trade, unless he had served the apprenticeship of seven years, "on penalty of 10 shillings per month" (7 Bost. Rec. Comm., 39). In this case the complaint was made by the coopers, but the authority relied on was

the town order, and the selectmen acted, claiming at the same time the doubtful right of inflicting a cumulative penalty. In other words, the town was treated as the only corporation, and the selectmen were supposed to be its executive officers. But the principle of free-trade, as then understood—every man to practise the trade he thought best—asserted itself beyond all legislative regulations before the colony ended. Boston began as an aristocracy; but the democratic principle triumphed over all obstacles; and the aristocracy yielded, except in social matters.

Before the founders left England, they considered the importance of iron works in the new world (1 Mass. Rec., 28, 30). Here the town of Boston led in the enterprise. In 1643 the town gave to John Winthrop, jun., and his associates, "three thousand acres of the common land at Braintry, for the encouragement of an iron worke, to be set up about Monotocot river" (2 Bost. Rec. Comm., 77). The General Court followed with a generous act of incorporation (2 Mass. Rec., 61, 125), and the enterprise had the benefit of Thomas Foley's advice and capital, Foley being one of the great English iron masters of his time. Governor Winslow, of Plymouth, was likewise interested in this undertaking, which has never died out, the Boston selectmen having chosen the best ground in all Massachusetts. They contributed also to the first ship built in Boston, the "Trial," which was built in 1611, and made her first voyage to the Azores, the second to Spain. The builder was Nehemiah Bourne, and the selectmen contributed the value of sixty acres that had been alienated by Brother Wright, of Braintree, who was fined £3 10s., to be paid to Bourne. The selectmen had no right to lay so heavy a fine; they probably relied on the fact that they were the guardians of the town lands, and that they were bound to put these lands to the best uses. The town did not object, and the proceeding stood (2 Bost. Rec. Comm., 58, 59). In 1645 the General Court opened all harbors of Massachusetts to "all ships from any of the ports of our native country or elsewhere, coming peaceably" (3 Mass. Rec., 12). The law remained until 1661, when it was repealed, possibly under the influence of the English navigation law passed in 1651, the influence of which is still felt.

In 1667 all sea-going vessels not owned in Massachusetts were required to pay tonnage dues whenever they entered a Massachusetts port, and a year later a customs tariff on imports and exports was adopted, to take effect on March 1, 1668 9. Boston and Massachusetts

had learned that commerce was apt to be so profitable as to bear taxing. By a certain inconsistency the navigation act then gathered the tax on commerce largely of home merchants. The navigation act known as 12 Carol., ch. 2, was formally adopted by Massachusetts in 1677 (5 Mass. Rec., 155), and in 1681-2 a naval office was established at Boston. James Russell was the first naval officer, and his commission was dated March 17, 1681-2 (5 Mass. Rec., 337-8). Within a year the General Court ordered that "the port of Boston, to which Charlestown is annexed, and the port of Salem . . . are and shall be lawful ports in this colony, where all ships and other vessels shall lade or unlade any of the plantations enumerated goods, or other goods from foreign parts, and nowhere else, on penalty of the confiscation of such ship or vessel, with her goods, tackle, etc., as shall lade or unlade elsewhere" (5 Mass. Rec., 383). Russell's successor was Samuel Nowell. Arrivals in the port of Boston reported at Castle Island, the fortifications of which were originally intended to protect Boston from foreign enemies. Indeed Boston had chiefly paid for the "castle." If the navigation acts, the naval officer, and the custom-house of later days, injured Boston and her merchants, the town remained silent. In truth, the laws were not strictly enforced, and commerce did not suffer. Boston commerce appeared to depend on the wants of the people, and the enterprise that supplied these wants.

As early as 1633-4 Boston was made a market town. The market was held where the old State House stands, and Thursday was market day, when the people from the country could sell their goods to the people at Boston without difficulty, and take in return what merchandise was for sale. In 1648 Boston received authority to hold two fairs a year, in June and October (2 Mass. Rec., 257), which led at the next town meeting to the election of two "clarkes of the market." A fair was simply a market of two or three days; but a market was in those times the only chance of every comer to enjoy free trade in the full sense of the term. Clerks or superintendents of the market have been elected ever since, and the Market Department of the Boston city government may justly boast of being the first of all such departments here established. It dates back to March 12, 1649. By a quaint anomaly the market department has become a source of great revenue to the city, when the characteristic of the old markets was that they should be entirely free. This freedom from expense, even rent, was expressly guaranteed when the first town house was built in Boston, and the

lower part of it reserved for market purposes. "The place underneath [the town house, which stood on pillars] shall be free for all inhabitants in this jurisdiction, to make use of as a market for ever, without payment of any toll or tribute whatever" (4 Mass. Rec., part i, 327). It deserves notice, also, that the first department established in our town government should have slipped away from the selectmen, as far as the administrative work of this department is concerned. The power so lost they have never regained; neither have their successors, the aldermen. Very likely the selectmen of 1649 were not aware that the election of clerks of the market by the town meeting was the first marked step toward reducing the management of all town prudentials by selectmen. In time they were to lose more.

FINANCES, TEMPERANCE, SCHOOLS.

In the matter of finance, the town bore heavy burdens from the beginning, and always proceeded with good judgment. Since 1885 the financial officers of the city are the appointees of the mayor, and not responsible to anybody but him. Even the auditing of accounts is controlled by the executive head of the city. The selectmen of colonial Boston were too prudent to ask for such power. They assessed all taxes, but in making valuations of property for assessment purposes, they had the assistance or supervision of a special commissioner elected in town meeting. This arrangement began in 1646, and lasted to the end of the colonial period (3 Mass. Rec., 87, 116). The taxes, or rates, were always collected by constables. But the selectmen generally chose the town treasurer, the town appointing committees for the examination and auditing of accounts. The report of this committee in 1685 (7 Bost. Rec. Comm., 175) is a good illustration. The town tax usually exceeded the "country rate," as it was called, though the latter was high. The country rate, or State tax, paid by Boston, amounted in the five years from 1675 to 1679 to £10,776 5s. 2*d.* Of this total, £10,353 5s. 2*d.* went to John Hull, the treasurer of Massachusetts, who gave Thomas Brattle, the treasurer of Boston, a full discharge (7 Bost. Rec. Comm., 153). The amount was occasioned mainly by King Philip's war. The ordinary town expenses, at the end of the colonial period, were about 100 pounds a year, mostly fixed charges for schools, for the poor, for highways, and for rents and repairs. To obtain this sum, about 600 pounds was the sum committed to the constables for collection. An interesting account of the town budget, from Edward Wil-

lis, town treasurer, is preserved in the Town Records of 1686 (‡ Bost. Rec. Comm., 187). The number of polls, in 1687, was returned at 1,447, but included all males of the age of sixteen and above (l. c., 194). This fixes the population for that year at more than 5,000, a small number of whom lived in Muddy River or Rumney Marsh. Then, as now, the tax laws were made by the General Court, and the town officers were required to collect both the State tax and the town money. The colonial selectmen discharged this duty with ability and integrity.

The liquor laws of the time were not radically unlike those of the present time. The town simply recommended persons that might be trusted to sell intoxicating drink, and supervised the proper administration of the law; but did not issue licenses, and did not receive the revenue connected with the liquor business. This revenue consisted in import duties, license fees, and excise, and went to the colony. In 1681-2, when Boston had three churches and three schools, it was allowed six wine taverns or wholesalers, ten innholders, and eight retailers, who sold liquor to be drunk in the homes of the people. Intemperance was greater than now. On the whole, the people had very little to do with the regulation of this traffic, local option being a modern growth, and opinion increasingly sensitive. The selectmen of colonial Boston were the overseers of the poor. They needed an almshouse, but did not succeed in getting it, while their expenses for the poor were very considerable. Most of the bequests made to early Boston were for the poor of the town, and in most cases it was necessary to pay out the principal; so urgent were the necessities of the selectmen.

The school system of Boston, now its most democratic institution, had its beginning in the establishment of the Latin school and Harvard College. But the people at large never intended to go to college or study Latin. To supply the wants of the plain people, who are the town, a school with Latin in it, and looking to the ministry, did not answer. On December 18, 1682, a public meeting of the inhabitants appointed a committee, including the selectmen, to "consider of and provide one or more free schools for the teaching of children to write and cipher, within this town" (‡ Bost. Rec. Comm., 158). The committee voted that two such schools should be established; that the town should allow £25 for each; and that parents might improve the teachers' lot by paying tuition. On November 24, 1684, the selectmen en-

gaged John Cole to keep a free school for instruction in reading and writing, his pay to consist in £10 in money, and £20 in country pay. When the colony ended, Boston had the Latin school, and two schools for reading and writing English. The care for these schools did not fall altogether upon the selectmen, though they had to supply the larger part of the money. The care of the schools gradually drifted away from the selectmen, and in modern days became an independent branch of our municipal government. The selectmen and their successors never managed the schools. Indeed, the free school is the work of the people, and the people have generally preferred to control the free school more directly than by a general town or city government.

RESULTS.

The colony government, under the patent of 1629, ended in May, 1686. The Province government, under the charter of 1691, began in May, 1692. The interregnum was brief. President Dudley and his council served less than a year, and Sir Edmund Andros was swept away, together with Edward Randolph, in the revolution of April 20, 1689, when the colony resumed its former methods of doing business, and so continued until the arrival of Sir William Phips and the beginning of the Province government. In the sixty-two years of its history under the colony, the town of Boston had become the most influential town in New England and America. Since 1680-81 it was the only town that had three deputies in the General Court (5 Mass. Rec., 305). The colony had enjoyed complete self-government, and enabled the towns of Massachusetts to enjoy the same privilege in all prudential affairs of a municipality. No town made better uses of this opportunity than Boston. It laid the foundations of a municipal government which has rarely failed the community in its reasonable expectations, and on historic occasions pointed the way to the highest duty and honor. Nearly everything that makes the government of Boston attractive or instructive, has its root in the high endeavors and hopeful ambition of the colonial period. As late as 1685 the town instructed its officers not to collect a fine of £100 lawfully ordered by the county authorities. It had previously defied a king; it was to defy another. Boston has never defied Massachusetts. Yet it was Boston that prevented the counties of Massachusetts from being a power between the town and the commonwealth. It was Boston that insisted upon direct dealings be-

tween the commonwealth and the towns that gave the commonwealth its character and strength. It was Boston that gave the town and town government a superior dignity that has been admired by many great minds, and rarely criticised by any mind. Colonial Boston began as an aristocracy; it ended as a pure democracy. This interesting transition entitles the people of colonial Boston to enduring honor; for the change was made almost imperceptibly. The more the whole community was fit for municipal self-government, the more it had. Special praise, however, is due to the early leaders. They never sought to defend the aristocratic institutions in church and state they had brought with them from England; but helped bravely and wisely to elevate the entire community to a reasonable understanding of what was best calculated to build a good town and a free commonwealth. A commonwealth like Massachusetts, and a community like Boston, are not a natural growth, nor the result of evolution and happy environment, but the work of reasoning and highly ethical generations, who know what is best, and always make for moral and political freedom, whatever the sacrifice.

After two centuries of political experience it is easy to point out where the Colony failed: It did not separate the powers of government. With equal justice the founders may be charged with not having been logical. But it is a mistake to estimate the seventeenth century by the nineteenth; the true business of the historian is to show how the present resulted from the past. We should not forget that the seventeenth century was emphatically a theological age, when dogmatic theology ruled supreme. Our time is emphatically untheological, and not kind to dogmatic theology. Whether this is really a gain, may be open to doubt; it is not doubtful, perhaps, that a scientific or science-making age is not the best qualified to judge a time when religion reigned supreme and the ideal interests of mankind had a theological cast, as if the highest hopes could not be separated from the eternities. We of the present are not given to theology; but the idealism of Massachusetts and its capital began with the theological founders. Whatever our opinion of dogmatic theology, it is an ideal pursuit; and it is the special honor of Boston and Massachusetts that, in the midst of practical labors, they have always evinced a marked interest in the ideal concerns of mankind. Scholarship has never languished in Boston; here is the cradle of our national literature; fine art has made Boston a home; Boston artisans have ever tried for the best.

This whole continent owes a debt to Puritan Boston. But the eminence of Boston in practical government and the ideal life began in 1630. In the days of the Puritan colony it was supreme. Liverpool and Glasgow have no such story to tell; neither have Hamburg and Marseilles. In the seventeenth century they were strangers to ideal pursuits; Boston was not.

The colony passed easily and very early from a government by freemen to representative institutions, or government by the representatives of freemen. The town of Boston was anxious to take a like step, but was prevented by the sister towns as represented in the General Court. A preference of town government to incorporated cities is still the dominating creed of Massachusetts, although a city is nothing but a town with representative institutions. The same sentiment attributes to towns certain prescriptive powers or rights, which are denied to the city, as though a city had only enumerated rights, expressly conferred, while towns are sometimes thought to have all municipal powers not expressly denied. The early selectmen proceeded on this latter theory, and it is due to them that our aldermen's powers cannot be enumerated. Meanwhile it is odd, and illustrates the conservative force of tradition, that public opinion in 1893, as in 1650, looks upon representative government in the State as safe and necessary, in municipal matters as apt to be fraught with mischief and a loss of popular rights. In truth, the founders of Boston reasoned deeper and better on town government than this century does on city government. It is safe to add that the early selectmen of Boston vindicated their rights more effectually than did the city officers of two centuries later. So well did the early selectmen manage as not to invite the interference of the General Court, or even of the town meeting; a later age goes to the State House when it wishes to govern Boston. Nor should it be forgotten that municipal self-government must vindicate itself. Had the constitution of Boston from 1630 to 1692 been ill administered, the General Court would have been glad to offer relief; but no relief was needed; Boston took better care of itself than did the commonwealth. For this we are indebted to the early selectmen; they taught a lesson for all time.

Yet who can deny that the constitutional law of colonial Boston and Massachusetts was ill-defined? The colonists constantly spoke of the magistrates, who were the "assistants," or board of directors, surrounding the Governor. They were intended by the patent to be ex-

executive officers; they turned out to be a branch of the General Court, and judges from whom litigants could appeal to the General Court. The weakness of the system lay in the jealousy with which the executive power was scattered, while the assistants wielded great power in legislation and as the chief judiciary of the country. This waste of executive power, accidentally enhanced by the establishment of a council (1 Mass. Rec., 361), still affects the Commonwealth; in colonial times it led the selectmen of towns to assume much executive power, an appeal lying, not to a superior executive who could have acted, but to magistrates or the General Court who would deliberate. The county officers never had much executive authority, and the Governor less. Hence the executive power of towns had to be exercised by special officers or committees; as a matter of fact, the selectmen soon became a standing committee of the town for all executive purposes and for the prudentials. In short, while the executive officers of the commonwealth were intentionally deprived of power, the selectmen became general executive officers in town affairs, partly from necessity, but mainly from choice. They were the best executive product of the time. This outcome is certainly remarkable; for the patent intended the Governor to be an executive of real power, assisted but not limited by the assistants. He became a respectable figure head; the assistants became judges and the higher branch of the General Court, while the town, relieved of court business, and too busy for making many by-laws, evolved the selectman, whose duties were almost altogether executive or administrative. But being men of energy, the selectmen of the colonial age exercised many powers never conferred upon them by the town, much less by the General Court.

PROVINCIAL PERIOD, 1692 TO 1776.

The Province Charter was signed October 7, 1691; but the government under the new charter did not begin until May 14, 1692, and the first act of the General Court in the Province period was not passed until June 14, 1692. It is proper, therefore, to treat the colonial period as ending in 1692, and to consider the Andros interregnum, from 1686 to 1689, a mere episode, the effect of which upon the town government of Boston was very slight. Indeed, the town government was so well established, and Andros as well as Randolph so little appreciated its importance, that they scarcely made an impression upon the organization of the town which led in their overthrow. The Province period

ended in 1776. If a day may be named, it should be July 1, although the Revolution began much earlier, and was complete in Massachusetts as early as 1771. Great Britain, on the other hand, did not formally recognize the independence of Massachusetts and the United States until November 30, 1782, and the definitive treaty recognizing the United States was not signed until September 3, 1783. July 1, 1776, was acknowledged beforehand by the Boston town meeting as Independence Day, for it resolved on May 23, 1776, that "If the Honorable Continental Congress should, for the Safety of the Colonies, declare them Independent of the Kingdom of Great Britain, they, the Inhabitants, will solemnly engage with their Lives and Fortunes to support them in the Measure" (18 Bost. Rec. Comm., 235). It is the honor of Boston, as a municipality, to have taken a leading part in defending American independence against both Andros and Gage.

The freedom of a state is indicated by the self-government it enjoys, and political maturity is indicated by municipal self-government. The Massachusetts Colony governed itself, and expected each town to do the same. The Province indicated a marked decline from the freedom of the colonial period. The Colony chose its own governor; under the Province charter the crown appointed the governor, the lieutenant-governor, and the secretary. The Colony made its own laws, and the only recognized test of these laws was that they must not conflict with the patent of 1629. The Province was required to submit its laws to the privy council in England for review, and they were subject to nullification on the part of the privy council within three years after receipt. The charter, then, did not encourage freedom, and did not contemplate municipal self-government, except that the subjects of the Province were supposed to have the liberty and immunity of natural born Englishmen. The towns were incidentally recognized by the charter, but the writers of the charter probably did not know a Massachusetts town. When the crown learnt from Boston the meaning of town and town meeting, Governor Gage was instructed not to let any town meetings be called without his knowledge and consent; to which the Boston selectmen replied with grim humor that they had no need of calling a town meeting, for "we had two now alive by adjournment" (23 Bost. Rec. Comm., 225). For the validity of this proceeding they relied on the law of the Province, which had the approval of the privy council.

AREA AND POPULATION.

The Province inherited Boston a flourishing town of about six thousand inhabitants, and including the present towns of Brookline, Revere and Winthrop, as well as the city of Chelsea. Suffolk county included Boston, Roxbury, Dorchester, Milton, Braintree, Weymouth, Hingham, Hull, Dedham, Medfield, Wrentham, Mendon, and Oxford. Before long, Woodstock was added, being settled by emigrants from Roxbury, and originally called New Roxbury. It passed to Connecticut about 1749, though the Province never gave up its claim. In 1705 Brookline was set off from Boston, and in 1739 Chelsea became independent of Boston. The town of Boston had sold, also, its lands in Braintree. From 1739 to 1804, then, when South Boston was added, Boston was small in area. In 1742 it boasted of 16,382 inhabitants; in 1771 it was supposed to have 1,800 dwelling-houses; but on July 4, 1776, it had less than 3,000 residents, many being absent on account of the war and the smallpox then raging in Boston. A few months later, 907 men from Boston were reported to be in the service of the country against Great Britain. Meanwhile Suffolk county had been greatly reduced, notably by the establishment of Worcester county, in 1731, when Mendon, Woodstock, Oxford, Sutton, and Uxbridge were set off. For in 1730 the county of Suffolk comprised the following towns: Boston, Roxbury, Dorchester, Hingham, Braintree, Dedham, Medfield, Medway, Weymouth, Milton, Hull, Wrentham, Mendon, Woodstock, Brookline, Needham, Sutton, Oxford, Bellingham, Walpole, Stoughton, and Uxbridge. On July 4, 1776, Suffolk county comprised Boston, Roxbury, Dorchester, Milton, Braintree, Weymouth, Hingham, Dedham, Medfield, Wrentham, Brookline, Needham, Stoughton, Stoughtonham District, Medway, Bellingham, Hull, Walpole, Chelsea, and Cohasset. But the power of the county was small; its chief importance lay in the administration of justice, which was wisely kept from town control and from all town officers.

The people were comparatively homogeneous, the chief distinction being between rich and poor, and between old families and later arrivals. As late as 1770 the town complained that the crown in dealing with Boston proscribed "patricians and plebeians" (18 Bost. Rec. Comm., 31). At the beginning of the Province period, the right in the Common was reserved to the old settlers (11 Bost. Rec. Comm., 20, 89); but as the time went on, this claim was effaced. The people en-

joyed liberty of conscience; but this liberty did not extend to "Papists," nor to Jews. Accordingly there was no Catholic church in provincial Boston; but a French Protestant church appears to have existed at the beginning of the seventeenth century. Toward the end of the provincial period a German Lutheran church appears to have struggled for life (18 Bost. Rec. Comm., 159). In 1771 a dancing school was licensed, but the teaching of French was viewed with distrust. Entertainments were given at Faneuil Hall, which was completed in 1742, and occasionally at "Concert Hall." The town grew fast, but suffered a setback after 1720, then recovered, to undergo a gradual decline in the last twenty-five years of the provincial period. The currency was generally in wretched condition. In 1774 £100 sterling equalled £133 "lawful," and £1,000 "old tenor." A dollar was rated at 1s. 6d. sterling, or 6s. lawful. Yet the provincial period began with a splendid growth; it paved the streets and sidewalks; it built sewers to drain houses; it named the streets and lanes; it straightened and widened many of them; it built Boston light, long wharf, and the town dock; it printed the town bylaws; it established wards; it adopted the social titles still in use; and at the end of the period it introduced street lamps. It found Boston a plain community, to leave it a complex town to the next age.

THE TOWN AND THE PROVINCE.

It was fortunate for the cause of town government that the crown, in granting the Province charter, placed the supervision of towns entirely in the power of the Province. To be sure, the crown could veto Province laws, but it never touched those relating to towns. The town of Boston, moreover, had a sort of partnership with the Province. The General Court met in the Boston town hall; Boston was the metropolis of Massachusetts; the leading men of the Province were many of them Bostonians, and not infrequently town officers. The modern feeling between city and country did not exist, and all towns as such had the same interest regarding the Province or the General Court. The latter was not ill disposed toward Boston, though it passed many special laws affecting Boston only. The idea that a town could not exercise any rights, save such as were granted by the General Court, was not then born. On the contrary, the towns acted freely, save where the General Court had raised a distinct barrier. Many of the rights exercised, both by towns and town officers, were prescriptive, the object being, not to



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develop a system of jurisprudence, but to satisfy the wants and requirements of the body politic. Compared with the Colony period, the rights of the Province, and indirectly of all towns in the Province, were greatly curtailed under the charter of 1691. In practice, the Province suffered more than did its towns, the latter having no dealings with the privy council, and very few with the officers appointed by the crown. The Province was friendly, if not always prudent, in dealing with town government. If the latter was wise, it did not owe its wisdom to crown or Province, but to the common sense of the people dealing directly with their own affairs.

The charter of 1691 confirmed the title of all towns in their lands (1 Prov. Laws, 9). This barred the General Court from disposing of town lands, and gave the towns a certain power independently of the Province. In order to settle the difficulties involved in the distribution of town lands,—difficulties likely to increase with the growth of the Province and the corresponding increase in the price of lands,—the General Court found it convenient to refer the problem to the law courts. The act was passed in 1694 (1 Province Laws, 182), and incidentally made the town a corporation in law as well as in fact. In Colony days the Massachusetts town had neither sued nor been sued. In 1692 the General Court had passed a general act (l. c., 64) confirming the towns in their boundaries, and authorizing them to continue their town business; but this general town charter continued the Colony law (Col. Laws, 1672, ed. Whitm., 149) that "no cottage or dwelling-place in any town shall be admitted to the privilege of commonage [for] wood[s], timber and herbage, or any other the privileges which lie in common in any town, or peculiar, other than such as were erected or privileged by the grant of such town, or peculiar, before the year 1661, or that have been since, or shall hereafter be, granted by the consent of any town, or peculiar" (1 Prov. Laws, 65). From the first arrivals of Englishmen in Massachusetts, they thought themselves the owners of the land, and all later arrivals were looked upon as intruders who must acquire and establish their rights. Fortunately this principle was never applied to towns in their corporate capacity. A happy star had stood over their birth; it did not set when a less generous age came with the Province.

The difference between the Colony and the Province in town matters is best illustrated by the general town acts passed in 1636 (1 Mass. Rec., 172) and 1692 (1 Prov. Laws, 64). The Colony told the

towns to do as they pleased in town matters, provided the laws and orders of the General Court were not violated. The freemen of each town might distribute town lands and all other town privileges by majority vote. The Province act undertook to regulate the distribution or allotment of undivided land either "according to the interests," or "by the major part of such proprietors" (l. c., 65). This did not work, and the matter was referred to the law courts (l. c., 182). The act for towns contained stringent provisions against idle persons and intruders; provided for the care of the poor; and offered relief in case constables or selectmen refused to do their duty; but the most important provision authorized towns, or their selectmen, to make all necessary rules, orders and bylaws relating to the prudential affairs of the town, provided these orders and bylaws were not to be binding, unless approved by the Court of Sessions, which consisted of justices of the peace appointed by the governor, with the advice and consent of the council. The Court of General Sessions of the Peace was not organized until the act of 1699 was passed (l. c., 367). It consisted of the justices of the peace for the county, or so many of them as should be limited in their commissions, and had both civil and criminal jurisdiction. In addition this court had charge of the county prudentials. It continued throughout the Province period, survived under the State constitution, and finally occasioned the incorporation of Boston as a city, one of the main purposes of which was to get rid of the court of sessions that had become a drag on all town affairs. The Colony, too, had encouraged law courts to engage in administrative work.

BOSTON AND THE COURT OF SESSIONS.

Before the court of sessions began to delay the affairs of Boston, the General Court repealed the fatal clause of 1692 under which the sessions had the absolute veto power on town orders and bylaws, and the power of enforcing these was given to the selectmen, defendants having the right of appeal to the justices in quarter sessions. Unfortunately this excellent provision was hidden in an act dealing with militia and other matters, and was thrown out by the privy council (1 Prov. Laws, 247, 263). No town suffered more in consequence than Boston. In 1701 the town undertook to codify its bylaws, and passed a code of nearly forty titles, on May 12. On August 5 it was announced that the court of sessions had vetoed all but twelve. The town tried

again on September 22, and was more fortunate, the attempt at town independence having been abandoned (compare 8 Bost. Rec. Comm., 9-21, with the "Several Rules, Orders, and By-Laws, approved by his majesties justices," and printed in 1702). Undoubtedly the meddling of the sessions with town affairs was specially distasteful to the selectmen; but they offered very little opposition, and the town meeting none at all. The power of the sessions was accordingly increased, and that of selectmen correspondingly diminished. In 1713 the power of laying out town ways, previously exercised only by the selectmen or their agents, was vested in the sessions, to be exercised whenever the selectmen were charged with delay or something worse. One would have expected that, in case any selectmen were slow in laying out a town way really needed, the parties aggrieved might appeal to the town meeting. But in the Province period the court of sessions was superior to the town meeting, and, unlike the town meeting, could enforce its orders by fine and imprisonment. Fortunately, Americans have never resisted the courts of law. Law courts have been forestalled, but not resisted.

Throughout the Province period liquor licenses were issued by the court of sessions, the selectmen having only the veto power. The court of sessions ordered prisons to be built and maintained at pleasure; the same court ordered all county taxes, and assessed them on each town; in general, the court heard appeals from selectmen, town meetings and towns, and any member of the court could punish the breach of a town law. In addition, the court of sessions heard and determined "all matters relating to the conservation of the peace, and punishment of offenders" (1 Prov. Laws, 367). The essence of police power, therefore, rested practically with the court of sessions, or its members, the result being peculiarly unhappy, as the justices could not directly set up and manage a suitable police force. The effects are still felt. The duty of preserving the peace in Boston was at first vested in the constable. As constables were chosen by the town, which preferred prominent men for unsalaried offices, it was difficult to find suitable persons to discharge the unpopular and ungentlemanly duties of the constable. For night service, watchmen were employed, unless the militia happened to keep what was called a "military watch" (Col. Laws, 1660, ed. Whitm., 178-9; 1 Prov. Laws, 129). The night police was first a "constable's watch" (Col. Laws, 1660, ed. Whitm., 198-9); but in 1699 the justices and selectmen together were authorized to em-

ploy a night police force other than the constables watch, which had proved inadequate for Boston (1 Prov. Laws, 382, s. 4m.). The town voted the cost, but the assessment was vested in the court of sessions, which acted unsatisfactorily to the town (11 Bost. Rec. Comm., 108, 221, 231). Relief came in the act of 1761 (4 Prov. Laws, 162), which enabled the selectmen of Boston to employ a night police of their own. The act remained in force to the end of the Province period, and was invoked in 1771 to protect Boston from "sundry regiments of his majesty's troops" (18 Bost. Rec. Comm., 194-5). Seventy-two watchmen were to protect Boston from the troops of King George and all other harm, at least in the night time.

In law every justice of the peace was free to punish a breach of town laws, by issuing a warrant of distress, and the court of sessions had ample power, provided the offenders were duly presented. But the constables by day, and the watch by night, were unequal to the work expected of them. The moiety system was tried, the informer receiving half the fine ordered by a justice; but the system failed. In 1701 the town passed an interesting order authorizing the selectmen "yearly to nominate and appoint one or more meet persons in the several divisions of the town, to inspect and prosecute the breach of all or any of the penal orders which are or shall hereafter be made by this town, and allowed of by the sessions of the peace, and to allow and assign such persons salaries and rewards, as unto the said selectmen shall be judged meet and convenient" (8 Bost. Rec. Comm., 15); but the order was apparently vetoed by the court of sessions, though occasionally carried out (11 Bost. Rec. Comm., 61, 63, 66, 67, 86). Of course, occasional prosecutions were justly unpopular, and could not take the place of a systematic police force, which came much later. In Colony times, the selectmen frequently made town orders or bylaws, with penalties attached, and as frequently enforced them, the fine going into the town treasury. The selectmen of the Province period were not able to exercise such power, and the town suffered accordingly. It is an open question, perhaps, whether the police of a town like provincial Boston should and could bring all violations of town and Province law to justice; it is less doubtful that every town is the best enforcement of its own orders, and that the self-government of towns calls for an efficient town police, which may be supplemented, but cannot be replaced, by a general police force. The more the towns take care of themselves, the better for all. It took Boston more than two centuries

to produce anything like a systematic police force. The fault, if any, did not lie with Boston alone.

ATTEMPTS AT RELIEF.

It was inevitable that the dependence of the town on county officers should lead to delay and dissatisfaction. It was natural that the selectmen should be the first to propose relief. In 1708 they told the town meeting that "the orders and bylaws of this town . . . have not answered the ends for which they were made, and the principal cause thereof is a general defect or neglect in the execution, without which the best laws will signify little. And one great reason why they are no better executed is the want of a proper head, or town officer or officers, empowered for that purpose, the law having put the execution of town orders into the hands of the justices only, who are not town but county officers" (8 Bost. Rec. Comm., 55). The selectmen added that the justices could not be expected to make town affairs their special business, and that it was inconsistent to let a town make its own rules and regulations, but deprive it of the power to enforce them. For relief they proposed a charter of incorporation, to be drafted by a large committee. The same committee was requested to propose "some way for lessening the charges of this town" (l. c., 56). The committee presented the draft of a charter, for which they received the thanks of the town, which then proceeded to reject the whole scheme (l. c., 59). Evidently the selectmen felt their dependence on the court of sessions more keenly than did the people of the town. At that time Boston was growing very fast; prosperity reigned; the town was undergoing the happy transformation from a plain village to a complex community, in which there was ample opportunity for men of ambition; and the average "inhabitant" was not aware that the shoe pinched. He prospered; he did not care that the selectmen felt embarrassed; perhaps he did not care much for the breach of town laws, save where he suffered personal inconvenience; and he was by no means ready to part with power, for the purpose of increasing the power of town or city officers. It is not in the nature of democracy to part with power, such as could be exercised in town meeting, and to increase the delegated power of elective officers. So the attempt of 1708-9 to make Boston a city, failed on the spot. Leading men favored the change; the town meeting did not.

The demagogue had not troubled the Colony; he appeared in the Province. The democracy of the Colony followed the leaders, who were men of great ability and political integrity; the democracy of the Province began to do its own leading, and to distrust all leaders not in full sympathy with the aims and opinions of the rising democracy. The Colonial age was simple and pure; the Provincial age was more complex and comparatively corrupt. In 1711 Boston suffered severely. The Province had indulged in the fatal experiment of issuing too much paper money, and underwent the usual effect; the number of rateable polls in Boston (males at least sixteen years of age) declined from 3,395 in 1738 to about 2,600 in 1746; trade was slack (11 Bost. Rec. Comm., 13, 100, 303); the tax laid upon Boston in 1744 was £30,000 old tenor. At such a time it might have been popular to propose an increase in the power of the town, especially by making Boston a county. Instead of that Thomas Hutchinson, himself a selectman, proposed that the General Court should confer greater power, not upon the town of Boston, but upon its selectmen and himself (l. c., 27). The matter was referred to the selectmen, who included Thomas Hutchinson and Samuel Adams. A majority of them proposed "that the selectmen for the time being, or the major part of them, be constituted a court of record, and vested with powers sufficient to try and determine all offenses against the bylaws of the town, their courts to be held the last Monday of every month" (l. c., 49). Adams did not sign the report, and the town declined to accept Hutchinson's report. It would have been a miracle if the town had voted to make the monthly meeting of the selectmen a police court, for trying every breach of a town order. It would have been strange if the town meeting had abdicated a part of its power to encourage the ambition of Thomas Hutchinson, who was full of schemes and plans for himself, while Adams schemed and planned and plotted for his town and country. The Hutchinson plan was impolitic and ill-timed. It failed accordingly (l. c., 27, 31, 47, 49).

In 1762 a number of inhabitants desired the town to "take such methods as shall be judged necessary for the incorporation of it" (19 Bost. Rec. Comm., 182). A clause to that effect was accordingly inserted in the warrant for the annual town meeting. The next clause in the same warrant called for a committee to reduce town expenses. A young democracy favors economy; a more advanced democracy favors liberal appropriations. The town meeting of 1762 refused the

committee (l. c., 12), and the question whether the town wished to be incorporated was "passed in the negative, almost unanimously" (l. c., 67). The truth is, the town was not prosperous, and it would have been hard to convince that as a city it could do better. When political struggles with the mother country were added to the economic struggles at home, and when the town of Boston was almost deserted—its population fell from near 20,000 in 1738, to less than 3,000 in 1776—there was no occasion to think of being incorporated a city, least of all when the historic town meetings of the Revolution were justly applauded by the United States. At a time when the independence of the country was in issue, there was no disposition to consider the independence of municipalities. Indeed, the autonomy and self-government of a town has room only in an autonomous and self-governing nation. As long as the Province of Massachusetts was not entirely autonomous and self-governing—for a Province with governors not of its own choosing is not independent—how could its towns be little republics? They might wish for independence; they would not find it in a dependent Province. The Colony of Massachusetts was free; the Province of Massachusetts was not.

DOMICILE AND SUFFRAGE.

Both domicile and suffrage were municipal throughout the Province period, and, with the exception that anybody could become a freeholder by purchase, domicile and suffrage could not be acquired without the consent of the town or its selectmen. In practise it was the selectmen who admitted inhabitants and approved voters. Under the general town charter of 1692, strangers obtained the right of domicile in any town of the Province by living there for three months without protest on the part of the town. The protest, to be effectual, must be served on the stranger, and a record left with the court of sessions (1 Prov. Laws, 67). It was the selectmen who had to act in the premises, and in case they failed to give due warning to strangers, the latter became legal residents, with a right to town relief when needed. The cost of poor relief was among the heaviest burdens borne by Boston throughout the Province period.

In 1700-1 masters of immigrant vessels were required to give a full list of such passengers, "and their circumstances," and the selectmen were authorized to require a bond for the support of any immigrants, should they prove unable to support themselves, or to return them to

the vessel in which they came. Domicile was not acquired, save by a freehold, by birth in the town where domicile was claimed, by serving an apprenticeship, or by twelve months' residence without warning (l. c., 451). While the act of 1700-1 made the master of immigrant vessels responsible for the poor and the helpless he brought, the law of 1722 (2 Prov. Laws, 214) made him responsible for all passengers he brought. In theory, then, the selectmen of Boston were well prepared to keep out all undesirable inhabitants; in practice they failed. When strangers thought they could improve their condition by going to Boston, to Boston they went; when fortune or hope beckoned elsewhere, Boston could not hold them. The Province pursued a clear course. As early as 1705 it required four pounds for every negro brought into the Province (1 Province Laws, 578), and in 1708-9 the same rule was applied to Indians (l. c., 634), while during some years a premium of forty shillings was paid for every white man servant, between the age of eight and twenty-five years, brought from "the kingdom of Great Britain." In 1718, when the bills of credit issued by the Province were depreciated, the council recommended that the importation of white servants be again encouraged (l. c., 580), and the General Court prohibited the abduction of servants and apprentices under a fine of fifty pounds (2 Prov. Laws, 119). The Boston selectmen were mainly troubled by adventurous persons from other provinces trying to gain a residence in Boston. The list of such individuals warned out of town included persons calling themselves worsted combers, dyers, clock-makers, gardeners, and even coachmakers, at a time when the streets of Boston had barely been named, and later on dancing masters, teachers of French, professors of singing, and "comie-satirick" lecturers. From about 1738 to 1776 the problem in Boston was not how to prevent men from acquiring domicile or a vote, but how to stay the steady decline of the population. In Boston it was a proud and strong, but dwindling, population that fought the historic fight for American independence. The greater, therefore, its honor. Revolutionary Boston consisted of native Bostonians.

None but freeholders could be members of the General Court, and a freeholder was simply a proprietor of land (1 Prov. Laws, 11, 452). Boston sent four members to the General Court of the Province, and was usually well represented in the Council, which was chosen by the General Court. The freemen of old had disappeared with the patent of 1629, and were succeeded by freeholders; but to entitle these to a

vote for members of the General Court, their freehold must be worth forty shillings a year. Other inhabitants were entitled to vote for members of the General Court when they had property to the value of at least fifty pounds sterling (l. c., 11, 315, 363). In town matters the law was more liberal. The general act of 1692 conferred the town suffrage upon all freeholders and upon any inhabitant who was "rateable at twenty pounds estate" (l. c., 65). In 1700-1 an inhabitant was defined as a person formally admitted to the town by the selectmen or in town meeting; but freeholders, persons born in the town, and those having served an apprenticeship in the town, were excepted from the necessity of a formal admission (l. c., 452). The poll tax, which was high, did not qualify for voting, and was assessed on all males who had completed their sixteenth year. Temporary acts passed in 1735 and 1738-9 (2 Prov. Laws, 761, 980), also in 1742-3 (3 Prov. Laws, 47), and from time to time renewed, further defined the general town act of 1692, which controlled throughout the Province period, and worked well, although it established a certain inequality not desirable in a democracy. It gave a marked preference to freeholders; this preference was intentional, and was recognized in the important act of 1700-1 (1 Prov. Laws, 452, s. fin.), though the General Court held in 1720 that freeholders were not qualified to vote in town meeting, unless rateable at twenty pounds estate, and this interpretation prevailed (1 Prov. Laws, 107; 2 Prov. Laws, 761; 3 Prov. Laws, 47; 5 Prov. Laws, 1121). Persons not freeholders depended for their vote to some extent upon the selectmen, who never abused the power they wielded. The difference in the voting qualifications for town and Province elections made it necessary to hold them separately, the popular town meeting being managed by moderators, while the meetings for Province elections were conducted by selectmen and attended by few persons. Apparently the highest number of votes cast for Boston representatives in the General Court of the Province was 723 (18 Bost. Rec. Comm., 78); in town meeting the number of voters present was apt to be much higher, especially at the annual meeting in March. The election of representatives for the General Court was usually held in May.

The first little code of town laws, issued by Boston in 1702, contained the important provision that town meetings should be conducted by a moderator, and that "no matter of any weight or moment shall be voted at any town meeting, without the same hath been specially exprest in the warrant" (8 Bost. Rec. Comm., 17, 21). In 1715 the

Province made a general law to the same effect (? Prov. Laws, 30). This law, which prevented the town meeting from becoming a mob, required the selectmen, who called the town meetings, to insert in the warrant or call whatever ten freeholders might require under their hands, and added that "no matter or thing whatsoever shall be voted or determined, but what is inserted in the warrant for calling said meeting." The result was that the town meeting of the Province period was controlled by freeholders. This is no longer the case; but the Massachusetts laws of 1893 governing the town meeting (chapter 117, sec. 259-265) is almost to a letter a repetition of the Province law passed in 1715; this, in turn, repeats the Boston town orders of 1701; and these were evolved or wrought out by the experience of Boston under the Colony. It is this conservatism, this respect for precedent, this clinging to past experience, that best protects us from interesting experiments in government. However society may change, whatever leaps in the dark may be taken by persons and property, the body politic is deeply conservative, and rarely parts with a solid gain made in our history as an organized political community. And the history of its government is the greatest glory as well as the noblest inheritance of America. This inheritance is not fully appreciated, unless one first studies and masters the history of a government like Boston or some ancient town in New England.

TOWN POWER

The power vested in towns was not defined by the Province, and is not now defined. When towns came to be incorporated as cities, jurisprudence adopted the theory that cities could not exercise a right not conferred by the General Court, it being assumed that the city was "created" by the General Court, and that the creature had nothing beyond what was given by its creator. The theory reacted upon the power supposed to be in towns. But practice did not comply with the theory, and it is not rash to assume that in such cases the theory is imperfect, an ounce of fact being worth more than a pound of theory. The first act passed by the General Court under the Province undertook to continue "all the local laws" of the Colony, and ordained that they should "remain and continue in full force in the respective places for which they were made and used" (1 Prov. Laws, 27); and a later act adds that they "shall so continue, until the general assembly shall take further order" (i. e., 99). But both these acts were disallowed

by the privy council, which wanted to get rid of the Colony, and let the Province start fresh. None the less, and despite the remark in the general town act that selectmen were chosen "for the ordering and managing the prudential affairs of such town," and other town officers "for the executing of other matters and things in the laws appointed by them to be done and performed" (l. c., 65), this same act recognized town usage, and simply limited town acts by the requirement that they be "not repugnant to the general laws of the Province" (l. c., 66). In fact, neither the General Court nor the science of jurisprudence could foresee what a town ought to do in a given case, and the town of Boston found no legal or other difficulty in doing what it thought prudent. Its selectmen enjoyed a similar latitude; for no wisdom could tell exactly what was covered by the prudential affairs which the selectmen were chosen to manage.

In 1750 the General Court placed an excise duty of a shilling on every pound of tea sold in the Province (3 Prov. Laws, 496), whereupon the town of Boston objected. When the General Court dismissed the objection, the town meeting voted to "make application at home, in order to prevent said acts being confirmed by his majesty." Christopher Kilby was chosen as the town agent to get the General Court overruled by the privy council, and he was successful (14 Bost. Rec. Comm., 183-4, 241). If the town was the creature of the General Court, the creature was strong enough, it seems, to thwart the will of its immediate creator. No wonder it took courage to resist also the creator of the General Court. Before this battle, the town adopted in 1773 with unanimity a report submitted by Samuel Adams, and vindicating the right of the town meeting to consider as town affairs whatever touched the town, and to act accordingly. The report quoted the Province acts, and appealed at the same time to "the great and perpetual law of self-preservation, to which every natural person or corporate body hath an inherent right to recur." To Governor Hutchinson's statement that the town of Boston had no authority to discuss the salaries paid to judges in Massachusetts by order of the crown, the report replied that "no law forbids the inhabitants of towns in their corporate capacities to determine such points as were then determined," and added the general rule for town conduct that "where the law makes no special provision for the common safety, the people have a right to consult their own preservation." The town had asked that the General Court be called together to consider the judges' salaries, but

the Governor refused to act. The report disposes of the case by this reasoning, which fairly took the wind out of Governor Hutchinson's sail: "The town had determined upon no point but only that of petitioning the governor; and will his excellency or any one else affirm that the inhabitants of this or any other town have not a right, in their corporate capacity, to petition for a session of the general assembly, merely because the law of this Province, that authorizes towns to assemble, does not expressly make that the business of a town meeting?" (18 Bost. Rec. Comm., 120-125.)

No better vindication of the town meeting and its powers is on record, and Samuel Adams is justly considered the typical American of the typical town meeting. His report, moreover, was directed against Governor Hutchinson, the first scholar who made the constitutional history of Massachusetts his special study. But even if Hutchinson had quoted good law, the facts were plainly against him; and while it is conceivable that the law may be bent to the facts, it is not conceivable that the great facts of history can be bent to human statutes. The town of Boston had done many things not expressly authorized by the General Court, and not a few of these are living today. Massachusetts did not authorize towns to choose overseers of the poor until November 16, 1692 (1 Prov. Laws, 65, 67); at the annual town meeting of March 9, 1690-1, Boston chose four persons to be "ouer Seers of the poore of this towne for the yeare ensuinge," and on March 11, 1691-2, again elected four "Ouerseers of the poore by papor votes" (7 Bost. Rec. Comm., 206, 210). Indeed, the Province law merely recognized what the Boston town meeting had done, and the act of the town could not be undone by the General Court. In 1772 the Province incorporated the Boston overseers of the poor (5 Prov. Laws, 177), whose history dates back to the very Colony which the crown lawyers in London, together with their friends in Massachusetts, attempted by a fiction of the law to blot out of existence (see the interesting "observations" printed in 1 Province Laws, 109-110). The Colony pursued the true course, and even now it is the Colony, rather than the Province, that teaches us the lesson of local self-government, a part of which Massachusetts has yet to learn. A treasure lost for a long time is not necessarily lost for all time.

TOWN OFFICERS.

The Province town inherited from the Colony nearly all the town offices named up to 1776. The town constable was the earliest of all

town officers, and among the few adopted directly from England. The tithingman, introduced in 1677, and originally appointed to look after ten families, his neighbors, was a sub-constable who looked after sabbath breakers (Col. Laws, 1672, ed. Whitm., 219). He was not thrifty; neither was his successor, the warden of 1761 (4 Prov. Laws, 417). The Massachusetts town immediately produced the selectmen, whose name means the men specially chosen or selected to manage the prudentials of the town. In 1641 the Boston selectmen chose a treasurer and recorder, and in 1650 the office was divided; but the recorder was not called town clerk until 1693 (7 Bost. Rec. Comm., 213), the Province law of 1692 having provided for the annual choice, in town meeting, of a "town clerk, who shall be sworn truly to enter and record all town votes, orders, grants and divisions of land made by such town, and orders made by the selectmen" (1 Prov. Laws, 65). The market department of the city of Boston dates back to 1649. A sealer of weights and measures was chosen in 1650.

Overseers of the poor were appointed before the Province charter was signed (7 Bost. Rec. Comm., 206). The finance and school departments of Provincial Boston were inherited from the Colony age, which made a good beginning with a fire department; but the police and health departments of Colonial Boston were blind attempts. In the matter of laying out and repairing highways, as well as town ways, the fatal confusion of the Colony age was continued under the Province, and is still an inheritance. On the whole, then, the Colony was the creative age of the Boston government; the Province was not. Colonial Boston did not swear its selectmen; neither did Provincial Boston. Up to 1776 the selectmen of Boston had never acted as a board, always as a committee. Indeed, Provincial Boston barely preserved and bequeathed the great achievements of Colonial Boston.

Like the Colony, the Province drew a line more nominal than real between highways and town ways. Highways were to be laid out under the authority of the court of sessions, town ways by the selectmen; but the surveyors of highways were to repair all ways and bridges within their respective towns (1 Prov. Laws, 136). In 1727-8 it was provided that the act of the selectmen in laying out town ways, to be binding upon the town, must be formally approved by the town meeting (2 Prov. Laws, 453). The expense of constructing and maintaining all sorts of ways must be borne by the town, but the town could make almost any bargain with the persons nearest in interest. In theory the

surveyors employed "all persons from sixteen years old and upward," until all the ways were in proper condition. In practice the whole work in streets, including construction, repairs, and drains, drifted to the care of the selectmen, and the town meeting usually chose them surveyors of highways. They made pathetic efforts to charge paving and repairs to abutters; but the law permitted the payment of highway repairs from the town tax, and gradually it became the rule of the town to meet all street expenses from the general tax levy. Sewers and drains, thanks to the act of 1709 (1 Prov. Laws, 613), were built and maintained at the expense of the immediate beneficiaries, the selectmen supervising the work, and assessing the cost. Notwithstanding this law, the town had a system of drains almost as soon as it had sidewalks, and paved streets, and a system of wards that was occasioned by the great care the town of Boston bestowed upon its poor (11 Bost. Rec. Comm., 210). The selectmen exercised in substance all the powers of a board of public works, beside being a board of health, a board of police, fire commissioners, and school committee. Early in Province days the Boston selectmen were relieved of the care for the town finances and for the poor; all other town affairs fell upon the selectmen. Yet Boston never developed faster, and never advanced more rapidly, than from 1700 to 1720, when it enjoyed the benefits of a cheap and abundant currency.

The first department to be separated from all others, in Provincial Boston, was the finance department. Under the Colony, valuations for tax purposes were made by the selectmen and a commissioner specially chosen by the town for that purpose (Col. Laws, 1672, ed. Whitm., 23, 1 Prov. L., 29). The selectmen usually decided what the town rate should be; to this they added the county and Colony rates, and the collections were made by the constables. The amounts were then expended by the selectmen, through the town treasurer, and apparently all went well. In 1687 the town was reported to have 1,117 rateable polls (males above sixteen years of age), and rateable estates to the value of £21,898 15s. On October 27, 1690, the Boston selectmen called for a town tax of £112 1s. 2d.; on June 11, 1691, they called for a town tax of £135 1s., both rates being payable in "countrie pay," with an allowance of one-third to such as paid money (3 Bost. Rec. Comm., 191, 201, 208). The Province tax was very much larger, and, to facilitate its assessment, the General Court ordered each town to choose assessors. A Boston assessor must be a freeholder, and



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“reputed worth” at least £300. On July 16, 1694, then, the town of Boston chose its first assessors (1 *Prov. Laws*, 166; 7 *Bost. Rec. Comm.*, 219). The appointment of tax collectors, in the place of constables, had been previously authorized (1 *Prov. Laws*, 93, 409), but the town meeting was not unwilling to let the selectmen do the assessing and the collecting (8 *Bost. Rec. Comm.*, 33, 35, 64, 116, 140, etc.). The selectmen, on the other hand, voted as early as 1702 to record abatements, as well as drafts on the town treasurer, “in the several books for that use” (11 *Bost. Rec. Comm.*, 27). These financial records of Boston under the Province are lost.

It happens, therefore, that the finances of Colonial Boston are better known than those of the Province period. Of the latter we know very little, beyond the general appropriations made in town meeting, the nominal tax levy, and occasionally a balance sheet of the town treasurer. But all these figures should be used with extreme caution. Valuations were irregular; a tax assessed was never collected in full; and the currency was fluctuating. If the Province had been faultless in other respects, it should be condemned for the “bills of credit” it issued. This mischief began with the Province. When the old-tenor bills had been sufficiently multiplied to defeat the object for which they were issued, the Province ordered a new kind, eighty shillings of which “shall be in value equal to” a troy pound of standard silver, which was 37-40 fine (2 *Prov. Laws*, 818). This lawful money, then, as they called it, rated twenty shillings at three ounces of standard silver, while the royal mint rated a troy pound of silver at 62 shillings. There was no objection to calling a pound of silver eighty shillings in Massachusetts, while in England it was called sixty-two shillings; there was great objection to depreciating whatever currency the Province saw fit to adopt. When the Province introduced its lawful money, so called, in 1737, it offered to accept old-tenor bills at one-third of their face value (l. c., 867). The new-tenor bills underwent the same fate as their predecessors, and when the Province became a State, its finances were in utter confusion. So were those of Boston, where a committee reported a debt of “near eighteen thousand pounds” just after Massachusetts had ceased to be a Province (18 *Bost. Rec. Comm.*, 258-9). The town tax ordered in 1772 was £6,500; in 1773, £7,000; in 1774, £8,000 (l. c., 86, 135, 180); only a small part could be collected, and in 1775 no town tax appears to have been ordered. Boston received from the Province, in matters of finance, the good institution of asses-

sors and collectors, and a currency as bad as was ever inflicted upon a reputable community. Governor Belcher told the crown in 1737 that "his majesty's instruction always intended there should be issued from time to time bills of credit sufficient for the annual support and service of the government" (2 Prov. Laws, 845). The charge was substantially true, but cannot excuse the Province, however culpable the crown may have been. The Province persisted in trusting the crown; the crown persisted in proving that it should not be trusted. The crown succeeded; with some reluctance the Province accepted the situation.

HEALTH, SCHOOLS, FIRE DEPARTMENT, POLICE, LIGHTING.

As the city charter of 1822 vested all health and quarantine matters in the city council, it was not strange that the Province made the selectmen a board of health (1 Prov. Laws, 469). The Colony had done the same, whereupon the selectmen of 1678 ordered that all persons that had the smallpox should not air their clothes and bedding "except it be in the dead time of the night" (4 Bost. Rec. Comm., 119). The selectmen of the Province period were expected to deal with "the plague, smallpox, pestilential or malignant fever, or other contagious sickness, the infection whereof may probably be communicated to others" (1 Prov. Laws, 469). As the selectmen could not enforce their will, least of all when an appeal was taken to the famous court of sessions, any two justices of the peace were authorized to issue a warrant enforcing the regulations of the selectmen in this business. It was held later (l. c., 187) that the two justices, acting upon the advice and direction of the selectmen, could order the forcible removal of smallpox patients. Rainsford island became the quarantine hospital, and woe to the vessel that had smallpox on board. In 1772 a schooner arrived, with a boy on board who had had the smallpox, but had recovered and been well for ten days. The boy, the captain, the crew, the passengers, and the vessel were smoked with "rossom and brimstone," also "washed and cleansed," whereupon the officer at Rainsford thought they might be dismissed. The selectmen replied: "Our orders are that you continue to use the proper means for cleansing the schooner, and everything on board, as well as the people. With respect to the captain and the two passengers, you must take particular care as to their washing and cleansing. Those of them who have any hair must wash the same well with vinegar. Their clothes, especially the suits they are to come up with, must be aired, washed, and smoked as

carefully as possible. And when this is done, report to us again." After much more smoking, washing and cleansing, the keeper was allowed to let the schooner go, "first taking care that you are paid for your trouble" (2 Bost. Rec. Comm., 135-8).

Not, perhaps, to strengthen the power of the selectmen as a board of health, but to fight the smallpox, the most dreaded of all epidemics in Province times, the General Court repeatedly supplemented its "Act providing in case of sickness," passed in 1701-2. In 1739 persons arriving in Boston from any place "where the smallpox or other malignant infectious distemper is prevailing,"—the act referred to places "in the neighboring provinces" only,—were required to report to the selectmen, and the selectmen had full power to warn such persons out of the Province (2 Prov. Laws, 987). The fine of neglectful travellers was £20. In 1742-3 families with a case of "pestulose eruptions" were required to inform the selectmen, and to display a red flag, under a penalty of £50 in either case, £25 to go to the informer (3 Prov. Laws, 35). Inoculation was prohibited by the act of 1764, unless thirty families suffered from the smallpox, and the selectmen permitted inoculation (4 Prov. Laws, 668). As the laws of the General Court did not stop the dreaded malady, another act was passed in 1764, fining country people £100 for going to Boston and being inoculated there (l. c., 729). On July 4, 1776, the court of sessions was authorized to permit the establishment of inoculating hospitals, and to punish private inoculation with whipping (5 Prov. Laws, 552). At that time the people of Boston were frantic; their town was nearly empty, it was without a reasonable supply of food, trade had ceased, the epidemic was commonly thought to have been occasioned by the British soldiers, and the selectmen had neither money nor skill to meet the case. From April 3, 1775, to March 29, 1776, no town meeting was held in Boston; the selectmen's meetings were interrupted for more than a year. When they were resumed, the absence of British soldiers was duly noticed; also "the present opportunity of transacting the affairs and business of the town in a free town meeting" (18 Bost. Rec. Comm., 227); nobody believed for a moment that the town or the Province had lost any wisdom supposed to dwell with kings; nobody imagined that, in case the Massachusetts health laws were bad, better laws could be framed upon a hint from the mother country. Even a crown that in theory never does wrong, cannot convey those ideas of which it is not previously possessed. The Province did not know that epidemics are more

than a town affair, perhaps a later age will learn that they are more than a State matter. Towns were justly required to take care of their prudentials; to make their selectmen a board health, and the only guardians of the public health, quarantine included, was to impose imperial duties upon a municipal corporation. As well might a town be required to regulate the coinage, or to provide original standards of weights and measures. The distribution of power in public-health matters is not much better in 1893 than it was in 1776 or 1692.

In the matter of schools, the Province inherited the admirable law and practice of the Colony, which was fortunate in providing for Harvard college and for secondary education, before reading and writing schools were established. For it seems that primary schools depend more on the higher schools than the latter depend on the lower schools. For this reason it was a happy law that required for all grammar-school masters the approval of at least two ministers. A grammar-school prepared directly for college, and ministers represented liberal learning better than any other profession. Free trade in teaching being prohibited, Provincial Boston was saved from the self-appointed professors that profess more than they make good. In 1768 the law authorized the establishment of school districts within towns, such districts or precincts being allowed to order a higher tax for school purposes than the town at large was disposed to levy. This interesting law was the beginning of a policy under which the schools and their management have become a separate establishment, and rather independent of the general town or city government. The management of the schools rested with the selectmen; but as early as 1710 the practice of choosing eminent men for the inspection of schools was formally adopted by the town (8 Bost. Rec. Comm., 65). In 1724-5 the selectmen began the custom of annual school visits, to which eminent men were invited, the affair ending usually with a dinner (13 Bost. Rec. Comm., 131, 153, 212, 251). This custom continued long after the establishment of the school committee and until Boston had become a city. The Province law did not greatly affect the Boston schools (Prov. Laws, I, 63, 170, 681; II, 100; IV, 988); they were founded in the affection and liberality of the people, who never wavered in this attachment.

The fire department of Provincial Boston continued under the management and control of the selectmen; but in 1724 the management of fires was placed in the hands of ten firewards, who were appointed by the selectmen and the justices of the peace (1 Prov. Laws, 677). In

1745 the town was allowed to appoint its firewards (3 Prov. Laws, 211), and as they gave satisfaction, their number was gradually increased to sixteen (4 Prov. Laws, 661). The fire engines were manned by volunteers, and the engine "first brought to work upon any building on fire" received a premium; but the engine men and their captains were appointed by the selectmen. The fire service was always popular, and the frequent recipient of favors. In 1772 John Hancock gave the town "a new and finely-constructed engine (imported) for the extinguishing of fires;" it was apparently the tenth; it was named in honor of the donor, who was requested to name the captain of the company; and in case of fire the Hancock engine was instructed to give "the preference of its service" to the Hancock estate (18 Bost. Rec. Comm., 86, 88; 23 Bost. Rec. Comm., 162). To prevent fires, the Province continued the Colony law of 1683 that no building should be put up in Boston, "except of stone or brick, and covered with slate or tile" (5 Mass. Rec., 426; 1 Prov. Laws, 42). Wooden buildings required the consent of the selectmen, the justices of the peace, and the governor and council (1 Prov. Laws, 42, 404). In 1760 a similar law was passed, but the same law excused all previous offenders, provided they would cover their buildings within ten years with slate or tiles (4 Prov. Laws, 380). By a certain irony the building, fire, and street-widening laws of Boston under the Province are commingled; and had it not been for its many great fires, both under the Colony and the Province, the amounts the city of Boston has expended for street widenings, great as they are and will be, might have been double or treble. The fault lies with the founders, who distributed the territory of Boston, and then tried to give each lot owner some kind of access to his property, always at the expense of others who were entitled to damage. The wonder is, not that the streets of the peninsula are irregular and narrow, but that the officers of the town and city have contrived, against disadvantages not experienced in any other civilized community, to make the streets we have. The great fires of Boston have helped, and the selectmen of Provincial Boston took full advantage of every fire that ravaged the town. These fires, it appears, were not prevented by building laws of Spartan rigor, nor by maintaining a fire-engine company for every five hundred or one thousand inhabitants. The best laws, and the best government service, cannot prevail against private indifference. A free community must delegate many rights; it cannot delegate responsibility, and be safe.

The Province authorized Boston, in 1761, to establish a town police (1 Prov. Laws, 162). The theory had been that the town constable was the town policeman, that the constable might have officers to help him, and that where the constables proved insufficient the Colony or the Province must act, and that they would act by the militia. The theory broke down, because neither the Colony nor the Province was prepared or disposed to maintain a standing militia. After the theory had failed, the town of Boston was permitted to make what police arrangements it could. The chief difficulty was the cost. Well might the Province shrink from the cost of a police force for all Massachusetts; but even a rich town that raised by lotteries the money required for paying the way to Roxbury, or for rebuilding Faneuil Hall, would have great difficulty in maintaining a standing police force such as it needed. In truth, the police of Provincial Boston was wretched. The first militia act of the Province, passed in 1693, provided for military watches, that is, for such night duty of the militia as the chief military officers of the town might order; and all males from sixteen to sixty years of age were liable to serve (1 Prov. Laws, 128). Of course, nobody was anxious to serve as night watchman, and pay his own expenses. In 1699, therefore, all towns were authorized to employ a night watch, with or without pay; but in case the watch was paid, the cost was assessed upon the ratepayers by the court of sessions (*l. c.*, 384), although the law admitted the watch to be for the benefit and safety of the town, and the justices were not town officers. The act provided for a watch by night, and for a ward by day, including Sundays; and to that extent marks the end of the constables' watch together with the constables' character as general peace officers. The stately German marshal, and the French constable of higher rank, became in Massachusetts a beadle. And before the Province gave the authority, the town of Boston employed ten watchmen, to protect the inhabitants better by night than the constables did by day (§ Bost. Rec. Comm., 231). To distinguish the new watch from the constables' watch and the bellmen (so called because they carried a bell to alarm the town in case of danger), the term "select watch" was used, the men being specially chosen or selected. In two years the new watch cost £265 per annum, and the amount was raised by special assessment (*l. c.*, 232, 241, 243).

In 1712, when Boston assumed the character of a provincial metropolis, its watchmen were given the powers of a modern police officer (1

Prov. Laws, 689). On the whole, the arrangement worked well; it remained for a century and a half. When the British soldier came, to overawe revolutionary Boston, not only was the number of watchmen increased, but they received a new and efficient ally. In the annual town meeting of March 10, 1772, the town was asked to consider "the expediency of fixing lamps in proper parts of the town, for the better accommodation of the inhabitants." As usual in such cases, the matter was referred to a committee. The committee recommended that three hundred lamps be put up, that the first cost be met by private subscription, and that the new department be maintained from the general tax levy. The lamps were bought by John Boylston in London, their cost was about five shillings sterling each, and within a year three hundred and ten street lamps were put up in all parts of Boston. Meanwhile the General Court had passed a good act giving the proceeding the approval of law, and expressing the reasonable belief that the street lamps would help to prevent "fires, burglaries, robberies, thefts, and other lesser breaches of the peace" (5 Prov. Laws, 302; 18 Bost. Rec. Comm., 72, 115, 128, 135, 162-5). The intentions of the Province were that Boston should enter the Commonwealth properly lighted, and with all the appointments of a capital city. It had found the town unpaved, unlighted, and unguarded; it left Boston well paved, well lighted, and well protected. The town might have answered that it owed the Province very little, that it was in debt, that its streets were deserted, that a smallpox epidemic was more ruinous than a foreign army, and that the court of sessions had not been abolished. On one point Boston and Massachusetts were of one mind—that almost anything might be suffered to secure a free Commonwealth and a free town meeting. As soon as these were established—greatly surpassing the liberties of the ancient Colony—the miseries and shortcomings of the Provincial period were mercifully forgotten. Boston saw its darkest days in 1776; but the Boston of 1776 looked forward, and moved bravely onward.

The main sources for the constitutional and government history of Boston under the Province, from 1692 to 1776, are the "Acts and Resolves of the Province of the Massachusetts Bay," admirably edited, especially by A. C. Goodell, jr., and published by the Commonwealth of Massachusetts, 6 vols., Boston: 1869-92; and volumes 7, 8, 12, 14, 16, 18, also, 11, 13, 15, 17, 19, 20, and 23 of the Boston Record Commissioners, published by the city of Boston.

COMMONWEALTH PERIOD OF THE TOWN 1776 TO 1822.

The sources for the government history of Boston from 1776 to 1822 are not easy of access. The State laws, especially for the earlier part of the period, were not well printed, and are rarely found in a complete set. The Secretary of State has begun to reprint them from 1780 to 1806. For many purposes the edition of the General Laws, from 1780 to 1822, edited by Metcalf, will suffice (Boston, 1823, 2 vols., 8vo.). The special laws for the same period have been published in five volumes, and exceed the general laws in local interest. The town-meeting records for the period exceed in bulk the entire period from 1634, when they began, to 1776, being the larger part of the ten volumes in the custody of the Boston City Clerk. The records of the town meetings are printed up to 1778. Of the twenty-three volumes containing the minutes of the selectmen, from 1701 to 1822, the publication ends in vol. 15, with April 19, 1775. The records of the school committee, the assessors, and of a miscellaneous nature, are all in manuscript. Those in the possession of the Overseers of the Poor are important, as they cover a constitutional conflict between the town or city and the board. The records of the court of sessions are in the office of the clerk for the Supreme Court of Suffolk county. The town printed much, and most of this is lost. But the editions of the By-Laws issued in 1786, 1801, and 1818, are useful, as each undertook to give all the bylaws and the important acts of the General Court relating to Boston. The edition of 1818 is specially helpful. For the period from 1776 to 1780, when the Massachusetts Constitution was adopted, the fifth volume of the Province Laws, edited by A. C. Goodell, Jr., is a storehouse that supplies everything, as far as the General Court is concerned. Of private writers on the government of Boston from 1776 to 1822, Josiah Quincy's "Municipal History" is interesting, in that it rests largely upon direct knowledge. He had been the orator of Boston on July 4, 1798. From 1823 to 1828 he was mayor.

SUFFOLK COUNTY

In 1733 the Boston Town Meeting presented elaborate reasons why Suffolk county should not be reduced, and why Dedham in particular should not be set off (12 Boston Rec. Comm., 50). When the Province became a State, Suffolk county comprised twenty towns: Boston, Roxbury, Dorchester, Milton, Braintree, Weymouth, Hingham, Dedham,

Medfield, Wrentham, Brookline, Needham, Stoughton, Stoughtonham, Medway, Bellingham, Hull, Walpole, Chelsea, and Cohasset. The county was more than a district for the administration of justice: it had large executive powers over each town, as Boston knew to its sorrow. The bill of rights had laid down the principle that "in the government of this Commonwealth . . . the judicial [department] shall never exercise the legislative and executive powers, or either of them: to the end it may be a government of laws, and not of men." This principle, best vindicated by John Adams, was violated in Boston throughout the period under discussion, the county judges having the veto power over all town bylaws, the power to grant liquor licenses, the assessment of county taxes, the appointment of certain local officers, the permitting of Sunday funerals, the right to discontinue highways, and the locating of distilleries, potteries, and slaughterhouses. The county, to which their jurisdiction extended, was large, and Boston in particular kept the court of sessions busy. Boston had always wished to be a separate county, and in 1793 Norfolk county was established, taking every Suffolk town, except Boston and Chelsea (1 Gen. Laws, 423). It was found proper to restore Hingham and Hull to Suffolk (l. c., 426); but in 1803 they were set off to Plymouth county (? Gen. Laws, 80). Suffolk county, then, was reduced to its smallest size, which remained until 1804, when South Boston was added. The next addition to Suffolk, of Roxbury, was not made until 1868. When Norfolk county was established in 1793, it had more inhabitants than Suffolk. In 1790 Suffolk County had a population of 44,875, of whom 18,320 were in Boston. Of the total 23,878 were set off to Norfolk county, and 20,997 remained in Suffolk, including Hingham and Hull. In 1820 Suffolk county had a population of 43,890, against 36,471 in Norfolk county. The population of Boston, in 1820, was 43,298.

It is not clear whether the authors of the Massachusetts Constitution and the General Court considered the justices of the peace and the court of sessions executive or judicial officers (Const., part ii, ch. iii, art. 3; amendm. 8). It is certain that they did both judicial and administrative work, and natural that neither was well done. The Constitution of 1780, which is still in force, provided that judicial officers should serve during good behavior, but excepted justices of the peace, on the ground that they might fail to discharge the important duties of their office "with ability or fidelity" (Const. of Mass., III, 1 and 3). Accordingly they were appointed for seven years. Their authority, in

the period under discussion, was great. In 1781 the General Court authorized them to determine civil causes up to twenty dollars, and expressly took such cases away from the Court of Common Pleas, save in appeal (1 Gen. Laws, 123). In 1808 the act was renewed (2 Gen. Laws, 181). Their criminal jurisdiction was even more extensive, as all offenders were supposed to be brought first before a justice of the peace (1 Gen. Laws, 133). Fines for the violation of town and other laws were imposed by justices of the peace, who accounted for these fines annually to the town, county, or State treasury concerned. The justices were paid by the fees they collected. In addition, they exercised executive power, as a sort of check upon the selectmen. Most of the justices of the peace were laymen, and their judicial work was not good. Accordingly all civil jurisdiction was taken away from them in 1822, in the act that formed part of the city charter (2 Gen. Laws, 585).

The justices of the peace together formed the court of sessions, which had original jurisdiction in criminal matters. But the act of July 3, 1782, which continued the Province court of sessions (1 Prov. Laws, 367), omitted the quorum clause that required certain justices, or any one of them, to make the proceedings in the sessions complete. An appeal lay from the court of sessions to the Supreme Court (1 Gen. Laws, 68). The act of June 19, 1807, required the court of sessions for Suffolk county, at that time one of the smaller counties, to consist of a chief justice and four associates (2 Gen. Laws, 171). This ruled the justices of the peace out of the court they could not dignify, and the members of the court were relieved of the duty, previously exercised, of assisting in the administrative work of laying out or discontinuing highways. None the less the court of sessions was abolished in 1809, and its power transferred to the Court of Common Pleas, which thus became a court with administrative duties attached to it (2 Gen. Laws, 208); but in 1811 the court of sessions was revived, and continued until Boston became a city (l. c., 295, 587). Its administrative power was then transferred to the mayor and aldermen, at that time one board. The criminal jurisdiction was transferred to the police court, of three judges, who sat also as a justices' court, and as such inherited the entire civil jurisdiction previously vested in justices of the peace. It was the commingling of purely administrative work with judicial duties that impaired the usefulness of the ancient court of sessions. In town matters the court of sessions or the county justices, all paid by fees, could check many things the town or its selectmen

were ready to do; and a judiciary living on fees was not likely to win confidence. A court without the confidence of the community is a failure where failure is most unfortunate.

To give relief, especially in prosecuting the violations of town laws, the General Court established, in 1800, the Municipal Court of Boston (2 Gen. Laws, 26). It consisted of a salaried judge, who had the same criminal jurisdiction as the court of sessions, and was to take special "cognizance of all crimes and offenses against the by-laws of the town." In addition, the town was authorized to choose annually a town attorney, who was to prosecute in behalf of the town, and was allowed a salary. In 1813 the original jurisdiction of this Municipal Court was extended to all crimes in Suffolk county; meantime the town attorney had become a county attorney (l. c., 328, 172). The field of the court of sessions was thus encroached upon in every direction, until in 1822 the anomaly of having a sort of lay court for judicial and executive work was got rid of, to the profit of the law courts and the administrative interests of the town. The higher courts, being the Court of Common Pleas and the Supreme Court, had law judges only, and worked well. The Court of Common Pleas heard civil cases involving more than forty shillings (1 Gen. Laws, 67); and in 1814 the Boston Court of Common Pleas was authorized to try minor cases without a jury (2 Gen. Laws, 352). This was called the Town Court, which became a separate court in 1818 (l. c., 441), held by a special justice of the peace. The town judge for civil actions, together with the Boston Court of Common Pleas, which had added to its duties the hearing of certain criminal matters, was swept away by the act of February 14, 1821, establishing a Court of Common Pleas for the Commonwealth (l. c., 551). This court was to become, in 1859, the Superior Court.

The main reason why Boston became a city is not so much the fact that the town had become too large for a government by town meeting, selectmen, and other town officers, although this reason was strong, as the very serious fact that the town suffered because the county authorities, especially the justices, failed to do well what town business was by law entrusted to them, and because the administration of justice was bad, especially where the violation of town laws was involved. On December 10, 1821, a report commonly attributed to Lemuel Shaw, who was Chief Justice of the State from 1830 to 1860, urged the town to become a city for the double purpose of improving the administration of justice and the prudentials. In support of the

former this language was used: "The present mode of administering justice in its first stages is attended with many growing abuses; and though they have already attained to a very considerable extent, they must, unless prevented by an entire change in the system, produce eventually the most mischievous and immoral consequences." The report demanded two acts of the General Court, the town joined, and it is chapter 109 in connection with chapter 110 of the acts of 1821—both were signed on February 23, 1822—that made Boston a city, with some approach to autonomy, and without a court of sessions. The General Court reserved the right to annul bylaws made by the town; but that was relief from the approval previously vested in the court of sessions. The town meeting was reluctant to ask for its own extinction; the question whether the court of sessions should be abolished, received the support of 4,557 votes, with but 257 opposed (Quincy, Munic. History, 33). The people of Boston were not convinced that town government was a failure; they were convinced that the commingling of town business with the administration of justice was a mistake the consequences of which were as unfortunate as they were notorious. Had it not been for the hope of establishing justice in town matters where a court alone could establish justice, and where the justices of the peace, jointly and severally, had failed to establish so much as reasonable justice, the town would not have voted, on January 7, 1822, that the "Town of Boston" should be changed to the "City of Boston." The proposals of 1781, 1792, 1801, and 1815, while favoring the adoption of a city charter, had failed to ask for reform where it was most urgently needed. This reform came in 1822, when Boston was made a city, in order that the judiciary should not exercise legislative and executive powers, or either of them. The city of Boston would have fared better still had the thirtieth article in the Declaration of Rights been applied in its full meaning and in all its consequences to the instrument known as our first city charter. But the charter was a great step forward, in that it limited and defined executive and judicial powers for the city of Boston and its government.

AREA AND POPULATION OF BOSTON.

In Colony and Province days it was customary to speak of Boston "within the neck," meaning the peninsula on which the capital of Massachusetts is situate. This peninsula consisted of several parts. The old north end was separated from the centre of the town by a navigable

creek or canal, since changed to Blackstone street, which was not built until after Boston became a city. Originally this canal was about six hundred feet long, the present Haymarket square and the junction of North and Blackstone streets being covered by the tide. The easiest road to Charlestown ferry was through Sudbury street, which is also the earliest street in Boston with a definite name attached to it (7 Bost. Rec. Comm., 3). The streets through the old north end to the Charlestown ferry were built later, and at great expense. The strip of land that connected the peninsula proper with Roxbury and the main land, was about two hundred feet wide at the present junction of Washington and Dover streets. But the territory of Boston extended beyond, the boundaries toward Roxbury being two creeks that emptied respectively into the Back Bay and the South Bay (11 Bost. Rec. Comm., 80). Kendall and Arnold streets were in Boston, but the south end (south of Dover street) was not generally settled until after Boston had become a city. Boston west of Sudbury street, at that time called New Boston, was not generally occupied until the latter part of the Province period. Boston had become a narrow town as early as 1740, for East Boston failed to attract population until quick and sure communication by steam was established. The necessity of more room was felt as soon as Boston recovered from the ravages of the Revolution. By 1790 it had 18,038 inhabitants, not counting the islands. In 1800 this population was 24,655; in 1810, 32,896. In 1820 the population of Boston proper, not counting East Boston, South Boston, and the islands, was about 42,000. For the accommodation of such a population the old peninsula proved insufficient. Charlestown offered some opportunity for relief; but communication with Charlestown was not easy, it was an independent municipality, and the system of separating the business and residence sections of a community had not forced itself upon attention.

Some relief was had by the great bridges built in the period under consideration. The first of these was the Charles-River bridge, from the foot of Princee street to Charlestown, opened to travel on June 17, 1786. On November 23, 1793, the great bridge from the foot of Cambridge street in Boston, to Cambridge, was opened to travel. Until these great works were achieved, the only bridge over the lower part of Charles river was the "Great Bridge," from the foot of North Harvard street, in Brighton, to Cambridge (4 Mass. Rec., part I, 470; 1 Prov. Laws, 158, 383). It was first built in Colony days, apparently in

1662, and as late as 1833 the towns of West Cambridge (Arlington) and Lexington petitioned the General Court that they might be relieved of contributing toward the support of this interesting structure, which for more than a hundred and thirty years was the only highway connecting Boston with Cambridge, except by the Charlestown route. From Boston the bridge was reached via Roxbury and Brookline. The bridges of 1786 and 1793 made travel easier, but did not relieve the growing population of Boston. For this purpose South Boston, known as Dorchester Neck, was transferred, in 1804, from Dorchester to Boston. South Boston now covers 1300 acres; in 1801 it covered less than half that area. But a bridge to South Boston (now Dover street bridge, originally the Boston South bridge) was opened to travel on August 6, 1805 (3 Spec. Laws, 368, 371), and a second bridge was immediately proposed. Before this was built, it was found best to encroach upon the South Bay by filling the area south of Beach, and east of Washington street (l. c. 375). This district is called the South Cove. The land so won from the sea retarded the settlement of South Boston, which had about two hundred inhabitants when annexed to Boston, and less than two thousand in 1820, though it had the second Catholic church in Boston. An addition of greater importance than the South Cove, for the immediate relief of the population, was the filling of the ancient Mill Pond, at the north end. This pond was made in 1613-46, by constructing a causeway or mill-dam along the present Causeway street, from Leverett to Prince street. The pond was roughly triangular, the base, along the causeway, being about two thousand feet, and the distance from the causeway to the point where a canal connected the mill pond with Boston harbor about fourteen hundred feet. The present Haymarket square was part of the mill pond. This territory was filled in 1807-22, and is still indicated by the names of North Margin and South Margin streets (2 Bost. Rec. Comm., 74; By-Laws of 1818, p. 201). As early as 1693 there were three mills where the sluice connected the mill pond, or mill cove, with Charles river, and two mills where the pond was joined by the canal to Boston harbor (map in Boston city doc, 119 of 1879). The filling was taken from Beacon hill; the streets of the Mill-pond district were laid out by Charles Bulfinch, who was the leading man in town improvements for the period under consideration (Quincy, Mun. Hist., 26). From 1791 to 1817 he served with but one interruption as selectman, and most of the time as superintendent of police. The arrangements for filling the old mill pond were as admirable as was the skill that first de-



Gov. Mansfield

vised the pond, with its double supply of water and power from the north and the south. The similar enterprise of using the Back Bay was planned on the like principle, and finally led to like results, a large addition to the area of Boston by encroachments upon tidewater. The milldam from the junction of Charles and Beacon streets to Brookline was first proposed in the town meeting of June 11, 1813. On October 20, 1813, the town meeting accepted the committee report recommending a large grant of flats on condition that the grantees build the dam named, with proper sluice ways for mill purposes, and a second dam, of similar character, to South Boston, as well as a canal from the South Bay to the Back Bay, the canal to be near the present Dover street, and to supply mill power (By-Laws of 1818, p. 219). An act in this sense was passed by the General Court (5 Sp. Laws, 17, 136, 331). The South-Boston dam and the canal across Washington street were not built; the milldam to Brookline (Beacon street) was opened to travel on July 2, 1821. When the filling of the north cove was complete, the filling of the Back Bay began; about that time Boston adopted a city charter. The palm for enterprise appears to belong to Henry Simons and the grant of 1643.

RIGHT OF SETTLEMENT AND OF VOTING.

The town code of 1786, p. 108, continued the bylaw prohibiting strangers from making Boston their home, except under a permit from the selectmen; persons acquiring a freehold, and apprentices, had permission to settle in Boston. The code reprinted the law of 1700-1 (1 Prov. Laws, 451), under which nobody could vote in town meeting without the consent of the selectmen or the town; but natives, freeholders, and apprentices were excepted. Immigration was carefully restricted, and strangers could not be entertained in Boston, even by their relatives, for more than twenty days, unless the facts were reported to the selectmen in writing. The pertinent law of 1736-7 (2 Prov. Laws, 835) was reprinted in the town code of 1786, p. 113. The Constitution of 1780 (ch. I, sec. II, art. 2) undertook to define an "inhabitant," but left the right of admitting inhabitants as before, that is, to the towns and the selectmen. Technically, then, nobody had the right of domicile in Boston, except natives of the town, freeholders, apprentices, and persons admitted by vote of the selectmen or the town. This admission must be formal and explicit, and without this formality the right of domicile or "inhabitaney" could not be acquired

(4 Prov. Laws, 912). The Constitution recognized only the fact of actual residence. In 1789 a law defined "the settlement of a citizen in any particular town" (1 Gen. Laws, 366). The term citizen was new, not being found in the Constitution of 1780, save incidentally and in the sense of resident. The Constitution called citizens "subjects." At first the term "citizen" was used as an equivalent for inhabitant, or legal inhabitant. Before long the national government took charge of this subject, and citizenship was conferred, not by selectmen, nor by the Commonwealth, but by the United States. The State regulated the rights of domicile and suffrage, also the right of settlement, with its implied right to poor-relief.

The laws of citizenship and settlement were substantially one in Boston until Congress passed its first naturalisation act, in 1795. Up to that time citizenship, or "inhabitaney," was the prerequisite to voting as well as to poor-relief. For a short time Massachusetts naturalised, but could not grant inhabitaney. When citizenship became a national affair, there was nothing in the premises left to the town, except to prevent the settlement of persons likely to need relief. But a settlement could be, and can be, acquired without citizenship. The old law of settlement, which had been inherited from the Colony, and had added greatly to the power of the town, thus passed away, leaving behind it the mean duty of protecting the town from paupers, while the inestimable right of citizenship was conferred by the United States. Boston had become part of a sovereign nation, and the nation decided who should be admitted to the enjoyment and exercise of national power. The Colony had freemen, that is, members of the company; the Province had freeholders, or owners of land, which conferred the rights of a British subject; the United States conferred citizenship, which was the first step to the highest rights the people of the United States as a body politic could confer. Surely, a new era had begun; the great Revolution yielded great results; the town of Boston had become part of a national partnership. It was to learn this in other directions, and to reap additional benefits.

No religious test was prescribed by the patent of 1629. The Colony was true to this silence, except that in 1651 it required the members of the General Court to be "orthodox Protestants" (Col. Laws, 1650, ed. Whitmore, 115), and that violent laws against Quakers were enacted. The responsibility for these violations of the patent (1 Mass. Rec., 16) rests wholly with the Colony (see the laws of 1660, ed. Whitm., 154-6).

In part the action of the Colony may be explained by the fact that self-preservation was the paramount duty of the Colony, and that it was more important to save Massachusetts than to engage in untried experiments of toleration. The Province charter provided that "there shall be a liberty of conscience allowed in the worship of God to all Christians, except Papists" (1 Prov. Laws, 14). In 1700 all Roman Catholic priests were specially prohibited from living in the Province (l. c., 424), and the law remained in force until the Constitution of 1780 (part II, ch. VI, art. 6). The Colony did not and could not prevent the Society of Friends from establishing itself in Boston. The first Catholic church in Boston was not built until after the beginning of this century, though Catholics began to arrive after the Constitution of Massachusetts had replaced the Province charter. The declaration of rights (art. 2) established freedom of conscience and freedom of worship, though the next article authorized town taxes for the support of "public Protestant teachers of piety, religion, and morality." This authority was taken away by the eleventh amendment, in 1833. The oath that no foreign person hath, or ought to have, any authority in any matter, ecclesiastical or spiritual, within this Commonwealth, had been replaced, in 1821, by the simple oath of allegiance. Nor were the members of the General Court required, after the amendments of 1821, to declare the truth of the Christian religion. The era from 1776 to 1822, then, saw something like emancipation from the political test of creed, as far as Massachusetts was concerned. The United States did not tolerate a test of its officers' religion, and made the free exercise of religion the supreme law of the land.

The difference between town and state suffrage was continued, town suffrage being the more liberal of the two. The Province had never defined the qualification of voters as to age and sex. The Constitution of 1780 expressed the practice of the Province period, limiting the right of voting in State matters to males at least twenty-one years of age. The property qualification was either a freehold yielding three pounds a year, or any estate worth sixty pounds. This was virtually an adoption of the Province charter requirements, the Massachusetts pound consisting, ever since 1652 (3 Mass. Records, 261-262), of three ounces of silver 37-40 fine. It was customary to treat two pounds sterling as equal to three pounds of this Massachusetts money of account. As a curiosity it is worth stating that the Massachusetts Constitution recognized silver money only (part II, ch. VI, art. 3), while the Province

law was bimetallic in ordering the new-tenor bills of credit. In addition to the sex, age, and property qualifications, which controlled to 1821, the voter must be a legal "inhabitant" or formally admitted to the town in which he claimed the right of suffrage. This inheritance from the Colony, which was a close corporation, was done away with in 1821, when the third Amendment of the State Constitution required all voters to be male citizens, residing in Massachusetts, who had paid a tax. In town matters the General Court gave the suffrage, in 1782, to "every person who is an inhabitant within any town in this Commonwealth, who shall pay to one single tax, besides the poll or polls, a sum equal to two-thirds of a single poll tax" (1 Gen. Laws, 62). The general town act of 1786 retained this provision, but replaced the term "every person" by the phrase "the freeholders and other inhabitants of each town in this government" (l. c., 250). The act of June 18, 1811, required town voters to be male citizens, at least twenty-one years of age, of at least one year's residence in the town, and to have been taxed (2 Gen. Laws, 279). The city charter (sec. 8), finally, adopted for municipal purposes the same requirements of voters as the amendment of 1821 required in State elections.

At last, then, the difference between town voters and voters for State affairs was to disappear, but not while Boston remained a town. While Boston was a town, the selectmen decided who should vote, though in town meeting the moderator had control. In deciding who was a voter, the selectmen had the assistance of the assessors, who were required by the law of March 7, 1801, to make regular lists of voters (2 Gen. Laws, 41, 72). This list was perfected by the selectmen, but had reference to State elections only. In 1813 the assessors were required to make also a list of "all such inhabitants as may be qualified by law to vote in the choice of town officers" (l. c., 341). The same law introduced the system of checking at all elections. The city charter required the board of mayor and aldermen to make the voting lists (sec. 24). The active and passive right of suffrage in town matters was substantially one since the general town act of 1786 (1 Gen. Laws, 250); in State matters more was required of voters, and still more of persons voted for. The town, therefore, was more democratic than the State. It had been so ever since Colony times, and traces of this are still found. Among State officers the law recognizes rank; in town matters rank never counted for much. The idea of manhood suffrage, however, was unknown to the age under discussion. On the other hand, the town

of Boston under the Commonwealth began with complicated restrictions of suffrage, and ended in 1822 with simple and obvious requirements upon the citizen voter. The progress made was altogether in the direction of simplicity and equality. No wonder the people were attached to their own town meeting, where they had rights unknown in State matters. The town was the nearest approach to a democratic republic known to the men of Boston in 1822.

POLICE DEPARTMENT.

For the better order of the town, Boston introduced street lamps just before the end of the Province; in part also to help the night watchmen who had to look after the British soldiers. When the soldiers left Boston, and the people returned to their own—they came in thousands—a day patrol was found necessary to maintain reasonable order. Some years later the first “inspectors of the police” were appointed, and the interesting ordinance authorizing a permanent patrol still stands in the town code of 1786, p. 66. The police department, then, began in 1786; but the old night watch was retained as a separate service until 1854. The force appointed in 1786 consisted of four “inspectors of the police,” the term police having reference to the good order of the town, not to the men appointed for that purpose. The term was new, it had not gone into the dictionaries, and at best a student would write of “well-policed states,” meaning well-ordered states (18 Bost. Rec. Comm., 133). Howell used a similar expression in 1642, but the word was as foreign to the people of Boston in 1786 as the terms bi-cameral or physiological psychology are today. The “inspectors of the police” were ordinary patrolmen, subject to the selectmen, by whom they were appointed. A patrolman was required to report to his superiors once a week. Of course, the arrangement failed. Patrolmen who received their instructions from any one of the nine selectmen were obliged to consult their own judgment, and free to consult their own convenience. Promptness and responsibility in administration are not compatible with committee rule. A committee means the absence of individual responsibility in administration. In addition it means delay, lack of discipline, and want of executive force.

Experience led to a change. The selectmen were authorized to “elect one suitable person to superintend the police [good order] of this town” (By-Laws of 1801, p. 33). The selectmen chose their own

chairman, Charles Bulfinch, a good man, who served from 1799 to 1817, when he was succeeded by Jeremiah Freeman. In 1820 Caleb Hayward was appointed. The "superintendent" was required to patrol the streets in person. In case the work was too much for him, the selectmen were authorized "to appoint, from time to time, such and so many assistants to the superintendent as the business of the office may be found from experience to require" (By-Laws of 1801, p. 33). This arrangement remained until Boston became a city, and the city charter vested "the administration of police" in the mayor and aldermen. The term still meant, in the language of the old ordinance, the administration of "the by-laws of the town, and the laws of the Commonwealth, which especially relate to the good order and government of this town," the purpose being that these laws and by-laws might be "carried into effect with energy and promptness" (l. c., p. 33). It took a long time to produce the modern term "police" and the establishment so designated. The Colony began with a constable; a constables' watch was added; the next step was the watch and ward as recognized by the law of 1699; in 1761 Boston was graciously permitted to hire and pay its own watchmen, the General Court claiming the right to regulate some things the General Court did not pay for; in 1786 Boston began to employ a regular day police; and in 1799 the police department was complete, if not perfect. Even the term, "superintendent of police," was revived in 1818, after it had done duty from 1799 to 1823. The Boston police department, then, is not of provincial origin. It was the first executive department to rise in Boston after Massachusetts had become a State.

THE PUBLIC SCHOOLS.

The province did not prove a great benefactor to schools. The most illustrious name in the history of the Boston town schools belongs to the Colony age. The same age boasted of three schools supported by town taxes (*7 Bost. Rec. Comm.*, 181); the visitors of 1772 reported that they found the five schools of the town to have 941 pupils, of whom 499 were in the grammar or Latin schools, and 442 in the three writing schools, which ranked with our later grammar schools. Girls and young boys were not admitted. The girls were all taught in private schools; the rudiments of reading and writing were supposed to have been picked up by the boys before they entered the town schools. Yet there was no free trade in private schools. The system of town schools

began from the top. Under the Commonwealth it was that the town of Boston admitted girls to its public schools, that primary instruction was first supplied at the public expense, and that the English high school was established for such children as wanted a practical education without preparing for college. George B. Emerson was the first master of the "English classical school," as it was called. Independence brought a certain largeness of speech that has never been wholly effaced. But the school system was made democratic. At the same time it slipped away, though gradually, from the selectmen and their successors. Today the public schools of Boston have a government of their own; the City government simply supplies the money. The government of the schools is vested in the School Committee. The first School Committee, as the term is now understood, was chosen October 20, 1789.

This School Committee is a Boston invention. Up to 1789 the selectmen had the management of the schools. In 1789 the management passed to the School Committee consisting of the nine selectmen and twelve persons chosen by the town. The School Committee was the accidental outcome of the annual committee that used to visit the schools once a year, and then dined with the selectmen at Concert or Faneuil Hall. This visiting committee was recognized by the Massachusetts school act of June 25, 1789: "No person shall be allowed to be a master or mistress of such [primary] school, or to keep the same, unless he or she shall obtain a certificate from the selectmen of such town or district where the same may be kept, or the committee appointed by such town, district or plantation, to visit their schools, as well as from a learned minister settled therein, if such there be, that he or she is a person of sober life and conversation, and well qualified to keep such school" (1 Gen. Laws, 370). Much more was required of the teachers in the high schools, then called grammar schools; and all teachers were wisely required to be citizens of this or some other of the United States. Possibly the town was not unaware of this act when it appointed a committee of twelve, one from each ward, to propose a better government of the schools. The committee reported that there ought to be seven schools, that girls ought to be admitted to the higher schools, and that the town schools should be managed by a School Committee, the latter to consist of the nine selectmen and one person from each ward. The report was adopted and carried into effect. At that time Boston had 18,000 inhabitants. No provision was made for pri-

mary schools, although the State law tolerated them, provided they were kept at private cost, and superintended by the town authorities. Primary schools were known as dames' schools, being kept by women. There were some charity schools of this kind, and the principle of free primary schools was greatly promoted by the Sunday schools, successfully introduced in Boston in 1816.

In 1817 the town schools had 2,365 pupils, of whom but 836 were girls. Yet the town had nearly 40,000 inhabitants. Beside these public schools there were one hundred and sixty-two private schools, with 1,132 children in attendance, most of them girls. The number of truants was reported at 526. As the School Committee failed to act properly, the friends of primary town schools appealed to the town meeting, and Mr. James Savage hurled this indictment at the conservatives: "All children have an equal right to the [free] schools, we know, on the following conditions, and no other, viz.: 1st, The child must be seven years old; 2d, He must be able to read in the Bible sufficiently well to keep his place in a class; 3d, He cannot be admitted after the age of fourteen, however well he can read, or however deficient he may be in writing or arithmetic." The town meeting, it is needless to say, decided in favor of establishing primary schools at the expense of the town; the School Committee, or grammar board, was ordered to appoint a committee of thirty-six, three from each ward, to carry the plan into effect; and \$5,000 was allowed for expenses. The town of Boston and its schools were enriched by this memorable vote on June 11, 1818. Twenty-five primary schools attended by about a thousand pupils were immediately established; when Boston became a city, it had the Latin School, the English classical, the Eliot, the Adams, the Franklin, the Mayhew, the Hawes, the Smith, the Boylston, and thirty-five primary schools. In 1855, when the Primary School Committee held its last meeting, and its work passed into the hands of the School Committee, there were one hundred and ninety-seven primary schools, with some twelve thousand pupils. From 1818 to 1855, then, Boston had two school committees, one for the grammar and high schools, and another, appointed by the grammar board, for the primary schools. This committee consisted finally of one hundred and ninety-nine members. Its "Annals" have been saved from oblivion by Joseph M. Wightman, Mayor of Boston in 1860 and 1861. The men of 1818, especially James Savage and Elisha Ticknor, gave Boston not only its free primary schools, but an establishment which, in connection with the higher

grades, was destined to become a government in a government, to perpetuate government by committee, and to retain public respect, while the interest entrusted to them has become a popular passion of no mean significance.

BOARD OF HEALTH.

It may be possible to reduce police matters to municipal regulation, though not without danger to the State and nation. Epidemics, quarantine, and the public health are not altogether municipal. The questions of public health that troubled Boston in the seventeenth and eighteenth centuries were essentially non-municipal, the smallpox being a frequent and cruel visitor. Yet the selectmen were the town board of health from 1630 to 1799, the Province merely offering advice in the form of penal laws. The first quarantine act passed by the Province, in 1699, had been thrown out by the privy council, as an obstruction to commerce (1 Prov. Laws, 376). The State inherited from the Province the bad habit of leaving the management of epidemics and quarantine matters with the selectmen. In 1793 the General Court passed a law to prevent the spreading of smallpox, but left the administration to the selectmen (1 Gen. Laws, 420). In 1810 vaccination was provided for; but while every town was required to have vaccination officers, vaccination itself was left to the discretion of the towns (2 Gen. Laws, 253). In 1794 a general health and quarantine act was passed by the General Court, but left matters with the selectmen, unless towns saw fit to appoint a health committee (1 Gen. Laws, 539). A supplementary act, of 1800, did not change this (2 Gen. Laws, 9). Nor is it surprising that the health laws of the eighteenth century were confined to a struggle against contagious diseases. But by 1800 Boston had become a crowded and congested town. Nearly 25,000 people were living on the old peninsula of about one square mile. The water supply was not good, the sanitary arrangements were bad.

To appreciate the sanitary condition of Boston at about 1800, it should be borne in mind that the town ended just south of the present Kendall, Arnold, and Thorndike streets; that nearly 25,000 persons were living on less than a square mile of uneven territory, with imperfect drainage, and surrounded by flats; that the streets were ill-paved and ill-swept; and that the houses were low, thus calling for more ground to spread on. Add the commerce of Boston, involving the arrival of nearly 2,000 vessels a year from all parts of the world,

and the fact that but one corporation had tried to add to the natural, but insufficient, water supply. The selectmen and their police force were unable to cope with the nuisances that endangered the public health. On February 13, 1799, therefore, the General Court passed its first law for suppressing nuisances in the town of Boston, by a board of health to be chosen by the people. On June 20, 1799, this act was replaced by another, which has made a permanent impression (2 Special Laws, 307). It provided for the election of the twelve members constituting the Board of Health, by ward meetings, to be presided over by a ward clerk (sec. 1, 21). This eliminated the selectmen from the very beginning; they could not even call the ward meetings (sec. 21). In 1813 the board of health, together with the selectmen and the overseers of the poor, were entrusted with the duty of appointing the town treasurer and collectors (4 Spec. Laws, 502).—good evidence that the board had the public confidence. The board of health was the third of the new administrative departments established since 1776, and occasioned the new institution of ward clerks and ward elections. Its powers were very great.

The board of health appointed the scavengers, who were police inspectors with great powers for ordering other persons to keep the streets clean (8 Bost. Rec. Comm., 97; 11 Bost. Rec. Comm., 325; By-Laws of 1786, 123-126). The board was required to deal with all nuisances, and was given power to invade any premises for that purpose. Its Rules and Regulations, when published, had the force of town bylaws, the penalty attached being five dollars. The board had some power in the matter of tainted provisions, and undertook to do what the ancient market department ought to have attended to (see the regulations of the board, By-Laws of 1801, 36-39). Finally, the board had full quarantine powers, and was allowed a physician of approved ability. For the payment of all necessary expenses the board of health was "authorized to draw upon the town treasurer." The town committee of accounts, however, might inspect the accounts of the board. In 1803 the power of the board of health was enlarged; it could establish a quarantine on land, by preventing all unnecessary communication with infected places (3 Sp. Laws, 211). In 1816 a new act continued and enlarged the powers conferred in 1799 (5 Spec. Laws, 137). This act is an honor to the time. The board of health was to examine into "all causes of sickness, nuisances, and sources of filth that may be injurious to the health of the inhabitants of the town of Boston." The

board had power to seize any unwholesome meat, fish, bread, vegetable, or liquor; its rules were to cover all clothing and other articles that could convey or create any sickness, whether such clothing and other articles were brought into or conveyed from the town of Boston, the penalty in this case being up to a hundred dollars; the board had full authority over all burying grounds and funerals; it was allowed a town physician and a port physician (see its excellent regulations in the By-Laws of 1818, 72-96). The city charter transferred all these powers from the board of health to the city council. In 1799 the powers of the board of health were taken away from the selectmen, who were executive officers, to be transferred, in 1822, to a compound legislative body. The evil effect was felt for fifty years.

OVERSEERS OF THE POOR.

Beside the police, the school committee, and the board of health, no new department was created by or for the town of Boston under the Commonwealth. Moreover, the board of health was unwisely abolished when Boston had become a city; the police department was created in theory only, or mainly, the expense being an obstacle in the way of maintaining an efficient police; but the school committee was to last, and to assume ever increasing importance, which is now (in 1893) greater than ever. On the other hand, the power of the venerable overseers of the poor began to crumble in the last days of the town. The overseers, whose mission was charitable, had kindly permitted themselves to look after the vicious poor, and in that way to become the instruments of reformatory, correctional, and penal work. Under the law of 1788 the overseers could discharge from the house of correction; under the law of 1798 the insane poor, properly under the charge of the overseers, were sent to the house of correction; the law of 1794 gave them special duties as to houses of ill fame; finally, the law of 1735, to which the Boston overseers appealed, when Josiah Quincy attacked them, had made them the managers of the workhouse for "the idle and poor" (1 Gen. Laws, 324, 557; 2 Prov. Laws, 757). As the town of Boston had no separate house of correction, workhouse, and almshouse, and as the overseers had charge of the almshouse, and the workhouse, and some authority in the house of correction, the poor, the idle, and the vagabonds all drifted under the care of the overseers, the latter consenting. Their colony, first in Beacon street, then in Leverett street, contained the respectable poor, with the vagabonds,

the sick, the orphans, the insane, and the outcasts. Even the jail was there.

This colony was kept together in 36 rooms; there it was fed by the overseers, who tried in vain to keep their company duly employed, the result being that the expenses of the town for the nominal relief of the poor were enormous. In 1776, for instance, the town was informed that its treasury had been drawn upon by the overseers for £3,158 11 2, while the selectmen had drawn £1,121 17 7½ (18 *Bost. Rec. Comm.*, 257). It was not uncommon for the annual drafts of the overseers to exceed those of the selectmen (l. c., 87, 135). Mr. Quincy perceived that this was misplaced generosity, and induced the town to buy the estate at South Boston now occupied by the house of correction. The estate covered some sixty acres; there the house of industry was erected, the inmates to be employed on the farm. One of the last votes of the town approved the proceeding, and the overseers of the poor were requested to deliver to the house of industry such able-bodied poor as could be put to work. The overseers resisted. When Mr. Quincy became mayor, he fought this fight to the end, and the overseers were beaten. Under the town the overseers had charge of all indoor and outdoor relief, of the insane and the workhouse; Mr. Quincy left them nothing but outdoor relief, all else being transferred to what is now (since April 21, 1890) called the department of public institutions. The theory advanced by Mr. Quincy was correct, but it was not carried into effect. His opposition to the overseers of the poor simply resulted in making two administrative departments where one would suffice. It would have been wise to separate charity, correction, and punishment; this separation was not made; it has not been completed in 1893. Mr. Quincy's *Municipal History* states his view with spirit (pp. 34-10, 88-96, 138-147). The overseers defended their course in a spirited address "To their constituents," published in 1823; but they lost their control of indoor relief. The laws of February 3, 1823 (house of industry), of June 12, 1821 (house of correction), and of March 1, 1826 (house of reformation for juvenile offenders), made this loss complete.

FINANCIAL AND MINOR CHANGES.

Under the laws of 1786 (1 *Gen. Laws*, 217, 251) the town meeting chose annually nine assessors. As they were not able to cope with the work of determining the value of taxable property for a town of more

than 25,000 inhabitants, the General Court, in 1802, authorized each of the twelve wards to choose annually two assistant assessors, who elected the three principal assessors (3 Spec. Laws, 5). This arrangement answered the purpose, and incidentally strengthened the practice of ward elections, in the place of overcrowded town elections at Faneuil Hall. The assistant assessors and the board of health were chosen on the same day, the ward meetings for that purpose being held on the first Wednesday in April. The financial year, like the tax year, began on the first day of May. This date was found the most convenient. In 1822 a change was attempted, but proved inconvenient (Quincy, *Mun. Hist.*, 46); a second change was made by the ordinance of March 21, 1891. But the tax year continues to begin on May 1, as in the days when Boston was a town. The act creating assistant assessors provided that the town treasurer, chosen in town meeting, should be the collector of taxes. In 1813 the selectmen, the overseers of the poor, and the board of health were authorized to choose the town treasurer and the collectors (4 Spec. Laws, 502). The same officers, thirty-three in all, had been authorized in 1812 to superintend the finances of the town, and were called the committee of finance (*By-Laws of 1818*, p. 4). The city charter transferred the election of the city treasurer to the mayor and aldermen, but the assessment and collection of taxes to the discretion of the city council—good evidence that the charter was not a thoroughly well-considered instrument. The town had ordered as early as 1786 that at every town vote involving money the vote should be counted, and that reconsideration should not be allowed, unless demanded by at least the same number of voters (*By-Laws of 1786*, p. 84). This prevented undue haste, and worked well.

Regular committees audited the accounts of the town treasurer, and submitted town budgets. Before the close of the eighteenth century the accounts of the town were annually published, at first in the form of broadsides. In 1811 a detailed account of expenses and town property was begun in pamphlet form. In 1812 this duty was assigned to the committee on finance, consisting of the nine selectmen, the twelve overseers of the poor, and the twelve members of the board of health, and when the office of city auditor was established, in 1824, he continued the series of reports begun by the finance committee of the town, his first report being the thirteenth in the series. Indeed, no suspicion attaches to the financial transactions of the town and its officers. The town was equally fortunate in the orders it issued. To prevent block-

ades in the principal street of the town, now Washington street, all teams were required more than a century ago to drive on the east side of the street when going north, and on the west side when going south, under a fine of ten shillings for every offense (By-Laws of 1786, p. 11). The Province system of fire companies was continued, but the selectmen were allowed in 1785 to appoint eighteen men for every engine, and in 1801 the number was increased to twenty-four men. The "Cataract," or number 11, was allowed forty men. The men attached to each engine chose their own captains, and made their own rules (By-Laws of 1818, pp. 150-154). In a case of fire the twenty-four firewards took control, if disorder can be called control. Nor was the later volunteer system an improvement equal to the occasion, though Mayor Quincy boasted in 1828 that he had twelve hundred firemen to fight the enemy of the town. The truth is, the town had not the money to pay for a good police, a good fire service, good water, good sewers, and good streets.

PLANS FOR A CITY IN 1784.

The change from town to city was taken with great reluctance. It was thought best to amend the State Constitution, in order to dispel all doubt about a city charter the General Court might grant. This amendment, proposed by the constitutional convention of 1820, was ratified by a very small majority of the voters, but it was ratified and still stands. It authorizes the General Court to give a city constitution to such towns as have at least twelve thousand inhabitants, provided such towns make formal application and give due consent (art. 2 of the Amendments). This amendment did not take effect until 1821, but prepared public opinion for the change impending in Boston. In the Colony and the Province the mere suggestion of such a change was rejected by the town meeting. Under the Commonwealth formal plans for the transition from the town organization, which is simple democracy, to a city, which is representative democracy, were submitted in 1781, in 1792, in 1804, and in 1815. They were all rejected, and fortunate it is they were rejected. The constitutions of the State and the United States supplied good precedents for a city charter; these precedents were not mentioned. Yet the government of a city cannot be wholly unlike that of a State or the nation. The essential part, as far as the constitution of either is concerned, is the extent and the proper distribution of the power to be vested in the government. The Con-



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stitution of Massachusetts had laid down the ideal principle as to the distribution of power in a free government (Declaration of Rights, art. 30). When the charter of Boston was drawn up, the learned jurists looked to the town they would and would not abandon, and never to the State or the nation which had shown how to organise democracy, through representative institutions, in a free and efficient government. The lesson of the Articles of Confederation of 1777 had been forgotten.

The several plans for a city charter, submitted to the town meeting from 1784 to 1821, are still extant, but have very little save antiquarian or pathological interest. The committee of 1784, which included Samuel Adams, William Tudor, James Sullivan, and Thomas Dawes, submitted two plans, one of them an adaptation of the old New-York charter, as if the world had not advanced since King George II. The town meeting ordered the "Two Plans" printed and distributed, and at a later meeting rejected the schemes tumultuously (Quincy, *Mun. Hist.*, 22-24; H. H. Sprague, *City Government in Boston*, 10-11). The first plan contemplated four annual elections by the people, two to be held in March, beside general meetings. The people were to meet for certain purposes in wards, for other purposes at Faneuil Hall. In a word, the simple arrangement of the town meeting was to be replaced by a complicated system. The government was to be vested in a corporation called "The Mayor, Aldermen, and Common Council of the City of Boston, in the Commonwealth of Massachusetts." The corporation was to be divided against itself, the mayor, recorder, and twenty-four councilmen to constitute the common council, but no common-council meeting to be legal, unless the aldermen were present. The mayor, recorder, twelve aldermen, and twenty-four councilmen were to make the ordinances; the mayor, recorder, and twenty-four councilmen were to raise the money for the use of the city; but only the mayor and aldermen were to appropriate and expend it. There was to be a town clerk, but the recorder was not to be that person; he was to tell the corporation of thirty-eight persons what each division could lawfully do. The second plan proposed that the corporation consist of the president and eighteen selectmen, one-third of the latter to be chosen by the people at large in a general meeting, and the remaining twelve selectmen by wards on the next day. No checks and balances were provided, and the corporation of nineteen was to tax and expend taxes at pleasure. This plan was rejected because the people understood it

too well; the other plan because nobody could understand it. The town was not prepared to transfer its whole government to an irresponsible committee of nineteen; neither would the town accept a common council of thirty-eight for one purpose, of twenty-six for another, while the power of appropriating and expending money, and of appointing city officers, was vested in the mayor and aldermen who were part of the common council, but voted only on certain topics. The wonder is, not that the plans were rejected, but that men of standing and reputation proposed them. The administration of justice and the onerous dependence on the county justices were not touched in the plans of 1781; the legislative and executive powers of the government were neither separated nor even defined; government by committee was to be made permanent; no appreciable relief or gain was offered to the voters and taxpayers. How could they help rejecting the plans? The rejection took place on June 17, 1781, and was complete.

TOWNSHIPS AND CITIES.

In 1785 a committee including Adams, Tudor, Sullivan, and Dawes, of the committee of 1781, reported that the constitution of the town was perfect, thus justifying the rejection of the previous plans (Sprague, *l. c.*, 12). On March 23, 1786, the General Court passed its general town act, declaring "the inhabitants of every town within this government . . . to be a body politic and corporate" (1 Gen. Laws, 250). The statement, therefore, that "the town of Boston was never formally incorporated" (Sprague, 6), is not entirely correct. The act of 1786 replaced the general town act of 1692 (1 Prov. Laws, 61), and this took the place of the memorable Colony act passed in 1635-36 (1 Mass. Rec., 172). These three acts are the ancient charters of the Massachusetts town, and as such have permanent interest. Without them it is difficult to understand the constitution of these towns, even at the present time. But it is significant that the rights and duties of a town or its selectmen have never been enumerated, and that towns generally may do anything not expressly prohibited by the General Court, or since 1789, by the law of the United States. The powers not delegated to the United States are certainly reserved to the States or the people. In Massachusetts the State has enumerated powers, and the State Constitution does not vainly enumerate and reserve the rights remaining with the people and not delegated. The declaration of rights is almost profuse in affirming the rights remaining with "the people," a term

used as freely as the term "town" is used in the frame of government. It is not unreasonable, then, to conclude that the people certainly have many reserved rights, and that they are free to exercise these rights in their corporate capacity as towns. The General Court can establish and abolish towns, but not wholly without their consent; it cannot prohibit town meetings (decl. of rights, art. 19), and it cannot annul a lawful contract (U. S. Const., art. 1, sec. 10). It cannot prevent the people from organising themselves for public purposes, from taxing themselves, from changing their government, and from treating all government as an agent of the people to whom it is responsible (decl. of rights, art. 5, 7). In their town meetings the men of Massachusetts could exercise the rights justly dear to them as freemen and as members of organised society. There they exerted their powers directly and visibly; there they could speak their minds; there they could join with their neighbors in ordaining what should be, or what should not be. It was in the town meeting and by the town meeting that the local aristocracy had become democratic, and that the American principle of equal rights and equal duties had been established. The people of Boston might exchange this government, with its many reserved and prescriptive rights, for something better; but the town meeting would not abdicate in favor of a committee, which it had been in the habit of creating and discharging at pleasure. The town might be disposed to delegate a part of its power temporarily to one set of agents, another part to another set of agents; it would not retire in favor of an annual committee. The town would accept greater power; it would not resign the power it had. The Boston men feared that the establishment of a city meant the loss of town rights; the neighbors of Boston feared that a city meant an increase in Boston rights, to the detriment of the neighbors.

In 1792 the town discussed the melioration of its government as proposed by a committee of twenty-one, including James Sullivan, William Tudor, Christopher Gore, John Quincy Adams, and Charles Bulfinch. They proposed a town council of twenty-seven, the nine selectmen to be chosen on a general ticket, and the remaining eighteen in the nine wards to be established. This town council was to make bylaws, and to choose a town attorney for prosecuting their violation. A special court was to be established for these causes. The town did not take kindly to this notion. The average voter does not naturally like a prosecuting attorney, and the idea of a town attorney to prosecute all

violations of town ordinances was not acceptable. The town would elect a number of officers; but the legislative and executive power was vested in the town council. That was more than the town meeting could bear, and, greatly to the surprise of John Quincy Adams and young Harrison Gray Otis, the whole scheme was rejected after full and fair consideration. Mr. Adams was disgusted with "simple democracy." Yet what could have induced the town to transfer the power of the town meeting to a committee of twenty-seven? To establish this committee, the people were required to have a general election and an election by wards, and the committee so elected was to unite legislative, executive, and prosecuting powers. The men who finally rejected the scheme have not been praised (Sprague, 12-11); but was it right, was it prudent, was it American, to vest nearly the whole power of the town in one unwieldy and irresponsible committee? Had not the Confederation illustrated the efficiency of committees that legislated and executed, nobody in particular being responsible for failures? The superiority of an annual committee over a temporary committee was not conceded. So the attempt of 1791-2 fell through, on January 26, 1792 (Quincy, *Mun. Hist.*, 25).

THE PLAN OF 1804

In 1804 the town ordered a constitutional convention. The members were chosen in wards, that system having been introduced in 1799. The convention included James Sullivan, James Prince, John Davis, and Harrison Gray Otis, but none of the town officers that knew best where the shoe pinched. The convention met in Faneuil Hall, and was charged to propose whatever changes might be necessary in the town and county government. The work of the convention was prepared by a committee of the gentlemen named, with R. G. Amory and Charles Jarvis added. The convention finally proposed a town council of thirty-three or thirty-four, to consist of nine selectmen chosen at large, of twenty-four delegates chosen two by each ward, and of the Intendant, to be chosen by the thirty three from among themselves or from the people at large. This title was borrowed from Charleston, S.C. The intendant was to preside at the town council, which made the bylaws, ordered taxes, appropriated money, and, strange to say, was to prosecute all suits in which the town might be a party. Lest this legislative body lack executive power, it was to manage all town property and to "give deeds in their name and behalf." The selectmen

were to expend the money not spent by the town council, the board of health, the overseers of the poor, or other town officers. The latter were to be appointed by the town council, except that the intendant was to appoint "the police officer" [sic]. The intendant was to preside at the meetings of the school committee, the selectmen, and the town council, and, worst of all, he was to appoint a regular time and place "to receive the complaints and representations of individuals." There he was to attend "daily." He was to have a salary, and would have earned it.

The convention—famous as the only constitutional convention ever held by the town—recommended "that suitable measures be taken to render the town of Boston a county," the town council to be the heir of the court of sessions, whose judicial work had been transferred to the municipal court. The reason why the selectmen were retained, is not clear, except that in managing his police officer the intendant was to have "the concurrence of the selectmen." But they were to be surveyors of highways. To produce the town council, at least two elections were required. As for the intendant, the town would be unable to see why he should not be elected by the people. If he was to be the head of the town, though only in name, the town would never permit him to be chosen by the town council, which was altogether overloaded with legislative and executive duties, and was to have more, should the court of sessions be abolished. Still the convention showed a certain improvement upon all previous attempts: it tried to regulate the town finances, it proposed to unite the town and county, and it undertook to give the town a visible head. The chairman of the selectmen was simply the parliamentary chairman of a board with undefined powers and rights. The town meeting was retained, but it was shorn of power. Then why retain it? the town meeting might ask. Plain men have a keen eye to the difference between shadow and substance. The people were less partial to the name of town, town meeting, or selectman, than to the power they knew so well how to exercise through these agencies. The people desired this exercise of power, and they were not prepared to transfer the whole power of the town to a standing committee they could not control. Nor are the plain men ever wholly wrong in their conclusions and judgments. The scheme of 1804 was laid before the town on March 12, and was not accepted. The people might distribute power, as they did in town meeting; they would not transfer all power to one body however representative.

THE REHASH OF 1815

The plan of 1801, somewhat modified, was again proposed in 1815, when certain members of the town government had failed to be re-elected, and gentlemen felt that town government was a failure (Quincy, *Mun. Hist.*, 26). Charles Bulfinch, who had been defeated, was chairman of the selectmen, received a salary, and was superintendent of police. Such men are apt to lose in popular elections. Nor does it appear why town government was a failure when certain good officers were thrown out. The town appointed a large and influential committee to report on the expediency of changing the municipal constitution. The committee included Jacob Rhodes, Redford Webster, and George Blake, who had served in the convention of 1801. Among the new members were John Phillips and Josiah Quincy, both destined to serve the city of Boston as mayors. The report of the committee is amusing, and the draft of the charter they submitted an echo of 1801. The convention had proposed a plain town council; the gentlemen 1815 proposed to call it "The Intendant and Municipality of the Town and City of Boston," adding that the term "town" was "absolutely indispensable" because it stood in the State Constitution; that Boston should be called a city because "this name has an effect to raise the rank of a place in the estimation of foreigners;" and that the head of the city-town should be called intendant because that term was used in Charleston, South Carolina, "implying the duties which he is to execute." The convention of 1801 had proposed that the intendant should be removable by three quarters of the town council so voting. The committee of 1815 omitted this bit of pleasantry. They gave him a voice at least in the management of town property, and treated the selectmen with some respect. All money not expended by the board of health or the overseers of the poor was to be expended by the selectmen, but only upon appropriations made by the municipality, which was to consist, apparently, of the intendant, the nine selectmen, and the twenty-four delegates combined.

The school committee and the county justices were treated with slender respect, and it was provided that "the town and city of Boston shall hereafter be a county." But the thirty-three or thirty-four members of the municipality were to appoint three justices of a police court, and "care shall be taken that all the justices of the county shall be taken in succession quarterly, if they shall express their consent to act as justices of said court." The same municipality was to appoint the

clerk of this police court. Possibly as a bid for votes the committee proposed that the municipality should "grant to any association of artists, artificers, or mechanics, such power of regulating themselves in their several occupations, and of possessing such immunities, and imposing such restrictions, as the said municipality shall consider for the benefit of the community and for the encouragement of industry." The chief executive of the town was to be chosen by a convention of the nine selectmen, the twenty-four delegates, the twelve overseers of the poor, and the twelve members of the board of health. The selectmen, overseers, and board of health, acting under the law of 1813, chose the town treasurer and collectors; this power the committee proposed to transfer to their municipality. But the most brilliant passage of their report is this: "The executive power efficiently exists at present in a superintendent of police, who is chosen by the selectmen out of their own body, and receiving a salary dependent upon their discretion, and responsible solely to them." The committee appears to have thought that the executive work of the town consisted in the duties discharged by the head policeman. Yet Josiah Quincy, who fancied himself a champion of the town meeting, would not trust the same town meeting to appoint a superintendent of police. The real executive work of the town-city was to be done by the thirty-three selectmen and delegates, the intendant to be the figure head, while the inevitable committees would use their best judgment in managing matters.

The constitutional reasoning offered by the report is astonishing. The report states correctly that the chief executive of the city-town should not be vested with judiciary powers [be the judge of the police court?], because in that case he would have to be appointed by the governor. Then the report proposes a police court of three justices selected by the city-town in quarter-yearly rotation, and "acting under the authority of the government of the town." The State Constitution said, and still says: "All judicial officers . . . shall be nominated and appointed by the governor, by and with the advice and consent of the council," and Mr. Phillips, who signed the report, was president of the State senate. As the State Constitution contained the words "town" and "selectmen," the committee concluded bravely that "a board of selectmen is rendered necessary, by the letter of the Constitution, in every town in this Commonwealth." By a like train of thinking the terms "town" and "town clerk" were offered as "absolutely

indispensable," being "made so essential by the provisions of the State Constitution," which mentioned the terms just as it happens to mention "subjects," meaning citizens. The report tried to draw a line between executive and judiciary powers, though it treated justices of the peace and the police court as executive agencies. The obvious line between executive and legislative work was not drawn, partly, perhaps, because town affairs had always been conducted by committees, the members of which took part in town meeting; and it seemed natural that the men who had voted the money should expend it. The ideal that runs through all these committee reports is a town government containing none but able, honest and thrifty men, with a predominance of persons that have attended at least a highschool, and occupy some social position. The class of inhabitants that had neither wealth nor education nor influence to boast of, took a different view. They knew that they were not drones in the body politic or the body social, and that power belongs to him that fairly takes it. The report of 1815 was treated kindly by the town, which rejected it by a vote of 951 to 920. About one person in twenty saw fit to vote. The liberties of the town were saved.

FROM TOWN TO CITY

On June 5, 1821, the governor of Massachusetts announced that the General Court, under the second amendment of the Constitution, might incorporate cities. The people had approved the amendment with special reference to Boston, although it applied also to Salem which had the requisite 12,000 inhabitants. The amendment was carried by a very small majority, but it was carried, and prepared the public mind for the impending change. If the General Court could incorporate towns, it could incorporate cities; but the law lights of the Commonwealth thought the amendment desirable. In the same month—June, 1821—the Boston town meeting proposed to unite the office of town and county treasurer. The finance committee, which elected the town treasurer under the authority of ch. 62, Acts of 1813, failed to comply with the request of the town, for the county treasurer was elected by the people. This petty incident led the town to insist upon its preference, and to reconsider the relations of the town to the county. As usual when there is discontent, the cry of extravagance was raised. The fact is, the county expenses were moderate, but the county authorities were unpopular, mainly because most of them were Bostonians

appointed by the governor, and lived on fees and litigation. As the town was virtually the county, it seemed inconsistent with self-government that the acts of the town should be revised and occasionally set aside by a few townsmen whom the governor had commissioned. In due course the town received two reports, on the union of the town and county treasurer, and on making Boston a county. The two reports were turned over to a committee of thirteen, with instructions to report a plan for a better town and county government. Clearly the town was ready to act. It was ready to escape, if possible, from all county bondage.

The committee, as usual under the town, when important affairs were in hand, included great names: John Phillips, for years president of the Massachusetts senate, and destined to be the first mayor of Boston; Josiah Quincy, the speaker of the house, and deeply interested in Boston affairs, destined to be the great mayor; Lemuel Shaw, who had been selectman, and was to be chief justice; and Daniel Webster. The committee report was considered by the town on December 10, and re-committed. The report, commonly attributed to Lemuel Shaw, recommended the union of the town and county, and for the rest hoped that all powers of the town and county might be vested in a town council of nine selectmen and "about forty" assistants, except that the town clerk, the board of health, the overseers of the poor, the assessors, the firewards, the school committee, and some fifty petty officers should be chosen by the people, and,—which is important,—that the court of sessions be abolished, its executive duties to go to the town, while the judiciary work of the court and its members was to be vested in salaried law courts. The report appeared to separate the judiciary from the other branches, but, while leaving the town to choose annually some hundred and twenty town officers, not counting ward officers and State or national representatives, the executive and legislative work of the town and county was to be done by nine selectmen and forty assistants, without an executive head, that is, without responsibility. Boston, at that time, had about 45,000 inhabitants. The committee allowed one assistant to every nine hundred, and concluded that the total number of assistants would be "about forty." The town concluded that the committee had not gone far enough, added twelve men, and instructed this committee of twenty-five to draft a city charter.

The report so called for was submitted on December 31, and led to a memorable debate. The debate lasted three days, and ended in the

adoption of the terms mayor, aldermen, and common council, where the committee had proposed intendant, selectmen, and assistants; but far more important was the adoption of the principle that the executive power of the town and county was not to be in the hands of one body; it was to be divided; there was to be a system of checks and balances. The report had wisely proposed that the judiciary be separated from the other branches; the remaining power was to be distributed, lest any one branch wield too much power. This was achieved by the democracy of the town meeting. The plain men felt that the town gained when it inherited all the administrative work of the county; the plain men felt, also, that it was better to divide and distribute the administrative and legislative power of the town than to lodge it in any one body. The committee had proposed that the selectmen, now reduced to seven, should elect the "intendant;" the town voted that the mayor be chosen by the people. With like intelligence the plain men insisted upon elections by wards, and that the city government should not have the right to sell the common or "Funnel Hall." On the whole, the people showed greater progress and better insight than did the gentlemen who fought so tenderly for leaving things more or less as they were. It was the honor of the lawyers to have separated the judiciary from all other work. Nobody thought of separating executive and legislative work; everybody appeared to think that the mayor and aldermen were the executive body, while the city council was to be the town legislature that passed ordinances and made appropriations. The consequences of this confusion were to be felt for more than sixty years of administration by committee.

The result of the debate begun on December 31, 1821, was submitted to a popular vote on January 7, 1822. The people voted almost unanimously that Boston be a county, and, by a vote of 2,805 yeas to 2,006 nays, that the report for changing the town to a city, as adopted in town meeting, be approved and carried into effect. The act of the General Court was approved on February 23; on March 4 it was accepted by a popular vote of 2,797 yeas, to 1,881 nays, about one person in ten voting. On April 8 the first city election was held. Josiah Quincy describes the change from personal knowledge. Mr. H. H. Sprague (pp. 18-31) gives additional details. It is difficult to exaggerate the services the town officers had rendered, especially the selectmen who were not consulted when a city charter was under consideration. Under the Colony the selectmen had been administrative, legislative,

and semi-judicial officers in one; under the Province all their judiciary and many of their administrative duties had been lost to the county justices; the management of many important affairs had been transferred, both under the Province and especially under the Commonwealth, to other town officers; yet they had served faithfully and without compensation, except that their chairman received a salary when he became superintendent of police. The selectmen, the overseers, and the board of health had free access to the town treasury; their acts were never suspected. They had the power to incur debts; they left the town without a debt; the city inherited from the county a debt of \$71,185.

The volume of By-Laws published by the selectmen of 1818, possibly the compilation of Thomas Clark, the town clerk, illustrates the fidelity and insight of the selectmen, and presents a matchless picture of the town government. No later attempt has equal value. The city has published many ambitious volumes; but only the code of 1818 undertakes to cover the whole field of local government. And that attempt is almost silent as to schools. It enumerates the 112 officers chosen annually in town meeting; also the officers appointed by the selectmen. It shows how each ward elected a member of the board of health, two assessors of taxes, and a ward clerk, and how the board of health together with the overseers and selectmen elected the town treasurer and collectors of taxes. In the place of this army the citizens of Boston, qualified as the amended State Constitution prescribed, were to choose one mayor and eight aldermen at large; in each ward four councilmen, one member of the school committee, one overseer of the poor, not less than three firewards, and the ward officers. All other officers were to be appointed by the city government. The town and county finances, managed by two treasurers and at least four conflicting boards, were united and transferred to the city government. The ordinances of the city were not subject to the veto power exercised by justices of the peace. The city was to have a representative head, and the powers formerly exercised by the town meeting were distributed among two bodies, each having the negative upon the other. The town, then, made a great gain in power; this power was not vested in any one body, but distributed; the constitution was simplified; a system of accountability was made possible; and the individual citizen was relieved. Under the town he had to elect more officers than he could possibly know, and to attend more meetings than was reasonable. Under the city he was

to attend to all local affairs in one election. The town had gained; the citizen had gained; the government had gained; and the liberties of Boston were increased beyond those of any other community in Massachusetts. This very striking advantage was secured by the plain men of Boston who did not reason closely upon constitutional principles, but knew very well whether popular rights were to be increased or diminished. Much is due to the learned and highminded men that drafted the charter; more is due to the town meeting that stood for popular rights. All honor to the reforms that come from the intellectual and scholarly few; the noblest reforms come from the plain people.

THE CITY PERIOD, 1822 TO 1890.

The chief source for a constitutional history of the city is to be found in the Acts of the General Court. A complete set of these laws is not common; nor is there a general index. Up to 1831 the General Court usually met twice a year. The general laws have been digested in three several codes, the Revised Statutes, passed November 1, 1835; the General Statutes, passed December 28, 1859; and the Public Statutes, passed November 19, 1881. The special statutes passed by the Commonwealth have been printed in a separate set, under the authority of the State; but the set is not absolutely complete. The city of Boston has repeatedly tried to make a code of all laws and ordinances applicable to the municipality. Such codes were issued in 1827, 1831, 1850, 1861, 1869, and 1876. The compilations of 1827 and of 1850 are interesting as illustrating the government of the city under the first charter; the compilation of 1861, with its several supplements, is relatively complete; and the compilation of 1876, being the work of James M. Bugbee, is valuable. A purely historical treatment of the laws, ordinances, regulations, and orders of the city government is a desideratum. The city published in 1860 the *Annals of the Boston Primary School Committee*, by Joseph M. Wightman, covering the government of the lower schools from 1818 to 1855. A "Manual for the use of the Overseers of the Poor" appeared in 1866. Private enterprise has undertaken a history of the Boston fire department. And some of the executive departments have begun to publish the law by which they are governed. The city ordinances have been issued, in separate digests, in 1883, 1885, 1890, and 1892, with the Regulations of the Board of Aldermen added. In 1885 the law department of the city issued a volume of special statutes relating to Boston; an enlarged edition, with

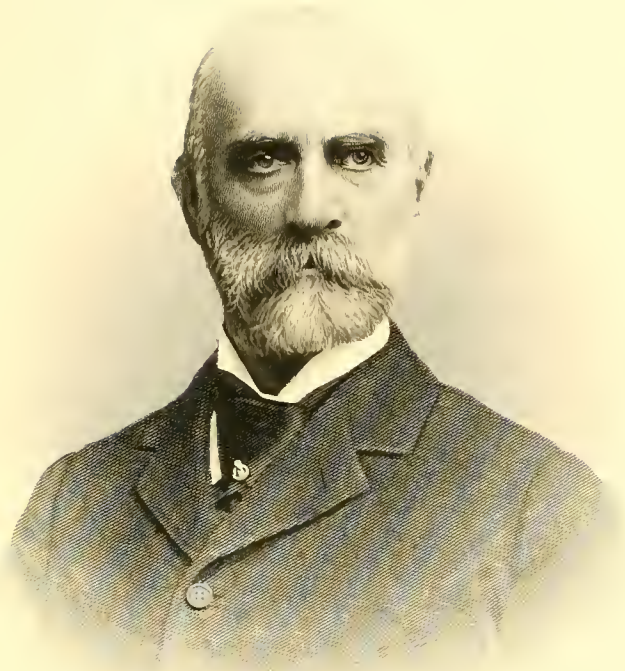
"extracts from the Public Statutes," appeared in 1887; a third edition, entitled "Special Statutes relating to the City of Boston," and omitting the general laws, appeared in 1892, but is not complete. Much information is scattered through the "City Documents," the titles of which are digested in an index. The documents mentioned under the entry of "charter" are important. Charter digests appear in the city codes, up to 1876, also in document 28 of the year 1875, in a pamphlet published by the city in 1886, and in the Municipal Register, published annually since 1841. All these digests should be used with reserve. Quincy's Municipal History is a brilliant account of the author's administration, from 1823 to 1828. Mr. James M. Bugbee, in 1887, and Mr. H. H. Sprague, in 1890, published brief reviews of the Boston government from the beginning. In 1891 the Record Commissioners published a Catalogue of the past City governments.

AREA AND POPULATION.

The area of Boston was smallest from 1739, when Chelsea was set off, to 1804, when South Boston was annexed. The area of the city was enlarged by encroachments upon the surrounding water, especially in the South and Back Bays, by the annexation of Roxbury in 1868, of Dorchester in 1870, of West Roxbury in 1874, all these being transferred from Norfolk County, and by the annexation of Charlestown and Brighton in 1874, these two being transferred from Middlesex County. Including the harbor islands, the area of the city is nearly forty square miles; the original peninsula, north of Dover street, was less than five hundred acres. The population of Boston, in 1820, was 43,298; in 1890 it had risen to 448,177, the original peninsula, enlarged by encroachments upon tide water, containing 161,330, while 287,147 lived on annexed territory, including East Boston, the harbor islands, and South Boston. Suffolk County, which had 43,940 inhabitants in 1820, rose to 484,780 in 1890. Its area was smallest from 1803 to 1804. The annexations of 1874 made it the most populous county in Massachusetts. The city and the county are one; the city holds all property of Suffolk County; the voice of Chelsea, Revere, and Winthrop in Suffolk-County matters is insignificant; the dreams of 1650 and 1677 have been realised; Boston is the only municipality in Massachusetts not subject to a separate body of county commissioners; it is not surpassed for municipal spirit; and yet the great city has not become a homogeneous community. East Boston and West Roxbury have a city gov-

ernment in common, but little else that they have not in common with other cities or towns. The law of 1885 made the city a monarchy; but even a great monarch in this democratic land cannot master the reasonable ambition of so composite a community. Local ambition has achieved magnitude. Has it achieved municipal greatness? Has it magnified self-government? In 1845 it was thought that foreign immigration destroyed or impaired the unity of Boston. In the fifties this sentiment swept through the State; and yet the foreign immigrant should not be blamed when Brighton and East Boston are commonly spoken of as separate communities. Boston made its greatest gains in self-government before it covered thirty seven square miles. After the great annexation it has been governed mainly by State law, and since 1885 the General Court is the chief legislature of Boston; the mayor the executive officer chiefly of State-House law. The ordinances of the city, since 1885, have been comparatively insignificant. Boston has become large; but it consists of the city proper, with a half-dozen thrifty suburbs mechanically attached to the metropolis. These suburbs have gained by annexation, the old peninsula has not. Once it had to satisfy only its own local wants; now it has to provide for a family enlarged by hopeful agreement. Yet the old peninsula, up to the Roxbury line, contains two-thirds of all the property taxed by the city.

Of the Boston population roughly one third is foreign born; another third is of foreign parentage. In 1845 it was noticed that only 27 per cent. of the population was born in Boston of American parents, and that "foreigners and their children" constituted nearly one-third of our population. Persons interested in such subjects will find Lemuel Shattuck's Census of Boston for 1845 interesting, and may consult Carroll D. Wright's digest of the Boston census for 1880. The national census of 1890 promises the latest details. The admirable State Census of 1885 gives luminous details as to the parent nativity of our population. These writers all show how largely our population has been recruited from Ireland and British North America, and, to the thinking mind, how rapidly this immigrant element is either amalgamated or lost. A great city seems to be the cemetery of the country, and America seems to be the cemetery of foreign nations. What survives helps to make up the American nation, without visibly affecting our inherited laws, institutions or language. These appear to be stronger than all influences from without. And even the humble immigrant



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comes here very much as did the fathers we honor,—to improve his condition, not to upset the law and order to which he looks for encouragement. This immigration is governed by natural causes. It was slight while Boston was a commercial city; it became noticeable when we had occasion to build canals, turnpikes, and especially factories. In 1822, when Boston became a city, the art of Macadam was not generally known; illuminating gas did not light the streets of Boston; steamboats had been seen, but were not trusted; our first railway track was laid in 1826, at Quincy; our passenger railways belong to 1834 and later years; the first ocean steamer, the "Britannia," arrived in 1840; our first line of street railways was opened in 1856; we had our last riot in 1863; the elevator in our city hall was built in 1871; the first message by the electric telegraph was sent by Morse in 1814; in 1846 the telegraph connected Boston with Springfield; the telephone came in 1877; the city introduced electric lights in 1882; electricity as a motor in our streets was accepted by the city in 1889. The number of tippling-shops in Boston is not any larger in 1892 than it was in 1822. On the whole, then, immigration has not checked progress, and perhaps it has supplied some of the hard work that had to be done to build our sewers, streets, canals, railways, and waterworks, and to carry out the plans of more enterprising minds. These minds have more enterprises than there are hands to carry them out, and the whole world has more work to do than there are men ready to do it. Boston would be a small city but for fresh blood from the country, and New England would have lost its people in good part to the great West, had not foreign immigration supplied the places left vacant by our own emigrant who sought to improve his condition beyond the Alleghanies. But the character of New England and Massachusetts and Boston has not suffered. The census of 1885 tells us that of the Boston population ten years of age and older, seven per cent. was illiterate. That fact is due to immigrants. But they have neither made nor marred the laws that govern the city.

THE CITY AND THE COUNTY.

In accepting the city charter the people of Boston accepted also the Act of 23 February, 1822, for regulating the administration of justice in Suffolk County. This interesting act, known as ch. 109 of 1821, formed part of the charter, with which it was to stand or fall. Without this act the charter is incomplete. Its effect is still felt. It drew a

sharp line between the administration of Justice and all other work of the city and county. It relieved the law courts of all administrative work, which was assigned to the board of mayor and aldermen, and it abolished the veto power the ancient court of sessions had exercised since 1699 over all bylaws passed by the town. The administration of justice was kept by the State; the executive power of the county was transferred to the city, and by the Act of February 10, 1823, the city council was empowered to lay and assess county taxes (1821, ch. 109, s. 13; ch. 110, s. 15; 1822, ch. 85). The town of Chelsea, beside Boston the only town in Suffolk County from 1803 to 1846, was relieved of all county taxes, and of all ownership in the property of Suffolk County in 1831 (1831, ch. 65, accepted by Chelsea Sept. 5, 1831). But Boston supplies all Suffolk county, now consisting of the cities of Boston (since 1822) and Chelsea (since 1851), and the towns of Revere (set off in 1846 as North Chelsea, named Revere in 1874) and Winthrop (since 1852, when it was set off from North Chelsea), with county buildings, and pays all expenses of Suffolk County, except that Chelsea, Revere and Winthrop pay for such services as they may accept from the county commissioners of Middlesex acting in the three communities named (Publ. Stat., 205).

By a fiction Boston became virtually a county. Under another fiction Chelsea, Revere, and Winthrop remain in Suffolk county, and vote for certain officers of Suffolk county, such as the district attorney, three clerks of the Supreme and Superior courts for Suffolk county, the register of probate, the register of deeds, the commissioners of insolvency, and the sheriff, though all these officers are paid by the city of Boston. At the same time the people of Chelsea, Revere and Winthrop vote for the county and special commissioners of Middlesex, who have one kind of jurisdiction in Chelsea (1872, ch. 87), and another in Revere and Winthrop (1893, ch. 117, s. 255). The East-Boston District Court has jurisdiction of Winthrop (1886, ch. 15), and the Police Court at Chelsea has jurisdiction in Revere, but both courts are a charge upon the city of Boston, while the justices and clerks of these courts are appointed by the State. The Boston city charters of 1822 and 1851 contemplated that Boston should become a county in fact (1821, ch. 110, 15; 1851, ch. 148, s. 38); and the law of 1831 debarred Boston from opposition, should Chelsea, since then divided into one city and two towns, request to be set off to "any other county." But why should Chelsea, Revere and Winthrop ask for such a transfer, when Boston

pays their county expenses, and they vote for county officers in both Suffolk and Middlesex? The Superior Court for Suffolk County, the Municipal Court of the City of Boston, the East-Boston District Court, the municipal court for the Charlestown district, and the municipal court of the South-Boston district, moreover, have concurrent criminal jurisdiction over a part of Hingham and over Hull (set off from Suffolk to Plymouth county in 1803), and over the islands in the lower harbor, as well as over a large water area (Publ. St., 202, 409, 856). By implication this jurisdiction is held to extend, in a measure, to the Boston police force, which is an executive body (Rules and Reg. of Police Department, 1889, p. 12).

The jurisdiction of Boston includes the harbor as far as Lovell's island; a certain joint jurisdiction goes farther, and includes a part of Plymouth county. Chelsea, Revere and Winthrop, on the other hand, are nominally in Suffolk county, but virtually in Middlesex county as well. The jurisdiction of the lower law courts is concurrent along the boundary lines of their respective districts (Publ. St., ch. 154, s. 50); and where the counties of Suffolk and Middlesex are separated by the Charles river, the counties have concurrent jurisdiction over the river (1794, ch. 31; Publ. St., ch. 22, s. 11). The rights and duties of Suffolk county, then, are extremely complicated, and not always clearly defined. But Boston alone among all the municipalities in the Commonwealth exercises all the powers a county and city can exercise in Massachusetts; and this advantage was obtained by the two acts of 1822, which made Boston a city. No other city in the State has like advantages. Boston had fought for this unique position in Colony and Province times, and from the very beginning it had shown generous hospitality to the government offices of Massachusetts. This hospitality continues; for the court house of Suffolk county is maintained by the city of Boston and is the home of the Supreme Court for the Commonwealth. Accordingly the proud capital still repays the privilege conferred upon it in 1822. It has always been the capital, and it has never failed to discharge the duties of a capital. Some of these duties it has discharged with munificence, and since 1822 it has not asked for favors.

ADMINISTRATION OF JUSTICE.

The reason why the administration of justice, during the later years of the town, was so unsatisfactory, is twofold. In the first place, the

justices of the peace could not command public confidence; their courts were almost private, and they lived on fees. Far more serious and annoying was the fact that the court of sessions, which consisted of justices of the peace, had large administrative powers, especially in county matters. This was remedied by the act of 1822 (1821, ch. 109). The police court then established consisted of three competent judges, who inherited the criminal jurisdiction of the sessions and the justices of the peace, and also, as a justices' court, the entire civil jurisdiction of the justices of the peace. The town court, which had existed since 1811, was merged in the Court of Common Pleas for the Commonwealth, in 1821. The municipal court, established in 1800, remained—since 1843 as a branch of the Common Pleas—until 1859, when it was merged in the Superior Court, as was the Superior Court of the County of Suffolk, that had been established in 1855 (ch. 119). The Superior Court, then, established in 1859, was the heir of the Superior Court of Suffolk County, of the Municipal Court, of the Court of Common Pleas, and, indirectly, of the town court. Under the amended Constitution (am. 19) the clerks of the Supreme and Superior courts for Suffolk county have been elected by the people since 1855. The police court of 1822, and its civil branch, the justices' court, were merged, in 1866, in the Municipal Court of the City of Boston (1866, ch. 279). At first its judges were paid by the Commonwealth; but its clerks were elected by the voters of Boston. The clerks are now appointed by the State, and the judges are paid by the city. The court has given great satisfaction, but was established before the great annexations took place.

Boston had a prosecuting attorney as early as 1800; and he was elected by the people (1799, ch. 81, sec. 1). In 1807 his appointment was vested in the State, and for obvious reasons the offices of town and county attorney were united when Boston, in 1822, assumed all expenses of Suffolk County (1821, ch. 101). In 1855, in an age that had limited wisdom and unlimited courage, the attorney-general and all district attorneys were made elective officers, the district attorney being chosen triennially by the voters in Suffolk county (Mass. Const., am. 17, 19; St. 1893, ch. 117, sec. 250). But a prosecuting officer is clearly a branch of the executive, not of the judiciary. For this reason he should be appointed by, and responsible to, the executive head. For purely executive purposes, and as counsel, the city established a law department in 1827, the head of the department being called city solicitor, who had an assistant, from 1839 to 1844, called city attorney. In 1881 the office

of corporation counsel was established, the city solicitor being his associate. Unfortunately the opinions of this law department are not published, except incidentally. But the city has been well advised in the law, and the law courts in Boston, down to the lowest, are above reproach. The judges have been learned in the law, very faithful, and in the full possession of public confidence. The city of Boston votes higher salaries than does the General Court. The country appears to oppose salaries above a certain conventional point, and may boast that it has not failed in securing both talent and integrity, particularly in the administration of justice. The judiciary is the only branch of government in the United States that has escaped general distrust.

In consequence of annexations to the city, its municipal court, as established in 1866, would have proved insufficient, had it been required to serve the enlarged community. Like its predecessor it had but three judges; now it has five. The police court at Chelsea had been established in 1855 (1855, ch. 26); in 1874 the municipal court of the East-Boston district, with jurisdiction over Winthrop, was established, and became the East-Boston district court in 1886 (1874, ch. 271; 1876, ch. 240; 1886, ch. 15); the municipal court of the South-Boston district was established in 1874 (1874, ch. 271; 1876, ch. 240). This relieved the municipal court of the city of Boston, the jurisdiction of which is limited, since 1876, to the peninsula proper, or wards 6-12 and 16-18. When Roxbury was annexed, in 1868, its police court was retained, and is now known as the municipal court of the Roxbury district (1867, ch. 359; 1876, ch. 240). In 1870, soon after annexation, the municipal court at Dorchester was established (1870, ch. 333). When Charlestown was annexed, in 1874, its police court became the municipal court of the Charlestown district (1873, ch. 286, sec. 4), and in the same year the municipal courts in the West-Roxbury and the Brighton district were established (1874, ch. 271; 1876, ch. 240). So there are nine municipal courts in Suffolk County, and eight in Boston. They have jurisdiction of civil causes involving not above a thousand dollars, and of crimes under the degree of felony, where a prosecution by information or indictment is not required (Publ. St., ch. 154; St. 1893, ch. 396). Owing to the uniformity of the law, and to the authority of the higher courts, but especially in consequence of the character of the justices who have summary power, the municipal courts have worked well. The Probate Court, inherited from the earliest time of the Province, now also a court of insolvency, is a county court in the best sense. It

still acts under the interesting law of 1818 (ch. 190); but since 1858 the register of probate is elected quinquennially by the people (1893, ch. 417, s. 252).

THE CHARTER.

The first city government of Boston was organized on May 1, 1822. The mayor, the eight aldermen, and the common council were impressed with the idea, that town government was a great blessing, and that a city was intended to be as nearly like a town as possible. "As far as practicable," Mr. Quincy tells us, "the customs and forms to which the citizens had been familiarized under the government of the town, were adopted" (Quincy, *Mun. Hist.*, 44). The same prejudice, for such it was, runs through the charter of 1822. The administration of police, the executive powers of the city, and all the powers previously vested in the selectmen, whether by law, by town vote, or by prescription, were given to the board of mayor and aldermen (1824, ch. 140, sec. 13), and all other powers previously exercised by the town were vested in the two branches of the city council, to be exercised by concurrent vote, each branch having a negative upon the other (l. c., sec. 15). The mayor was to nominate all officers whose appointment depended on the aldermen (sec. 21), and he could summon the city council or either branch to hear his recommendations (sec. 12); but he was to be no more and no less than the chairman of the city board of selectmen, with strict orders to be a vigilant and useful inspector. The real power of administration was lodged with the aldermen. The same principle still adorns the statute book of Massachusetts. City councils have the power of towns, "the mayor and aldermen shall have the powers and be subject to the liabilities of selectmen" (*Publ. Stat.*, ch. 28, sec. 2). The intention of the charter was that the city should be governed like a town, or that a representative democracy should follow the precedents of a self-governing democracy. But the difference between a simple democracy and representative democracy is radical.

The powers vested in a town are not defined, save in particular instances. Neither are the powers of selectmen. It appears that selectmen are chosen for a definite period of time; but their powers are indefinite (see 1893, ch. 423, sec. 6-9), and subject to orders issued by the town meeting, which is the town government. A selectman is an agent; a board of selectmen is not a government. The mayor of a city

and the members of a city council are not the agents, but the members of a government. Selectmen are the agents of a government; the mayor and city council are themselves a government. Public opinion shrinks from this conclusion, and likes to urge that cities are mere corporations, but not a government. In truth, the mayor and city council of Boston are a real government, not wholly unlike that of either the State or the United States. All three have limited powers; but within the limits prescribed by law each government has very great powers. A selectman is constantly subject to new orders from the town meeting; a city government is not, although the Boston charter of 1822 retained the semblance of general meetings giving instructions to the city government (1821, ch. 110, sec. 36). The orders of a town meeting are binding upon the selectmen; the "instructions" of a Faneuil-Hall meeting are not binding upon the city government. It was an illusion to retain these meetings. It is an illusion to say that aldermen have the power of selectmen. It is an illusion to think that a town government and a city government can be similar. Being a representative government, with distributed power, the government of the city of Boston resembles that of the United States rather than that of a Massachusetts town. A town government is the very ideal of self-governing democracy acting for itself, issuing orders, and supervising its agents; a representative government is not a real democracy, but a sort of democratic aristocracy, on the theory that the democracy will choose the best men to conduct the government business. A town meeting is democracy with government power exercised by the many; representative democracy is the power of the many transferred to the few. The charter of 1822 made this transfer, but failed in the proper distribution of the power transferred. It separated the judiciary from the executive and legislative branches; and this separation entitles the charter to permanent respect. The charter erred in not separating the legislative and executive officers of the city government, and in not establishing a system of checks and balances, which is the very essence of representative government. Without a sharp separation of powers, and without a full system of checks and balances, a representative government might be a tyranny. Democracy, as the town meeting well knows, holds all municipal power. When the town surrenders the direct exercise of this power, when simple democracy becomes representative democracy, full municipal power is not given to one person, nor to one body, but is carefully divided, lest the government be despotic. Under

a wise separation and distribution of power, the legislative authority of the municipality is vested in a body composed of two branches, each having the negative upon the other, lest there be hasty ordinances, hasty loans, hasty appropriations, hasty action. The executive power is vested elsewhere, lest the laws of the city fail of impartial, fearless, and prompt execution.

The charter of 1822 did not make this necessary separation; it vested in the aldermen full legislative and executive power, while establishing a figure head called the mayor, whom the public might blame when the aldermen did not govern well. As great executive power was vested in the eight aldermen, the forty-eight members of the common council were pardonably jealous, and tried to secure a part of the administrative power. When the aldermen consented to a government by committees, the common council came very near exercising executive power through the joint committees of the two legislative branches. The charter itself gave the city council power to elect all officers not otherwise provided for, and this power was used freely (l. c., sec. 16). Nor is it wrong that a government branch or board or officer should exercise all power within lawful reach. The result was that as late as 1881 Mayor Prince declared the functions of the mayor, in the inauguration of civic measures, to be "merely advisory" (Inaug. Addr., p. 8). He might have added that his executive powers were chiefly advisory, and that city councils were reasonably unwilling to take advice. Why should they seek advice? It is as safe to trust one's own judgment as to follow other men's advice. The fault was not with the city council, to whom it is usually charged, but with the charter of 1822. That instrument lodged all municipal power in the city council, and instead of creating an executive officer, the equal and rival of the city council, made the mayor the chairman of the aldermen, without any veto power beyond his vote. At the same time he was made a member of the school committee, and not even its chairman, except by courtesy. The "care, custody, and management of all the property of the city" was expressly vested in the city council (1821, ch. 110, sec. 16). In a word, the charter of 1822 transferred the power of the municipality to the city council, except the judiciary, and a few matters, like the firewards, the overseers of the poor, and the care of the public schools. The only remedy left with the people was a refusal to re-elect members of the government that had proved unsatisfactory. Beyond this the city council had almost unlimited municipal power, and one marvels

that this power of creating taxes and debts was not used more extravagantly than the records disclose. One marvels at the ability and fidelity of the several city councils. One wonders that the city ever escaped a great scandal in its municipal affairs. It was not the virtue of the charter that saved the city government from disgrace. On the whole, the city councils and their committees were better than the charter, and did better than the charter required. For the charter almost invited misgovernment. It established irresponsibility, and yet the city was not totally misgoverned.

THE PUBLIC SCHOOLS.

Easily the most interesting of all our municipal institutions are the public schools, not only for the lavish support they have from the tax levy, but also for the position they occupy in our system of government. The schools are entirely supported from taxes, and now consume, speaking roughly, about one-fifth of the annual tax. No expense for schools seems too high in the estimation of the people, and an attempt to reduce teachers' salaries, or to delay the erection of new schoolhouses, or to reduce the work of the schools, excites popular indignation. At the same time the schools retain the traditional government by committee. And the more popular they became, the more they drifted away from the general city government. The city council votes a gross sum for schools; the school committee expends the money, and has entire charge of the schools, including, since 1889, the erection and repair of all school buildings. The mayor of the city, however, has a limited veto power over all school-committee votes involving the expenditure of money (1885, 266, sec. 10), and his approval of contracts involving \$2,000 or more, is required (1890, 418, sec. 6). But the civil-service law of the State does not apply. The laborers and clerks employed by the city must first pass an examination conducted by the State, while the teachers in our schools are entirely under the control of the school committee.

The charter of 1822 vested the care and superintendence of the public schools in a board of twenty-one persons consisting of the mayor, the eight aldermen, and one person in each of the twelve wards chosen at the annual city election. As the aldermen were overwhelmed with all sorts of duties, many of them purely administrative, they were relieved of their school work in 1835. The law of that year (ch. 128),

adopted by the people on April 29, 1835, vested the management of the schools in a school committee of twenty six persons, including the mayor, the president of the common council, and two persons from each of the twelve wards chosen annually by the people. The common council was jealous of the executive power exercised by the aldermen, and the new arrangement, such as it was, appears to have been a concession. But this school committee dealt with the grammar schools, the primary schools being left to the care of the self-perpetuating primary school committee established in 1818, and continued until 1851. The city built its first primary school house in 1835. Even so great a man as the elder Mayor Quincy rejoiced when the establishment of a girls' highschool was prevented (*Mun. Hist.*, 216-225, 269-271). He seemed happy that the girls' highschool had not been revived in 1851. Yet when the first examination for admission to the girls' highschool was held in 1826, the number of applicants was two hundred and eighty-six. In other words, the school system was imperfect, and the school government irregular in fact as well as in law (Mayor Bigelow's inaug. address, 1850, p. 5; city docs. of 1852, no. 22).

This irregularity was removed by the city charter of 1851, which incidentally abolished the primary school committee, and placed the care and management of the public schools under a committee of seventy-four persons, consisting of the mayor, the president of the common council, and six persons from each of the twelve wards, chosen by the people. These specially-elected members of the school committee were chosen for three years, being the first departure from the ancient habit of returning public officers once a year to the people. Not only were these members of the school committee chosen by wards, but they must be inhabitants of the wards that chose them. The question whether aldermen and members of the school committee should be chosen by wards, or by the city at large, has been much discussed. The critics usually prefer the arrangement that has not been made. As long as the city was relatively compact, that is, before the annexations from 1868 to 1874, a certain community of interests existed which justified general popular votes for general officers. Yet this principle was in part abandoned as early as 1799, to the satisfaction of the people. The school committee established in 1851 certainly gave satisfaction, and unified the school department. The primary school committee, with its 199 members,—one to each primary school,—was discontinued, and an attempt was made to give the schools an executive

head, by the title of superintendent. The first superintendent of schools was appointed in 1851; but he is still the mere clerk of the school committee. The principle of dividing legislative and administrative functions as to the public schools was not considered in 1854, and has not been established since.

This fact, that the schools needed an executive head, and the annexations of the suburbs to 1874, occasioned the law of May 19, 1875 (ch. 241), which still controls. This law continued the mayor as chairman of the school committee, as if to maintain some connection between the public schools and city hall; occasionally the mayor would serve as chairman of some sub-committee appointed from the general school committee. The latter consisted, beside the mayor, of twenty-four members, eight being chosen annually to serve three years. They are chosen by the voters of the city at large, and in 1879 the right to vote for members of the school committee was given to women substantially on the same conditions as the male voters must comply with. The law of 1885, ch. 266, wisely excluded the mayor from the school committee, which thus consists of twenty-four persons elected by the people at large, under a generous suffrage, the constitutional amendment of 1891 having swept away the payment of a tax as a prerequisite of voting. All American citizens at least twenty-one years of age, not paupers, able to read the Constitution of Massachusetts in English and to write their names, who have lived a year in Massachusetts, and six months in Boston, who are duly registered as voters, may now vote for the Boston school committee (1893, ch. 417, sec. 13, 14). While the possible number of voters for school committee is now (in 1893) about 200,000, the actual number has never approached 100,000. At the city election of 1888, when the largest number of citizens voted, the total was only 63,548 men and 19,490 women. At the city election of 1892 the number of municipal voters was 68,447 men and 9,510 women.

The expense for schools, disbursed by the school committee, is about two million dollars a year. Nominally the expense was as high in the first year after the great annexations. Theoretically the school committee is the product of a suffrage that cannot be more liberal, unless aliens and minors be included. The school committee of twenty-four persons can discharge teachers and other servants at pleasure. It may engage them on its own conditions, except that janitors and persons having charge of boilers are supplied by the civil-service commissioners

of the Commonwealth. For executive officers the school committee has a board of one superintendent and six supervisors, who may examine and report, but cannot really order or act, their power over principals being specially limited. Yet the vast establishment has never been tainted by party politics; owing in part to the high salaries offered, the school committee, itself unpaid, has secured instructors and other officers of the best character; and the schools have the enthusiastic support of the people. From time to time the general city government has been assailed by public opinion; the school committee has not. The organisation of the city government has been condemned; the organisation of the schools and their government is scarcely a subject of discussion, much less of criticism. The system may be theoretically wrong; it has worked to the general satisfaction of the people who pay the bills. The establishment shows that even a defective law may be well administered, and the school committee itself is the best illustration of American adaptability and of unselfish citizenship devoted to the public service.

FIRE DEPARTMENT.

The charter of 1822, in establishing the city of Boston as a municipal corporation, vested its government in the mayor and city council, the school committee, the overseers of the poor, and the firewards, respectively. The firewards had existed for more than a century, and under the law of 1711 were appointed by the selectmen and the justices. Ever since 1745 they were elected by the people, and the city charter of 1822 (sec. 19) required that three or more firewards be chosen in each of the twelve wards. A fireward was in command at fires, and could require any person to obey. The term is still used (Publ. Stat., 267), a fire engineer having the authority of a fireward. At the same time, the firewards had a certain authority over buildings and explosives. The appearance of dozens of commanders at a fire may be imagined. A petty conflict of opinion between the fire companies and the elder Quincy led to the appointment of a chief engineer, in 1826, and to the repeal of the law requiring the election of firewards (see the law of June 18, 1825, adopted by the people on July 25, 1825). Mayor Quincy's Municipal History tells the story in detail; but the real point is the establishment of an executive officer to take command at fires. That office still exists. When Mayor Quincy retired, he reported the department to consist of "twelve hundred men and officers" (Mun. Hist., 264); the re-

port of the department for 1892 says: "The entire force of the department consists of about 800 men."

The chief engineer and his assistants were elected by the mayor and city council; the fire companies were appointed by the mayor and aldermen, but elected their own foreman, and made their own rules and regulations, subject to the approbation of the mayor and aldermen. It was the old volunteer department, with a volunteer in command. This led to the very difficulties encountered by Mayor Quincy, particularly as premiums were paid to the ardent volunteers. From and after February 16, 1829, a salary was paid to the chief engineer, and Mayor Eliot, a man of high ability, established the important principle of a paid fire department, in 1837 (city ordinance of July 29, 1837). In 1826 it was found expedient to reorganise the entire force of the fire department (Quincy, *Mun. Hist.*, 203, 264); Mayor Eliot did the same thing in 1837 (see his inaug. addr. of 1838, p. 3). But even the ordinance of 1861 left the choice of the chief and the assistant engineers to the city council, and the appointment of the companies to the mayor and aldermen, each company choosing its own foreman, subject to approval. All this was swept away by the great fire of 1872, and the ordinance of 1873, which required the mayor to appoint, subject to approval on the part of the board of aldermen, a board of three fire commissioners, who appoint the chief engineer and all other members of the department, purchase supplies, and manage the department. The law of June 24, 1831, enabled the city to pay an indemnity to members of the fire department disabled in the discharge of their duties. In 1874 (ch. 61) the Boston Protective department was incorporated, and in 1886 the office of fire marshal was established, this officer, appointed by the State, to pass semi-judicially upon fires.

In 1850 the General Court passed a special act relating to the Boston fire department (1850, ch. 262), the value of the act consisting in the repeal of old statutes, and in leaving the city free to work out its own safety. The city government decided finally in favor of a paid commission. Government by committee had broken down, partly because it was inefficient, partly because it was gratuitous, and mainly because it was irresponsible. Public opinion was not prepared to establish one-man power, and compromised by establishing paid commissions, such as still conduct a large part of the business of the State. The Boston fire commission has given great satisfaction. It is watched very closely, especially by underwriters. At the same time the popular interest in

the department is lively. It is one of the few departments that has found a chronicler. It controls scores of buildings, valuable apparatus and supplies, and a numerous force; the cost of the department is not far from a million dollars a year; yet it has not been found necessary to invoke the State for regulating or reforming the establishment. Twice in the remote past the city government has disbanded the whole department; but municipal authority has sufficed to establish order, discipline, and extraordinary efficiency. One is tempted to affirm that the departments are generally efficient in proportion to the popular interest they command, and that popular opinion is apt to be right. But much is due, also, to the city council, which has created and sustained the fire department, thus proving that a city council, duly informed, is likely to consult the public good. Of all municipal departments created by the city council, the fire department is the most typical. As such it deserves special attention on the part of students devoted to municipal affairs.

RELIEF AND CORRECTION.

The charter of 1822 (see. 19) required the election, in each ward, of an overseer of the poor, who must be an inhabitant of the ward. The charter of 1854 retained this provision without material modification. But the board of overseers had changed in its powers and duties. When Boston became a city, the overseers were the most venerable corporation, and the only branch of the government that had been formally incorporated. They had charge of the poor, of the degraded, of the insane, and of prisoners. To provide for the poor that could work, the house of industry was built in South Boston. Instead of interesting the overseers in the undertaking, they were alienated, and a long controversy ended in the defeat of the overseers. Then the house of reformation for juvenile offenders was established; also, the house of correction, a lunatic hospital, an almshouse, and a home for neglected children. All these establishments, to which the city hospital might be added, were the natural province of the overseers of the poor. They permitted the establishment of rival boards, the result being that in 1857 all indoor relief, together with the reformatory and correctional institutions, were united under twelve directors for public institutions, and that in 1864 the election of the overseers was transferred to the city council, to pass, in 1885, to the mayor, acting with the approval of the board of aldermen. In 1889 the public institutions were placed

under a board of three commissioners (1864, ch. 128; 1851, ch. 35; 1889, ch. 245).

The overseers hold trust funds amounting, in 1893, to more than \$700,000. They devote about \$100,000 a year to charity, but maintain a temporary home and a lodge so-called. The real mission of the board is out-door relief. The commissioners, on the other hand, deal with some 3,500 paupers, orphans, truants, insane, and malefactors, at a cost not far from \$200 per head. But the complete separation of the unfortunate from the vicious has not been effected, though attempted by Mayor Quincy. On the other hand, the city provides generously for those whom it is required to support. The overseers of the poor have always served without pay; so did the directors for public institutions from 1857 to 1889. The board of directors included three members of the city council, elected annually, and nine citizens at large, three of whom were annually elected for three years. Of course, a board so composed was apt to lack that force which is specially required in dealing with thousands of unfortunates and criminals. But the fault lay largely in the law. It was to oppose the overseers of the poor that the General Court was induced to establish a separate board of directors for the house of industry, in 1823 (1822, ch. 56). In 1824 separate directors for the house of correction were authorized by the General Court (1824, ch. 28). In 1825 another board, for the house of reformation, was authorized (1826, ch. 182). In 1827 the directors of the house of industry were given the same power as to paupers that overseers of the poor had; but the Boston overseers were not deprived of this power (1826, ch. 111). The wonder is that the work of dealing with the unfortunate and vicious did not itself become more unfortunate. Had the General Court required the city to work out this problem, the city would have supplied the means. Nor is it ever well to invoke the General Court, when municipal means will answer. Municipal problems are best solved by municipalities, not by outside power. It is safe to add that true municipal reform, when needed, must come from within. The new city was mistaken when it created several departments to do the work of one inherited from 1691.

It was competent for the city to establish a house of industry, in which to house and employ its paupers; but law, tradition, and propriety vested the management of the enterprise in the overseers of the poor. It was an unfortunate precedent when a rival establishment, with like powers as the overseers had, was set up. The law of Febru-

ary 3, 1823, under which this step was taken, has not proved a benefit, least of all in the general policy it established. The city government had the highest interest to keep down the number of independent administrative departments: by pursuing the opposite course, it has surrounded the mayor of Boston with a cabinet as large as a town meeting. The President of the United States has a cabinet of eight men; the mayor of Boston of about a hundred. That the General Court consented, is natural, as it must take its Boston information from Boston, not from Berkshire. Nor were the overseers blameless. They did not think it their duty to cooperate with the city council, and set up the idle claim that they were not accountable for their expenditures. Yet the charter provided, and still provides (1821, ch. 110, sec. 20; 1854, ch. 148, sec. 51), that all boards and officers of the city, "entrusted with the expenditure of public money, shall be accountable therefor to the city council, in such manner as they may direct." The city council, therefore, had the right to ask very close questions wherever money of the city was involved, and might have extended its enquiries to school and county matters. The claim of the overseers was not tenable, and led to their own defeat (compare Mayor Lincoln's inaugural address, 1859, page 21). The results continue in 1893, and so does the needless multiplicity of rival departments. The seed was sown in the charter; the city council and the General Court have added indiscriminately. What harvest could they expect?

POLICE DEPARTMENT.

The charter vested "the administration of police" in the board of mayor and aldermen (1821, ch. 110, sec. 13). The charter of 1854 prescribed that appointments should emanate from the mayor, then to be acted upon by the aldermen (1854, ch. 148, sec. 49), while in all other cases the aldermen were to act first (sec. 48), when the mayor and aldermen were required to act (see also 1821, ch. 110, sec. 21; 1882, ch. 164). The term "police," as used in the charters of 1821 and 1854, did not mean "police officers" or "police force," but had reference to the general good order of the municipality. Even the Revised Statutes of 1836 do not mention any police force or police officers. In fact, the first law of the State authorizing the appointment of "police officers" in Boston, was passed in 1838 (ch. 123), and the first law authorizing cities and towns in general to make such appointments, was not passed by the General Court until 1851. Boston had acted in the premises soon



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after the Province reign was ended, the confusion occasioned at that time requiring the employment of special officers for maintaining order in the streets. This led to the interesting ordinance on page 66 of the By-Laws of 1786, which authorized the selectmen to appoint officers called "the inspectors of the police," who were day patrolmen. The night watch had been established soon after 1630. The "inspectors of the police" were required to report once a week to the selectmen, and were otherwise inefficient. The selectmen were therefore authorized by the town to elect "one suitable person to superintend the police of this town" (By-Laws of 1801, p. 33). The term police, in this case, meant "good order," and the selectmen could appoint "assistants to the superintendent" (i. e., 34), that is, appoint day policemen, if necessary, provided there was money to pay them. The chairman of the board of selectmen was usually chosen superintendent of police, and the mayor and aldermen, in 1822, inherited the police arrangements of the town. They inherited also the night watch, which, under the law of January 29, 1802, had been appointed by the selectmen. The mayor and aldermen took charge of the day police and the night watch because these establishments had been under the care of the selectmen, who appointed them. The common council tried repeatedly to get concurrent power over the police, but failed; the legislative power the common council shared with the mayor and aldermen was not well exercised, least of all by the common council.

The city council maintained separate watch and police departments to the year 1854. In 1823 a special head for the day police was established, under the name of city marshal, who was also tithingman and constable, and soon took charge, in a measure, of street cleaning and the removal of house refuse, the ordinance of 1833 providing that "the department of internal and external police, as far as it regards the preservation of the health of the city, be placed under the superintendence of the city marshal" (code of 1834, pp. 171, 226). The captain of the watch, on the other hand, took charge of the street lamps. When the night watch and the day police were united, in 1854, the lamp department became a separate establishment, with a separate superintendent, but continued under the special control of the mayor and aldermen. The removal of house refuse and street refuse, after consideration, was treated, the former as a health matter under the jurisdiction of the city council (1821, 110, sec. 17), and street refuse as a police matter to be regulated by the mayor and aldermen only (i. e., sec. 13). This dis-

tribution of power is related by Mayor Quincy with great spirit (*Mun. Hist.*, 62-73). The real work drifted into the hands of the superintendent of streets, who had teams to work with. The ordinance of 1833 made the superintendent of streets a general officer for paving and repairing streets, for laying out and widening them, for building and repairing sewers, for the repair of public buildings, the school houses included, for supplying fuel, and "for cleaning the streets, disposing of manure, and removing house dirt" (code of 1834, 260). The superintendent of streets attended to this police duty until 1853, when a separate department for "cleaning the streets, disposing of manure, and removing house dirt and house offal" was established and placed under a "superintendent of the health department." From 1890 to 1891 this officer was called "superintendent of sanitary police" (*Rev. Ord.* of 1890, 55), then to be merged again in the street department, the head of which is called superintendent of streets (ordin. of March 9, 1891). The confusion of the departments was due to a confusion of terms. From 1831 to 1837 the city marshal was superintendent of sewers (code of 1831, 246). As late as 1867 the aldermen had a committee on external health, and another on internal health. The term police was used by the charter of 1822 in a very general sense, but soon acquired the narrower meaning of police officer, without losing the law sense that recurs in the term "sanitary police." In some instances the terms health and police were used as identical, even by Mayor Quincy, and the city marshal was actually the health officer of the city, under the ordinance of October 7, 1833 (code of 1834, p. 175). The health ordinance of May 31, 1821 (code of 1827, p. 170), was entitled "an ordinance relative to the police of the city of Boston."

The chief impulse for establishing a regular police force in Boston came from Mayor Eliot, who has left his impressions in other branches of the city government. But it was an error to leave the appointment of all police officers with the mayor and aldermen. Before 1838 the night watchmen were the principal police force. When Mayor Quincy retired from office, he exclaimed: "The name of police officer has indeed been changed to city marshal. The venerable old charter number of twenty-four constables still continue the entire array of city police; and eighty watchmen, of whom never more than eighteen are out at a time, constitute the whole nocturnal host of police militant, to maintain the peace and vindicate the wrongs of upwards of sixty thousand citizens" (*Mun. Hist.*, 272). Later the city marshal was given

deputies to aid him, but the constables continued the chief peace officers. After the act of 1838 (ch. 123) the appointment of regular police officers began; but the first Municipal Register, of 1841, enumerates all police officers in two lines (p. 89), and in 1854 the force numbered but 47 men. After the union with the watch, which took place on May 26, 1854, the department consisted of 236 men. When it passed under the control of commissioners, the force was about 700 strong, every man appointed by the mayor and aldermen. Well might Mayor Cobb ask to be relieved of this business; well might he say that "the affairs of this department cannot be properly attended to by the committee on police" (Inaug. Addr., 1876, 21). Mayor Lincoln had expressed another view in 1864 (Inaug. Addr., 25). It was finally under Mayor Pierce, and in part on his suggestion, that the police department was placed under three commissioners, appointed by the mayor and aldermen. At the same time the new commissioners were given the power to grant liquor licenses, which is not, perhaps, a police duty (1878, ch. 244; Mayor Pierce's Inaug. Addr., 1878, p. 20). With unconscious rashness the whole "administration of police," as mentioned in the charters of 1822 and 1854, was transferred from the aldermen to the new board.

The new board was destined to have a stormy career. The civil-service law of 1884 had not been passed, the commission was exposed to the whole force of municipal pressure. In seven years it had ten different members, and in 1885 it was superseded by a board of three members, appointed by the State. They are appointed for five years, and the first change in the membership of the board was made in 1893. The law requires the board to be selected from the "two principal political parties," the members of the board cannot be removed without the consent of the governor and council, and the expenses of the board in the administration of their department must be paid by the city. The number of patrolmen, and their pay, cannot be increased without the consent of the city. The board, as far as the city had any power to part with, holds all the power vested in the previous board on June 12, 1885. The city council may grant additional power. The members of the police force hold the power of constables and watchmen, as exercised ever since the days of the Colony. The principle of a board appointed by the Commonwealth, in the exercise of the constitutional right vested in the Commonwealth, but paid by the city, has been called in question, especially as interfering with municipal self-govern-

ment. On the other hand, the city has had the benefit of a quiet and efficient police service, and the political complexion of the board has not occasioned the evils it appeared to invite. For the board is professedly a body made up of party men. Financially the arrangement has worked well, as a comparison with the kindred fire department shows. A government machine that works well, and satisfies a public want, justifies itself. But it is never well to invoke the country for redressing the evils of the city, and a city is not doing its whole duty when it occasions interference from the General Court. The latter should not be invoked by the city, except to give strength or relief, after the resources of the city and the citizens are exhausted. Nor can the supreme power ever relieve the citizen and the city of their public duty, including that of caring well for their own

HEALTH DEPARTMENT.

The history of the Boston health department, as made by the city council, is mournful, and proves conclusively that the charter of 1822 made a mistake when it transferred the power of the old board of health, established in 1799, to the city council, to be exercised at pleasure (sec. 17). The law under which the early board acted was exceptionally good, and the elective board showed great efficiency (see By-Laws of 1818), though Mayor Quincy holds the opposite view (Mun. Hist., 64). From the adoption of the city charter, in 1822, to 1817, the city council was the board of health. Then the mayor and aldermen were the board of health until 1813, when a better arrangement went into effect. The charter of 1822 did not contemplate that the council should be an executive board, but provided expressly that the health power vested in the city council should be carried into execution "by the appointment of health commissioners," or in some other way. The Revised Statutes of 1836 said instead: "In the city of Boston, the city council shall exercise all the powers, and perform all the duties, of a board of health for the said city" (ch. 21, sec. 2). It is worth adding that the Revised Statutes, being the first codification of the Massachusetts statutes, were the work of Theron Metcalf and Horace Mann. The clause, due perhaps to the dim ideas then entertained of municipal government, was repealed April 23, 1817, and on June 8 of the same year the city council appointed the mayor and aldermen health commissioners for the city (Mun. Reg., 1818, 46, 83). They continued to be the nominal board of health until 1813, although the laws of 1819

(ch. 211) and 1854 (ch. 448, sec. 40) persisted in making the city council a board of health, with power to delegate their authority, as a board of health, to "any committee of their number." The city council delegated its power to the mayor and aldermen (code of 1851, 102; code of 1863, 306), but created the superintendent of health, in 1853, to carry out all laws and ordinances relating to "the subject of internal health." This confusion ended in 1873, with the appointment of the board of health.

Of course, neither the aldermen nor the city council could do executive health work. In 1824 the work was divided between a health commissioner, who attended to "the external police" or health, especially quarantine matters; a superintendent of burial grounds; and the city marshal, who had control of "the internal police" or health (code of 1827, 170, Quincy, Mun. Hist., 53). In 1833 the city marshal was given control of all health matters, and up to 1853 he was virtually the Boston board of health. The duty of street cleaning and the removal of house refuse was transferred, in 1825, to the superintendent of streets, who performed that duty until 1853. In 1834 the city council treated sewers as a health matter, and required the city marshal, the police officer of the city, "to take the general superintendence of all common sewers" (code of 1834, 246, 174). In 1837 the office of superintendent of sewers was created, thus relieving the city marshal; but the first Municipal Register issued by the city, in 1841, treated the superintendent of sewers, the superintendent of streets, and even the surveyors of highways as parts of the "health department." So did Mayor Lyman in his inaugural address of 1835 (p. 11), as far as sewers are concerned. The division of quarantine, meanwhile, had drifted under the control of a physician, and the superintendent of burials continued his special work. To promote executive efficiency, then, the early city government abolished the board of health, which should have been retained, and divided its power among three departments newly created, but not defined, for in the city the health duties of the city marshal, the superintendent of streets, the sewer department, and the two branches of the city council were commingled. The city marshal, however, was the health officer of Boston from 1823 to 1853, while the superintendent of streets, from 1825 to 1853, removed the street and house refuse.

To terminate this confusion as to "internal health" or police, the city council of 1853 created a superintendent of the health department,

requiring him to execute all laws and ordinances relating to "the subject of internal health." In truth, the superintendent had charge of the city stables and teams, and attended to street sweeping and the removal of house dirt. Later ages will wonder how such a department ever came to be called a health department. Mayors Shurtleff and Gaston (inaug. addr., 1869, 30; 1870, 52; 1872, 18) insisted that street cleaning was one thing, and that the city needed a professional board of health. Mayor Gaston approved the ordinance of December 2, 1872, under which the health power of the city was transferred to a board of health, consisting of three men. They were to serve three years, and the arrangement has worked well, mainly because the ordinance was reasonable, although it continued the "superintendent of health," as a subordinate of the board, requiring him to "make all necessary arrangements for cleaning the streets, disposing of manure, and removing house dirt and house offal, to the entire satisfaction of the board of health" (code of 1876, 103). The Revised Ordinances of 1885 made the superintendent of health once more an independent officer, appointed by the mayor, subject to approval on the part of the board of aldermen, and popularly his division was known as the health department (auditor's finance report for 1889-90, 97). In 1890-91 the establishment was called the department of sanitary police, to be merged, by the ordinance of March 9, 1891, in the street department, which still calls the removal of house refuse its "sanitary division," beside having a street-cleaning division (rep. of street department for 1891, 1-2). The board of health, on the other hand, has become a great department. It holds all the power of the former board, with some additions. Its quarantine service is good, and beside having charge of cemeteries and undertakers, public baths and lying-in hospitals, the the abattoir, stable permits, and hawkers, it guards the general health of the city. When the city of Boston decides not to have more departments than the government of the United States, the health department may include the inspection of milk and vinegar, the inspection of provisions, the registry department, and possibly the hospital department. Certainly there is no reason why the city should not have entrusted absolutely all health matters to the board of health, which has so amply justified the ordinance signed by Mayor Gaston. It is pleasant to add that the chairman of the board in 1893, Dr. Samuel H. Durgin, has been a member of the board from its establishment in 1873, and that the publications of the board have some scientific value.

TAXATION.

The city charter vested the power to lay and assess taxes in the city council (1821, ch. 109, sec. 1; ch. 110, sec. 15, 28; 1822, ch. 85). The city council discharged this duty with reasonable judgment, having good precedents to go by. As early as 1691 the town chose assessors separate from the selectmen, and in 1802 the law authorized the town to elect two assistant assessors in each of the twelve wards, the assistants electing the three principal assessors. This law was repealed by the charter, and from 1822 to 1885 the city council chose all assessors of taxes. The number established in 1802 was not changed until 1849, and by the ordinance of October 24, 1850, the distinction between first and second assistants was virtually established. In 1866 the board of principal assessors was increased to five, and so remained until the ordinance of April 20, 1891, required the appointment of nine assessors. The institution of assessment districts, together with first and second assistants for each, was established by the ordinance of January 3, 1868, due to the annexation of Roxbury, and in 1880 the principle of electing assessors for three years was established. The law of 1885 (ch. 266) transferred the appointment of assessors to the mayor, subject to approval by the board of aldermen, and the appointment of assistant assessors was left to the assessors (Rev. Ord. of 1885, 55; but see St. 1885, ch. 266, sec. 1), it being the apparent policy to vest great power in heads of departments. The city councils, from 1822 to 1885, acted conservatively in this matter, especially as regards the choice of principal assessors.

As under the town, the assessors were the first city department to administer State law only, the city supplying merely the means for carrying the tax laws of the State into local effect. Massachusetts taxes wealth, and the Boston assessors were among the first to tax wealth at its real value as nearly as the market can indicate value. That personal property largely escapes direct taxation, is not the fault of the assessors. Neither is it their fault that the principle of municipal or special taxes has been discouraged in Massachusetts. The vast privileges conferred by the city, therefore, have not yielded fair returns to the corporation as such. The assessors tax the wealth they find, and out of the general levy on wealth nearly all municipal expenses are defrayed. As these expenses are heavy, the tax is heavy, the principle of special assessments or of fees for special rights or services having

been discouraged. But the tax actually assessed is apparently borne without hardship, payments being prompt. Up to the war period the expenses of the city and county were relatively light. For the year ended April 30, 1862, the city and county expenses, including the State tax, were \$3,138,651.91, against \$5,203,706.55 for the next year. But during the first year the premium on gold did not touch 105, while in the second year it rose above 172. Municipal expenses grew very high when Boston saw fit to annex the suburbs, while the premium on gold melted away. In the year preceding annexation, when Boston had about 200,000 inhabitants, expenses were \$6,532,619.77, and the gold premium rose above 167. During the first year after annexation, when the gold premium did not go above 117, and the population was 341,919, municipal expense reached \$15,388,632.28. On April 30, 1867, the net debt of the city was \$8,558,281.59; on April 30, 1874, it was \$27,173,213.02. All this is not due to annexation; but during the years of annexation Boston began its present scale of municipal house-keeping.

Ten years after this period, in 1885, an accident led to a law (1885, ch. 178) limiting both the debt and the tax of Boston. This interesting law has prevented the Boston tax rate from being 17 per thousand of assessed property, which was the rate in 1881, but has not checked generous expenses. The law desired the net debt of the city to be within 2 per centum of the average valuation. On this basis the net debt, on January 31, 1893, ought to have been within \$16,386,264.04; it was reported by the auditor at \$21,323,238.11 (ann. rep., 1893, p. 8, 9), this amount not including the debt for water supply. The General Court of 1885 laid down a strict rule, and its successors from 1886 to 1892 authorized the city to incur debts amounting to \$28,806,469.69, to which the fine resolutions of 1885 need not apply. The auditor reports the net debt of the city (funded debt, less means to pay), on January 31, 1893, at \$30,908,879.11, which includes the debt for water supply, and is nearly four per centum of the average valuation for the preceding five years, less abatements. Against this stand the vast assets of the corporation, briefly alluded to in Mayor Hart's inaugural address of 1890, p. 13. For the amount of interest and sinking-fund requirements of the city, see Mayor Hart's inaugural address of 1889, p. 10. It should be remembered, also, that the city debt includes the county debt, and that the city tax includes the county and State tax. That debts are an evil, need not be stated; nor that the prudence of a gov-

ernment is measured by the degree to which it meets current requirements from current revenues.

VOTING.

As the right of suffrage in Massachusetts could not be exercised, until 1892, except upon the payment of a tax, it was natural that the assessors should make out the lists of voters. The city charter placed this duty upon the mayor and aldermen; and Mayor Quincy, always energetic, seems to have personally revised such a list, "subject to the revision of the board of aldermen" (Mun. Hist., 237). The list contained about twelve thousand names. The list of 1892 contained but 87,227, or a smaller proportion, notwithstanding the tax requirement upon voters had been abolished. Mayor Quincy may have thought that mayor and aldermen meant chiefly the mayor; after his time it meant chiefly the aldermen, and Mayor Shurtleff tells in his last inaugural address how the aldermen made voting lists (1870, 35). They let the faithful city clerk do the work, of course with the aid of the assessors. Annexation made this arrangement impossible, and in 1874 (ch. 60) the duty of preparing lists of voters was transferred to a board of three registrars. These registrars and their assistants are not allowed to hold any other office, and since 1890 they are required to represent political parties (1893, ch. 417, sec. 28, 33). When such a man quits the political party "which he was appointed to represent," he must be removed from office, says the statute (l. c., sec. 29). How the politics of a clerk can be ascertained under the guarded secrecy of the ballot, established in 1889, the law does not indicate. But it provides that assessors shall send their assessment lists to the registrars (l. c., sec. 16, 17), which lists must contain the names of all men of the voting age, and of such women as make written application therefor.

The law intended from the outset to guard the registrars of voters, but could not separate them from other offices. Even after the repeal of the tax requirement upon voters, the assessors' list of persons to be taxed is justly made a basis for registering voters; for the assessors go from house to house to learn who should be taxed, and the city requires them to keep "a full and complete record of the name of each person having a residence in the city of Boston, and his present and past residences" (Rev. Ordin. of 1892, 21). The State requires every male of the age of twenty years or above to be taxed; women of the voting age may be taxed, and in case they hold taxable property must be

taxed. Registrars are justly required to help in enforcing the tax laws (1893, ch. 117, s. 21). It is not quite certain, therefore, that it was best to make them an independent department, and that an attempt to reduce the many independent departments of the city might not make the registry of voters a bureau under the assessing department. The government of the United States requires many executive offices, but nearly all are subordinate to one of the eight cabinet officers. The work of the registrars of voters is largely ministerial, and a ministerial office should not be made an independent department. The government of the United States requires good work of the coast survey and the mint, but has properly subordinated these offices. It is pleasant to add that the Boston voting list is very accurate, especially in the case of naturalised voters, whose names are not entered, save upon adequate evidence. The present ward lines of Boston were established in 1875-6, previous divisions having been made in 1715 (eight wards), 1735, 1805, 1822, 1838, 1850, and 1865 (always twelve wards). The annexed cities and town were treated as new wards, until 1875-6. Precincts, for voting, were not established until 1878, the number being 107, until 1889, when it was increased to 286, to be reduced in 1890 to 205.

The city charter accepted the suffrage requirements of the third amendment to the Constitution of Massachusetts (the amendment was adopted in 1821) as the proper test for municipal voters. The ancient difference between State suffrage and municipal suffrage was thus swept away, to be restored in 1879, when women were given the right to vote for school committee. The General Court may establish municipal suffrage at pleasure, while State suffrage is regulated by the Constitution. The male inhabitant of the Province was not replaced, until 1821, by the citizen; nor, until 1857, by the legal voter, who must be a citizen as well as an inhabitant. But the poll tax as such never had anything to do with voters as such. The poll tax is still assessed on minors, and until 1841 it was assessed on all males "between the ages of sixteen and seventy years." In 1855 the constitution was so amended as to establish the principle of plurality elections, in the place of the majority previously required by candidates. For town, city, and county elections the plurality rule had been previously adopted, on February 27, 1854 (1854, ch. 39). The publication of election returns used to be left to private enterprise. In 1875 the Boston registrars of voters issued a sheet showing, by wards, the number of names registered for the city election of 1874. The number was 57,045; the

total vote for mayor was 18,733; yet the city had about 330,000 inhabitants. In 1822, when Mayor Phillips was elected, the entire vote was 2,650, in a population of more than 45,000. For the national election of 1892 the registrars report the Boston vote at 74,883, and the number of registered voters at 85,227, while the population was about 460,000. For the votes of the mayors, see the Catalogue of the City Councils XXXIII (published in 1891). The registrars of voters issue annual reports. In 1888 (ch. 436) the law established the principle of ballots supplied at the public expense, of elections conducted entirely by public officers, and of secret voting. This arrangement, popularly known as the Australian ballot, was first used at the November election of 1889, for State officers, and met a public want, especially on the part of candidates for office and of all persons who desired orderly elections. A code of all election laws was presented in the acts of 1893, ch. 417. Occasionally the charge of fraud or corruption has been made in regard to Boston elections, but always without evidence. The elections, or the contrary, show great intelligence and independence on the part of voters.

FINANCE DEPARTMENTS.

The financial departments of the city were greatly simplified by the charter. Previously there were separate treasurers for the town and county, and the town collectors were separate from the town treasurer. Until 1811 the collectors allowed a discount to tax payers who paid within three months after the delivery of the tax bill. The city charter vested the appointment of the city treasurer in the city council (1821, ch. 110, 18), and the supplement of the charter (1821, ch. 109, sec. 12) made the city treasurer the treasurer of Suffolk county. He was also collector of taxes until 1875 (ch. 176), and as such appointed deputies, while up to 1822 the constables were the real collectors, police and peace officers. Since 1875 the office of the city treasurer, therefore, performs mostly ministerial duties. Unless otherwise ordered, the city treasurer holds the trust funds devised to the city, the amount on January 31, 1893, being \$578,932.11. He receives the same salary as the treasurer of the United States (\$6,000). The collecting department has been remarkably successful in collecting taxes and other sums due to the city, except poll taxes. This may be adduced as a justification of the tax system that prevails in Boston and Massachusetts, and makes any material changes difficult. Those that ought to pay special

taxes or fees oppose the change, and the community as a whole appears to favor the payment of all municipal expenditures from the general tax levy. But this system, inherited from the remote past, invites special appropriations and demands for special work. Special work done by the city for special interests should be specially paid for. The amount of special collections in Boston is slight. The tax year begins on May 1; the finance year of the city and town began on the same day, except from 1823 to 1825, and since 1892, when it began on February 1. From 1823 to 1825 it began on June 1.

Under the town government all finances finally drifted under the control of the selectmen, the overseers of the poor, and the board of health, who constituted the committee of finance, and acted as such since 1812, though the town meeting elected annually three auditors of accounts (code of 1818, p. 4). These auditors simply took a final look at the accounts before they were published. The charter supplement (1821, ch. 109, sec. 11) authorized the city to appoint an auditor, and an ordinance to that effect was passed on August 2, 1824. By a curious anomaly a separate board of accounts was established for the county courts and prisons (1821, ch. 109, sec. 9). This board, consisting of judges, was replaced, in 1866 (ch. 111), by the board of aldermen, who acted until 1879, when the city auditor became county auditor,—an office that should have been assigned to him in 1824 (1821, ch. 256). A greater anomaly is the fact that Boston became a city to get rid of county interference, and then let all county matters drift away from city control. The charter supplement (1821, ch. 109, sec. 13) vested the laying of county taxes in the city council, and permitted county taxes to be treated as city taxes (see also 1822, ch. 85); yet the city council chose to neglect county matters, and so occasioned the constant interference of the State with this subject. Originally (1821, ch. 109, 4, 5) the salaries of the police court and its clerk were fixed by the city. As the city council neglected county finances, the General Court took charge, the result being that county expenses have become rather onerous. This unsatisfactory condition could have been avoided, if the city government had given due attention to county affairs. It was more attentive to city finances proper. To meet all public indebtedness, the ordinance of December 28, 1840, required the annual purchase of three per cent. of the city debt, which from the days of Mayor Quincy (*Mun. Hist.*, 271) to 1870 was managed by a special committee. The ordinance of December 21, 1870, created the board of sinking-fund commis-

sioners (Mayor Gaston's inaug. addr., 1871, 11), but did not prevent an alarming increase of the city debt, the fire of 1872 and the annexations adding to its growth.

The ancient committee on the reduction of the city debt, consisting of the mayor and two members of the common council, established on April 23, 1827, had acted with ability and success. They had excellent ordinances to aid them. The sinking-fund commissioners are ministerial officers. The ordinance of 1870, which created the board, laid down the rule that loans for public buildings should run ten years; loans for street widenings and improvements were to run twenty years; loans for the water supply were to run thirty years. These loans were to be provided for by paying into the sinking fund, respectively, six, three, and one and a-half per cent. on each. The General Court, alarmed by the increase of municipal debts, provided in 1875 (ch. 209) for sinking funds in general, and required at least eight per cent. to be set aside against ten-year loans, and enough against other loans to cancel them at maturity. The same law provided that water loans should not run above thirty years, sewer loans not above twenty years, and all other loans not above ten years. The city requires eight per cent. on ten-year loans, three and a-half per cent. on twenty-year loans, and two per cent. on thirty-year loans (code of 1876, 320; Rev. Ordin. of 1892, 70). The court-house loan the General Court permitted to run fifty years (1885, ch. 377) by which time the present building and its furniture will certainly be inadequate; fifty-year park construction loans have also been authorized (1891, ch. 301; 1886, ch. 304). A catalogue of the city debt, on January 31, 1893, appears in the annual report of the auditor, 1893, p. 170-201. It should be stated that the city has always met its debt at maturity, except twice, in the case of water loans (i. e., 190), and that its debt management was best, perhaps, when it rested entirely with the city. The water debt has always been treated as a separate establishment, and was the first to have a sinking fund by that name (1846, 167, sec. 11). In 1882 (ch. 133) the General Court wisely permitted the annual payment of loans or loan certificates, instead of requiring the accumulation of sinking funds, provided a given loan is thus cancelled at maturity. This arrangement is not favored, but is preferable to a sinking fund.

SUPERINTENDENT OF STREETS.

The administrative departments traced in the preceding pages are mentioned, if not founded, in the charter of 1822. But the charter

could not keep them from a tortuous course. The departments created by ordinance were not more fortunate. When Boston became a city, the duty of paving and repairing all streets and ways was found to rest with the surveyors of highways, while the selectmen could widen, lay out, and discontinue such ways, though the court of sessions also had the power to lay out highways. The mayor and aldermen inherited the power of the selectmen and the sessions, and greatly desired to be surveyors of highways, the more so because the selectmen had usually acted as surveyors. But the city council of 1822 elected three surveyors of highways, and it took much pressure to make the common council recede from its desire to have some control of street work. A citizens' meeting was held, a law was passed by the General Court (Quincy, M. H., 65), and in 1823 the mayor and aldermen became surveyors of highways. They divided the city into four districts of three wards each, and, in the words of Mayor Quincy, "appointed two aldermen superintendents of each district." This arrangement gave way, in 1835, to the committee on paving. From 1835 to 1885 that committee ruled over the streets of Boston, wielding great power and expending vast fortunes. In theory the mayor and aldermen were the surveyors of highways from 1823 to 1854, and the aldermen alone from 1854 to 1885 (1854, ch. 448, sec. 11). The law of 1885 (ch. 266, sec. 6) undertook to separate the executive powers of the highway surveyors from their legislative and judicial powers, if any. In fact, the mayor was made surveyor of highways, and as such wields great power (see also 1893, ch. 423, sec. 21, 22).

As early as May 23, 1825, the mayor and aldermen appointed a superintendent of streets, and made him their agent for general street work. As they obliged him to do much additional work, such as repairing school houses, the common council insisted upon having a voice in appointing the superintendent. The ordinance of April 23, 1827, provided for his annual election and prescribed his duties. Up to 1885 he was elected by the concurrent vote of the two branches of the city council; since then he is appointed by the mayor, subject to approval on the part of the board of aldermen. Up to 1885 he was the special agent of the aldermanic committee on paving; since then he is the special agent of the mayor. At first the superintendent of streets had charge of laying out and widening, of paving and repairing streets, of all common sewers, of cleaning streets and removing house dirt, of the public buildings, the public wells and pumps, and whatever else the



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aldermen might direct, though up to 1854 the mayor had some authority over the superintendent. As a curiosity the health ordinance of May 31, 1824, "relative to the police of the city of Boston," may be mentioned. It ordains that "the department of internal police be placed under the superintendence of the city marshal," and that "to this department shall belong the care of the streets, the care of the common sewers, and the care of the common vaults, and whatever else affects the health, security, and comfort of the city" (code of 1824, 170-1). In 1834 an ordinance required the city marshal "to take the general superintendence of all common sewers" and even to make plans of them (code of 1834, 246). The actual work on public sewers, however, was done by the superintendent of streets (l. c., 261), and the sewer assessments made by the city marshal proved an illusion.

The duties assigned to the superintendent of streets could not be discharged by one officer, however diligent, and by the ordinance of June 6, 1837, the office of superintendent of sewers was established, relieving the superintendent of streets of much work, and the city marshal of inspecting, accounting and drafting he was not well qualified to manage. The sewer department has always been interesting for the attempt it made to assess the cost of sewers, in part or altogether, on the abutters or immediate beneficiaries. On the whole, the attempt has failed in a city that paid all public expenses from the general tax levy; the town, however, had never treated sewers as a town affair. In 1840 the care of the public buildings was transferred from the superintendent of streets to the superintendent of lands (ordin. of September 17, 1840), and in 1846 an independent superintendent of public buildings was authorized (ordin. of December 24, 1846), who has charge, also, of the fuel for the city. By the ordinance of April 26, 1853, finally, the city stables and the work of street cleaning, as well as the removal of house refuse, were transferred from the superintendent of streets to the superintendent of health, so called. The ordinance of March 9, 1891, again united the street, sewer, health or sanitary-police, and bridge departments (the latter having been authorized in 1828, 1870, and 1885, respectively) under the superintendent of streets. Possibly the work of the street commissioners, the board of survey, the lamp and ferry departments might have been added. At any rate the first superintendent of our streets was required to do the work now assigned to the board of survey and the street commissioners (see also Quincy, *Mun. Hist.*, 194).

ADDITIONAL DEPARTMENTS ESTABLISHED BEFORE 1854.
Law Department.

The city of Boston began, and continued for more than five years, without a law department. The early mayors were learned in the law, yet the failure of establishing a department for interpreting and applying the city charter proved a mistake. In 1827, after some heavy bills for counsel had been incurred, the office of city solicitor was established (ordin. of June 18, 1827). His duties have continued substantially the same, and may be described as those of a business lawyer. The salaries paid at that time to city officers ranged at or above a thousand dollars each. The clerk of the police court received \$1,400, and his assistant \$700. The city solicitor was allowed \$600, the same as the city messenger. From 1839 to 1813 the city solicitor, at that time John Pickering, had the assistance of a city attorney, Elbridge G. Austin. Mr. Pickering served from 1829 to 1816, and was unsurpassed for accuracy. Unfortunately few of his opinions are published; but he overruled many views and precedents he found, and placed the law business of the city on a good foundation. In particular he put an end to the absurd habit of the early city fathers to imitate town usages. The code of 1827 illustrates the early period; the code of 1834 introduces a better age. Mr. Pickering drafted the first part of the Revised Statutes, "Of the internal administration of the government," which still stands, duly amended, in the Public Statutes of the Commonwealth. Before he became city solicitor, he had won fame by his dictionary of Greek, and previous to that he had published his vocabulary of Americanisms. He was easily the most learned man in the service of the city.

His successor, Peleg W. Chandler, was city solicitor from 1846 to 1853, and has left two monuments behind him, the city code of 1850 and the charter of 1851. Of the two, the former is the better. It presents a complete picture of the city laws and ordinances prior to the charter of 1851, and contains some historical references. Mr. Healy was the head of the law department from 1856 to 1882. In 1881 the office of corporation council was created for him (ordin. of March 30, 1881). He was the pupil and partner of Daniel Webster, and himself the Webster of our municipal law. He was not a literary lawyer, and few of his opinions are published. But it was in part due to his sturdy honesty and courage that the affairs of the city were kept untarnished at a time when municipal extravagance was not uncommon,

and corruption sometimes charged against other cities. He was annually elected by the city council; he reigned while government by committee was supreme; his speech was homely; he was incapable of an indirection; but he kept the corporation straight. The law of the corporation, perhaps, deserved no other monument than the name of its honest and faithful servant (a portrait and sketch of Mr. Heady appeared in the *Municipal Register* of 1882). It is not creditable to the city that its law department continues to be "under the charge of the corporation counsel and the city solicitor jointly" (Rev. Ord. of 1892, 46). The United-States Department of Justice is better arranged. It is to be regretted, also, that all formal opinions given by the law department of the city are not published. They might be an honor to the department and a light to the corporation. The city has had good law at a small cost.

Bridge Department.

On November 3, 1828, the city appointed a superintendent of the free bridge. A few years later a superintendent of the Boston south bridge was appointed. The free bridge is now known as the Federal-street bridge, and the Boston south bridge is called the Dover-street bridge. The principle established by the appointment of the bridge superintendent has proved a source of great expense. In 1857 the city had seven superintendents of as many free bridges; on May 22, 1871, the two bridges to Charlestown, and the two to Cambridge, were added (auditor's report for 1871-72, 19, 71, 81). The Revised Ordinances of 1885 united all bridges, except three to Cambridge, under one superintendent of bridges, who began to serve on April 5, 1886, taking charge of more than twenty bridges over navigable waters. The ordinance of March 9, 1891, placed all highway bridges under the care of the superintendent of streets, thus restoring the establishment to the simple arrangement with which it began in 1828. Meantime the number of bridges maintained in part or wholly by the city is seventy-five, and the total number of public bridges in the city is a hundred and ten (ann. rep. of city engineer for 1892-93, 14). The first bridge that connected Boston with any of its neighbors, Charles-river bridge, was opened to the public on June 17, 1786. Forty years later there was no free bridge in Boston. Exactly a hundred years after the completion of the first Boston bridge, some twenty superintendents of bridges, nearly all elected annually by the city council, were reduced

to the rank of draw-tenders, under a general superintendent, who became a mere division chief in 1891.

Had not Boston yielded to annexation, the history of its bridges might be simpler. South Boston was annexed for the benefit of South Boston, and did not rest until the free bridge of 1828 was accepted by the city, the outlay in the first fiscal year thereafter being more than \$3,000. To make the city accept the bridge, the owners paid \$1,607, which was immediately required to put the bridge in order. The Dover-street bridge was purchased at \$3,500, and then a larger sum was expended on repairs. The Charles-river bridges to Charlestown and Cambridge were obtained on the like principle as the free bridge of 1828. The South-Boston bridges, in particular, were the subject of meetings, debates, divisions, legislation, and great excitement. But South Boston committed the city to the principle that bridges are ways to be maintained, like other ways, out of the annual tax. Later on, in the case of the Charles-river bridges, the same principle was applied to structures connecting the city, not with another part of the city (South Boston), but with the municipalities on the other side of Charles river. Is it inconsistent in East Boston to ask for a free bridge, or, in default of that, for free ferries? To be sure, the people of Boston have had a free road to South Boston since 1828, and across Charles river since 1858 (for historical notes see the code of 1876, 64). To be sure, the city is rich; but New York is richer, and the East-river bridge is not free. The people of Boston and the General Court have always had great faith in the city treasury, and the treasury has justified this confidence. In addition, the city has provided sumptuously for the suburbs whose inhabitants desired to do business in Boston. No wonder the proposition is now made that Boston build elevated roads, tunnels, and tracks of steel in order that the suburbs may have free access to the market they want, and none of the expense that maintains the great metropolis.

Quarantine and City Physician.

The city council of 1821, apparently anxious to delegate as little power as possible, and to increase the number of its servants, undertook to do all the work previously transferred to the board of health. The astonishing ordinance of May 31, 1821 (code of 1827, 170), established three coordinate health departments,—the city marshal, to take care of health in the city; the commissioner of health, to take care of

quarantine matters; and the superintendent of burial grounds. This officer, Deacon Hewes, rose to some importance. The city owned the "funeral cars," and conducted the funerals, took care of the cemeteries, and the superintendent kept the mortality record. The ordinance requiring the city to conduct funerals and to supply the funeral cars, continued until 1869, though the office of superintendent of burial grounds was changed, in 1849, to that of city registrar, which still continues (in 1893). This office is now devoted to the recording of births, marriages, and deaths, the former having been transferred from the city clerk's office. The department, it appears, came from the board of health (code of 1818, 73), to which it may return, unless departments are to be multiplied. The records of marriages and deaths in Boston are strikingly accurate; those of births are not. If the registry department has not served the cause of medical science or vital statistics, it has been careful of all records within its province, and accurate in essentials, the value of the papers being personal and legal, rather than medical.

The board of health, established in 1799, had received from the selectmen all quarantine matters, and did very well. The early city government transferred the general supervision of the quarantine service to a commissioner, who was abolished in 1826 (code of 1827, 177). Of course, the board of health and the commissioner employed a physician to do the work; in 1826 the "resident physician," as they called him, was made the head of the quarantine service. He was called resident physician because he did not reside at the quarantine station, which was Rainsford island, as in the past. In 1841 the resident physician's title was changed to port physician; he was required to vaccinate all suitable applicants, and he was virtually the city physician, though the mayor and aldermen fancied themselves to be the real board of health because they were the nominal board. In 1849 the office of city physician was established (Mun. Reg. for 1850, 85-90); and the port physician was transferred to Deer Island, which was made the quarantine station, and was to contain the house of industry, the house of reformation, and other correctional establishments previously located at South Boston. The quarantine hospital was transferred, in 1866, to Gallop's island, the pearl of the harbor islands. From 1826 to 1849 Dr. J. V. C. Smith was the resident or port physician. He attended to his business, studied local history, and later on was mayor for two terms. Another city physician, Dr. S. A. Green,

was mayor in 1882. The wise ordinance of 1872 restored all quarantine matters, all health matters, cemeteries, and kindred affairs to the board of health, which appoints its own physicians, and has done well, although its jurisdiction might be larger. In a large sense, quarantine and public health are not a municipal subject, perhaps; but the Boston quarantine and health service is good.

Public Lands.

When Boston became a city, it held large tracts of land. Boston owned a township in Maine, and within the city limits it owned large estates at the north end, Fort Hill, and especially some 280 acres of neck lands, so called. These latter became the South End, a name that continued long after Roxbury had been annexed. By filling, the real estate of the corporation was greatly increased, and for sixty years the city was a large operator in the land market. From 1834 to 1880 it had a superintendent of lands, who performed the ministerial duties connected with the preparation of the lands for the market, and their sale. The directing was done by committees, and on the whole it was well done. The system invited malfeasance, yet the city was not defrauded. The ordinance of 1834 (code of 1834, 298) required the superintendent of public lands to sign contracts and agreements, and in case he was prevented authorized the mayor to execute all legal instruments. This illustrates the view the city government took of its power. Nor was it strange that the committees on lands committed certain errors of judgment, among them the costly blunder in the Suffolk-street district so called. This district covers the territory between Pleasant, Washington, Dover, and Tremont streets, about 31 acres, and was nearly all wrested from tide water. But the grade adopted was so low that when additional land was filled in, the Suffolk district could not be drained and was subject to overflows when the tide was high. It had to be raised at an expense of some \$2,500,000. Yet when Middlesex street was accepted by the city, in 1831, who could foresee that the Back-Bay basin would be filled in as far as the mill dam, now Beacon street? Very likely the city might have become rich, had its public lands been leased instead of sold. On the other hand, the committee contrived to sell the public lands for immediate improvements of the first order. The policy pursued was not the best, perhaps, but nobody was wronged. A government that does not wrong the people, has nothing to regret. The larger part of the streets laid out by the committee on lands has

borne the test of time, and continues among the best improved estates in Boston. The public lands of the city, not otherwise cared for, passed in 1880 to the street commissioners.

Harbor.

In 1847 the office of harbor master was established. In 1889 the office was wisely transferred to the board of police. The jurisdiction of the police has been gradually extended over the outer harbor as well, and over certain adjacent territory (St. 1864, ch. 50; 1868, ch. 168). The wonder is that no harbor police was had until 1847, and that hardly any harbor legislation was passed until 1837. Up to that time the harbor was generally treated as public property with which men might do as they chose, provided no individual was wronged. The result was that the harbor of Boston was greatly injured; for in the early days of the city the government of the United States did very little for harbors. Harbor lines, beyond which piers must not extend, were first established in 1837 (ch. 229); a map of the inner harbor, with a view to its preservation, was made by the Commonwealth in 1847; and early in the sixties, mainly at the suggestion of Mayor Lincoln, the harbor was surveyed, by the city of Boston, again with a view to its preservation and improvement. Since then the government of the United States has cared for the harbor with great liberality, while the Commonwealth regulates riparian interests, and the city performs police duty. This police duty, it is interesting to think, covers a hundred square miles or more; the original area of Boston proper was less than one square mile. The United States Coast Survey published its first chart of the Boston harbor in 1856.

Minor Departments.

In 1849 the city was first authorized to appoint coal weighers. The law is important to coal consumers, especially such as buy in very small quantities. The city commissions these sworn weighers by the score, and the arrangement works. From the outset the municipal government has supervised weights and measures with skill and care; yet it would have been well to lodge the appointment of all weighers and measurers with the city sealer, and to attach the latter to the police department. The traditional phrase of the General Court in providing for municipal officers of a minor character vests their appointment in

the selectmen, or mayor and aldermen, respectively, the result being that the mayor of Boston has to appoint thousands of officers every year, or more than the greatest care of one man can readily supervise. The city government, on the other hand, made few attempts at consolidating departments and offices, the tendency being rather in the opposite direction, partly, perhaps, on the theory that all appointments have something of patronage about them, and that patronage is worth having. It may have been for some such reason, coupled with the dislike of novelty in public affairs, that Boston appointed a surveyor of hemp as late as 1850, and an assay master as late as 1857. The assay master had to certify, under the law of 1723, that distilleries did not use lead in their apparatus, and the surveyor of hemp had to certify, under an act which expired in 1738, that certain hemp and flax grown in this "province" were "of great service to the crown" (? *Prov. Laws*, 737). Perhaps it was the love of creating departments that led the government of 1852 to make its messenger a sort of a department officer, and the Revised Ordinances of 1890 to establish the "city messenger department." Of course, the city government had a messenger from the start, and the selectmen had under the Province, but without establishing a separate department. The superintendence and lighting of street lamps was the duty of the night watch up to 1854, the captain of the watch receiving an allowance as superintendent of lamps. When the watch was merged in the police department, in 1854, a separate lamp department, with a separate superintendent, was created, and is still continued, although the department might be a bureau under the superintendent of streets. The aldermen treated lamps as their special province, and the common council was unable to get a voice in the matter, the law of 1772 having authorized the selectmen to set up street lamps, and the aldermen having been made the heirs of the selectmen, although the city council had the sole right to create the office of superintendent of lamps.

"Truant Officers.

In 1850 the mayor and aldermen appointed the first truant officers. In 1873 the appointment of these officers was wisely transferred to the School Committee, and in 1893 the appointment was confined to persons certified by the civil-service commissioners of the Commonwealth. In Colony days the selectmen were the truant officers; in 1735 the overseers of the poor had joint authority; when the city was established,

and Mayor Quincy had his struggle with the overseers of the poor, the city had a great many truant officers, namely, the mayor, every alderman, any director of the house of industry, any director of the house of reformation, any overseer of the poor (Act of March 4, 1826, sec. 3; Act of March 21, 1843), the result being total neglect. Nominally the house of reformation was the truant school; but the authorities of the public institutions were at liberty to transfer inmates from one establishment to another, and unable to effect a full separation of the vicious from the unfortunate. It has been intended to establish a parental school, especially for minors not simply criminal; but the management has not been entrusted to the School Committee (St. 1886, ch. 282). The ancient confusion, therefore, continues; for if there were a parental school, the commissioners of public institutions and the school committee would have joint authority over an establishment nominally parental, but correctional in fact. The subject falls properly under the care of the School Committee, which appoints the truant officers.

Market Department.

Under the interesting ordinance of September 9, 1852, the city appointed a superintendent of the Faneuil-Hall market, since called the superintendent of markets (Rev. Ord. of 1890, p. 67), and previously known as the clerk of the market, the first being chosen in 1649. This is, in one respect, the most interesting office under the city government. The modern city of the Germanic world owes its first character largely to market laws; and a trace of these early laws still survives in Boston (Rev. Ord. of 1892, ch. 43, sec. 60). When markets became a necessity, special laws for regulating them were required. The administration of these market laws and regulations was vested in the market towns; whence the piepowder courts, courts with summary proceedings, and municipal courts, round which gathered the municipal rights and duties that distinguish a market town from other municipalities. The Boston market place retained the medieval law, and a part of it still reigns within the limits of the Faneuil-Hall market. Within these limits the ordinance of 1852 permitted free trade only two days before Thanksgiving and Christmas, respectively. The purpose of the market is to give the people of Boston the full advantage of open competition in the sale of perishable provisions, and to give the farmers within the neighborhood of Boston a certain advantage over distant rivals. A history of the market laws has not been written. In early English

cities the mayor was generally clerk of the market and judge of the piepowder court, whence his popular title "your honor," which still survives in Boston, by a sort of atavism (see G. L. Gomme's Index of Municipal Offices, 11).

Water Department. Engineer and Surveyor

The Boston water supply has more interest as a financial and engineering enterprise than in law. Up to the present time the work has cost nearly twenty-four million dollars, and is sufficiently vast to transcend mastery by one mind. The literature of the subject is a library. In 1825 the City ordered the first report upon the subject, and in 1831 Loammi Baldwin's famous report pointed to the supply that was taken. In 1816 the proper authority was obtained, and the work begun, Nathan Hale, James F. Baldwin, and Thomas B. Curtis being the commissioners who carried the Lake Cochituate supply to Boston, at an expense of four million dollars. The introduction of water was duly celebrated on October 25, 1818. In 1819 an ordinance established the Cochituate Water Board, to consist of a commissioner, an engineer, and a water registrar who, together with the committee on water, were to manage the great undertaking. In 1850 the board was so changed as to consist of an alderman, a member of the common council, and five citizens at large, who served without pay. The board was chosen by the city council, as were the city engineer and the water registrar, whose offices were created by the same ordinance (Oct. 31, 1850). The city council, then, created three departments, where one would have sufficed. And yet the arrangement worked. The board was faithful, the engineer excellent, and the water registrar all that was wanted, as far as the assessment of water rates was concerned. The first report of the new board, issued in 1852, presented a good history of the establishment.

The commissioners who built the works were also appointed by the city council, but they were paid. They secured the service of E. S. Chesbrough, engineer, and overcame all obstacles occasioned by indifferent regulations and divided authority. The act of 1846, under which the work was done, is interesting, also, for the first mention of a sinking fund in the history of the city government. The sinking fund was controlled by the mayor, treasurer, and auditor of the city, yet it was not well managed. Apparently a part of the water revenue was expended for new construction, and the sinking fund was supplied from

the general tax levy (see the auditor's annual report for 1879, p. 9). In 1877, therefore, this subject was transferred to the board of sinking-fund commissioners. The case shows that at times a good law may operate indifferently, and that an indifferent law will not prevent the right men from doing their duty. The union with Charlestown brought the Mystic water works under the control of the city, and led, in 1876, to the establishment of the Boston Water Board, consisting of three paid members, appointed for terms of three years, respectively, by the mayor, with the approval of the city council up to 1885, and the board of aldermen since. The ordinance provided, also, that the members of the board should not be directly or indirectly interested in any matter or thing connected with the water works (code of 1876, 941). The intent of the ordinance is obvious. Nor has it been necessary to construe the terms. The city has had good water, apparently at a fair price, and certainly without disgrace.

The engineering department owed its origin to the water works, but the bridges, sewers, and parks made it an office of general importance, and the increase in street work led, in 1868, to the separate establishment of the surveying department. This department should have remained a bureau under the city engineer; but the betterment law of 1866 (ch. 174) gave added importance to the aldermen's committee on laying out and widening streets, and the city surveyor was made their clerk. But the "care and supervision" of the office were vested in a special committee, which fixed the salaries of the subordinates, and had the approval of their appointment and discharge. The same principle was applied to the engineering department. The heads were elected by the city council for a year at the time. None the less both departments were efficient, possibly because the publicity of the supervision was a protection. Systematic work was not possible in offices that took their orders from "any committee of the city council," yet the city was well served. As the water department is supposed to pay for itself, it is an open question how far it should employ engineers and other officers paid entirely from the water revenue. Its sinking fund used to get replenished from the general tax levy, and some of its law, engineering, and other expenses are still charged to general appropriations. On the other hand, the water revenue may be used, under the law (St. 1892, ch. 213), for new construction. To have made the water registrar an independent department, which assesses the water rates, seems odd, unless it is proper to multiply departments.

THE PUBLIC LIBRARY.

At the time when the popular interest in public schools was inflamed, the city of Boston received the gift of some books from Paris, and concluded that these documents were a proper nucleus for a free public library. In 1848 the General Court authorized the city to expend not exceeding \$5,000 a year for such a purpose. In 1850 Edward Everett offered a thousand volumes of public documents, and Mayor Bigelow \$1,000. In 1851 the General Court authorized cities and towns to establish and maintain public libraries open to "the inhabitants thereof," Boston being allowed to expend \$28,000 the first year, and about \$7,000 a year for maintenance. In 1852 Mayor Bigelow suggested the appointment of a librarian, whose work began May 13, and of trustees, whose first report led Joshua Bates to offer \$50,000 toward the library, the city to find a suitable building. In the same year the permanent board of trustees was organized under an ordinance which called also for the annual election of a librarian by the city council. In 1853 the General Court authorized the expenditure of \$150,000 for the library, up to December 31, 1856, and \$10,000 a year thereafter. In 1854 the library had the services of a librarian, who was chosen by the city council; of trustees chosen in the same way; of commissioners who were to provide the library building; and of the usual committee, with the mayor left off. The circulating department was opened on May 2, 1854. On January 1, 1858, the library building in Boylston street was dedicated; in 1863 the trustees were authorized to appoint the librarian and superintendent, subject to the approval of the city council; in 1869 the trustees received authority to appoint their subordinates, but the city council was represented in the board up to 1885. The law limiting the library expenses to \$10,000 a year had been repealed in 1857, and in 1878 the trustees were incorporated, with leave to hold property up to \$1,000,000.

In 1880 the State gave a piece of land for the erection of a new library building, at the corner of Boylston and Dartmouth streets, the building to be erected within three years, and to be open to all the citizens of the Commonwealth. This estate has been added to by the city, and in 1887 the trustees were given entire control of the new building, its erection and management. In 1869 the city had authorized them to establish branch libraries; but up to 1863 the ordinance vested in the trustees only "the general care and control of the public library," and in the librarian its "immediate care and custody." So far from

preventing the growth of the establishment were the early ordinances, with their conflict of authority, that those were really the palmy days of the library. The people had found a new idol, the municipality a new mission. The people were passionate in their attachment to the library, and a share of this early love continues, unchecked by the vast expenses incurred in recent years. Apparently the city expends more for its public library than does any imperial government. The services of the trustees are gratuitous.

THE CHARTER, 1822 TO 1854.

The charter of 1822 made the mistake of trying to adapt a city to town government. But the difference between direct self-government by the people and representative government is radical. The mistake of treating the two alike still haunts our municipal jurisprudence (Publ. Stat., ch. 28, sec. 2), and illustrates the conservatism of American democracy. If town government and its departments were sacred, they should have been retained, and Boston should not have become a city. Having become a city, the methods of town government should have been abandoned. The charter of 1822 failed in this, and by false conservatism increased the evils it meant to remedy. In theory the principle was established that the city council should have the powers of the town meeting, and that aldermen should have the powers of selectmen. The theory was wrong; for a town meeting is essentially an administrative body, giving specific orders to its agents and servants, while the city council is not the agent and servant of the government, but itself the most important branch of the government. In substance, the charter placed the actual government of the city in the hands of eight aldermen, requiring them only to obtain in some matters the concurrence of the common council. Instead of dividing and distributing the power of the corporation, in a system of checks and balances, the charter provided for the continuance of town offices, and placed the real authority with the aldermen, who were not required to act as a board only, but had great power as individual aldermen.

The framers of the charter were bound to draw a sharp line between legislative and administrative work in the city government; for the very purpose and essence of a representative government consists in "a government of laws, and not of men," as the Massachusetts declaration of rights expressed it in 1780. In a town it is not necessary to legislate much, or to give many permanent orders, because the town

meeting may issue new orders at short notice. In a representative government legislation is of the utmost importance, because the direct self-government of men has been displaced by the indirect self-government through law. In a city government that neglects municipal legislation, the administration will become irresponsible and reckless. Yet our charter of 1822 gave the city council chiefly administrative duties, and reserved the legislative work in good part to the General Court. The charter provided for ward officers, firewards, overseers of the poor, school committee, and the treasurer and auditor; and then vested in the corporation "the administration of all the fiscal, prudential, and municipal concerns" (St. 1821, ch. 110, sec. 1). "The care, custody, and management of all the property of the city" were assigned to the city council (sec. 16), and "the administration of police, together with the executive powers" were vested in the mayor and aldermen (sec. 13). What wonder that every man named in the charter tried to administer and manage? What wonder that Mayor Quincy called the common council the legislative branch of the government, and the aldermen its executive board? What wonder that in the general endeavor to manage and administer, the mayor and the common council were crowded to the wall? What wonder that the city council neglected its legislative duties? It is a wonder that the charter did not work mischief. The government was saved, not by the merit of the charter, but by the character and integrity of the mayor and aldermen.

The standard by which the charter of 1822 should be judged is not the constitution of a Massachusetts town, but the Constitution of the United States, which had been in operation for more than thirty years. Nor is there an essential difference between the governments of Boston and the United States. Both have limited powers; the powers of both can be enumerated; both governments are representative and free. But the Constitution of the United States did not engage in any attempt at saving the offices of the Confederation; neither did it establish executive departments. It divided and distributed government power, and left the rest to Congress and the good sense of future generations. In more than a century it has not been very much changed; the Boston charter of 1822 required amending in 1823, and had received more than fifteen amendments by 1854, when it was revised (see the code of 1850, 453-182). Yet it cannot be harder to make a constitution for a city than for a sovereign nation. The defect of our charter was the imperfect distribution of power, and the implication that the city council



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might manage and administer, while the real legislative authority was to be exercised by the General Court. In defense of the framers it should be stated that the administrative sub-divisions of the Commonwealth and the United States are as complicated and confusing as those of Boston, and that the fault lies with the legislative bodies that make them. But in the State and nation the fault is not constitutional; in Boston it is. This fault of our charter consisted in reserving to the General Court certain legislative functions that should have been entrusted to the city council, and in imposing upon the city council administrative duties which should have been withheld. In a representative government it is fatal to let the same body legislate and administer.

The population of Boston had increased from about 45,000, in 1822, to less than 160,000 in 1854; the taxes were less than \$160,000 in the first year of the city; in 1853-54 they exceeded \$1,500,000. The city did not inherit any town debt, and the county debt left to the city was \$71,815; in 1854 the city owed more than seven million dollars, including nearly two millions for general city purposes, except the water supply. Yet the government had been honest. It might have done better; but it was not to be expected that it should do better than the charter prescribed or permitted. And the charter prescribed that the city council should manage and administer in general, that the aldermen should administer and manage in particular. They did; and the people might have fared worse. The public schools, those idols of the plain people, are still managed by a committee of twenty-four, and are well managed, certainly with some ability, great fidelity, and entire integrity. General city affairs were equally well managed under the charter of 1822. To be sure, the early city councils were strikingly unfortunate in their ordinances, as is illustrated in the town code of 1827. But could city councils do much, when anybody and everybody might go to the General Court for Boston legislation? The special laws relating to Boston, and passed by the General Court, are not less than six hundred, and one-fifth of the number was passed from 1822 to 1854. Such an arrangement must be ruinous to city-council work. And the common council was treated with peculiar contempt. The charter did not intend to give the common council concurrent jurisdiction, which is the greatest protection against haste, negligence, and corruption. In 1841 the mayor and aldermen as a board were authorized to make penal by-laws, known as regulations; and the charter revision of 1854

made the municipal power of aldermen supreme, save where they shared it with joint committees. But the responsibility for the unhappy arrangements rests with the General Court. The members of the city government must answer for individual shortcomings, if any; the system, the government, the constitution of the city were not of their making. These were made and marred at the State House.

ATTEMPTS AT REFORM, 1822-1851.

When matters did not go to the satisfaction of the people, it was customary, in the early days of the city charter, to hold meetings at Faneuil Hall, under sec. 25 of the city charter. Mayor Quincy thought well of these meetings, and considered them a continuation of the old town meeting. They were nothing of the kind. The town meeting could order the town officers; the "general meetings" authorized by sec. 25 of the city charter might advise or censure, but had no power that bound anybody. Anybody could hold such meetings, and anybody could advise or censure the city government, charter or no charter. Those general meetings merely show how useless it was to retain the form of town government, when the substance was gone. Accordingly a new way at reform had to be found. It became customary to get an act passed by the General Court, and to let the people vote upon its acceptance. Of course, the people usually rejected such acts, save where some substantial gain was offered. An act enabling the mayor and aldermen to choose one of their own number superintendent of police, as under the town, and to order ward meetings to be held outside the respective wards (6 Spec. Laws, 81), fell by its own weight. So did a building law, passed in 1827 (l. c., 561), which called for non-combustible or slow-burning architecture, but gave the mayor and aldermen great latitude. In Mayor Eliot's day the people were twice invited to vote on charter amendments proposed by the city government (city doc. 21 of 1837, doc. 5 of 1838). The amendments were rejected.

The reason why these measures were rejected is apparent. The people favor what they think advantageous; all else they view with indifference or opposition. It was not to be expected, in the early years of the city charter, that the people would add to the power of the mayor and aldermen. Why should they? The charter amendments of 1837 and 1838 proposed to transfer the election of the overseers of the poor from the people to the city council. Why should the people

support such a proposition? A more radical measure might have been approved, provided some public gain was to be made. How discriminating a popular vote may be, was illustrated by the treatment of St. 1852, ch. 266. The people rejected the offer to choose aldermen and assistant assessors by wards, but gave the common council concurrent authority, with the mayor and aldermen, when more than \$5,000 was to be expended on a county building, or in laying out a street. The people decided correctly that it was immaterial whether they had eight or twelve aldermen, and whether these aldermen were chosen by wards or at large, but that the power vested in the board of aldermen was an important matter, and that concurrent authority should be vested in the common council. Unlike the student or lawyer, the people are indifferent as to form; they are disposed to trust, and are not jealous of power where power is properly vested and exercised. They are disposed to delegate much, and are not pining for the Swiss referendum. But they insist that government shall be orderly and efficient. If the government be orderly, efficient, and creditable, the people are ready to support, to bear much, and to forgive something. But the people have an intuitive dislike for measures not transparently clear and useful. The reforms proposed from 1822 to 1854 were a matter of form, and for that reason could not command public respect.

Nobody floundered more than the members of the government, except the eight aldermen. They used the power they had, and did not complain. They said very little, and during the period under discussion did not even publish their rules of procedure, if they had any. They acted as a legislative board, as a branch of the city council, as an executive board, and as individual executives. The common council demanded more power, but met with opposition both quiet and effective. The concession made by the aldermen consisted in the appointment of joint committees, which rose to such importance that they figure in the charter of 1854 (sec. 40). The charter amendments of 1837 and 1838 had proposed that either branch of the city council, or any committee thereof, should have power to lease or sell city property. This passion for committees was honestly inherited. Under the town, orders were usually carried out by committees. Indeed, the selectmen were a standing committee of the town meeting. Under the city charter all executive and administrative work should have been done, as since 1885, by paid officers. The members of the city council were not so anxious to do work as they were willing to supervise and direct

the work of others, to help in selecting these others, to wield patronage, and to dine or celebrate at the public expense. They have been bitterly denounced for this; but they did not create the absurd system that required the city council to give orders and to manage the execution. The chief sufferer was the mayor. Mayor Bigelow explained this with insight when he retired in 1852. The duties of the mayor, he said after three years' experience, should be purely of an executive character, whereas he presided over the board of aldermen, the school committee, and many other committees, to the exclusion of administrative work. As a member of these bodies he had one vote, and no more. He had no veto power, and as an executive he had about the same power as an alderman, except that he nominated police officers, undertakers, and weighers. Mayor Bigelow (see doc. 80 of 1851) was the first to point out the true reform.

CHARTER OF 1851.

Mayor Bigelow had pointed out that the mayor should be an executive officer, and that he should not be a member of the board of aldermen and the school committee. The city government of 1854 undertook to act upon this hint, the outcome being the charter of 1854, which is still in force, though literally reformed by many amendments. The immediate impulse for the new charter came from Mayor Smith and Henry J. Gardner, prominent members of the Native American party. There is no reason why such a party might not produce a good charter. But the charter was drafted under directions from the city council, and the city council was not likely to deprive itself of the administrative powers conferred by the charter of 1822. Nor were the times favorable to sound legislation. The Constitutional Convention of the State, assembled in 1853, had failed of success; the Commonwealth was divided into three or more parties, none of which commanded a majority, and Boston was more divided than the Commonwealth. The contest for the mayoralty, in 1853, had been led by a Whig, a Prohibitionist, and a Know-Nothing, the last named being elected on the third trial. This contest led the General Court to establish the principle of election by plurality vote in all town, city, and county elections, in the place of elections by majority vote that had been in force up to that time (St. 1851, ch. 39). That the General Court should improve the charter submitted by the city council, was not to be expected. It was not apt to have better views of a city charter than the men of Boston.

The new charter, as first proposed, placed the election of the school committee under the control of the city council. This was expunged. In order to make the mayor an executive officer, he was deprived of his vote in the board of aldermen, over whom he was to preside; and it was decided that the term "mayor and aldermen" should virtually mean "aldermen," except that the mayor was to have the qualified veto power over formal votes of the board or the city council, and that he should continue to nominate a few petty officers whose appointment was vested in the mayor and aldermen. These he might also remove. But all important officers, save the police, were chosen and removed by the city council. Over the executive power vested in the aldermen the mayor had no control. Indeed, the only new power given to the mayor was the qualified veto; but every alderman could nominate officers, give information to the city council, direct the department officers, and watch the execution of the laws and orders. The charter was just such an instrument as the aldermen wished, and ought not to have had. It made the mayor a figure head of the administration, it confirmed and increased the power of the aldermen, and virtually established government by legislative committees. The provision that ordinances might carry a penalty up to \$50, has not been carried out by the city government. But a term of three years was wisely established for members of the school committee. The number of aldermen was increased to twelve, but the plan of electing them by wards was rejected by the people. As nothing better was offered, the people accepted the charter, but in a light vote. The yeas were 9,166, the nays 990; the population of the city more than 150,000. The proposed election of aldermen by wards was rejected by 5,138 votes, against 4,833 in its favor. At the previous city election more than 13,000 ballots were cast.

The common council attempted to get the same power as the board of aldermen, but failed. Public opinion acquiesced in the idea that municipal business was mainly administrative, that aldermen were the legitimate administrative officers, like selectmen in towns, and that common councilmen might possibly do the work of minor town officers who did not draw pay. The common council itself supported this position by giving much attention to purely administrative work, to the neglect of municipal legislation. The lawyers seemed partial to the prerogative of aldermen, and the germ of power entrusted to the common council was never allowed to develop beyond the state of a modest

bud. Yet the city council had the power of towns, aldermen had only the power of selectmen, and towns were not obliged to employ selectmen as their agents for every kind of town business. The philosophy and jurisprudence of the charter were neglected in the general attempt of the city council to administer and manage as much as possible, and to avoid theoretical questions. In this misplaced endeavor the common council could not compete with the aldermen. It fought for executive rights; the more important field of legislation was neglected, and the great constitutional problems of municipal government were not touched. In fact, whenever important legislation was desired for the city, application was made to the General Court, and the General Court, always partial to special legislation, rarely refused to consider problems which should have been solved by the city government.

The aldermen worked night and day, the common councilmen were faithful, the people could not understand their government. Its fault was not want of integrity or diligence, but constitutional. The mayor, who should have had full executive power, was confined to ornamental speeches. The city council, which should have legislated for all municipal departments and concerns, was required by the charter to administer and manage, and the General Court never hesitated to legislate for the city of Boston. The city, therefore, had three legislatures,—two at city hall, another at the State House. For the aldermen could legislate without the concurrence of the common council. The mayor was to be “taken and deemed” the chief executive officer; but the executive powers of the corporation were vested in the aldermen (not in the board of aldermen); yet the city council was to appoint the principal city officers, and had the care, custody, and management of all city property, as well as “the administration of all the fiscal, prudential, and municipal concerns.” The lawyers decided that cities were “created” by the General Court, and the people were too civil to find fault with their creators at the State House, but blamed the city government when taxes or debts were too high, or improvements too slow. They demanded the best that money would buy, and insisted that taxes must be low. With few exceptions all public expenses were met from the general tax levy or loans, and there is still a lurking belief that a government may be rich while taxes are low, or that skill and influence can get improvements for which the beneficiary need not pay. As the city could assess taxes and incur debts without limit, it is greatly to the credit of the city governments and their committees

that the people who pay the bills fared so well. Surely, worse things might have come from a city council that both levied and disbursed the tax, and could borrow millions to satisfy the popular cry for the latest improvements. Future generations will marvel when they read the Boston charter of 1854.

CITY HOSPITAL.

Before the charter of 1854 went into the effect, the machinery for governing the city was complete. Great ingenuity in establishing a variety of conflicting departments and city organs had been shown. The departments created since then might have been made a part of some department to which the people were accustomed; but the General Court and the city council were determined to create a new department for every kind of work that could be entrusted to new officers and at least one governing committee. From time immemorial the town had established a hospital when occasion required, and the Province had a regular establishment on Rainsford island. This hospital was at first kept by the Province; it was then kept by the town at the expense of the Province; finally it was ingeniously transferred to Boston. When Boston indicated a willingness to establish a permanent hospital, nominally for emergency cases, the General Court hastened to grant permission (St. 1858, ch. 113). The usual committees were appointed; in addition a board of trustees was created, and on May 24, 1864, the city hospital was dedicated. The late Elisha Goodnow had left a bequest of \$26,000 for a hospital to be erected in or near South Boston, half the income to be used for free beds; in 1862 the city provided for a board of trustees of the hospital; the building was erected under the joint management of the committee on public buildings, the committee on the city hospital, and the trustees. Between them they laid a very broad foundation, though Thomas C. Amory, jr., chairman of the trustees, confessed at the dedication that, "were we permitted, with our present experience, to recommence our task, the control would be left with a single committee, and to fewer minds" (1864, city doc. 40, 31).

The city hospital has become a whole colony, with more than twenty buildings, and an annual requirement of not less than \$250,000 for maintenance. It is well managed, and one of the few city departments that have undertaken to enrich knowledge, and not simply to consume. In 1880 the trustees, now five in number, were incorporated, and have

"the general care and control" of the hospital with all its branches, training school, convalescent home, and out-patient departments. Yet when this enterprise was proposed, in 1849, so distinguished a man as Dr. D. Humphreys Storer, whose opinion was entitled to attention, declared that the institution was not required, and that he was not the only physician who held that view. Mr. Amory comforted his dedication audience in advance, "if our beds are not immediately in requisition," with the statement that the Massachusetts General Hospital received its first patient on Sept. 3, 1821, and "no other application before the twentieth." Of course, a hospital offering the best treatment free of expense was not to be wholly without applicants. The building, when delivered to the trustees for use, had cost \$350,000; the expense in the first year thereafter was \$113,437, a large part of this being borrowed, while the building was erected almost entirely from borrowed money. The city thus committed itself to expenses not exclusively of a public nature, and the General Court consented. The people rejoiced, and look upon the city hospital with almost the same delight they take in the Public Library. The trustees are not paid, they are appointed for five years each, and they collect from patients that are able to pay. The city council leaves the management of the hospital entirely to the trustees.

EAST BOSTON FERRY.

In view of the money devoted by the city to the hospital and the public library, which were not municipal necessities, as defined by municipal jurisprudence, it seems surprising that the East Boston ferry, though owned and operated by the city, should continue as a toll ferry. In old times the East-Boston ferry, when operated, was a part of the Chelsea ferry, which was in private hands. The first regular ferry to East Boston appears to have been established in 1833. In 1852 the East-Boston Ferry Company bought the ferry then in operation for \$200,000, the city was to prescribe the duties of the company and the tolls, provided the latter netted eight per cent. on the capital invested, which might be \$300,000. The act of incorporation held out the hope of a free ferry, to be established by the city. In 1870 the city bought the ferry property for \$275,000, and the enabling act again held out the hope of a free ferry. In 1877 the city council voted to make the ferry free, but the Supreme Court of Massachusetts ruled such a vote to be illegal. Whether or not the city might have established a free ferry in

1870, under St. 1869, ch. 155, is undecided, although the presumption is against free ferries, as far as the science of jurisprudence is concerned. The question would be free from doubt, were East Boston another town or city; but it has been a part of Boston since 1637, and the right of the city to build a free bridge to East Boston is not to be doubted, provided authority from the General Court is obtained. The ferry has cost the Boston tax payers about \$2,000,000. (See St. 1852, 244; 1868, 352; 1869, 155; Chief Justice Gray's decision in 123 Mass. Rep., 460). The ordinance of April 17, 1891, wisely transferred the management of the ferry from a board of commissioners or directors, appointed annually, to one superintendent. Another ferry, conducted by a railroad company, connects the city proper with East Boston.

PARKS.

In 1870 the people of Boston voted upon an act (St. 1870, ch. 283) under which a board of nine park commissioners, four to be appointed by the State, should lay out one or more parks, the annual cost of maintenance not to exceed \$50,000. Two-thirds of the voters were to accept the act to make it binding upon the city. The vote was 9,333 in favor, and 5,916 opposed; so the measure failed. After the annexations of 1874 another act, under which three park commissioners, appointed by the mayor and city council, were to establish parks within the city limits, was accepted by the light vote of 3,706 yeas, to 2,211 nays, a majority vote to decide. The act did not contain any limitations, except that expenses were to be kept within appropriations made by the city council. The park commissioners have never received a salary; yet the city has had good service. A fine system of parks has been projected, and is in part complete. Not including the common, the public garden, and the public squares, the parks cover nearly three square miles, and the cost, up to January 31, 1893, was about \$11,500,000. The General Court and the city government have been equally lavish in this matter, and the city has received an equivalent for its great outlay. The city government has very little to do with the parks, beyond authorizing the loans and expenditures. But the common, the public garden, and other public grounds, to the extent of about 140 acres, with some thirty thousand trees, remain under the care of the city government and its superintendent of public grounds, an office established as early as 1841, and important since the public

garden has been made a delight to all comers. The parks and these public grounds might well be under one management.

REVIEW OF EXECUTIVE DEPARTMENTS.

This ends the list of the great spending departments. Other departments created since the charter of 1854 are certain cemeteries; the inspection of milk and vinegar, which has proved a benefit; the commissioners of the Charles-river bridges; the inspection of buildings, which looks after the safety of all houses and other buildings in the city, and has had the benefit of very much legislation from the General Court, but has been useful; the inspection of provisions; the record commissioners, who have published important documents of the early local government; the city architect; and even an art commission. In 1870 the laying out and widening of streets was transferred from the aldermen to the board of three street commissioners, elected by the people; and in 1874 the registration of voters was transferred from the aldermen to a board of three registrars, appointed by the mayor and aldermen, who could not properly attend to such things. In 1871 a superintendent of printing was appointed, whose duties, however, are ministerial. In 1875 the collecting department was separated from the treasury. But, on the whole, the city government prefers not to multiply administrative departments, and in 1891 an interesting consolidation of the bridge, sewer, and sanitary-police departments with the street department was effected. Still there are some thirty-five coordinate departments directly amenable to the mayor, not counting the schools, the county officers, the police, and numerous officers paid by fees. The number of appointments made annually by the mayor and aldermen is nearly three thousand, and the number of persons in the service of the city about three times that number.

It is due to the city government to state that most of the city departments are created by the General Court. When a public want arises, and the General Court acts at all, it usually creates a new municipal department, as far as Boston is concerned; for some new duty of town officers in the nature of things means a new department in the city of Boston. In addition, the city has many wants that do not arise elsewhere. The result is an administrative machinery of vast extent and extremely complicated, but with this element of unity that the expense is assessed upon the Boston tax payers. County expenses are prescribed almost wholly by the General Court, and defrayed by the city.

For years past they have exceeded a million dollars annually. The school expense averages above two millions a year, and is appropriated by the city council in bulk, to be expended by the school committee. In the appointment of the police force, the city has no voice, but it bears the expense, which exceeds a million dollars a year. The expenditures of the departments under the control of the city government are mostly fixed charges. Yet nearly every administrative department, and nearly every expenditure, have been created at the request of the tax payers. They have demanded the best, and they have borne the cost with astonishing ease. With the exception of the nominal poll tax, the city collects nearly every tax it assesses; and the payments are prompt. Yet owing to the fact that the people of Boston demand more and receive more, their taxes are the highest in the country. Since the charter of 1854 our population has trebled; our tax has sextupled; yet the community bears the burden without apparent difficulty. But it dislikes special assessments. It prefers that the municipality shall do as much as possible, and that the cost shall be defrayed from the general tax levy.

Under the law of 1890 all subordinates hold their places during good behavior, and since the charter of 1854 the rule of annually appointing all heads of departments has been in part abandoned. A slight beginning has been made in reducing departments to divisions of a department, the advantage being, not economy, but better supervision, greater stability, and less contact with political appointments. For in an important sense appointments made by the mayor are more or less political appointments. Perhaps the administrative machinery of the city could be reduced to a few departments, the political heads of which might come and go with every mayor, while all division heads and their subordinates would serve during good behavior. The United-States Treasury shows that all financial departments of the city might be safely united under one head. Such a department of finance should include the assessors of taxes as bureau officers, and might include the registration of voters, because the assessing and collecting departments have the best knowledge of persons in the city. A great health department might include the city hospital, the inspection of food for man and beast, all cemeteries, and the entire registry of births, marriages and deaths. The public library, the publication of early records, and printing naturally go together, and have very much in common with our system of schools. The great departments of police, fire, in-

spection of buildings, weighers, and medical examiners could be joined. The departments of relief, correction and prisons should be consolidated. Finally there would be, or could be, a department of public works, comprising streets, sewers, bridges, parks, lighting, public buildings, the city engineer and surveyor, the architect, the water division, and the ferries, together with the board of survey, and all administrative work now assigned to the street commissioners.

It is not unreasonable that with a new mayor there should be six or eight, but not exceeding ten, new heads of departments. It is contrary to reason that such officers as the city architect, assessors of taxes, the engineer and surveyor, the water registrar, the superintendent of printing, or the city registrar should be quasi-political officers. An officer elected by the people, or appointed by the mayor and aldermen, is almost inevitably a political officer. When the people elect a new mayor, they practically declare that he may select all officers for whose conduct he is responsible. In order to eliminate party politics from the service, therefore, it is important that as few offices as possible should be elective, or subject to the pleasure of the appointing power, and that as many offices as possible, including all ministerial offices, should be taken out of party politics. It is important, also, that the administrative machinery of the municipal service be simplified. The administrative branch of a government should resemble a pyramid. To command popular interest, the system of administration must be intelligible. The laws that govern Boston are more complicated than the laws that govern the United States; our executive departments are more numerous; supervision is more difficult. The reason is apparent. We have but one national legislature; the city has three or four. There is but one national administration; the administrative officers of Boston carry into effect the Regulations of the Board of Aldermen, the Ordinances of the City Council, the statutes of the General Court, the laws of Congress, and the directions of the mayor. No wonder, the reformers despair when they undertake to deal with municipal government.

THE BALANCE OF MUNICIPAL POWER.

This fact, that the spending officers of the city are the servants of so many masters, and that the supreme master, the voter and tax payer, is so exacting, is the chief reason why taxes in Boston are high, and why the municipality does many things that are elsewhere left to

private enterprise, and for that reason do not appear in the tax levy. The tax payer and the municipal government stand, to some extent, in the relation of principal and agent, or master and servant. Accordingly the municipal government cannot be judged justly without some attention to the public that clamors for improvements and is willing to pay the cost; though some persons demand generous expenses and low taxes. To reduce the general tax levy, the betterment law was passed in 1866 (St. 174). It was to let abutters bear a part of public improvements; but has not worked well. In theory common sewers were to be paid for by the abutting estates; but collections have been light. Even the parks were to be paid for, in part, by abutters; the object has not been obtained. When municipal expenses became enormous, under the joint influence of inflation, annexation, and the fire of 1872, the General Court limited municipal indebtedness by statute (St. 1875, ch. 209), ordaining that Massachusetts cities and towns should not owe above three per centum of their taxable property as valued by the assessors, though communities owing between two and three per centum of the assessed valuation might incur another one per centum of debt. The same law required sinking funds to be established.

Ten years later, the debts as well as the taxes of Boston were restricted by a law of Spartan rigor (St. 1885, ch. 178); but the General Court itself forced numerous exceptions upon the city. The net debt of the city in 1893 (gross funded debt, less cash available for redemption) is not far from four per cent. of the assessed valuation, and the amount required in 1892-3 for interest and sinking funds exceeded four million dollars. The city government is not alone responsible for this; neither is a stringent law a protection against lavish expenditures. Indeed the city government has been carefully protected. The city charters of 1821 and 1854 made members of the city council ineligible for salaried city offices. In 1884 members of the city council were made ineligible for such offices during the term for which they were elected. In 1850 they passed an ordinance making void all sales and contracts, purchases and agreements in which a member of the city council or an officer of the city had any private interest, direct or indirect (Ordin. of Dec. 23, 1850). The civil-service law (St. 1884, ch. 320, sec. 13) made it impossible for the members of the city council to charge wine or tobacco to the city, or more than a dollar a day for meals. The legislators appear to have felt that personal economy in members of the city government might promote municipal frugality. But a few

thousand dollars saved on municipal dinners or carriages are a small item in municipal expenditures that exceeded twenty-one million dollars in 1892-3. The real expenditures are demanded by the city government, by the General Court, and by the public, though it is customary to chide aldermen and common councilmen, when economy, retrenchment, and reform are in demand.

Up to 1885 the annual city councils controlled municipal expenditures, and are responsible for much that happened, though both the General Court and the public demanded much. Under a feeling that the city must be protected, as though it could not protect itself, the power of the city council, and especially the board of aldermen, was gradually curtailed. The establishment of the board of street commissioners, in 1870, is a good illustration. It transferred the right of laying out and widening streets from the aldermen to the street commissioners. Other executive departments were created at the expense of power which the charters of 1822 and 1854 had vested in the city council. The last favor shown by the General Court to the city council was in 1864, when the election of overseers of the poor was transferred from the people to the city council. The aldermen enjoyed the highest degree of power from 1847 to about 1876, and vast power up to 1885. But they gradually lost ground. Misled by a foolish charter they undertook too much; the result was inevitable distrust. In 1884 the law requiring the election of aldermen by districts was passed. It has not proved specially beneficial, nor at all injurious, for the reason that it cannot make any material difference whether an alderman is chosen by one-twelfth of the city or by the whole. The smaller States send at least as good men to Washington as do the large States, and a limited district is as apt to choose well as is a much larger district. But before the law of 1884 could produce results of importance, the storm that had gathered over the board of aldermen and its despised brethren of the common council, burst forth. It was to be a hurricane. The great wrong of the charters of 1822 and 1854 was to be redressed at last. The power of the aldermen was to be placed between the upper and the nether millstone.

THE BALANCE OF POWER RECAST.

In 1883 Benjamin F. Butler had been Governor of Massachusetts, to the sorrow of all conservatives in a State that thought well of the past. In 1884 and 1885, therefore, the General Court undertook to repair all



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the mischief that had brought the political aspirant to the head of affairs for a twelvemonth. In those two years the constitution of Boston was revolutionised. Boston had supported Butler; in 1884 it had occasioned a tax rate of 17 per mille, against 14.50 in 1883. This led the tax payer to demand reform. In addition, the city was Democratic; the State was not; the General Court was overwhelmingly Republican. The time was favorable to radical measures. The civil-service law of 1881 destroyed the favorite patronage of the Boston city council, by placing the clerical and labor force of the city under the rules of the Commonwealth. The law made it illegal for members of the city council to recommend the appointment of policemen, firemen, laborers in the street or clerks in offices, on any political or personal ground. Most of the sections in this good law showed the temper of the General Court by beginning with the word "No." In 1885 the law limiting the debt and the tax of Boston was passed (ch. 178), leaving the city council no latitude in making appropriations, the tax available under the limit (nine per thousand of the average assessed valuation for current expenses, exclusive of the debt and the State tax) being imperatively required for the fixed expenditures of the city. Indeed, under the new law the appropriating power could only decide whether the reduction in the income of the city should reduce the outlay for paving, for sewers, for the salary of teachers or something similar. It was a cast-iron law; but cast iron is not as enduring as a watch-spring, nor so useful.

In 1885 (St. 323) the appointment of the police board was transferred from the city to the Commonwealth, and the famous act of May 27 (St. 266) drew the line between executive and legislative work of the city government, as prescribed in the Massachusetts declaration of rights, in the Constitution of the United States, and in the very phrases that school children use when they speak of their government. The act of 1885 repeated the language of the charters, and then vested all executive and administrative power of the city government in the mayor, to be exercised through the many executive and administrative departments which the past had brought forth. By a stroke of the pen, the executive power exercised by the city council, but especially by the aldermen, who would not concede equal rights to the common council, was transferred to the mayor. For more than sixty years he had been very little else than head alderman, or the presiding officer of the corporation; on June 26, 1885, when the new law took effect, he became

an officer of very great power. He was made the appointing power, though the board of aldermen was wisely given the power of confirmation; he might veto separate items in appropriation bills; he was made supreme in all administrative duties, the heads of departments being his servants, whom he could remove at pleasure, and the members of the city council expressly debarred from participation in the executive work of the city, such as the employment of labor, the making of contracts, the purchase of supplies, the repair of a sidewalk, the care of public property, or the expenditure of public money. Neither an alderman, nor the whole city council, could issue binding orders or instructions to an administrative department, which thenceforth took its directions from the mayor alone.

Government by committee thus came to an end in Boston sooner than in the Commonwealth, and more radically than in the government of the United States. The General Court acted on the theory, carefully expressed in the Boston charters (St. 1821, ch. 110, sec. 30; 1854, ch. 448, sec. 62), that municipalities are the creatures of the State, and that the will of the General Court is the real charter of the proud city. Fortunately, the nature of things sets a limit to theories. In theory the General Court creates cities; in fact cities grow; and the best legislature can but recognise and try to regulate. In theory Boston was made a constitutional monarchy, with the General Court for its legislative branch; in fact the General Court cannot legislate for everything in Boston, because in the nature of things the General Court cannot be familiar with all the interests of the city government, and prudent men hesitate to regulate what they do not understand. In theory the mayor of Boston is the master of the many millions the household of the city requires; in fact he has less than his households wants. In theory he holds "the executive powers of the city" (St. 1885, ch. 266, ch. 6); in fact, many powers of a purely executive nature, as to schools, police, county affairs, parks, great public buildings, and even the erection of petty monuments, are past his control. But he is not the servant of the city council; neither can the city council act independently of the mayor. Indeed, real action and execution rest with the mayor; and his authority is derived from the General Court, rather than from the city council. Like so many of his appointees he executes statutes rather than ordinances, and he is not required to give an account of his stewardship to the powers that have created his prerogative.

As neither jurisprudence nor political philosophy has drawn the exact line between executive and legislative functions, the city council of Boston should not be censured for neither understanding nor admiring the law of 1885. Surveyors of highways appear to be executive officers; the law of 1885 vests the executive powers of the surveyors in the mayor, and appears to leave their legislative power in the board of aldermen. But what is the power of a surveyor of highways that is not executive? A similar question applies to the whole charter amendment of 1885. The charter of 1822 had vested in the city "the administration of all the fiscal, prudential, and municipal concerns of said city, with the conduct and government thereof" (sec. 1). In 1885 the administration was clearly transferred to the mayor; what, then, was left to the city council? The inaugural message of Mayor Matthews, in 1892, gives this answer: "The chief function of the city council, as the legislative branch of the city government, is to determine the amounts of money which the executive departments shall be authorized to expend during the year, and the manner in which the money shall be raised." That is, under sharp limitations the city council has a voice as to appropriations and loans (for since 1885 the tax always goes up to the limit then prescribed). No doubt, the city council has other powers; but it has not yet recovered from the hurricane of 1885. Nor is this strange. Chapter 266 of 1885 destroyed the traditions that began with Boston itself; it destroyed the belief that towns were the true model for city government; it destroyed the very theory of municipal government on which all New England was brought up. For after all had been said about the General Court being a creator of municipal government, the fact remained that towns had some rights, that they were the organs and the constituents of the Commonwealth, and that the town delegates of 1779 had made the Constitution of the State. The city council suddenly found itself deprived of the only power it valued, and that was the administrative power of the charter. The legislative power the city council knew to be slight. Hence its sorrow, unrelieved by public pity. But since 1888 the aldermen receive an annual salary of \$1,500 each; the common councilmen do not.

CONCLUSION.

After two centuries of town government, the power of which was felt by the British crown, and after more than sixty years under a city charter that was thought to preserve what was best in town govern-

ment,—for the charter of 1854 was merely an amplification of the first charter,—the city of Boston has virtually a government in which the powers are divided as the theories of Locke and Montesquieu, of John Adams and Alexander Hamilton require. The city has an executive head with ample powers. The judiciary, of course, is reserved to the Commonwealth, because the judicial power cannot be municipal, and for that reason should not be vested in a municipal government. The legislative power is nominally vested in the city council; in fact it is chiefly exercised by the General Court, in a long and bewildering set of general and special laws. Where the General Court has left the requisite power, the city council may act. But the General Court does not acknowledge any inherent or natural rights of the great corporation which we call the city of Boston. Jurisprudence sustains the position of the General Court. History teaches a different lesson. It shows clearly and impressively that there is a line to be drawn between municipal and State interests, and that municipal concerns should be left to the municipalities that pay the cost, and must share in their honor or their shame. The political history of all great states shows also that free municipalities, free to flourish, and free to suffer, are the nursery of citizens and statesmen fit to govern a free Commonwealth and a free people.

CHRONOLOGY OF THE BOSTON GOVERNMENT.

- 1628-9, March 1-11.—Massachusetts Colony charter.
 1630, Sept. 7-17.—“Trimontaine shalbe called Boston.”
 “—1631.—Earliest officers appointed: Constables, watchmen, surveyors of highways(?)
 “—Municipal and calendar years begin in March.
 1634.—Breed’s and Long islands annexed to Boston.
 “—Wharfinger chosen.
 1635-6, March 3.—Quarter courts established.
 “ “—General charter of towns.
 1636, Aug. 15.—Water bailiffs chosen (shore police).
 “ Nov. 15.—Hogreeve chosen.
 1636-7, March 9-19.—East Boston annexed.
 1641.—Town recorder (called town clerk in 1692-3, under 1 Prov. L., 65).
 “—Town treasurer.
 1643.—Selectmen first called by that name in the town records.

- 1645.—First annual election of selectmen.
 1647-8.—Sealers of leather chosen.
 1649-50.—Clerks of the market chosen.
 1650.—Scaler of weights and measures appointed.
 1652-3.—Paeker of flesh and fish chosen.
 1655.—Corders of wood chosen.
 " —General Court authorizes appointment of sworn measurers of
 corn, wood, and boards.
 1659.—Moderator for town meeting.
 1660.—Almshouse ordered by town. Built north of Common.
 " —Fence viewers authorized by Massachusetts code.
 1663-4.—Cullers of fish chosen; also, of staves.
 1665-6.—Measurer of salt chosen.
 1667-8.—Scavengers chosen.
 1677.—Tithingmen to be appointed (police).
 1690-1, March 9.—Overseers of poor chosen.
 1691, October 7.—Massachusetts Province charter.
 1692, November 16.—General town charter from the Province.
 1694.—Assessors first chosen.
 1699-1781.—Superior Court of Judicature.
 " —1782.—Province Court of Common Pleas.
 " —1822.—Court of sessions.
 1705.—Brookline set off from Boston.
 1710.—Appointment of hay weighers required.
 1711.—Appointment of firewards authorized.
 1712, February 1.—Firewards appointed.
 1713 and 1715.—First division of town into eight wards.
 1718.—Quarantine transferred to selectmen. Hospital at Spectacle
 island.
 1723-1857 (?)—Assay masters (for distilleries).
 1734-5-1850.—Surveyor of hemp and flax.
 1735.—Establishment of twelve wards.
 1737-1849.—Quarantine hospital at Rainsford island.
 1738.—Hay weigher appointed.
 1739.—Hay scales built at South End.
 " —Chelsea set off.
 1742, December 27.—First town meeting in Faneuil Hall.
 1745-1824.—Firewards elected by the people.
 1762-1775.—Wardens (Sunday police).

- 1764.—Deer reeves (to enforce close season).
 1772.—Overseers of the poor incorporated.
 " —Lamp department authorized.
 1776, March 5.—Boston town meeting at Watertown.
 " July 4.—Declaration of Independence.
 1780.—Massachusetts State Constitution.
 1781.—Superior Court of Judicature changed to Supreme Judicial Court of the Commonwealth.
 1782-1821.—Court of Common Pleas (not for Suffolk County 1814-21).
 1786, March 23.—General State charter for towns.
 " June 17.—Charles-river bridge dedicated.
 " —Inspectors of the police authorized by town code. Four police officers appointed.
 1789, October 20.—First School Committee chosen. School Committee of 21 members 1789-1835.
 " —Constitution of the United States.
 1793.—Norfolk county set off from Suffolk.
 " November 23.—West-Boston bridge dedicated.
 1799-1821.—Board of health, chosen in wards.
 " —Quarantine transferred from selectmen to board of health. Port physician (or resident physician) appointed.
 " —Ward clerks first chosen.
 1800-1859.—Municipal court (with jury).
 " —Town attorney.
 1801.—Inspection of lighters, or boats carrying stone and gravel.
 1802.—Alms-house, including bridewell and workhouse, removed to Leverett street.
 " —Assistant assessors first chosen, in wards.
 1804.—South Boston annexed.
 1806.—Second establishment of twelve wards (see 1735 and 1822).
 1810.—Inspectors of stone lime.
 1814-21.—Town court for summary trial of petty causes.
 " " —Boston Court of Common Pleas.
 1816.—Weighers of beef.
 1818-1855.—Primary-school committee.
 1821-59.—Massachusetts Court of Common Pleas.
 1822, February 23.—The city charter signed.
 " —Third division into twelve wards (see 1806 and 1838).
 " April 8.—First city election.

- 1822, May 1.—Inauguration of the city government. Mayor, eight aldermen, forty-eight common councilmen.
- “ May 1.—The city assumes county rights and duties.
- “ —Wardens, to preside at ward meetings. City elections to be held on second Monday in April.
- “ —Police court established. Court of sessions abolished.
- “ —1875.—Office of the city and county treasurer and collector united.
- 1823-25.—Fiscal years end on May 31.
- “ —51.—Jail in Leverett street.
- “ —28.—Josiah Quincy mayor.
- “ —House of industry at South Boston; occupied in 1825.
- “ —City marshal appointed (chief of police).
- “ July 31.—Mayor Quincy recommends the extension of Faneuil Hall Market.
- 1824.—House of correction, nine directors.
- “ —Board of health superseded by city government.
- “ —49.—Superintendent of burial grounds.
- “ August 2.—Office of auditor established.
- 1825.—House of reformation at South Boston, nine directors.
- “ —City elections to be held on second Monday in December.
- “ May 23.—Office of superintendent of streets established.
- 1826.—Municipal year begins on first Monday in January.
- “ —Firewards abolished. Chief engineer of fire department.
- “ —1891.—Fiscal years begin on May 1.
- 1827.—City solicitor.
- “ Quincy market dedicated.
- “ —1870.—Committee for the reduction of the city debt.
- 1828, November 3.—First superintendent of bridge.
- 1830, September 17.—Old State House occupied as City Hall.
- 1831.—Property of Suffolk County vested in Boston.
- 1833.—Surveyor-general of lumber.
- 1834-1880.—Superintendent of public lands.
- 1835.—Railroads to Providence, Worcester, and Lowell completed.
- 1836-1854.—School Committee of twenty-six members.
- 1837-1839.—Mayor Eliot in office.
- “ —1891.—Superintendent of sewers.
- “ —1848.—Superintendent of alien passengers.

- 1838.—Appointment of Boston police officers authorized by General Court.
 " —Fourth division of Boston into twelve wards (see 1822 and 1850).
- 1839-1844.—City attorney.
- 1839.—Lunatic-hospital established.
- 1840.—Superintendent of public buildings.
 " July 19.—Arrival of the first Cunard S.S., the "Britannia."
- 1841.—Superintendent of Common (see 1870).
 " —Railroad to Albany completed.
 " —Measurer of upper leather.
 " —County Court House, School street, changed to City Hall.
- 1841-5.—Eight trials to elect Thomas A. Davis mayor.
- 1847.—Mayor and aldermen authorized to make penal orders.
 " —Harbor master.
 " —Inspector of hay.
- 1848, October 25.—Introduction of Cochituate water celebrated.
- 1849.—Registry department.
 " —City physician.
 " —Coal weighers.
 " —1866.—Quarantine hospital at Deer Island.
 " —Cochituate water board and water registrar (see 1876).
- 1850.—City engineer.
 " —Truant officers.
 " —Second assistant assessors.
 " —Fifth division into twelve wards (see 1838 and 1865).
- 1851.—Surveyor of marble.
 " —Superintendent of schools.
 " —Jail in Charles street.
 " —Electric fire alarm introduced.
 " —Railroad to Montreal completed.
- 1852.—Library department.
 " —Superintendent of markets.
 " —City messenger department.
- 1853-1891.—Superintendent of health (of street cleaning or sanitary police).
- 1854.—Plurality to decide in municipal elections.
 " —Roxbury police court established.
 " —Police and watch departments united.

- 1854.—Amended city charter. Mayor receives veto power. Number of aldermen increased from eight to twelve.
- 1855.—Chelsea police court established.
- “ —1856.—County physician.
- “ —1859.—Superior Court for Suffolk county.
- “ —1875.—School committee of seventy-four members.
- “ —Half the cost of new sidewalks borne by the city.
- 1856.—Clerks of the Supreme and Superior Courts, district attorney, sheriff, register of probate, and commissioners of insolvency elected by the county voters.
- 1857.—Five trustees of Mount-Hope cemetery.
- “ —Reformatory and charitable institutions at South Boston and Deer island united under twelve directors.
- 1858.—Clerk of committees.
- 1859.—Superior Court established.
- “ —Inspector of milk.
- 1862.—Hospital department.
- “ —Charlestown police court established.
- 1863–1865.—City offices at Mechanic building, Bedford and Chauncy streets.
- “ —Weighers of boilers and heavy machinery.
- 1865.—Sixth division of Boston into twelve wards (see 1850 and 1876).
- “ —September 17.—New City Hall in School street dedicated.
- 1866.—Municipal Court established; police court abolished.
- “ —Betterment law passed.
- “ —Quarantine hospital at Gallop’s island.
- 1868.—Roxbury annexed.
- “ —Surveying department.
- 1869.—Inspection of petroleum.
- 1870.—Dorchester annexed. Municipal court of Dorchester district.
- “ —Board of street commissioners.
- “ —Ferry department.
- “ —Superintendent of Common and public grounds (see 1841).
- “ —Department of sinking funds.
- “ —1887.—Cedar-Grove cemetery.
- 1871.—Inspector of buildings.
- “ —Commissioners of Charles bridges.
- “ —Superintendent of printing.
- 1872.—Board of health.

- 1872.—City elections held on Tuesday after second Monday in December.
- “ —Inspector of provisions.
- 1873.—Board of fire commissioners.
- “ —Appointment of truant officers by School Committee.
- 1874.—Charlestown, West Roxbury, and Brighton annexed.
- “ —Municipal (district) courts established at East Boston, South Boston, West Roxbury, and Brighton.
- “ —Board of registrars of voters.
- “ —75.—(Fiscal year). The city received \$12,176,436.08 in taxes.
- 1875–1878.—Liquor license commissioners.
- “ —1892.—Department of record commissioners.
- “ —Municipal debt limited by law to 3 p. c. of property taxed.
- “ —A new charter proposed by Mayor Pierce’s commission.
- “ —School Committee reorganized. Supervisors.
- “ —Three common councilmen elected from each ward.
- “ —Collecting department.
- “ —Park department.
- “ —City architect.
- 1876.—Boston water board, in place of Cochituate and Mystic water boards.
- “ —1893.—Boston has twenty-five wards, unchanged.
- “ —1885.—School Committee of twenty-five members.
- 1878.—Precincts established for voting purposes.
- “ —Probation officers.
- “ —1885.—Police commissioners, appointed by the city.
- 1879.—Women receive the right to vote for School Committee.
- 1880.—Inspector of vinegar.
- 1881.—Corporation counsel.
- 1884.—Civil-service law for State and cities.
- “ —1892.—Aldermen elected by districts.
- “ —Mayor Martin’s commission recommends charter amendments; three reports.
- 1885.—Boston board of police, appointed by the State.
- “ —Charter powers recast; city council deprived of executive functions; mayor’s power increased. School Committee of twenty-four members.
- “ —Debt and tax limit for Boston.
- 1886–1891.—General superintendent of bridges.

1886.—Fire marshal, appointed by the State.

1888.—Weigher of salt water fish.

1890-1891.—Inspector of wires.

1890.—Art commission.

1891.—Board of Survey.

“ —Superintendent of ferries replaces commissioners.

“ —Sewer, bridge and sanitary police departments placed under superintendent of streets.

“ April 30.—Net debt of city \$31,342,638.47.

1892.—Fiscal year begins on February 1.

“ —Common council has seventy-five members, three from each ward.

“ —93 (fiscal year).—Municipal expenditures, \$21,300,665.04.

A SKETCH OF THE MEDICAL PROFESSION OF SUFFOLK COUNTY.

BY

EDWARD JACOB FORSTER, M.D.

AFTER the writings of Josiah Bartlett, who in 1810 delivered the annual address before the Massachusetts Medical Society, giving an account of the progress of medicine in Massachusetts from the earliest settlement to that date, the very interesting lecture of Dr. Oliver Wendell Holmes, given in 1869 at the Lowell Institute, upon the Medical Profession of Massachusetts, and the masterly address of Dr. Samuel A. Green, entitled "The History of Medicine in Massachusetts," and delivered in the Saunders Theatre before the Massachusetts Medical Society on the occasion of its centennial anniversary in 1881, the whole field, of which this county is now but a small portion, has been so well gone over that a late gleaner has but little chance to find anything of interest which has escaped the careful search of the earlier workers, well known, not only as historical scholars of more than local fame, but are otherwise distinguished. Besides these accounts of medicine in the larger field of the old Bay State, Drs. Holmes and Green have in the Memorial History of Boston contributed a further account of medicine, its men and its institutions, as found in Boston, which is practically synonymous with Suffolk county.

Suffolk county was incorporated May 10, 1643, and has since that time both gained and lost territory.

We find that in May, 1781, it included within its limits, Boston, Roxbury, Dorchester, Milton, Braintree, Weymouth, Hingham, Cohasset, Dedham, Medfield, Wrentham, Brookline, Needham, Stoughton, Stoughtonham (Sharon), Medway, Bellingham, Walpole, Chelsea, Franklin, Foxborough, or a great part of the present Norfolk county,

which was incorporated March 26, 1793. After this county was set off, until the annexation of Roxbury in 1868, Dorchester in 1870, Charlestown and West Roxbury in 1874, it comprised only the cities of Boston and Chelsea, the townships of Winthrop and Revere, and the islands in Boston Harbor.

It may be said to have included only Boston, for Winthrop and Revere were formerly parts of Chelsea, and the latter, under the names of Winnissimmet and Rumney Marsh, was a part of Boston.

It is with this Suffolk county that we shall have to deal in the present article, otherwise we should be encroaching on the work of those who have written, or will write, the medical sketches of the adjacent counties of Norfolk and Middlesex.

The earliest record we have relating to medicine is that of the action of the Company in London, at one of its earliest meetings, held March 5, 1628-29, when a proposition was made "to Intertayne a surgeon for [the] plantacion," and Mr. John Pratt "was appointed an abell man," and Robert Morley was appointed to "serve as a barber and surgeon [on all] occasyons belonging to his Calling to aney of this [company] that are planters, or there servants."

The two professions of theology and medicine were for a time united in the "Angelical Conjunction," as this union was styled by Cotton Mather, and so in the list of practitioners of medicine must be included those whose chief business was the care of souls.

A knowledge of physic was then considered as part of a liberal education, and thus we find Governor Winthrop, the founder of Boston, spoken of by Mather as having been a "Help for our Bodies by Physick."

The first action of the Massachusetts Colony in regard to the practice of medicine was embodied in the following law intended to protect the public from ignorant practitioners.

The law is as follows:

Chirurgions, Midwives, Physitians.

Forasmuch as the Law of God allows no man to impaire the Life, or Limbs of any Person, but in a judicial way;

It is therefore Ordered, That no person or persons whatsoever, employed at any time about the bodies of men, women, or children, for preservation of life or health; as Chirurgions, Midwives, Physitians or others, presume to exercise, or put forth any act contrary to the known approved Rules of Art, in each Mystery and occupation, nor exercise any force, violence or cruelty upon, or towards the body of any, whether

young or old, (no not in the most difficult and desperate cases) without the advice and consent of such as are skillfull in the same art (if such may be had) or at least of some of the wisest and gravest then present, and consent of the patient or patients if they be *mentis compotes*, much less contrary to such advice and consent; upon such severe punishment as the nature of the fact may deserve, which Law nevertheless, is not intended to discourage any from all lawfull use of their skill, but rather to encourage and direct them in the right use thereof, and inhibit and restraine the presumptuous arrogancy of such as through presidence of their own skill, or any other sinister respects, dare boldly attempt to exercise any violence upon or towards the bodyes of young or old, one or other, to the prejudice or hazard of the life or limbe of man, woman or child.—“The General Laws and Liberties of the Massachusetts Colony,” Cambridge, 1672, page 28.

This early account of a slight accident is so quaintly told we give it place here.

In Sewall's Diary, under date of July 26, 1695, we find recorded:

Poor little Mary falls down into the cellar of Matthias Smith's house, and cuts her head against the stones, making a large orifice of more than two inches long; it was about 6 post meridiem. The Lord sanctify to me this bloody Accident.

A disease supposed to be small-pox had even preceded the coming of the colonists, and had created great havoc among the Indians. It is supposed to have been introduced by Europeans who touched along the coast in some of their fishing expeditions.

Cotton Mather speaks of it in his journal, regarding it in some aspects as a fortunate visitation of Providence. He says:

The Indians in these Parts had newly, even about a year or two before, been visited with such a prodigious Pestilence, as carried away not a Tenth, but Nine Parts of Ten (yea it is said Nineteen of Twenty) among them: So that the Woods were almost cleared of those pernicious Creatures to make Room for a better Growth.

It continued to be from time to time a scourge to the colonists, and we are not surprised to find them interested in the introduction of European methods of contending with it.

As early as 1717 Lady Mary Wortley Montague wrote from Adrianople describing the method and effect of inoculation, and in 1721 she had her son publicly inoculated in England, and it was soon after generally adopted.

In the same year we find that experiments in inoculation were made in Boston. Cotton Mather, who evidently wished the disease to be fatal only to the Indians, is said to have brought it to the attention of the Boston physicians. It met there, as in London, with great opposition, but finally was generally adopted.

The leader of the opposition was Dr. William Douglass, a Scotchman, who had come to Boston in 1718, and was perhaps, the most prominent of Boston physicians, both from education and ability. Dr. Zabdiel Boylston had, on the other hand, the enterprise and courage to prove the advantages of inoculation by experimenting with it in his own family, and may be considered its champion.

In the winter of 1763-64 an epidemic of small-pox broke out in Boston, and an inoculating hospital was established at Point Shirley by the Governor and Council for the treatment of the disease. The governor also opened Castle William, now Fort Independence, to the use of physicians engaged in its treatment, as is shown by the following contemporaneous advertisements:

In order to enlarge the Conveniences for Inoculation in addition to those already proposed at *Point-Shirley* that every Person desirous of undergoing that Operation may have an Opportunity of doing it, without endangering the Spreading the Distemper, and that this Town may be, as soon as possible, freed from the apprehension of the Small-Pox; the Governor has consented that the Barracks of *Castle-William* shall be improved for the Purpose of Inoculation, from this Time into the Middle of *May* next. And the said Barrack are now opened to ALL PHYSICIANS having Patients to Inoculate, under such Rules as shall be thought proper to be made for that purpose.

There are in the Barracks 48 Rooms, each of which will contain ten Patients conveniently.—*The Boston Post-Boy & Advertiser*, February 27, 1764.

The following notices from the same paper inform us that distinguished physicians from other provinces and localities joined themselves with the Boston physicians in the treatment of the disease at these hospitals:

Those Physicians of the Town of *Boston* who are engaged in carrying on the inoculating Hospital at *Point-Shirley*, being prevented giving their constant Attendance there during the continuance of the *Small-Pox* in Town, hereby notify the Public, that they are join'd by Doctor *Barnett* of *New-Jersey*, who will constantly attend at said Hospital with one or other of said Physicians whose Business will permit, and employ the utmost Diligence and Attention for the relief of those that put themselves under their care. They further notify, that *Point-Shirley* contains as many comfortable and decent Houses as will be sufficient to accommodate as many Persons as will probably ever offer for Inoculation at one Time, from this or the neighboring Governments, and is well furnished with every requisite Convenience both for Sickness and Health.—*Boston Post-Boy & Advertiser*, March 19, 1764.

DR. SAMUEL GELSTON

Gives this Publick Notice to his Patients in *Boston* and the adjacent Towns, that he has prepared (by Permission of his Excellency the Governor) all comfortable

Accommodations for them at the Barracks at *Castle-William*, in order to their being inoculated for the Small-Pox under his immediate Care.

N. B. His Rooms are in that Part of the Barracks where the Patients of Dr. *Nathaniel Perkins*, Dr. *Whitworth* and Dr. *Lloyd's* are received.

Dr. *Gelston* and Dr. *Warren* reside at *Castle-William* day and night.

ALL Persons inclined to go to the Barracks at *Castle-William* to be inoculated where Dr. *Gelston* resides, may apply to Dr. *LLOYD* at his House near the King's Chapel, who will provide them a Passage to the *Castle*.—*Boston Post-Boy & Advertiser*, November 5, 1764.

Private hospitals were also opened in the city, and several thousand people came from all parts of the Province for treatment.

We find in the Boston Town Records, 1758-1769, in one of the Record Commissioners' Reports, the following record of the action of a town meeting, showing that these arrangements for the treatment of the disease were generally acceptable to the citizens:

Feb. 24 (1764) 10 o'clock A. M. The Town Met according to Adjournment.

The Committee Appointed the 20th of this Instant February to consider what are the most expedient Methods for the Town to take in their present distressed circumstances by reason of the Small Pox, and of the Proposals made relative to Inoculation Hospitals—Report, That it be recommended to the Selectmen still to continue their endeavors to prevent the spread of the Distemper, and that for the accommodation of such of the Inhabitants as are inclined to take the Distemper by Inoculation it will be expedient for the Town to countenance the Establishment of Inoculating Hospitals, and they find upon enquiry that the Houses at Point Shirley are very convenient for that purpose; that a number of Physicians have hired the Houses at said Place with a view of improving them as Inoculating Hospitals, and are ready to admit any of the Physicians of the Town to inoculate their Patients there, they paying a reasonable consideration for the Houses and Furniture, and that a number of Physicians are about engaging Houses at some of the Islands near the Town for the same purpose—They further Report—that they have also considered the Petition for establishing an Inoculating Hospital in this Town, and are of the opinion it will not be convenient at present to have such an Hospital within the Peninsula. The above Report having been read and debate had thereon,

Vote 1, that the same be accepted.

The following record from the same source is of interest in this connection:

At a Meeting of the Freeholders and other Inhabitants of the Town of Boston legally qualified and warned in publick Town Meeting Assembled at Faneuil Hall on Monday the 12th Day of March Anno Dom 1761.

Royal Tyler Esq. in the name of the Overseers represented to the Town, that being acquainted by the Selectmen that a number of Physicians were willing to inoculate such of the Poor Gratis, as were desirous of receiving the Small Pox in



Joseph R. Winick.

that way; they had accordingly waited upon those Gentlemen, who readily engaged to carry through that Distemper their proportion of the Poor of the Town either in the natural way or by Inoculation, as also to find Medicines and give proper attendance Gratis—they mentioned among other Things, that they were apprehensive that the great number of Persons which will be immediately laid down may so take up the attention of those Physicians who have thus engaged, as to prevent them in some instances from attending the sick Poor who may thereby suffer; and that therefore they had secured as Physicians to be at the call of the Overseers in all such cases—Whereupon it was Voted That the Conduct of the Overseers in those particulars are satisfactory to the Town.

A vote taken at the same meeting indicated a feeling of apprehension of the effects of the wholesale inoculation which had been going on for some time.

Upon consideration of that Clause in the Warrant (Viz't):

Whether any Measures shall be taken to prevent Strangers coming into Town or any of the Inhabitants to be Inoculated after a certain time allowed for that purpose.

Voted, that the Hon'ble Harrison Gray Esq. Hon. Samuel Wells Esq. Royal Tyler Esq. John Barratt Esq. Thomas Cushing Esq. John Ruddock Esq. Benjamin Kent Esq. be and here by are appointed a Committee to consider of this Matter, and Report as soon as may be.

The Records show the action of the committee at an adjourned meeting held in the afternoon of the same day:

The Committee Appointed to consider "Whether the Town will take any Measures to prevent Strangers coming into the Town or any of the Inhabitants to be Inoculated after a certain Time allowed for that purpose," Report—That no Person not being an Inhabitant of this Town shall have liberty to come into this Town in order to be Inoculated untill the first of April, nor shall be Inoculated in said Town after the 10th Day of April next. And those of the Inhabitants of the Town that have removed into the Country, shall not have liberty to be Inoculated in the Town after the first Day of May next, unless at that Time there shall be upwards of twenty Familys visited with that Distemper—After debate had thereon, the Question was put, Whether said Report be accepted—Passed in the Affirmative.

At an adjourned meeting, on the following day, it was

Voted, That the said Report be in part reconsidered, and that all Persons Inhabitants and others have free liberty to come into Town and be Inoculated before the 20th of April next; and that after that Time the Selectmen be desired to take the same Measures for cleansing the Town of ye Infection as were practised in 1732, and that those Votes be published in the Boston News Papers, that all Persons may have notice of the Town resolutions and conform themselves accordingly.

At an adjourned town meeting on the afternoon of the 15th day of May the town took more decided action upon the matter of inoculation, as will be seen by the following extracts from the Records:

Royal Tyler, Esq., in the Name of the Overseers, acquainted the Town that 1,025 of the poor Inhabitants had passed through the Small Pox by Inoculation under their inspection and care, a number of whom who had been Inoculated, supplied with Medicines and attended Gratis by the Physicians as follows, viz. Dr. Kast, 150; Dr. Sprague, 71; Drs. Church & Lord, 50; Dr. Roberts, 43; Dr. Jackson of P., N. Hampshire, 33; Dr. Sylvester Gardner, 31; Drs. Gardner and Barnett, 27; Dr. John Perkins, 24; Dr. Whitworth, 23; Dr. Yougast, 17; Dr. Bulfinch, 16; Dr. Pecker, 16; Dr. Doubt, 15; Dr. Warren, 14; Dr. Loyd, 7; Dr. Grozier, 4; Dr. William Perkins, 4; Dr. Pyncheon, 4; in all, 526. Whereupon it was Voted unanimously that the Thanks of the Town be and hereby are given those Gentlemen Physicians, who in this Season of difficulty and distress have generously Inoculated and carried through the Small Pox Gratis so considerable a number of the poor Inhabitants.

The Town entered upon the consideration of that part of the Warrant which relates to the clearing of the Town of the Small Pox and being informed that many Persons now Inoculated and sick of the said Distemper do come from other Towns to this for that purpose,

Voted, that the Town esteem it a great grievance that such Persons obtrude themselves to perpetuate a Distemper among us, which the Town are taking every Measure to clear themselves from and therefore,

Voted, that the Selectmen take every legal Measure to remove any Persons from the Town who shall after this date obtrude themselves in the like manner upon the Town, and that the Names of such Persons who shall hereafter obtrude themselves as aforesaid, the Towns they come from, and the Places in this Town where they are harboured, shall be published in the Papers, and all the Inhabitants are desired upon any such Persons coming into the Town, to give immediate notice thereof to the Selectmen.

At the same meeting steps were taken to obtain authority from the General Court to free themselves from the same danger:

Upon a motion made and seconded, the Question was put (vizt.): "Whether the Representatives shall be Instructed to make Application to the General Court the approaching Session for an Act to be provided Which shall empower the Selectmen to remove any Persons who shall presume to come from other Towns into this either infected with the Small Pox, or with design to receive the Infection—Passed in the Affirmative—It was then Voted that the Committee Appointed to draw up Instructions to our Representatives, be desired to instruct them on this head accordingly.

A few days after, May 24, 1761, the citizens took measures to do away with the inoculating hospitals that had been established in their midst.

The report of a town meeting, held at that date, is in part as follows:

The Petition of a considerable number of Inhabitants that the sense of the Town may be known respecting Inoculating at No Idles Island—And that such steps may be taken as will effectually prevent any Inoculating Hospitals being erected in this Town, or the Limits of it—was read—Also Letters from the Selectmen of Chelsea, and the Doctors Perkins and Loyd—

And after the Debate had thereon—Voted, That the Selectmen be desired to withdraw their leave of Inoculating at Noddles Island, and that the Hospital there be discontinued; And that the Town allow of no Inoculating Hospital within the Limits and Connes of the Town of Boston.

The selectmen, who had been very active in taking measures to extirpate the dread disease, acted at once upon the instructions of the town meetings.

We find in the selectmens' minutes, 1764-1768 (twentieth report Record Commissioners), the following account of their action, and that of the physicians in consultation with them:

At a Meeting of the Select men April 19. 1766 [*sic*.]

Present

Joshua Henshaw Esq.
Joseph Jackson Esq.
John Scollay Esq.
Benjamin Austin Esq.
Samuel Sewall Esq.

The following Advertisement was sent to the several Printers, for a place in their Papers, viz't.

BOSTON, April 19, 1764.

The Time for the permission of Inoculated in this Town by a Vote of the Inhabitants at a General Town Meeting being limited to the 20th of April ends to Morrow, therefore the Selectmen expect that no Person will presume to come in for Inoculation after the 20th Day is past, and they hereby inform the Public, that the Gentlemen Physicians belonging to or now in the Town have engaged to conformity to said Vote, that they will not Inoculate any Person after the time limited.

By Order of the Selectmen,

WILLIAM COOPER, Town Clerk.

The Time for the permission of Inoculation in this Town, ending to Morrow, the Gentlemen Physicians belonging to or now in the Town, were desired to attend the Selectmen, who accordingly attended, when they engaged that they would not Inoculate any Person after the Time Limited by the Town—The Physicians who came into this agreement are as follows, viz't. John Perkins, James Pecker, John Clark, Nyot Doubt, James Lloyd, John Sprague, Henry Will Crozier, Hall Jackson, Joseph Warren, John Peck, Mr. Mather, Nathaniel Perkins, Thomas Bullinch, Myles Whitworth, Sylvester Gardner, Benjamin Church, Mr. Lord, Mr. Williams, Charles Pyncheon, Mr. Tamer, Mr. Thomas, Mr. Roberts, Godfrey Cast for himself and Mr. Wells, Joseph Gardner for himself and Mr. Barrett.

Memo.

The Physicians sent to who did not attend the Selectmen are Samuel Marshall, Samuel Gilston, Mr. Smith, Mr. Mather, Mr. William Perkins.

We select the following reports of the official action of the selectmen in regard to this matter from many appearing in these same "minutes:"

At a meeting of the Selectmen, May 12, 1764.

Present

Joshua Henshaw Esq.
Joseph Jackson Esq.
John Scollay Esq.
Samuel Sewall Esq.
John Ruddock Esq.

The following Advertisement was sent to several Printers for a place in their Papers to be published Monday next.

The Selectmen have heard that many Persons are coming into Town from the Country for Inoculation, under a notion that liberty has been granted theretor, wherefore they inform all Persons whatsoever, that no such liberty has been or will by them be given, and if Persons do persist in their intrusion upon the Town they cannot answer for the effects of that resentment which has risen and is still rising in the Breasts of Multitudes of the Inhabitants against those who attempt so grossly to abuse them as to make this Town a Hospital, notwithstanding proper Hospitals are provided conveniently situated to receive such as incline to take the Distemper. The Selectmen and Overseers are now visiting the Town for the information of the Inhabitants at their meeting tomorrow, by which will be discovered the state of the Town with regard to the Infection, and what Strangers or others do intrude upon us.

By Order of the Selectmen,

WILLIAM COOPER,

Town Clerk.

And again:

At a Meeting of the Selectmen, June 9, 1764.

The Several Constables of the Town attended, and gave in their Return of the state of the Town with respect to the Small Pox; by which it appears that there are 33 Familys in Town which have the Small Pox among them, in which are 41 Persons still sick of that Distemper—and that 178 Familys are yet exposed to the Infection, in which are 291 Persons liable to the Disorder

The following letter was sent Drs. Nathaniel Parker and Loyde:

GENTLEMEN—

Above is an attested Copy of the Town Vote relative to Inoculating at Noddles Island, & whereby you'll perceive that we follow the Orders of the Town when we acquaint you that we now Withdraw our leave for Inoculating at said place.

By Order of the Selectmen,

WILLIAM COOPER,

Town Clerk.

BOSTON, June 9, 1764.

DRS. NATHANIEL PARKERS & LOYDE.

At a Meeting of the Selectmen June 11, 1764.

The following Advertisement was this Day published in the several News Papers

BOSTON, June 9, 1764.

Upon enquiry into the state of the Town with regard to Small Pox, it appears it is now in only thirty three Familys, which encourages the Selectmen to hope that the Town may be cleared of said Distemper in ten Days or a Fortnight provided those who moved into the Country to avoid it will forbear coming in, till they may do it with less danger than at present. In the mean Time we would advise all Persons who have had the Infection in their Familys immediately to smoke, Cleanse and air their Houses and all such Things as may retain the Infection, that our Friends from the Country may not be exposed when they return to us. Also that all Persons who have been Inoculated for the Small Pox at Point Shirley, are warned against coming up to this Town without producing a Certificate from their Doctors, or in their infected Garments, or untill they are thoroughly air'd and cleansed, and entirely clear from Infection, as they would avoid the resentment of the Town which runs too high to be long restrained. As to the Physicians of the Town, the Gentlemen will not violate their Obligations to us, or be so regardless of the interest of this Community as to Inoculate a single Person in the Town after this Time.

JOSHUA HENSHAW,	BENJAMIN AUSTIN,
JOSEPH JACKSON,	SAMUEL SEWALL,
JOHN SCOLLAY,	JOHN RUDDOCK,
	Selectmen.

The selectmen finally succeeded in confining small-pox patients to designated hospitals, in establishing a partially effective quarantine at Castle William and Rainsford Island, and in overcoming the disease as an epidemic, although the Records show that they were continually contending with cases imported in trading vessels, and that their quarantine rules, judged by those of to-day, were sadly wanting in stringency.

Diphtheria, or a disease of very similar nature, broke out as epidemic in Boston and vicinity in 1735-36, and created great excitement and dread. Dr. Douglass, whom we have before mentioned, and who was a really scientific and skilled physician, described it in a pamphlet bearing the following remarkable title:

The Practical History of A New Epidemical Eruptive Miliary Fever, with an Angina Ulcusculosa which prevailed in Boston, New England, in the Years 1735 and 1736—[Boston, 1736].

It is inscribed to a medical society in Boston, and the preface begins:

Gentlemen, This Piece of Medical History does naturally address itself to you considering that I have the pleasure of being one of your number, that you have been fellow laborers in the management of this distemper, and therefore competent judges

of this performance, and that where difficult or extraordinary cases have occurred in any of your private practice, I was favoured to visit the Patients in order to make a minute Clinical enquiry in short, without your assistance this piece would have been less perfect, and not so well vouched.

He says of the disease, "It was vulgarly called the Throat Illness, or a Plague in the Throat."

The disease was so destructive, and the reputation of it had so far spread through the Province, that the selectmen felt called upon to issue the following circular in order to protect their trade:

THE *Select-Men of the Town of Boston*, in order to inform the Trading Part of our neighbouring Colonies, concerning the State of the present prevailing Distemper in this Place, did desire a Meeting of as many of the Practitioners in Physick as could then be conveniently obtain'd. The Practitioners being accordingly met, did unanimously agree to the following Articles:

1. THAT upon the first appearance of this Illness in Boston the *Select-Men* did advise with the Practitioners; but they at that Time having not had Opportunities of observing the Progress of the Distemper, it was thought advisable (until further Experience) to shut up that Person who was supposed to have received it in Exeter to the Eastward; upon his Death the Watch was soon removed, but no Infection was observed to spread or catch in that Quarter of the Town; therefore no Watches were appointed in the other Parts of the Town where it afterwards appeared, the Practitioners judging it to proceed from some occult Quality in the Air, and not from any observable Infection communicated by Persons or Goods

2. THE Practitioners and their Families have not been seized with this Distemper in a more remarkable manner (and as it has happened not so much than other Families in Town, even those Families who live in solitary Parts thereof.

3. AS to the Mortality or Malignity of this Distemper, all whom it may concern are referred to the Boston Weekly Journal of Burials: by the Burials it is notorious, that scarce any Distemper, even the most favourable which has at any Time prevail'd so generally, has produc'd fewer Deaths.

4. AS formerly, so now again after many Months observation, we conclude, That the present prevailing Distemper appears to us to proceed from some affection of the Air, and not from any personal Infection receiv'd from the Sick, or Goods in their neighborhood.

NATHANIEL WILLIAMS,
WILLIAM DOUGLASS,
JOHN CUTLER,

HUGH KENNEDY,
WILLIAM DAVIS,
THOMAS BULLING,

MEDICAL SOCIETIES.

The first medical society in America was formed in Boston, but, unfortunately, we have no knowledge of its name, and its records, if ever kept, have completely disappeared

From contemporary correspondence fortunately preserved we know of its existence, and are able to fix the date of its formation at about 1735.

Dr. William Douglass, a noted author and physician of that day, writes, under date of February 18, 1735-36, to Cadwallader Colden, of New York, that

“ We have lately in Boston formed a medical society, of which, this gentleman [Dr. Clark, the bearer of the letter], a member thereof, can give you a particular account. We design from time to time to publish some short pieces; there is now ready for the press number one, with this title page —

NUMBER ONE,

MEDICAL MEMOIRS

CONTAINING

1. A miscellany. Practical introduction.
2. A history of the dysentery epidemical in Boston in 1734.
3. Some account of a gutta-serena in a young woman.
4. The anatomical inspection of a spina ventosa in the vertebrae of the loins of a young woman.
5. Some practical comments or remarks on the writings of Dr. Thomas Sydenham.

Published by a Medical-Society in Boston, New-England.

This letter is now among the Colden Papers, in the possession of the New York Historical Society; a copy of it is printed in the second volume, fourth series, of the Massachusetts Historical Collections (pages 188, 189).

The first number of these “ Medical Memoirs ” was never printed. It was probably Dr. John Clark, at that time an eminent practitioner of medicine, who is referred to in the letter, as a member of the society. He was born on December 15, 1698, and was then at the height of his professional zeal, when he would naturally be interested in a scientific association. He belonged to a family of medical antecedents and traditions, being himself of the fourth generation in a direct line of John Clarks, all physicians, and he was followed by three more, equally direct, of John Clarks, these three also physicians,— covering a period of more than a century and a half and including seven generations of the name.

In *The Boston Weekly News-Letter*, January 5, 1737, there is a long communication, addressed “ To the Judicious and Learned President and Members of the *Medical Society in Boston*,” and signed “ *Philanthropos*.” It takes strong ground in favor of regulating the practice of physic throughout the province, and advocates the plan of having all

practitioners examined by a board of physicians and surgeons appointed by the General Court. The writer is justly severe on the "Shoemakers, Weavers, and Almanackmakers, with their virtuous Consorts, who have laid aside the proper Business of their Lives, to turn Quacks."

In the same newspaper of November 13, 1711, is an interesting report of a surgical operation performed about that time for urinary calculus, on Joseph Baker, a boy six years old. It was done "in Presence of the Medical Society," by Dr. Sylvester Gardiner, and "according to Mr. Cheselden's late Improvement of the *lateral* Way." The report begins:

A Medical Society in Boston, New-England, with no quackish Views, as is the manner of some, but for the Comfort and Benefit of the unhappy and miserable Sufferers by the excruciating Pain occasioned by a Stone in the Bladder, do Publish the following case.

Although the Medical Society in Boston was short-lived, an account of the history of medicine in the State would be incomplete which did not mention its existence. In its day it exerted a good influence on the profession, and showed a zeal on the part of the physicians which is alike honorable to their heads and creditable to their hearts. The origin of the society may have had some connection with the epidemic of diphtheria which broke out in Boston during the summer of 1735; at any rate, it was organized about that time. It is known to have been in existence late in the autumn of 1711, though ten years afterwards there was no trace of it. Dr. Lloyd, who began the practice of medicine in Boston about the year 1752, and continued in it for more than half a century, had no recollection of such an association. This last fact is mentioned by Dr. Bartlett, in his address before the Massachusetts Medical Society, June 6, 1810, and shows that it had disappeared before Dr. Lloyd's time. The founders of this local society, the pioneer association of its kind in the country, represented the active medical thought of Boston.

THE MASSACHUSETTS MEDICAL SOCIETY

The war for Independence had brought the medical fraternity into prominence and had been the means of bringing together from different parts of the State physicians of skill and experience.

The formation of a society for mutual discussion and improvement was a natural outcome of this increased intercourse among men who

had felt the evils of isolation, and the need of a larger field of observation and study.

In establishing the Massachusetts Medical Society its founders took an important step in securing a steady progress in their profession and in building up the reputation which attaches to Massachusetts medical men as a class.

The Act of Incorporation under which this society came into existence is as follows:

COMMONWEALTH of MASSACHUSETTS.

In the Year of our Lord, 1781.

An ACT to incorporate certain PHYSICIANS by the Name of *The MASSACHUSETTS MEDICAL SOCIETY*.

As health is essentially necessary to the happiness of society, and as its preservation or recovery is closely connected with the knowledge of the animal economy, and of the properties and effects of medicines, and as the benefit of medical institutions, formed on liberal principles, and encouraged by the patronage of the law, is universally acknowledged:

*Be it therefore enacted by the Senate and House of Representatives in General Court assembled, and by the authority of the same, That, Nathaniel Walker, Appleton, William Baylies, Benjamin Curtis, Samuel Danforth, Aaron Dexter, Shirley Erving, John Frink, Joseph Gardner, Samuel Holten, Edward Augustus Holyoke, Ebenezer Hunt, Charles Jarvis, Thomas Kast, Giles Crouch Kellogg, John Lynn, James Lloyd, Joseph Orne, James Pecker, Oliver Prescott, Charles Pynchon, Isaac Rand, Isaac Rand, jun., Micajah Sarver, John Sprague, Charles Stockbridge, John Barnard Sweett, Cotton Tufts, John Warren, Thomas Welsh, Joseph Whipple, William Whiting, be, and they hereby are formed into, constituted and made a body politic and corporate, by the name of *The Massachusetts Medical Society*; and that they and their successors, and such other persons as shall be elected in the manner hereinafter mentioned, shall be and continue a body politic and corporate by the same name forever.*

And be it enacted by the authority aforesaid, That the fellows of said society may from time to time elect a president, vice president and secretary, with other officers as they shall judge necessary and convenient; and they the fellows of said society, shall have full power and authority, from time to time, to determine and establish the names, number and duty of their several officers, and the tenure or estate they shall respectively have in their offices; and also to authorize and empower their president or some other officer to administer such oaths to such officers as they, the fellows of said society, shall appoint and determine for the well ordering and good government of said society, provided the same be not repugnant to the laws of this commonwealth.

And be it enacted by the authority aforesaid, That the fellows of said society shall have one common seal, and power to break, change and renew the same at their pleasure.

And be it enacted by the authority aforesaid, That they, the fellows of said society, may sue and be sued in all actions, real, personal or mixed, and prosecute and defend the same unto final judgment and execution, by the name of *The Massachusetts Medical Society*.

And be it enacted by the authority aforesaid, That the fellows of said society may from time to time elect such persons to be fellows thereof, as they shall judge proper; and that they, the fellows of said society, shall have power to suspend, expel or disfranchise any fellows of said society.

And be it enacted by the authority aforesaid, That the fellows of said society shall have full power and authority to make and enact such rules and bye laws for the better government of said society.

And be it further enacted, That the first meeting of the said Medical Society shall be held in some convenient place in the town of *Boston*, and that *Edward Augustus Holyoke*, Esq, be, and he hereby is authorise I and direct I to fix the time for holding the said meeting, and to notify the same to the fellows of said Medical Society.

In the HOUSE OF REPRESENTATIVES, October 30, 1781.

This bill having had three several readings, passed to be enacted.

NATHANIEL GORHAM, Speaker.

In SENATE, November 1, 1781.

This bill having had two several reading, passed to be enacted.

SAMUEL ADAMS, President.

Approved,

JOHN HANCOCK.

A true copy.

Attest,

JOHN AVERY, jun, Secretary.

In accordance with the last clause of this Act, Dr Holyoke published a notice in *The Boston Gazette and The Country Journal*, November 12, 1781, calling a meeting of the members whose names were mentioned in the charter. It was called "at the County Court-House, in Boston, on Wednesday the 28th Day of this Instant November, at Ten o'Clock, A. M. for the Purpose of chusing Officers of the Society, and transacting any other Matter (which by this Act they are empowered to do) as they shall think proper." The charter members were thirty-one in number and represented different sections of the State: fourteen of them lived in Boston; two in Newburyport; two in Salem; and one in each of the following towns: Cambridge, Danvers, Dedham, Dighton, Great Barrington, Groton, Hadley, Northampton, Portland, Rutland, Seitate, Springfield, and Weymouth. By counties, as constituted at that time, Suffolk had sixteen members; Essex had five; Hampshire, three; Middlesex, two; Berkshire, Bristol, Plymouth, Worcester, and Cumberland, in the District of Maine, one each.¹

¹ A curious incident happened in connection with the formation of the Medical Society. The name of John Sprague appears among those mentioned in the Act of Incorporation; and accord-

The first meeting of the corporation was duly held in the county court house on November 28, 1781, at which time there were present nineteen of the thirty-one persons whose names are given in the Act of Incorporation. The court house of that period stood on the site of the present one in Court street. The first vote passed was that the officers at this meeting should be chosen *pro tempore*; and subsequently "Edward Augustus Holyoke Esq;" was elected president, "Doct'r Isaac Rand jun'r" secretary, and "Doct'r Thomas Welsh," treasurer.

About this time (1783) the Boston Medical Society was organized for the study of anatomy. Its only known work was in promoting the growth of the Medical School, just then coming into existence, and whether swallowed up by the larger Massachusetts Medical Society or superseded by the demonstrations at the school, it soon disappeared from view.

Of the thirty-one who are named in the act of 1781 as incorporators of the Massachusetts Medical Society, fourteen were residents of Boston, and are worthy of special mention, as being among the successful organizers who thus gave position to the profession; their names are here grouped together.

Nathaniel Walker Appleton, Benjamin Curtis, Samuel Danforth, Aaron Dexter, Joseph Gardner, Charles Jarvis, Thomas Kast, John Linn, James Lloyd, James Pecker, Isaac Rand, jr., John Warren, Thomas Welsh, Joseph Whipple.

At this time Dedham and Weymouth were parts of Suffolk county, and we should therefore include John Sprague, of Dedham, and Cotton Tufts, of Weymouth.

Accounts of each will be found among the biographical sketches.

We here give a brief account of the existing medical societies; some confine their membership to residents of Boston; others, like the Massachusetts Medical Society, while they hold their meetings here, have no limit as regards residence but the boundaries of the Commonwealth.

ingly Dr. John Sprague, of Dedham, was present at the early meetings and took part in the proceedings. This continued until July 13, 1782, when Dr. John Sprague, of Newburyport, was chosen a member. At the meeting of the councillors, held October 4, 1783, a reply to the notification of his election was read, wherein he stated that he was the senior physician of the name in the State and that he considered himself already a member by the charter. Dr. Sprague, of Dedham, who was present at the time, quietly resigned his supposed membership; but he was chosen again a member at the same meeting.

SUFFOLK DISTRICT MEDICAL SOCIETY

This society was organized in 1849, and includes in its membership all Fellows of the Massachusetts Medical Society residing in Boston (proper), East and South Boston, Chelsea and Winthrop. The society is divided into a number of sections, to each of which is assigned the investigation of a particular branch of medicine.

BOSTON MEDICAL ASSOCIATION.

This association is made up of a majority of the regular physicians of Boston, who establish the code governing practice, and the fees to be charged.

BOSTON SOCIETY FOR MEDICAL OBSERVATION.

This society was organized in 1835, discontinued in 1838, and re-established in 1846. Its object is "to make its members good observers of disease, to collect and arrange accurately recorded facts in the furtherance of the cause of medical science, and to publish from time to time the results of the observation of such facts." Its active membership is limited to forty, who must be members of the Massachusetts Medical Society, living in Boston. It has also associate and corresponding members. Active and associate members of twenty years' standing are eligible for election as honorary members. It takes and circulates among its members the leading foreign and American medical journals. Its library is deposited in the rooms of the Medical Library Association.

BOSTON SOCIETY FOR MEDICAL IMPROVEMENT.

This society was incorporated March 20, 1869, for mutual professional improvement in the different branches of medical science. Its meetings are held at the hall of the Medical Library Association, and its library has been placed in their rooms. Its scientific communications are published in the *Boston Medical and Surgical Journal*.

The valuable anatomical collection of the society was presented to the Medical School of Harvard University, and is now placed in the new Medical School building on Boylston street.

OBSTETRICAL SOCIETY OF BOSTON.

This society was organized in 1860. Its object is the study of obstetrics and the diseases of women and children. Its members must be members of the Massachusetts Medical Society, and are limited to thirty. It has also a small honorary membership. Its meetings are held at the houses of its members in turn, and are always followed by a social reunion and supper. Its proceedings are published in the *Boston Medical and Surgical Journal*.

THE BOSTON SOCIETY OF MEDICAL SCIENCES.

This society was organized in 1869, and has for its object the promotion of the sciences connected with medicine.

BOSTON MEDICO-PSYCHOLOGICAL ASSOCIATION.

This society was organized in 1880, for the purpose of reading and discussing papers on psychological subjects, of reporting cases, and of taking psychological journals.

MASSACHUSETTS MEDICO-LEGAL SOCIETY.

This society was organized July 9, 1877. Its object is the instruction and professional improvement of the medical examiners, the successors of the coroners. The society has both regular and associate members. The regular members must be members of the Massachusetts Medical Society or of the Massachusetts Bar, with the provision that two-thirds of them shall hold commissions as State Medical Examiners. They transact all the business of the society, while the associate members can be present at stated meetings for discussions, etc. Provision is made for the election of distinguished professional men, medical, legal or scientific, to permanent associate membership.

MASSACHUSETTS MEDICAL BENEVOLENT SOCIETY.

The organization of this society dates from 1857; in 1871 it received an act of incorporation from the Legislature of Massachusetts. Its object is the relief of its members, or of their families, should they need assistance; and of such other members of the medical profession or their families as may be deemed by the society suitable objects of

its beneficence. The society has now over \$33,000 of invested funds, and fourteen beneficiaries who are recipients of its bounty.

BOYLSTON MEDICAL SOCIETY OF HARVARD UNIVERSITY.

The society was organized January 6, 1811, for the purpose of promoting emulation and inquiry among the students at the Medical School connected with Harvard University, of whom its membership is alone composed. It was incorporated in 1823. The president must be a physician of regular standing, elected by the immediate members. A printed catalogue of the members is issued once in three years. The income of a fund, the gift of the late Ward Nicholas Boylston, M.D., for whom the society was named, is appropriated to prizes. In accordance with the terms of incorporation, seven trustees, who must be practicing physicians, are annually appointed, who have the sole management and control of the permanent funds.

SOUTH BOSTON MEDICAL CLUB.

This is composed of members of the Massachusetts Medical Society living in South Boston, and has for its objects professional improvement and social intercourse. It was organized February 25, 1873, and meets at the houses of members on the second Thursday of each month.

NEW ENGLAND HOSPITAL MEDICAL SOCIETY.

This society was organized in January, 1878, for the professional improvement of educated women physicians, graduates of regular medical schools.

There are a few smaller societies, but their existence is hardly known outside of their very limited membership.

HOSPITALS.

Boston is well supplied with hospitals and dispensaries; besides those given in the following pages, there are some smaller ones which are not incorporated, but are under the care of private individuals and cannot properly be considered as public institutions.



Charles N. Prouty

MASSACHUSETTS GENERAL HOSPITAL

This hospital was incorporated February 25, 1811, and opened for the reception of patients September 3, 1821. It is one of the oldest institutions of its kind in the country, and under the most efficient management. More than a thousand in-patients receive its advantages annually, and nearly five thousand out-patients. It is supported by invested funds, voluntary contributions from citizens of Boston and vicinity, and by moderate charges where patients can afford to pay for care and treatment.

The hospital has 243 beds. Patients suffering from medical or surgical diseases are received from any part of the United States or Provinces. Chronic or incurable cases are not, as a rule, admitted, and the rule is *invariable against contagious diseases*.

Since 1872 four new pavilion wards have been constructed on the grounds of the hospital. These buildings are called the Jackson, Warren, Bigelow and Townsend wards respectively, in memory of the services of Drs. James Jackson, John C. Warren, Jacob Bigelow, and S. D. Townsend.

The Thayer Building for nurses was built in 1882, and the Gay Ward for out-patients in 1883. The former was named after Nathaniel Thayer, for many years a trustee and a liberal contributor to the hospital; the latter after Dr. George H. Gay, one of the surgeons of the hospital for many years.

A Convalescent Home, connected with the hospital, is located in Belmont. It has thirty beds.

A new edition of a history of the hospital, written by the late N. I. Bowditch, was issued in 1872 under the editorial care of Rev. George E. Ellis, D.D., one of the trustees of that time.

BOSTON CITY HOSPITAL

This hospital was incorporated in 1880. It was established and is maintained by annual appropriations from the city government; bequests and donations have also been given to it amounting up to the present time to \$43,500. The total cost of the buildings alone was \$750,000. It was opened for the reception of patients June 1, 1864, and at that time consisted of a central administrative building, two three-storied pavilions, and morgue. Three years later a two-storied

pavilion, divided into small rooms, was built for the reception of diseases requiring isolation. In 1874 and 1875 the hospital was again enlarged by the erection of two three-storied buildings, two one-story pavilions, and a building for the use of the various departments for out-patients. It now has 180 beds.

It is intended for those only who require temporary relief during sickness, especially those suffering from acute medical or surgical diseases, and except in special cases is limited to residents of Boston. The hospital is open at all hours to cases of emergency. Physicians and surgeons are in daily attendance for the treatment of out-patients.

A Convalescent Home was established in 1890 in Dorchester; it has accommodation for thirty-four patients.

Large additions are now in process of erection for the better isolation and care of contagious diseases.

THE CHILDREN'S HOSPITAL.

This hospital was incorporated February 26, 1869, and its present quarters on Huntington avenue were opened in December, 1882. It has one hundred beds.

It provides medical and surgical treatment for the diseases of children. Patients between the ages of two and twelve, and suffering from acute diseases, are received. Those having infectious or contagious diseases are never admitted, and chronic cases only when they offer urgent symptoms which seem capable of relief. The beds are free to the poor of Boston, but a moderate charge is made for those who are able to pay. The very moderate charge of four dollars per week for those who reside outside the city.

The immediate care of the hospital, and the nursing, is entrusted to members of the Protestant Episcopal Sisterhood of St. Margaret, East Grimstead, Eng.

A convalescent home at Wellesley, containing eighteen beds, has been established in connection with the hospital.

BOSTON LYING-IN HOSPITAL.

This hospital, which was organized in 1832, now occupies a new, spacious and well-appointed building on McLean street. It has a capacity of seventy beds, and cares for about 500 house-patients yearly. It also maintains a well organized out-patient service, which annually

cares for over a thousand women in their homes. This service is gratuitous. The house-patients are charged a fee which must be paid on entrance, and includes all charges for care during labor and for two weeks thereafter, or for such further time as may be necessary for the patient to become able to leave the hospital. Those awaiting labor are not received; but a list of approved and convenient boarding-places and homes is kept at the hospital, where they may remain until the proper time for entrance. Deserving women, who are unable to pay, are received free, if residents of Boston; non-residents by special vote of the executive committee.

The hospital is governed by a Board of Trustees, and has an advisory Board of Lady Visitors. The medical staff consists of three consulting physicians, a visiting physician, an assistant visiting physician, and three physicians to out-patients. The house-staff consists of three physicians, who are appointed for terms of six months; and five externes, who attend to the out-patient service under the supervision of the out-patient physicians and the house physicians.

The hospital also maintains a training school for nurses, in which women are thoroughly trained for obstetric nursing. Instruction is given by lectures by the staff and the house physicians, by recitations, and by constant bedside teaching under the supervision of the director of nurses. Diplomas are awarded to those who pass a creditable examination at the end of their course.

MASSACHUSETTS CHARITABLE EYE AND EAR INFIRMARY.

This institution owes its origin to Drs. Edward Reynolds and John Jeffries, who, in November, 1824, opened a small room in Scollay's Building as a dispensary for the gratuitous treatment of the poor afflicted with diseases of the eye. In March, 1826, their dispensary was regularly organized as the Boston Eye Infirmary. A month later it was incorporated by the State Legislature under its present title. It was soon after removed to Court street, and six years later to the Gore Mansion in Green street, where it remained until 1850. It was then removed to the building now occupied in Charles street, which was dedicated July 3 of that year.

The Eye and Ear Infirmary has become one of the most important charitable institutions of Boston, and the demands upon it have constantly increased. A new wing has recently been added to its building for the better accommodation of out-patients.

BOSTON LUNATIC HOSPITAL

This hospital was built in 1839, was enlarged in 1846, and again in 1882. It has a capacity of over 200 patients, and is supported by the city of Boston, through the Board of Directors for Public Institutions. It is intended for the insane of the city of Boston, and accommodates about one-fifth of those unfortunates. It is free to the poor, but those who are able to pay are charged a moderate sum.

FREE HOSPITAL FOR WOMEN

Established in December, 1875; incorporated August, 1879. The hospital is entirely free, and receives only those women who suffer from diseases peculiar to their sex, and have not the means to obtain the medical advice or the care which they need. It contains twenty beds, and is supported by contributions from religious societies and private individuals. Connected with the hospital is an out-patient department. Those who give the full amount, \$250, which is fixed for the support of a bed, are entitled to designate a patient throughout the whole year; but any one giving not less than \$150 is entitled to share with another person giving a like amount the right to designate patients.

A new hospital building in Brookline is now under construction. This hospital owes its existence to the energy of the professor of gynecology at Harvard University.

ST. MARGARET'S INFIRMARY

Organized in 1882 by the Sisters of St. Margaret (Protestant Episcopal) in order to receive patients (usually women and children) requiring medical or surgical care. About fourteen patients can be accommodated. Physicians, members of the Massachusetts Medical Society, are allowed to send and attend patients. The inmates are cared for by the Sisters and trained nurses, and receive every kindness.

The infirmary occupies two house in Louisburg square.

CHARITY HOSPITAL

Established in June, 1863, and incorporated in 1865, for the purpose of affording relief to the sick poor. Both acute and chronic cases are received, contagious diseases excepted. This institution is in charge of Roman Catholic Sisters of Charity, but receives patients of all denominations. It is located in South Boston.

ST. JOSEPH'S HOME FOR SICK AND DESTITUTE SERVANT GIRLS.

Incorporated in 1867, for the purpose of providing a home for, and otherwise aiding, sick and destitute servant girls. It includes under its organization a hospital for the treatment of diseases, especially those of an incurable character, and for women who have become exhausted and unwell while at their work, and need a temporary respite.

The institution has ninety beds, of which twenty-four are devoted to the hospital department. The institution was organized by and is under the charge of the Sisters of St. Francis.

HOUSE OF THE GOOD SAMARITAN.

Incorporated in 1860, for the care and treatment of sick women and girls, and of boys below six years of age, especially those suffering under diseases of long duration. It is supported by voluntary contributions and from the income of its funds.

ST. ELIZABETH'S HOSPITAL.

Established in 1868, by the Sisters of St. Francis, and incorporated January 29, 1872, for the treatment of the medical and surgical diseases peculiar to women. It is especially intended for patients in moderate circumstances who can afford to pay only a low rate of board and moderate fees for medical attendance. The institution has about sixty beds. In 1881 a branch was established in Roxbury.

ST. MARY'S INFANT ASYLUM AND LYING-IN HOSPITAL.

This institution was founded by Roman Catholic Sisters of Charity and the Society of St. Vincent de Paul in 1868, and incorporated in 1870, as an institution for the maintenance and support of foundlings, orphan and half-orphan children. It also accommodates deserving indigent females during their confinement in childbirth. The asylum will receive ten patients and fifty children. Patients are received on application at the asylum. No distinction is made on account of religion; and no patient is refused on account of her inability to pay.

DEER ISLAND INSTITUTIONS—HOSPITAL DEPARTMENT.

The hospital connected with the public institutions of Boston is located on Deer Island in Boston Harbor, with a branch at Rainsford

Island. Patients are received from the City Almshouse, the House of Industry, and the House of Reformation for Juvenile Offenders. The hospital is under the care of the Board of Directors for Public Institutions.

SMALL-POX HOSPITAL.

This hospital was organized in June, 1877. It contains forty beds, but a larger number of patients could be accommodated if necessary. It is under the care and direction of the Boston Board of Health.

THE CHANNING HOME.

Established in 1857, by Miss Harriet Ryan (the late Mrs. Albee), through the assistance of friends whom she had drawn into sympathy with her benevolent purpose. It was incorporated in 1861. This is not a hospital in the common acceptation of the word, but a home for those whose death seems quite certain and require constant medical attendance.

NEW ENGLAND HOSPITAL FOR WOMEN AND CHILDREN.

This hospital was incorporated March 12, 1863, for the purpose of establishing and maintaining in the city of Boston or its vicinity a hospital for the treatment of the diseases of women and children, giving also clinical instruction to female students of medicine, and of training nurses.

The present hospital building, located in Roxbury, was erected in 1872, and opened the same year for the reception of patients. It contains fifty-eight beds in rooms of two and four beds each.

The maternity building is entirely separate, and consists of a small house of two stories, each having three rooms of two beds each, and a separate room for the delivery. There are also two isolated houses for the care of cases of contagion arising in the hospital.

Patients are admitted on application at stated times. Chronic or incurable cases are, as a rule, not admitted, and contagious cases are refused. There are eleven endowment free beds, and six annual free beds.

WEST END NURSERY AND INFANT'S HOSPITAL.

This institution was incorporated in 1881. Children are admitted to the Nursery Department if below the age of two. Babies are taken

to board, without surrender, at three dollars per week. The number of free beds in the hospital is fifteen, and in the nursery fifteen. No infants are taken in the nursery free if the mothers are earning anything.

In the Hospital Department the medical and surgical diseases of children are treated. The beds are free, and in certain cases the mother is admitted with the child. An out-patient department is open daily.

BOSTON HOME FOR INCURABLES

This Home was organized in 1822, and formally opened for patients December 4, 1882, and incorporated in 1884. Accommodations are furnished for thirty adult patients, of both sexes, and thirty children. The design of the Home is to receive gratuitously patients who are incapacitated for life, who are unable to provide for themselves. Cases of contagious disease, syphilis, consumption, cancer, or any form of insanity are not received.

WASHINGTONIAN HOME

This Home was organized in 1857, and incorporated in 1859, for the cure of inebriates who wish to reform.

Persons having a permanent home within the State, whose circumstances render it imperatively necessary, may be admitted to a free bed; all other persons are charged a moderate sum for their board, according to their ability to pay, and the rooms, attendance, and accommodations furnished them. The institution furnishes accommodations to forty inmates.

While this institution is not strictly a hospital, it is devoted to the cure of the disease of intemperance, and should be classed as a special hospital.

VINCENT MEMORIAL HOSPITAL.

This hospital was incorporated in 1890, to honor the memory of Mrs. I. R. Vincent, for many years a member of the Boston Museum Company. It has ten beds, four of which are free. The visiting physicians are women.

BOSTON DISPENSARY.

This institution was founded in 1796, and incorporated in 1801. It is supported by funds heretofore contributed and by private charity,

receiving no assistance from the city. Its operations are confined to the city proper, East and South Boston. It has a fine building for its central office, erected in 1883. Here physicians are in attendance daily, who treat respectively men, women and children, and surgical cases, at stated hours. In addition to this office, the city is divided into nine districts, each having a physician assigned, who cares for those unable to leave their homes. Medicines are given out at the central office daily at stated hours.

NEW ENGLAND DISPENSARY

This is the out-patient department of the New England Hospital, with which it was connected until the removal of the latter out of town in 1872. It is located on Fayette street. The physicians in attendance are women.

As supplementing the work of the dispensaries should be noticed the

NORTH END DIET KITCHEN.

Organized in December, 1874, for the relief of the sick poor at the North and West End. Plain, nourishing food is given without payment, but only on the orders of the dispensary physicians.

And the

SOUTH END DIET KITCHEN.

Organized in November, 1875, and incorporated in 1882, at the south part of the city, to provide simple food for the sick. "Any person may obtain diet at the kitchen upon presentation of the slip-card of the corporation, signed by a Boston physician of regular standing, by a bible reader, a city missionary, an officer of the Associated Charities, or by such person as the managers of the corporation may have authorized to sign such slip-card."

MEDICAL EDUCATION.

In the letter of instructions given to Governor Endicott on leaving the old country, occurs the following, an evidence of forethought in the matter of medical education (Young, Chron. Mass., 165):

We have entertained Lambert Wilson, Chirurgion, to remain with you in the service of the Plantation, with whom we are agreed that he shall serve this Company and the other planters that live in the Plantation for three years, and in that time

apply himself to cure not only of such as come from hence for the general and particular accounts, but also for the Indians, as from time to time he shall be directed by yourself or your successor and the rest of the Council. And moreover he is to educate and instruct in his art one or more youths, such as you and the said Council shall appoint, that may be helpful to him, and, if occasion serve, succeed him in the Plantation which youth or youths, fit to learn that Profession, let be placed with him; of which Mr. Hugesson's son, if his father approve thereof, may be one, the rather because he hath been trained up in literature; but if not he, then such other as you shall judge most fittest.

Young adds in a foot note:

We have here the embryo of a medical school, undoubtedly the first contemplated on the continent of America. Whether it ever went into operation, or how it succeeded, we are not informed.

The beginning of the present Medical Department of Harvard University cannot be better told than by quoting from the account given by Dr. Ephraim Eliot, one of the physicians of Boston, during and after the Revolutionary war.

About 1781 or 1782, when Dr. Eliot was studying with Dr. Rand, the physicians formed a club, which met at the Green Dragon Tavern; one of their objects was to arrange the fee table, and make regulations for the benefit of the profession. Dr. Eliot writes:

The profession was much benefited by these regulations. The physicians became acquainted with each other; party politics were dropped at the meetings; but oil and vinegar will not unite. *They did not love each other*, and all were determined to put down Warren; but they could not: he rose triumphant over them all.

One night Dr. Rand returned home from one of these professional meetings; and, addressing himself to me, he said, "Eliot, that Warren is an artful man, and will get to windward of us all. He has made a proposition to the club, that, as there are nearly a dozen pupils studying in town, there should be an incipient medical school instituted here for their benefit; and has nominated Danforth to read on materia medica and chemistry, proposed that I should read on the theory and practice of physic, and some suitable person on anatomy and surgery. *He* was immediately put up for the latter branch; and after a little maiden coyness, agreed to commence a course, as he had many operations and surgical cases in the Continental Hospital, of which he is sole director in every respect; and he can always have command of subjects for dissection, without exciting alarm, or being reduced to the necessity of taking bodies from the burying-ground, as most of the inmates were foreigners, and no one could scrutinize into the matter. I would have you attend the lectures, which will save me the trouble of dissecting with you in order to qualify you for a Surgeon. Danforth declined, as it was not possible to command a chemical apparatus; as to myself, who would want to hear an interesting course of lectures on fevers and consumption? so I followed his steps. Now, Warren will be able to obtain fees from the pupils who will attend his lectures on anatomy and surgery, and turn it to pe-

cuniary advantage. But he will not stop there; he well knows that moneys have been left to the college for such an establishment as he is appointed to, and he is looking at the professorship. *Mark what I say, Elliot, you will probably live to see it verified!*" Thus Rand, evidently chagrined. At the proper season, Dr. Warren read a very excellent course of anatomical lectures with demonstrations, and exhibited the various operations of surgery. It was renewed the next year. The fullness of time having come, the corporation [of] Harvard University began seriously to think of setting up a medical institution. At first the improvement of Dr. Hersey's legacy was deemed a sufficient foundation; but on the suggestions of the friends of that seminary, a more enlarged plan was determined to be adopted. a professor of chemistry and materia medica, a professor of anatomy¹ and surgery, and one of the theory and practice of physic, were to be established. But professors were to be sought. a professor of anatomy and surgery, eminently qualified, could be obtained at once. For the other branches it required reflection. It was suggested that Dr. Aaron Dexter, who had attended the practice of Dr. Danforth, the most scientific chemist then on the stage, could easily qualify himself for a chemical professor. Dr. Waterhouse had recently arrived in Boston, or was expected in a short time. He had spent some years in London, and had completed his education at Leyden; was a relative and pupil of the excellent Dr. Fothergill, who, it was said, had contemplated such an establishment at this university; and, although he had died, it was also reported that Dr. Lettson had succeeded to much of his business, and meant to fulfill his benevolent intentions. This was only a gossiping story, but was believed, or rather hoped for, by many persons. Dr. Waterhouse was therefore determined upon for the other professorship. According to the bequest of Dr. Hersey, his professor was to be a resident in Cambridge; and there was no provision for a division of the legacy. It was to be for the benefit of a professor of physic and surgery; but, by an arrangement with the heirs of Dr. Hersey, it was consented to that Waterhouse should reside in Cambridge, the income to be divided in proportions to be determined upon between Warren and Waterhouse. Major William Erving, a Bostonian, and relative of Governor Bowdoin, who had been in the British service from his youth, but had retired therefrom, and having been much acquainted with Dr. Dexter, died in good time, and left an income to the chemical professorship. It was presumed that the attending students in the medical establishment would make up a sufficient gratuity to render it an object to the several gentlemen who had the appointments.

The Massachusetts Medical Society had authority to *examine* such candidates for the practice of physic as should offer themselves for the purpose, and grant diplomas signifying such persons as they found to be qualified for the profession; but they had no power to give degrees. The medical professors had similar powers, and were quite independent of the Medical Society. The university could give degrees and confer titles upon such as passed examination before their professors. Here, it was supposed, there would be some clashing of interests. The number who had been examined by the censor[s] of the society was not great. It was not long before

¹ In the manuscript, a pen has been drawn through the word "anatomy" and what appears like "physic" written over it.

the two institutions were at issue. None had been examined by the university; and no degrees but such as were honorary, had been granted. About the year 1788, George Holmes Hall and John Fleet offered themselves for examination to the censors. Dr. Oliver Prescott of Groton, Drs. Lloyd, Gardner, Danforth, and Rand were then in the office—a formidable host. The candidates were students in Dr. Warren's surgery, had dissected much, and were probably far better qualified than any who had presented themselves: in fact, the doctor had bestowed great pains in regard to their qualifications. Dr. Prescott, being hard of hearing, said nothing; and I think Dr. Danforth's business prevented his attendance, but he heartily joined in putting them down. It was judged that now was the time to mortify their instructor. Various times were appointed for attending to the business, and it was as often postponed; till the young gentlemen actually became confident that the censors, sensible of their own deficiencies, were afraid to encounter them. At length, the time came; and they found it a fiery trial. They then became convinced that all knowledge was not shut up in the brains of the professors: they were set aside and could not obtain certificates. Here they thought the matter would drop; but they were mistaken. Dr. Warren was neither mortified nor foiled. He had wished for an opportunity of commencing the examinations at Cambridge: this was a *good* opportunity. Lectures were immediately commenced, and got through before Commencement. This was an unexpected matter, and measures were taken to prevent its having effect. President Willard was applied to, to put a stop to the progress of the professors, lest it should generate serious misunderstandings between the two societies. Dr. Rand called on me, and desired me to prevail upon Dr. Fleet to suspend the matter; assuring me that the censors would make such representations as would effectually prevent him from getting into business, and that both he and Hall would be ruined. I was applied to, as I was like to, and did become his brother-in-law; but I had no influence over him, and declined any interferences. A public examination was held in the philosophy chamber of the university, at which many persons not of the profession attended. They were thoroughly sifted; and they afforded much gratification to all who were present. On the Saturday previous to Commencement, notice was sent that the censors would meet for their re-examination. They attended; when a few questions were asked, and they were passed. On Commencement day, not having been informed of this matter, a public attempt was made by some of the overseers, that the degree of Doctor of Physic should be withheld. Having been informed of the re-examination, opposition was withdrawn; and George Holmes Hall, who received the degree of Master of Arts in 1781, and John Fleet *ad eundem* in 1788, were admitted the first in course to the degree of Doctor of Physic.

This, it is believed, has been the only interruption that has taken place between the societies; and they have mutually contributed to the reputation of each other, and have done their part to raise the respect of both to their present high standing among the literary institutions of the country. —Proceedings Mass. Hist. Soc., 1863-1864, vol. VII., pp. 183-4.

From the day when the medical degree was conferred on Hall and Fleet to the present, the history of the Harvard Medical School has been one of steady growth in importance and influence. The lectures of the newly-formed school were delivered in the old Holden Chapel

and in the basement of University Hall in Cambridge, until the erection of the building known as the Massachusetts Medical College in Mason street in Boston in 1815. It was no easy matter for a busy Boston practitioner to deliver a course of lectures in the university town. "In the fullness of professional business he daily passed over Charlestown ferry to Cambridge, there not being a bridge at that time; and sometimes when impeded by ice, was compelled to take the route through Roxbury and Brookline to Cambridge, and to return the same evening, after himself performing the dissections and giving a lecture sometimes three hours long," as Dr. Thacher says in his medical biography.

Dr. Benjamin Waterhouse, the introducer of vaccination into America, was the first professor of the theory and practice of medicine, and Dr. Aaron Dexter instilled into the pupils of the new institution the still crude theories which were being organized into a system by such men as Balch, Cavendish, Priestley, Lavoisier, and others, as the foundation of the modern chemistry.

With this triad of men the school began, men of mark of their day, but with means and methods of the simplest character, the profession itself and the knowledge of medicine apparently just emerging from the ignorance of the earlier periods, and with everything to be formulated in the matter of technical knowledge as we know it to-day.

In 1815 the school was moved to Boston in order to be nearer the homes of those who were engaged in instruction; in 1846, under the name of the Harvard Medical School, it occupied the building erected for its use in North Grove street in Boston; and in 1883 that at present in use in Boylston street.

In all these years a long line of professors and teachers have followed each other; it is possible only to mention some of them by name: John C. Warren, eminent as a surgeon and a teacher; James Jackson, in theory and practice; Jacob Bigelow and his not less distinguished son, Henry J. Bigelow, John Ware, Walter Channing, D. Humphreys Storer, Jeffries and Morrill Wyman, Henry I. Bowditch, John B. S. Jackson.

These are some of the men who have by hard labor continued the work to our own time, and have brought the school to the position it holds.

During this middle period of its history the most important advances have been made in medicine and surgery. The first experiments of the anæsthetic properties of ether belong of right to the teachers in the

Harvard Medical School and the surgeons of the Massachusetts General Hospital; the Bigelow method of reducing the femur and the practice of litholapaxy; various methods adopted in the subject of orthopraxy; frozen sections in the study of anatomy; all owe their origin to this school; and the studies of abdominal and brain surgery, histology, antisepsis and asepsis, obstetrical and gynecological surgery have been either initiated or closely followed up—from hints given by others by the various professors and teachers.

At this time the Medical School of Harvard University has a teaching force of seventy-one professors and instructors, and four hundred and fifty-one students were enrolled during the year 1892-93. All candidates for admission pass an examination in English, Latin, physics, chemistry and one elective study, viz.: French, German, mathematics or botany. Beginning with the year 1892-93 all students are required to complete the full term of four years' study before taking a degree in medicine; one year at least must have been spent in this school. The degree *cum laude* is given to candidates who obtain an average of seventy-five per cent. in all the required examinations. The degree of Master of Arts is open to graduates of the school who are Bachelors of Harvard University or of other recognized colleges, who shall pursue an approved course of study in medicine for at least one year after taking the degree of Doctor of Medicine. Candidates for admission to the school may be examined either in Boston, or at either of the twenty other designated places, including such distant points as Portland, Ore., Bonn, Germany, and Tokio, Japan.

The course of instruction includes a carefully graded system of studies from the most elementary to the most advanced, with lectures, laboratory and hospital work, special attention being given in the later years to individual investigation and clinical study and conferences in the more advanced branches. For all this system of studies elaborate laboratories, with every requisite, are furnished; students are employed as assistants in the many hospitals and dispensaries of the city and its neighborhood; abundant means are furnished for the practical study of obstetrics; and no means are spared for the complete knowledge of medical science in conformity with the latest knowledge of the day. Twenty-five appointments are made annually as internes in the various hospitals, and as many more for assistants in the out-patient departments. More than one hundred thousand patients are treated annually in the various hospitals and dispensaries of Boston, and students have

free admission to the practice at these institutions. They have also access to the college and medical school libraries, to the Boston Public Library, and to various other collections of books of a general or special character. The Warren Anatomical Museum furnishes abundant means of instruction in technical studies, and various other collections in the city on special topics. Twelve scholarships are offered for the assistance of deserving students. Courses of study for graduates and summer classes are arranged for those needing such advantages. In these instruction is conducted in small classes, under the immediate supervision of the professors or instructors. Various prizes are open for public competition or for students of the school.

The following extract from the "Conspectus of the Medical Colleges of America," compiled and issued by the State Board of Health of Illinois, in 1881, shows that temporarily our city has not been free from those who, for purely mercenary motives, issued degrees fraudulent in character and preceded by no medical training:

NEW ENGLAND UNIVERSITY OF ARTS AND SCIENCES, BOSTON, MASS.

Fraudulent. Extinct.

BELLEVUE MEDICAL COLLEGE OF MASSACHUSETTS, BOSTON, MASS.

Organized in 1880. A fraudulent institution, exposed by the ILLINOIS STATE BOARD OF HEALTH in 1882. Vide infra; see also pp. xiii-xv, Fourth Annual Report of the Board.

MEDICAL DEPARTMENT OF THE AMERICAN UNIVERSITY OF BOSTON.

FIRST MEDICAL COLLEGE OF THE AMERICAN HEALTH SOCIETY.

EXCELSIOR MEDICAL COLLEGE.

The exposure, in November, 1882, by the ILLINOIS BOARD OF HEALTH of the fraudulent Bellevue Medical College of Massachusetts, led to the correction of a flagrant abuse in connection with the issuing of medical diplomas in Massachusetts. The "Bellevue" was organized under the "Public Statutes relating to *Manufacturing* and other Corporations," and its officers, on the trial which resulted from the exposure referred to, pleaded that they were legally incorporated, and were empowered by the laws of Massachusetts to issue diplomas and confer degrees without any restriction as to course of study or professional attainments. The United States Commissioner, before whom the trial was had, held the plea to be valid, and dismissed the case, with the following remarks:

"The State has authorized this college to issue degrees, and it has been done according to legal right. . . . The law makes the faculty of the college the sole judges of eligibility of applicants for diplomas. There is no legal restriction, no legal requirements. *If the faculty chose to issue degrees to incompetent persons, the laws of Massachusetts authorize it.*"

As a result of this decision, the "American University of Boston," and the "First Medical College of the American Health Society" were incorporated under the same authority as the "Bellevue," and the "Excelsior Medical College" and others were projected.



Alfred H. H. H.

An Act was passed by the Legislature, in 1883, forbidding any corporation, organized under the public statutes referred to in the above extract, from conferring medical degrees or issuing diplomas, or certificates conferring or purporting to confer degrees, unless specially authorized by the Legislature so to do.

The result of this salutary legislation has been to rid our community of what threatened to become a growing evil.

An organization which has been the means of conveying general information on medical matters to the laity should be mentioned, and which has certainly done much good in the community, the

MASSACHUSETTS EMERGENCY AND HYGIENE ASSOCIATION,

Which was organized in the winter of 1883 by the Women's Education Association, to provide, for both men and women, instruction which should fit them to be of use in cases of sudden illness or accident. Organized under its present title in order to give instruction in hygiene and the laws of health, and to qualify men and women to keep their presence of mind and act intelligently in cases of sudden accident and emergency, pending the arrival of surgeon or physician.

Emergency courses of lectures are given in Boston, Worcester, Lynn, to classes, consisting of not more than twenty-five, by physicians appointed by the Executive Committee.

NEW ENGLAND FEMALE MEDICAL COLLEGE.

This college was organized in 1848. Lectures were delivered and classes graduated until 1874, when it became merged with the Boston University School of Medicine. During its separate existence it was not a sectarian school.

BOSTON UNIVERSITY SCHOOL OF MEDICINE.

This school was organized in 1873, and graduated its first class in 1874.

It has always taught homœopathy, and admits students of both sexes on equal terms. A four years' course of professional study is now obligatory before graduation. The teaching board, as shown by the last catalogue (1893), consists of fourteen full professors, four associate professors, fifteen lecturers, and fourteen instructors and assistants. The number of students was one hundred and fifty-three.

COLLEGE OF PHYSICIANS AND SURGEONS.

This college was organized in 1880, and graduated its first class in 1881. For many years it was located on Essex street, more recently on Boylston street, and is now located on Shawmut avenue.

During the present year a reorganization of its board of government has taken place, and it begins the winter's course with a practically new board of instructors. It admits students of both sexes.

TUFTS COLLEGE MEDICAL SCHOOL.

The trustees of Tufts College have this year opened a medical school in Boston, for men and women.

Twelve professors, ten lecturers, and six other instructors are announced as comprising the faculty.

DENTISTRY

Dentistry, which has now become an important branch of medicine, and which includes among its practitioners a rapidly increasing number of highly educated and scientific professional men, was in early days but little understood and but rudely practiced.

Physicians, no doubt, until recent years, extracted teeth when they had become too painful for endurance; little attention had been given to saving or replacing them.

We gather from the following amusing advertisements in Boston newspapers (1780 and 1781) that a beginning had been made in dentistry at that time, although one of the practitioners included among his attainments the manufacture of musical instruments and the recovering of "Umbrilloes."

MR. TEMPLEMAN,

SURGEON DENTIST,

Encouraged by the success of his practice in different parts of Europe and America, begs leave to acquaint the public, That he is furnished with materials with which, and a dexterity peculiar to the art,

He preserves the Teeth,
Cures the seury in the Gums,
Extracts and transplants Teeth,
Scales Teeth,
Substitutes artificial Teeth,
Gives the Teeth proper vacancies,
Regulates childrens Teeth,
And plumbs concave Teeth,

which prevents their collating or being offensive, besides many other Operations too tedious to mention, as without the least pain (except that of extracting) since scaling the Teeth is carefully to take from them an infectious tartar which destroys the animal [enamel?], eats the gums, renders them spongy (CORRUPTED), and incapable of affording any support. Its being removed, which is not in the power of composition to effect, renders the gums firm, and leaves the teeth in their natural purity. Many people blame the climate, &c. for the loss of Teeth,— But it is too often the case, as I've observ'd in the course of my practice on the Continent, that but few people take care of their Teeth, till they become defective. The Europeans are remarkable (particularly the French) for their good and beautiful Teeth, owing to their own care, and knowledge of the art.

N. B. Mr. TEMPLEMAN will, with pleasure, attend those Ladies or Gentlemen who cannot conveniently wait on him at Mrs. Frasier's, near the Town-House, Boston.—“The Boston Gazette and The Country Journal,” October 8, 1781.

Gentlemen and Ladies that may want Artificial Teeth, may have them made and fixed in the neatest manner without the least pain by ISAAC GREENWOOD, Ivory-Turner, at his house in the Main Street, between the Old South and Seven-Star Lane, at the South-End of Boston, they help the Speech as becoming as the natural ones.

☞ *Ladies, wax rots your Teeth and Gums, throw it away. Come and have your Teeth cleansed, and if done in time, saves them from rotting and parting from the Gums.*

N. B. Said GREENWOOD continues to make Artificial Leggs and Hands: Turns in Ivory, Bone, Silver and Wood: Makes Fifes, German-Flutes, Hautboys, &c. &c.

☞ *Ladies please to send your Umbrellas to be mended and cover'd.*—(The Continental Journal and Weekly Advertiser, April 20, 1780.)

Special schools and societies have naturally followed the advance in scientific dentistry. The importance to the public of proper treatment of the teeth demanded the attention first of physicians who made it a part of their practice, and afterwards of men who could give it their whole attention.

Professional reputation followed study under representative dentists, and then the foundation of regular schools and societies for professional study and development.

There are in Boston two important schools of dentistry, one under the auspices of Harvard University, named the Dental Department of Harvard University, and the other the Boston Dental College.

DENTAL DEPARTMENT OF HARVARD UNIVERSITY.

The Dental Department of the university is located in Boston in North Grove street, in the building formerly occupied by the Medical

School, but having outgrown their quarters, an effort is now being made to erect a building especially designed for its use, in order to secure in connection with the Medical Department those advantages for clinical instruction which are found only in large cities.

Instruction in this school is given throughout the academic year by lectures, recitations, clinical teaching, and practical exercises, uniformly distributed. The course of instruction is progressive, and extends over two years, the teaching of one year not being repeated the next.

The first year is identical with that of the Harvard Medical School, the student receiving the same instruction by the same professors at the same time and place with the medical students, and at the end of the year passing with them the same examinations.

It is the object of the faculty to present a complete course of instruction in the theory and practice of dentistry; and for this purpose a well-appointed laboratory and infirmary are provided, and such arrangements made as to insure an ample supply of patients. Clinical instruction is given by the professors and other instructors; and, under the direction of demonstrators, patients are assigned to the students, securing to all an opportunity of operating at the chair, and becoming by actual practice familiar with all the operations demanded of the dentist.

The infirmary, which is a department of the Massachusetts General Hospital, remains open, and one of the clinical instructors and the demonstrator are in attendance daily throughout the academic year.

Students have access to the hospitals of the city, and to the dissecting-room and museum of the Medical School.

BOSTON DENTAL COLLEGE.

The Boston Dental College is located at 485 Tremont street, Boston, Mass. It was incorporated June 3, 1868, for the advancement of dental science and art, by means of lectures, clinical instruction, library, and museum. It is authorized by the Legislature to confer the degree of Doctor of Dental Surgery. The college pupilage is continuous over three years.

In this institution all branches of the dental and collateral sciences are taught, so far as they can be made available to the dentist. Every endeavor is used to make the course scientific and practical by demonstration and experiment.

The principal society of those of who practice this special branch of medicine is the

MASSACHUSETTS DENTAL SOCIETY,

Which was formed May, 1864, and received an act of incorporation from the Legislature in April, 1865. Its object is to cultivate the science and art of dentistry and all its collateral branches, by means of a library and museum, professional lectures, and publications, and by premiums and medals for original researches and discoveries; to elevate and sustain the professional character of dentists, and to promote among them mutual improvement, social intercourse, and good-will.

It includes active, junior, corresponding, and honorary members. Active members consist of practitioners of dentistry living in the State of Massachusetts. They must be twenty-one years of age, of good moral character, and have received a diploma from a respectable medical or dental college, or have been five years in the practice of dentistry, including term of pupilage. Junior members consist of students of dentistry and dentists not eligible to active membership. Corresponding members consist of practitioners of dentistry living in other States of the Union, or in foreign countries, who manifest a disposition to advance the science and art of the profession by contributing to its literature.

Honorary memberships are conferred by the society on distinguished members of the profession, and others who may merit the distinction.

The other dental societies are the following:

HARVARD DENTAL ALUMNI ASSOCIATION,

This association was organized in 1870, for the purpose of uniting the alumni of the Harvard Dental School.

ALUMNI ASSOCIATION OF THE BOSTON DENTAL COLLEGE,

This society was organized in March, 1872.

HARVARD ODONTOLOGICAL SOCIETY,

This society was organized July 2, 1878, for the purpose of maintaining and cultivating professional and social relations among graduates of the Dental Department of Harvard University. Any graduate of the Dental School is eligible to membership.

BOSTON SOCIETY FOR DENTAL IMPROVEMENT,

This society was organized January 13, 1874.

TRAINING SCHOOLS FOR NURSES.

Experience in the practice of medicine in hospitals has shown the importance of employing the services of competent nurses to carry out accurately the instructions of the physician, and schools under the auspices of the hospitals have grown up for their instruction.

There is now in successful operation a school connected with each of the principal hospitals, and at the McLean Asylum and the Boston Lying-in Hospital, where the instruction is of a special character.

The several schools are all organized on the same general plan; it will therefore suffice to speak in detail only of the

BOSTON CITY HOSPITAL TRAINING SCHOOL FOR NURSES.

The trustees of the Boston City Hospital organized in 1877 a training school for nurses, for the purpose of giving a systematic and thorough course of instruction in nursing to women who intend to become professional nurses.

The school is under the direction of the trustees and a committee of the hospital staff, but is more immediately under the charge of the superintendent of the school, and the resident physician and superintendent of the hospital.

The pupils of the school live at the hospital and serve as nurses in the wards for men, women and children, passing in rotation through the various services of the hospital, in order that experience may be had in all the departments.

Pupils of the school are under the authority of the superintendent of the school and the resident physician of the hospital, and are subject to the rules and regulations of the hospital.

The most desirable age for candidates is from twenty-one to thirty-five years; they must be in good, sound health, and must present on application a certificate from two or more responsible persons (one a physician preferred) as to their good character, education, capabilities, and good health. Upon the recommendation of the superintendent of the hospital and the approval of the trustees, they will be received for one month on probation. During this month they are boarded and lodged at the hospital, but receive no compensation.

At the end of the probationary month, if accepted as pupils, the candidates will sign an agreement to remain at the training school for two years, and to conform to the rules of the hospital.

At the end of the two years, they pass an examination by members of the staff, and if successful are given a diploma.

No single institution in the country has probably given more comfort to the individual members of the profession, and to their clients, than the one now to be described:

THE DIRECTORY FOR NURSES AT THE BOSTON MEDICAL LIBRARY,

No. 19 Boylston Place,

Which was opened in November, 1879. At this Directory a nurse, either male or female, can be secured at any time in the day or night, either for immediate service or for future engagement. Applications are received by messenger, by telephone or by telegraph. More than twenty-one thousand nurses have been furnished in less than fourteen years.

It is hard to realize how difficult it was to obtain good nurses for the sick before the Directory was opened, and how much more often nurses are employed now than formerly. People were slow to make up their minds to look for a nurse, if it could be avoided, and when it could be no longer avoided, the family of the sick person, the physician, and often members of his family too, would hurry in search of a nurse from one part of the city to another on foot and by carriage, only to find at night, perhaps, that no one had been successful, and that the search must be taken up again in the morning.

The training schools for nurses had increased the number of nurses, but had not made it much easier to find them. A list of nurses was to be found in every physician's office, but if it contained the names of a hundred nurses, only one out of all was likely to be found disengaged, and on the other hand, at inconvenient hours, nurses, generally the less desirable, would come to his office to tell in detail of how long they had been out of work.

There were also employment offices that professed to supply nurses, but they had only lists of nurses that could be looked up.

When in 1879 a committee was appointed to make arrangements for furnishing nurses, it was decided that, in order to do satisfactory work, a Directory must give sufficient guarantee of the qualifications and character of the nurses, that it must be able to say positively what nurses would be found disengaged.

The sixth annual report of the Medical Library gives an account of the methods of the Directory, which we quote:

Each applicant is required to fill out a blank form stating the name, residence, age, length of experience in nursing, from what training school, if any, he or she has a diploma, whether any particular branch of nursing is preferred to others, whether he or she is willing to take meals in the kitchen, the price per day and per week, and the names of three or four physicians and of a like number of families as references. When this blank is filled out and returned the registrar sends blanks, with a stamped and directed envelope inclosed, to the families and physicians named as references. The blank to a physician inquires whether the doctor considers the applicant a desirable nurse, whether she is good-tempered, neat, capable, and mindful of directions, whether she has any faults, and whether she is to be recommended in any special class of cases. The blank to families makes similar inquiries, and begs for any information bearing on the character and qualifications of the applicant. When this set of blanks is filled and returned, the information contained is carefully examined by the committee, and if the nurse is accepted an abstract is made of the reports and recorded in indexed books specially prepared for the purpose.

Postal cards which merely require a moment to fill out are kept constantly on hand and sold to nurses at cost price, so that the directory may be immediately notified of the taking or termination of an engagement, or of a change in residence, price, etc. On the first failure of a nurse to report an engagement promptly, a warning is sent, and on the second failure the name of the delinquent is dropped from the register, to which it can be restored only on payment of a second registration fee.

A card catalogue of all nurses registered is also kept so that the registrar can tell almost at a glance just which nurses are free at any given moment, nurses are also expected to keep the Directory informed as to future engagements, a point of special importance in securing attendance for ladies expecting confinement.

But the work of the Directory does not stop here. A nurse applying for registration is at liberty to choose her references, and will naturally refer to those families and physicians who she thinks will report most favorably about her. But when once the nurse is registered, blanks specially prepared for the purpose are sent to each person who secures her through the Directory, as well as to the physician in charge of the case. The replies are all submitted to the committee, and then copied in abstract into the register, or filed away, according to whether new facts are elicited or not. All complaints made by employers are investigated patiently, and every care is taken that strict justice is done as far as possible.

In July, 1879, the preliminary work was begun, and in the November following the Directory opened with the names of about sixty nurses on its books.

The first step was to send a circular to a number of the physicians in the largest practice in and about Boston, informing them of the project, and asking from each of them a list of such nurses as from personal knowledge he could recommend. To all nurses so vouched for, as well as to all graduates of the training schools for nurses, circulars were then sent explaining the plan and inviting them to register themselves. Nurses were not slow to see the benefits which would accrue to themselves and the public, and applications for registration soon began to pour in.

Nurses are not guaranteed employment by the Directory, and are always at liberty to seek occupation for themselves, provided only that they send prompt notification of any engagement secured. The chief aims of the Directory are to put employers and nurses in ready communication with one another, and to afford employers reliable information as to the character and qualifications of one who is about to become an important member of the household.

These methods have been followed hitherto with only occasional modifications of detail. The success of the institution was notable at the very outset, and the almost uninterrupted yearly increase in its business has been extraordinary.

From November 23 to December 21, 1879, sixty-one nurses were sent out; during 1880, six hundred and twenty; 1883, almost twice as many—1,204; in 1886, 1,349. In the report of this year the committee expressed the opinion that there would not be any great or rapid increase of business of the Directory. But that expectation was destined to be agreeably disappointed, for in the very next year the number had risen to 1,613, and in 1891 it reached 2,313.

These nurses were furnished to applicants not only in Boston, but in all parts of New England and occasionally outside of it.

Of female nurses the proportion of graduates from training schools to non-graduates has changed very much in the course of years.

There were in 1881 75 graduates and 291 non-graduates; 1884, 155 graduates and 380 non-graduates; 1892, 509 graduates and 469 non-graduates. The rise in the proportion of training school nurses is still more marked if we take those only who do the work of the year. Thus in the year ending September, 1892, the year's work of the female nurses was divided between 153 non-graduates and 385 graduates.

The number of male nurses has steadily increased and the quality of these is greatly improved. On September 28, 1892, there were 125 on the register, and 96 had been heard from during the year.

Taking all the nurses together there were on the books on September 28, 1892, 1,304, of these 187 were known to have died or given up nursing, leaving 1,117, who were supposed to be available. But of these only 434 were heard from and did the work during the preceding year.

The number of nurses disengaged at any one moment varies much. When there is little sickness it rises to a considerable number, but during the busiest season it often falls to two or three. But every mail is likely to bring in new ones.

During the year 1893, attendants for invalids and children having been instructed by means of lectures under the auspices of the Massachusetts Emergency and Hygiene Association, have been placed on the books of the Directory for nurses. They are not expected to take care of persons who are acutely ill, and receive at most seven dollars per week. Places have been found for them without difficulty.

The reasons of the remarkable success of the Directory have been suggested already in part. It commends itself to nurses (1) Because it supplies them with a large amount of work; (2) Because, being under the care of physicians, it recognizes and encourages good work, while its criticisms are unprejudiced and fair.

It is liked by the employer (1) Because he obtains a nurse without delay; (2) Because he finds that the nurse is, as far as possible, selected with reference to the peculiarities of each case.

Such an institution could hardly attain the same success if not under the care of physicians.

Since the Directory opened in 1878 six similar institutions are known to have been opened in Philadelphia, Brooklyn, Baltimore, Washington, San Francisco and Chicago.

COUNTY MEDICAL OFFICERS.

The only medical officers of the county are the two medical examiners and their assistant, the successors of the coroners, who were legislated out of office by the General Court in 1877, and the City Physician of Boston, now officially designated as the Physician to the Board of Health, one of whose duties is to attend professionally the county jail.

The office of city physician was established by ordinance in 1847. Dr. Henry G. Clark was the first incumbent, and held office until 1860. The appointment was made at this time by the mayor, and confirmed by a concurrent vote of the Board of Aldermen and Common Council. The duties then embraced medical attendance at the Suffolk County Jail, examination of all sources of danger to the public health, medical attendance at the various police stations, and the vaccination and re-vaccination of all applicants. He was also required to give certificates of vaccination to all children for their admission to the public schools. It was during Dr. Clark's term of service that Boston, in 1849, was visited by a very severe epidemic of cholera. [A very exhaustive report of this epidemic was published by Dr. Clark.] In 1851 occurred a comparatively slight epidemic of cholera.

In 1861 Dr. John S. Jones succeeded to the office, which he held until 1864. There is no record of any severe epidemic during his incumbency, although small-pox was more or less prevalent during this time.

Dr. William Read next held the office, from 1864 to 1869. In 1866 there was a slight epidemic of cholera which caused eleven deaths. Small-pox caused a certain number of deaths, but at no time was there anything approaching an epidemic.

Dr. William H. Page was appointed in 1870, and held office one year. During this time nothing of interest regarding the health of the city occurred.

In 1871 Dr. Samuel A. Green succeeded to the office, which he held until his election, in 1882, as mayor of the city. In January, 1872, the Board of Health was established, and the appointment of city physician was vested in this body subject to the approval of the mayor. It was during Dr. Green's term of service that Boston was visited by a very severe epidemic of small-pox. By the arduous and zealous work of this officer, in conjunction with the support and assistance of the Board of Health, the epidemic was speedily stamped out.

In January, 1882, the present incumbent, Dr. John H. McCollom, who had served as an assistant to Dr. Green, was appointed as his successor.

By a recent revision of the city charter the city physician is now (1893) appointed by the Board of Health as a permanent officer, and not annually, as before, and his title changed to Physician to the Board of Health.

As the population of Boston has increased from 122,346 in 1847, the first year of Dr. Clark's term of service, to 467,647 in 1892, the duties of the office have been greatly augmented. To give an idea of the work of this department, the following details are taken from the last report of the city physician: During 1892 3,909 persons were vaccinated and certificates of vaccination were given to 2,967 children for their admission to the public schools. At the request of the Civil Service Commissioners, 255 men were examined for appointment in the Police and in the Fire Departments. At the request of the Board of Police and Board of Fire Commissioners, respectively, twelve policemen and twenty-five firemen were examined for retirement, and nine cases of supposed injury or disease investigated. A careful external examination was made, the symptoms learned and a diagnosis sufficiently accu-

rate for all practical purposes reached in the cases of 557 persons dying without a physician in attendance. In Suffolk county jail 936 patients were treated, requiring 2,080 visits. In the City Temporary Home twenty cases of confinement were attended, and 208 visits made to persons suffering from various diseases. Fifty-two cases of eruptive disease, reported as small-pox, were examined. In only one instance was the disease found to exist. Six cases of reported typhus fever were examined, but in each instance the disease was found to be typhoid fever instead. The reports of 1,353 cases of diphtheria and 2,938 cases of scarlet fever were investigated.

VETERINARY MEDICINE.

The care and treatment of animals has of late years been recognized as a branch of medicine, and a school and hospital have been established for professional education and practice.

The Civil War brought together immense numbers of horses, and their treatment became of great importance to the country.

Veterinary surgeons were appointed by the War Department, and valuable service was rendered by them.

After the war the public was not long in realizing how valuable such services would be in civil life, and this new field for professional services has continued steadily to enlarge, and our animals are no longer necessarily left to the care of the thumb rules of ignorant grooms and hostlers.

The school is under the control of Harvard University, and is called the School of Veterinary Medicine of Harvard University. It provides a three years' course of instruction in the science and practice of veterinary medicine and surgery. The sanitary relation of animals to man has received much attention, and much important work has been done.

HARVARD VETERINARY HOSPITAL.

The Harvard Veterinary Hospital was established in 1883 at 50 Village street, Boston, and is a commodious and substantial building, offering every advantage for the observation and treatment of sick animals.

MASSACHUSETTS VETERINARY ASSOCIATION.

The Massachusetts Veterinary Association, for the mutual intercourse and improvement of the graduates of veterinary medicine, was organized in 1884 and incorporated in 1887.

PHARMACY.

Pharmacy claims a close relation to medicine.

The need of a proper training for apothecaries had become pressing with their great increase in numbers following upon the growth of the city. The larger establishments for the preparation and sale of medicines required competent men, and there was no time for private education as formerly.

Under the auspices of the leading men in the business, the Massachusetts College of Pharmacy was organized in February, 1823, and incorporated in 1852. Its object was to provide the means of a systematic education; to regulate the instruction of apprentices; to promote investigation, and to diffuse information among the members of the profession.

The School of Pharmacy, under the control of the college, offers to its students a theoretical and practical instruction. The graduates of the college organized, in 1870, the "Association of Alumni of the Massachusetts College of Pharmacy."

HOMŒOPATHY.

The present condition of this school of practice in this city and State is shown by the following list of institutions, etc., which acknowledge allegiance to this system:

The Massachusetts Homœopathic Medical Society, established in 1840, incorporated in 1856; meetings held second Wednesday in April and October.

The Boston Homœopathic Medical Society, established 1859, 210 members; meetings held on the first Monday of each month.

The Hahnemannian Medical Society, 30 members, meetings monthly.

The Massachusetts Surgical and Gynecological Society, established 1877, 120 members, meetings quarterly.

The Hughes Medical Club, 15 members, meetings monthly.

The Homœopathic Dispensary Medical Association, 60 members, meetings annually.

The Massachusetts Homœopathic Hospital, incorporated 1855, opened to patients in 1871.

The Ladies' Aid Association of the Homœopathic Hospital, 300 members, meetings monthly.

The Medical Board Association of the Homœopathic Hospital, 22 members, meetings quarterly.

The Homœopathic Medical Dispensary, incorporated 1856, opened to the public in April, 1857; has treated 240,585 patients, with 643,771 prescriptions, previous to January 1, 1893.

The Consumptives' Home, at Grove Hall, established by Dr. Charles Cullis in 1858.

The Boothby Surgical Hospital, established in 1888.

The Roxbury Homœopathic Dispensary, established in 1885.

The Westborough Insane Hospital, established by the State in 1881.

The Boston University School of Medicine, established in 1873.

The *New England Medical Gazette*, published monthly, by Otis Clapp & Sons, established in January, 1866.

The *Medical Student*, established in 1888.

In addition, there are in the State five hospitals which have double services, one being in charge of homœopathic practitioners, namely, the Newton Cottage Hospital, the Taunton Hospital, the Quiney Hospital, the Rufus S. Frost Hospital, in Chelsea, and the Malden Hospital.

There are also five other medical societies of this school in different parts of the State

MEDICAL LIBRARIES.

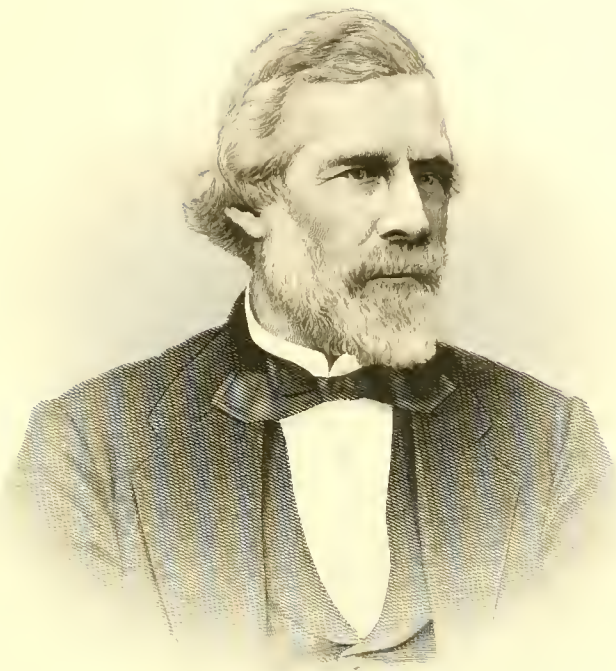
Boston has quite a number of medical libraries, the principal one being the Boston Medical Library, owned by the Boston Medical Library Association; the others are connected with State or city departments or with some hospital. A detailed account of all these is here given:

The first extensive collection of medical books that was made in the city was

THE SECOND¹ SOCIAL OR BOSTON MEDICAL LIBRARY.

In 1805 Drs. John C. Warren and James Jackson formed a private medical society for mutual improvement, in conjunction with Drs. Dixwell, Coffin, Bullard, Shattuck, Jeffries, Fleet and Homans. The society came together once a week for the purpose of reading and listening to papers. The members continued to meet until death removed all in succession. From this society, and principally from the

¹The First Social Library was a law library.



Nathan Matthews

exertions of Drs. Warren and Jackson, sprang the Boston Medical Library.

Among the papers of the late Dr. John Jeffries was the following autograph announcement:

December 30, 1805

The Boston Medical Library will be opened on Thursday next at Dr. Fleet's

A few books only have arrived

N. B. Books received and delivered on Mondays and Thursdays between three and five o'clock, P. M.

Dr. John Fleet, jr., lived in Milk street, and was, presumably, the first librarian.

About the year 1807 the library was entrusted to the care of a sub-librarian, Mr. Amos Smith, apothecary, and "kept in his shop," No. 39 Marlborough street. The Marlborough street of those days was the portion of what is now Washington street, which is included between Milk and Bedford streets. The list of books, printed at the time of removal, contains twenty-nine titles and forty three volumes.

The annual assessment was ten dollars.

In 1826 the Boston Medical Library ceded its whole collection of books, which in 1823 numbered 1,311 volumes, and was valued at the time of transfer at \$1,500, to the Athenæum on the following terms:

It was agreed: "That each proprietor of the medical library should have the privilege of life-subscriber on the payment of five dollars per annum, and should become a proprietor of the Athenæum by paying one hundred and fifty dollars, such life-subscriber to have the right, on his removal from Boston, to transfer his share for and during the period of his life; that the members of the medical library should have access to the privileges of the Athenæum during the then coming year for the sum of ten dollars; and that the medical department should receive its full proportion of the sums applied hereafter to the purchase of books."

As the shares of the Athenæum were then valued at three hundred dollars, it is probable that nearly all the members of the medical library availed themselves of the opportunity of purchasing at half-price; thirty shares were so taken.

In a letter of Dr. Shattuck dated 1828, published in the proceedings of the Suffolk District Medical Society, we are informed that there were at that time but seventy-one "regularly-bred" physicians in the city of Boston, so that at least one-half of the whole number must have

been members of the library. There were only thirty-five physicians who, in his opinion, could support themselves by their practice.

THE BOSTON MEDICAL LIBRARY.

The importance of having a reading-room provided with current medical journals and of forming the nucleus of a future medical library of reference, in a locality easy of access from all parts of the city, had long been felt by the profession of Boston. The movement, which culminated in the formation of the present association, emanated from among members of the Boston Society for Medical Observation.

The first meeting of six gentlemen at the house of Dr. H. I. Bowditch, on December 21, 1871, for the purpose of discussing schemes for a library, was succeeded by others, with a steadily increasing number of participants, during the spring of 1875, and later by a general call to the profession to meet on August 20, 1875. On this occasion organization was effected and officers for the first year were elected.

In 1877 the association was incorporated under the general statutes, The Boston Medical Library Association. Rooms at No. 5 Hamilton Place were first secured as possessing the prime requisites of central position and freedom from noise of passing traffic.

In 1881 the present building, 19 Boylston Place, was purchased and altered over for the accommodation of books and to provide a suitable hall and committee rooms for the use of the different medical societies. All the principal ones are now regular tenants of the association.

This building soon became inadequate for the proper accommodation of the library and its members, and in 1887 preliminary steps were taken to move to new and more commodious quarters. A lot of land on the corner of St. Botolph and Garrison street was purchased with the hope of erecting, in the near future, a fire-proof building. This hope is now nearing fruition, plans having been drawn and accepted and the executive committee given authority to build.

The Directory for Nurses (for an account of which see page 213), is domiciled in the library building.

The first extensive collection of books received was that of the Society for Medical Observation, amounting to 911 volumes of the most valuable American, English, French, and German journals. This is still yearly augmented by the periodicals for which the society subscribes. By the terms of the contract the society retains full ownership

in its library, and the right to take from the rooms its own books for the period of one week. It binds its own journals and insures its own library, as heretofore.

The next considerable acquisition of books was the obstetrical library of the late Dr. William Read, numbering nearly two hundred volumes, and containing all the standard publications on midwifery that have appeared in England during the past century, including many rare and choice works.

In 1876 the trustees of the Boston Dispensary presented a library left in their building by the late Dr. John B. Alley.

In the same year the Boston Society for Medical Improvement deposited its library of 174 volumes on the same terms as were accorded the Society for Medical Observation. Thus were acquired many sets of old English and American journals of great rarity and of practical as well as historic worth.

The list of individual contributors is a very long one.

The library at present contains (October, 1893): Books, 23,426; pamphlets, 23,472—making 46,898 titles; 472 different periodicals are regularly received. A carefully prepared cross reference card catalogue has been prepared.

The association is the possessor of many valuable portraits, rare manuscripts and early volumes, which it is now obliged to store, awaiting the advent of its fire-proof building.

LIBRARY OF THE STATE BOARD OF HEALTH.

The library dates from the organization of the board in June, 1869, and has been gradually increasing since that date, till it is now one of the most valuable sanitary libraries in the country. The books almost exclusively relate to hygiene and preventive medicine. The whole number of volumes is about 3,500, and there are about 3,000 pamphlets.

The library is not a circulating library, but is open for reference to all persons interested in matters pertaining to public health, and books are loaned at discretion to such persons as agree to return them in a reasonable time in good condition.

The following are some of the more valuable books in this collection:

Reports of the medical officer of the Privy Council of England, full set.

Reports of the Local Government Board of England, annual and supplements, full set.

Works of the Imperial Board of Health of Germany, Veröffentlichungen, Mittheilungen, and Arbeiten.

Transactions of the American Public Health Association, full set

Annales de l'Institut Pasteur.

Full sets of reports of American Boards of Health, about 200 volumes.

Parliamentary reports on water-supply, sewerage, rivers, pollution, vaccination, and other sanitary subjects.

Registrar General's reports, England, full set, fifty-four volumes

Registration reports, Massachusetts, full set, fifty volumes.

Registration reports of other States and countries

Many special volumes on food and drugs, water analysis, air analysis, toxicology, ventilation, school hygiene, health of occupations, sewage disposal, infectious diseases, cremation, etc.

Several periodicals relating to Public Health in English, German and French are regularly received.

STATE LIBRARY OF MASSACHUSETTS.

There are few general medical books in the State Library of Massachusetts, with the exception of medical dictionaries and books of that nature. It has quite a full collection of books bearing upon public medicine and sanitary science

LIBRARY OF THE SURGEON GENERAL.

The library in the office of the surgeon-general of this Commonwealth consists of books of reference upon medical and military matters, monographs and reports, in all about sixty volumes.

LIBRARY OF THE CITY BOARD OF HEALTH.

This library is principally made up of public documents and health reports, and is not very extensive

THE BOSTON PUBLIC LIBRARY

Has in its medical department over 13,500 volumes. Its collection of journals is very valuable, and the sets are tolerably complete. The regulations necessitated in a large general library do not allow of access to the shelves, except with an attendant as a special favor. Since

its foundation in 1852, many private collections of books have been deposited in its medical alcoves, among others a large portion of the library of the late Dr. James Jackson, and later the library of the late Dr. Daniel Tyler Coit. The library of the Massachusetts Medical Society was given to the city some years ago, at a time when all hope that the profession would ever have a library of its own was entirely relinquished.

In the reading-room the leading medical journals (American and European) are accessible.

THE LIBRARY OF THE HARVARD MEDICAL SCHOOL

Consists almost exclusively of old text-books and sets of journals; it is used chiefly by the students of the school, for whom it was avowedly designed by its founders. It originated in a donation of books drawn from the private libraries of the faculty of the school in 1819. The number of books is estimated at about eighteen hundred, of which many are duplicates.

The physiological laboratory of the medical school has been the recipient of a very large cabinet of microscopic specimens and three hundred and fifty volumes from Dr. John Dean, late of this city. The library contains full sets of all the best German, French, and English periodicals relating to anatomy, physiology, and microscopy.

LIBRARY OF THE COLLEGE OF PHYSICIANS AND SURGEONS.

This college has about 700 volumes, but which are not at present arranged so as to be available.

LIBRARY OF THE BOSTON UNIVERSITY SCHOOL OF MEDICINE.

The library of this school contains three thousand bound volumes, comprising some of the most recent and valuable works in medicine and the collateral sciences, including text-books and works of reference, of which a printed and also a card catalogue on the decimal system has been prepared. There are also several thousand monographs and pamphlets and a large collection of journals. The library in the new college building furnishes excellent facilities for medical reading and study. Two reading-rooms have been fitted up, one supplied with many of the leading medical journals and current literature, the other with works of reference, to which students have daily access.

The library is especially full in some of the earlier publications on homœopathy, which are long since out of print, as well as many more of recent date. It has complete sets of many of the most valuable journals, such as the *British Journal of Homœopathy*, *New England Medical Gazette*, *North American Journal of Homœopathy*, *Hahnemannian Monthly*, and many others, and has also complete files of the publications of the American Institute of Homœopathy, 1844-91; Massachusetts Homœopathic Medical Society, 1840-92; New York Homœopathic Medical Society, Pennsylvania Homœopathic Medical Society, etc. Some rather rare old books and interesting manuscripts.

LIBRARY OF THE BOSTON DENTAL COLLEGE.

The college has a library of about 300 volumes; these are mainly devoted to medical and chemical subjects, including many works on dentistry, made up by contributions from members of the staff and trustees, and of works purchased by the institution. The library is open to students and members of the faculty.

LIBRARY OF THE MASSACHUSETTS COLLEGE OF PHARMACY.

This library is largely the gift of Samuel A. D. Sheppard, Ph. G. It contains about 3,200 volumes, devoted chiefly to pharmacy, chemistry, materia medica, medical botany and microscopy. Among its works of especial importance are an unusually complete collection of pharmacopœias and dispensatories, embracing nearly all extant to-day, and many of historical importance; illustrated works on medicinal plants, as Nees Von Essenbeck, Bigelow, Bentley and Trimens, and Loehman; also a complete set of American journals of pharmacy and a large collection of journals of other countries.

In addition to the above are about 1,000 volumes, including reports of colleges of pharmacy, pharmaceutical societies, and boards of health.

A portion of the library is set aside for the free use of the students in the reading-room. The greater portion, however, is kept in the library for purposes of individual consultation, and under the immediate charge of the librarian. There is a card catalogue.

MEDICAL LIBRARY OF THE BOSTON CITY HOSPITAL.

The Medical Library of the Boston City Hospital was commenced at the opening of the hospital, in 1864. The nucleus of the library was

about 200 books, mostly duplicates, presented by the Boston Public Library. Many of these books were standard books on medicine and surgery, and several old books with valuable plates. Many books were given by members of the medical and surgical staff, and also by other physicians in the city.

There was at this time no special room assigned for the library, the books being kept under lock and key in elaborate hard wood cases in the board room of the hospital. The number of books did not increase rapidly in number, and the library became the repository of official documents of a miscellaneous sort, of no special professional value. From time to time the trustees of the hospital allowed a small sum each year for the purchase of medical journals and books. The number of volumes finally exceeded the capacity of the cases, and there being no special room, a large number of volumes were stored in closets and places not available for use. The growth of the Medical Library was slow and not of special interest until the year 1890.

At this time, after repeated petitions of the trustees and staff, the City Council appropriated \$17,500 for the construction of a building in the rear of the Administration Building, for a medical library, a pamphlet room, a place for keeping the clinical records, and for allied purposes. The library has now a room especially constructed for it, which not only serves most admirably for the deposit of about 6,000 volumes, but also as a proper place for the headquarters of the medical and surgical staff. The present capacity of the library may be increased by means of recessed alcoves, as the library grows in the number of its volumes.

When this library was transferred to its new quarters there were about 900 volumes. During the years 1891 and 1892, special appropriations and special methods were taken for increasing the number of books. There are now 2,743 volumes upon the shelves, all in good condition, with thousands of unbound pamphlets, medical journals, monographs, duplicates, etc., in the pamphlet room.

The hospital now has a most excellent practical working medical library. A large number of the books are those which have been published within the last five years. There are a large number of medical journals, both American and foreign, bound and properly classified; also large numbers of the reports of the leading American, London and foreign hospitals, together with the publications of American and foreign medical and surgical societies.

A card catalogue with cross references of all cases, medical and surgical, treated during the last ten years is kept in the library. A special feature of this library is a section devoted to hospitals, their construction, organization and administration, and also a section on public hygiene.

It is intended to be a practical working library for the medical and surgical and house staff of the hospital.

MEDICAL LIBRARY OF THE MASSACHUSETTS GENERAL HOSPITAL.

This library is known as the Treadwell Library, and was founded by the will of the late Dr. John Goodhue Treadwell, of Salem, in 1857. By its terms his library and some forty thousand dollars reverted to the hospital, the gift having been declined by the president and fellows of Harvard College on account of certain "unusual and embarrassing conditions." These conditions were in reference to "the support and maintenance of a Teacher of Physiology and Structural Anatomy, the Laws of Life and Organization." Eight closely written pages define how this teacher was to have been appointed, his duties, remuneration, etc. Most of this money was given to establish free beds. In addition to the books directly given to the hospital, "to be held in trust by the corporation for the use of the physicians and surgeons of the staff and their successors," the sum of five thousand dollars was especially set apart and reserved as a library fund. The income of this fund was to be "applied annually to the increase and repair of the library." No books could be purchased from this source excepting those on "anatomy, physiology, chemistry, medicine, surgery, and the collateral sciences."

To the original books contained in the library of Dr. Treadwell have been added from time to time large numbers of works on medical and surgical subjects in German, French and English, until the number now exceeds five thousand volumes. Nearly fifty of the best medical and surgical periodicals in these languages are printed. Officers and students of the hospital have the benefit of bound volumes of the leading periodicals issued subsequent to the year 1857.

The library is especially rich in works on surgery, and has many very valuable plates for teaching this and other branches of medicine.

The Treadwell Library has recently been moved from the room which it has occupied for many years to a large, light, and well venti-

lated apartment in the central building of the hospital, formerly occupied by the resident physician. There are accommodations here for an expansion to twenty-five thousand volumes. In addition to a large reading-room for general use, in which are arranged the periodicals as they appear, are alcoves for quiet study, conversation, and consultation. A librarian has recently been appointed, who has full charge of the details of management.

A card catalogue of every case that has been treated in the wards of the hospital since its foundation is being made, with cross references, so that, knowing the name of the patient or the disease, it may be possible in a moment's time to find any case that has ever been under hospital care. The hospital records in detail—that most valuable monument of the labors of previous generations—are provided for, so that they can be easily consulted, and so that it is impossible for them to be lost or stolen. This catalogue and the records are part of the library and constitute a special feature.

The Treadwell Library of the Massachusetts General Hospital, in its practical workings, gives the hospital staff the daily opportunity of keeping up with the work of the profession throughout the world through its best medical journals. It provides, by easy methods of reference, the records of the work and experience of previous generations of physicians and surgeons; and, finally, it gives, to those of the staff who wish to do literary work, abundant material for research in well lighted, well ventilated and quiet rooms.

THE LIBRARY OF THE CHILDREN'S HOSPITAL

Is only a small reference library for use of the house officers.

THE MEDICAL LIBRARY OF THE MASSACHUSETTS CHARITABLE EYE AND EAR INFIRMARY

Consists of two libraries, one for each department of the institution. The library of the ophthalmology department was started by gifts of the medical staff and continued by appropriations from the board of managers. It has now about 500 volumes, and is purely special in character. Its use is limited to the medical officers of the institution.

The medical library of the Aural department was founded by one of the aural surgeons in the year 1888. Since the opening of the new aural building the provision of a special library fund by the board of

managers of the institution has enabled the staff to provide the department with most of the modern works on otology, to which individual contributors are constantly making additions.

The library includes, besides special works upon diseases of the ear, the *Index Medicus* and several works on anatomy, physiology, and general medicine. At present there are ninety-eight bound volumes, several volumes of medical magazines, and about fifty pamphlets and monographs.

The library is in charge of the aural interne, under the direction of the surgeon on duty, and books may be loaned to any one connected with the institution.

MEDICAL LIBRARY OF THE CARNEY HOSPITAL.

There are over two hundred volumes in the medical library, which was started by Dr. M. F. Gavin, of the surgical staff, and is for the use of the staff and house officers. The books are principally bound volumes of journals. There are also quite a number of works in French, the gift of Dr. Sargent.

A room is devoted to the library, and it is hoped to increase the number and value of the books in the near future.

THE BOSTON ATHENEUM,

With the Second Social Library as a nucleus (see page 220), has added to its medical department until it numbers to-day about five thousand volumes, but it no longer adds to the collection. It subscribes to four medical journals. Its sets of journals are neither numerous nor complete.

THE HARVARD UNIVERSITY LIBRARY,

In Gore Hall, Cambridge, now contains 3,783 medical books. This department of the library was founded by Ward Nicholas Boylston, esq., who in the year 1802 gave to the college a medical library of eleven hundred volumes, as a special tribute of respect to his uncle, Dr. Zabdiel Boylston. In 1803 he established a permanent fund of five hundred dollars, subsequently augmented, the interest of which was to be expended in the purchase of books and the publication of prize dissertations.

About five hundred volumes were added to this collection some years since by Dr. B. Joy Jeffries, from the library of his father, the late Dr. John Jeffries.

The library contains but few modern works, and few recent periodicals. It receives but one strictly medical journal, and that gratuitously.

THE BOSTON SOCIETY OF NATURAL HISTORY.

Has a very choice library of twelve thousand volumes, and receives regularly over five hundred journals, reports, society transactions, etc. Among them are series of all the best journals relating to anatomy, physiology, microscopy, chemistry, botany, and other kindred branches of medical science. Free use of the books is accorded to all who apply for the privilege.

As supplementary to the libraries, mention should be made of the

WARREN MUSEUM.

The nucleus of this collection was presented to Harvard College by Dr. John C. Warren in 1847. Since this time it has been largely increased by gifts from different members of the medical profession, and is of great advantage to the students of the Harvard Medical School.

And also of the

WARREN MUSEUM OF NATIONAL HISTORY.

This museum was incorporated by the Legislature in 1858, although the fire-proof building, which it occupies, was built in 1849 by Dr. John C. Warren, to whom it is indebted for its establishment and many of its valuable specimens, including the skeleton of the great mastodon.

MEDICAL PRACTITIONERS IN SUFFOLK COUNTY.

An account of the rank and file will give a better insight into the character of any army than a record of its officers, however brilliant some of them may have been. So it is thought that an account of all individual practitioners from the earliest days of the county will give a clear view of the profession in the times when they were its representatives. With this view the following sketches have been collected.

Until a profession is organized it has but little weight in a community as such, although much may be accomplished by its individual members. With organization come concerted action, the preservation of records, and results that can easily be traced and recorded. Prior to organization we must content ourselves with recording the work of

individuals, and it will be a part of our task to present as far as possible the records of the physicians of Suffolk county until the profession organized itself in this community by establishing the Massachusetts Medical Society.

The biographical sketches of the practitioners of medicine in Suffolk county have been divided in two parts. Those who practiced their profession during the years succeeding the settlement of Boston in 1630 until the year 1700, are included in the first part. Those who were here between 1700 and 1800 are included in the second part.

This list of practitioners in Boston is believed to contain the names of all who practiced medicine previous to 1700:

Addington Isaac, sr.	Ellis Edward, jr.	Pemberton Thomas.
Addington Isaac, jr.	Ellis Robert.	Perkins John.
Meock Samuel.	Eyre John.	Pighogg ———.
Allen Daniel.	Eyre Jonathan.	Pratt Abraham.
Ashton Henry.	Eyre Simon.	Pratt John.
Avery William.	Firmin Giles.	Scottow Thomas.
Barnaby Ruth.	Gager William.	Snelling William.
Bowdoin Peter.	Glover John.	Starr Comfort.
Boylston Thomas.	Hall Nathaniel.	Starr Thomas.
Brackenbury Samuel.	Hawkins Jane.	Stewart ———.
Brackenbury Samuel, jr.	Hughes William.	Stone Daniel.
Bradstreet Samuel.	Hutchinson Anne.	Stone Samuel.
Bullivant Benjamin.	Kittredge John.	Swan Thomas.
Chauncey Elnathan.	Knopp Nicholas.	Swan Thomas, jr.
Checkley Samuel.	Lake Lancelot.	Taylor Henry.
Child Robert.	Ludovick Christian.	Thacher Thomas.
Clark John.	Lumerus Polus.	Wadsworth ———.
Clark John.	Lyll Francis.	Waldron Isaac.
Clark John, the Counsellor.	Mather Increase.	Weeden Elizabeth.
Clark John.	Morley Robert.	Wigglesworth Michael.
Cooke Elisha.	Morton Charles.	Wilkinson Thomas.
Cutler John.	Mountfort Jonathan.	Williams Richard.
Cutler John J.	Noyes Oliver.	Winslow Edward.
Cutler Peter.	Oakes Thomas.	Winthrop John.
Dmely William.	Oliver James.	Winthrop John, jr.
Ellis Edward.	Oliver Thomas.	Winthrop Wait.
	Palgrave Richard.	

Addington, Isaac, sr., "a single man," was admitted a member of the First Church, 1640, 13 1 mo.; "is believed to have been a surgeon;" the evidence of this seems to rest upon items in the inventory of his estate—"steel instruments," "a box of lancets tipt with silver,"

and "a surgeon's chest." He was a freeman 22 May, 1650, and joined the Art. Co. in 1650. Whitman says: "This christian name is Jesse on the old roll—probably a mistake." His autograph on a half-length portrait is given in the first volume of the Memorial History of Boston. His wife was Anne, daughter of Elder Thomas and Anne Leverett, sister of John, afterwards governor. He died in 1653. He had five children, the eldest, Isaac, a physician.

Addington, Isaac, jr., was born 22 January, 1644-5, son of the preceding; is styled chirurgion in three deeds, 1669-70-71. Eliot, in his Biographical Dictionary of New England, says he was "an eminent magistrate of Massachusetts." He was one of the worthies who opposed the administration of Sir Edmund Andros; and was appointed secretary of the Province by those who adhered to the old charter. He also received the same appointment from the crown when the charter of William and Mary was brought over. He was chosen for many years one of the Council, and was very active as a justice of the peace. He was admitted a freeman 7 May, 1673, joined the First Church 1688, and was a prominent member. He held many offices, and it seems doubtful if he could have devoted much time to the practice of medicine. Chief Justice Sewall, in his diary, speaks of having "the advice of Mr. Addington and Dr. Allen." He died 17 March, 1715.

Alcock, Samuel, son of Dr. George, and brother of Dr. John, of Roxbury, who graduated from Harvard College 1646. Toner, in his "Annals of Medical Progress," says he "was born in Roxbury and settled in Boston as a chirurgion." In 1676 he is rated on the tax lists. Sewall, in his diary, under date of 16 month, 1677: "Dr. Alcock dyes about midnight. . . . Dr. Alcock was 39 years old." Samuel was a graduate of H. C. in 1659.

Allen, Daniel, son of Rev. John Allen, of Dedham, born 5 August, 1656, died 1692. Winthrop, in his interleaved catalogue, says he was a physician in Boston; and Sewall writes in 1677: "Have the advice of Mr. Addington and Dr. Allin, who made the issue." He was graduated from H. C. in 1675, and was librarian of the college 1676 to 1679. Savage says he lived in Charlestown, mortgaged his estate in Dedham, and died in 1692.

Ashton, (Henry?) Drake, in his History of Boston, says: "over against Dr. Ashton's in Marlboro street." Savage mentions Henry

Ashton as of Boston in 1673, coming from Lancaster-shire, England, and presumes he is of Providence in 1676, and one of those who, for staying out the war, was entitled to receive an Indian for a slave.

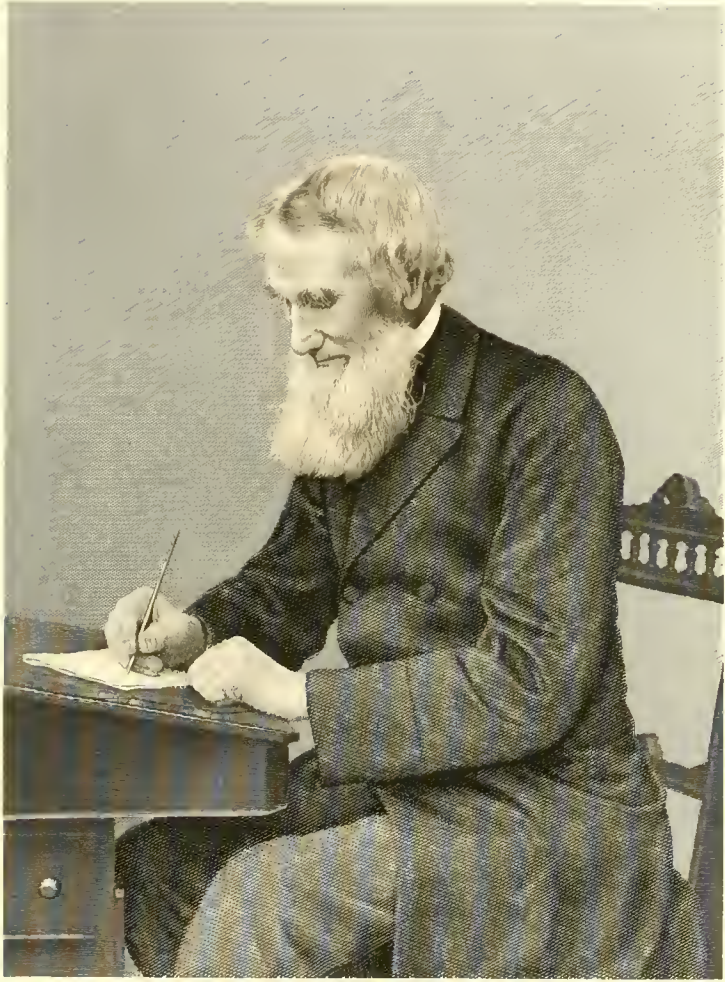
Avery, William, was born in England, came to Boston, in 1650, with his wife Mary and children Mary, William and Robert; settled first in Dedham, where he was the first educated physician; was in Boston in 1680, for Withington, in his history of Dedham, writes: "In 1680 Captain Daniel Fisher and Ensign Fuller report that Dr. William Avery, now of Boston, but formerly of the Dedham church, out of his entire love to this church and town, freely gives into their hands sixty pounds for a Latin school."

He opened an apothecary's shop, which is said to have been the first established in New England. He died 18 March, 1686, in Boston, aged sixty-five years. Toner says he was a benefactor of Harvard College. He is buried in the Chapel burying-ground, where a small gravestone marks the place of interment. Possibly he is "Lieut. William Avery, Dedham physician," who joined the Art. Co. in 1654. "There is a will of William Avery, Suff. Prob. Rec., 1680, bookseller — on the back says, now of Boston, formerly of Dedham." Toner says that "Jonathan, son of Dr. William, was born in Boston, and in his will, made in May, 1691, describes himself as a resident of Dedham, a practitioner of phisic, aged 35 years."

Barnaby, Ruth. Of her, Toner writes that she was a noted midwife of Boston, "who practiced her calling in that town for more than forty years. She was born in Marblehead, in August, 1661, and died 12 Feb., 1765, aged 104 years." He also states that at the age of one hundred years she was inoculated, and thus escaped dying with the loathsome disease which carried off some of her family.

Beardon, Peter, although a physician, his career in Boston was that of a successful merchant. He came from La Rochelle, and was in Casco in 1687. He died in Boston, in September, 1706.

Brackenbury, Samuel, was born 10 February, 1645-6, admitted to Second Church in 1677. He was graduated from H. C. in 1661. He was at first a preacher, and assisted Rev. Samuel Phillips at Rowley. He married Mary, daughter of Rev. Michael Wigglesworth, and moved to Boston. Sewall says, 3 October, 1676: "For the Flux . . . Dr. Brackenbury advises to Diacodium to more Rest and Approves Pepper boyled in Milk and Water alike of each. Diacod. 6 ounces." Again,



A. L. Dennison

22 September, 1676, he states that he "spent the day from 9 to the m. with Mr. Brackenbury . . . dissecting the middlemost of the Indian executed the day before, who, taking the ♥ in his hand affirmed it to be the stomach. I spent 18s 6d. in all, 6d. in Madeira wine and 6d. I gave to the maid." John Hull, in his diary, says: "Jan. 11 [1677], Mr. Samuel Brackenbury, a physician, died of the small pox."

Brackenbury, Samuel, son of the preceding, was born in Malden, in February, 1673; said to have practiced in Malden and Boston. Married Ann, daughter of John Chickering, 22 October, 1694; was admitted to the church in Charlestown in 1676, and died at Malden, 26 November, 1702, aged about thirty years.

Bradstreet, Samuel, was born in England in 1603; graduated at Harvard College in 1653. He may have received his medical education in England, where he went in 1657, returning in 1661. He is supposed to have practiced in Boston in 1663 to 1670. He went to Jamaica, where he died in 1682.

Boylston, Thomas, born 11 mo. 26 day, 1644, in Brookline, son of Thomas, from Fenchurch street, London. The father came in 1635, and settled in Watertown, with wife, Sarah Boilston. Parmer says he received his degree at Oxford, and came to New England and settled in Brookline in 1635; another authority gives the date of his birth as 26 January, 1637, and Bond makes it 26 January, 1644-45; Vinton agrees with the date given by Bond, being twenty-eight years old by oath given in court in 1673. "He was the earliest physician or surgeon in Brookline, called Muddy River, and a part of Boston till 1705." He married, in Charlestown, Mary Gardner, born 3 April, 1648, died 9 July, 1722, daughter of Thomas Gardner, of Muddy River. He was engaged as surgeon in the Narragansett war in 1675. His estate appraised at £560 14s., was probated in Suffolk county, 10 August, 1695.

Bullivant, Benjamin, came from London, England, in 1685. He was a very prominent member and one of the first wardens in King's Chapel. John Danton says he was of noble family, and also writes:

His Skill in Pharmacy was such, as rendered him the most compleat Pharmacopœan, not only in all Boston, but in all New-England; and is beside, as much a Gentleman as any one in all the Countrey. . . . He is as intimate with Gallen and Hypocrates (at least with their ways and works,) as ever I have been with you, Even in our most Familiar Converse. And is so conversant with the great variety of Nature, that not a Drug or Simple can Escape him; whose Power and Vertues are known so

well to him, he needs not Practise new Experiments upon his Patients, except it be in desperate Cases, when Death must be expell'd by Death. This also is Praise-worthy in him, That to the Poor he always prescribes cheap, but wholesome Medicines, not curing them of a Consumption in their Bodies, and sending it into their Purses, nor yet directing them to the East-Indies to look for Drugs, when they may have far better out of their Gardens.—(“The Publications of the Prince Society,” iv, 94-96.)

He was attorney-general for Governor Andros, Savage says, “and on the outburst, April, 1689, was for his office imprisoned, yet did not remain.” He was in Northampton, England, in 1711, when he wrote a letter to Danton. He is described as “a worth apothecary, a medical lawyer, and an honest politician.” Mr. Foote, in his History of King’s Chapel, gives quite an account of his connection with that church, and his experience in Boston.

Chauncey, Elnathan, born about 1639 in Plymouth, was the fourth son of President Chauncey of H. C. He was graduated at H. C. in 1661, and received his A. M. in 1664, when he maintained the affirmative of the following questions: “Utrum detur concensus per modum principii?” Probably he is the one of whom Winthrop mentioned as having “swooned away” when immersed “in very cold water” by his father, who persevered in his opinion of dipping in baptism and practiced accordingly.

Robert Hixon, a merchant of Plymouth, at his birth gave him “fifty acres of land; so much were the people of Plymouth attached to President Chauncey.” Charles Chauncey, H. C., 1721, says “he lived here in Boston, a noted doctor, for some time.” He went to Europe, and R. Blinman, of London, in a letter to Increase Mather, under date of 11 August, 1677, says “Mr. Elnathan Chauncey is like to return to New England, who hath had advantages from his two brothers here for the practice of physick.” Subsequently he went to Barbadoes, where he died, probably in 1684.

Checkley, Samuel, the sixth child of John and Anna Checkley, was born November 26, 1661. “He was a surgeon.” Whitman writes: “Col. Samuel Checkley, Boston, physician and surgeon, son of Capt. Anthony, Ar. Co., 1662, and an officer of the militia of Boston. After the revolution, which overturned Andros’s government, he was actively engaged in revising the Ar. Co.; was elected its lieutenant in 1694, captain in 1700, and must have long remained an active member. He was major of Boston regiment 1702, in 1706 lieutenant-colonel, and 1710

colonel, which office he held two years. When he died I have been unable to ascertain, except that his will was dated January, 1711, and proved 1 July, 1712. I conclude he died while colonel of the regiment. A member of the Old South Church." He joined the Art. Co. in 1678.

Child, Robert, came from Northfleet, County Kent; was educated at Corpus Christi College, and received A.B. 1631, A.M. 1635. He was educated for the medical profession at Padua. After coming to these shores he settled at Hingham. Previous to coming he had traveled on the Continent, and, as Winslow says, "confesseth hee was twice at Rome, speaking some times, as I have heard reported, in favor of the Jesuits." His object in coming to New England was stated to be to explore the mines of the country. In 1646 he and others were fined for protesting against the union of the church and state. He complained that the fundamental laws of New England were disregarded, and that freeborn Englishmen, if not members of one of the churches, were denied civil privileges and debarred from Christian ordinances. He prayed for redress and threatened to apply to Parliament. He was summoned before the court, accused of "false and scandalous passages," and fined fifty pounds. His trial is related by Winthrop. He prepared to sail for England in order to lay his case before Parliament; but the court anticipating his design, caused him to be apprehended, and, adjudging him to be guilty of contempt, quadrupled his former fine and ordered his imprisonment until payment was made.

Toner further says his original intention in coming to this country was to explore the mineral resources of the New World. He was a learned man, for the times, and his bitterest opponent, Gov. John Winthrop, spoke of him as "a man of quality, a gentleman and a scholar."

His brother, Major Child, of England, indignant at his brother's imprisonment, published a pamphlet, "New England's Jonah cast up at London," containing Child's petition to the court. This was answered by Winslow in the "Salamander." He probably died in England.

Whitman gives a short sketch of Dr. Robert Child in the second edition of his history of the Ancient and Honorable Artillery Company, concluding him to be the member whose surname only was given on the old roll, and not very legible, and which in his first edition he deciphered a *Chidley*.

Clark, John,¹ was first of Newbury, where he was for ten years before coming to Boston. Savage says he "was noted in his profession, as

also for keeping fine horses." Admitted a freeman 1639, and representative to the September session of that year.

His oil portrait is owned by the Massachusetts Historical Society, in which he appears in a close-fitting skull-cap, with long locks and venerable flowing beard. His left hand rests upon a skull, and his right holds a trephine. Tradition says he was the first regularly educated physician in New England, and that he received a diploma in England before he came to this country for his success in cutting for stone. He married Martha, sister of Sir Richard Saltonstall (he died in November, 1661), who survived him sixteen years or more, during which time it may be inferred she subsisted on the proceeds of certain patent stoves, invented by her husband. The patent was granted him only for life, but at his death there were many stoves left which came to her by will.

He was instrumental in the introduction of a breed of horses into this country, which, it is said, were long known in Plymouth as Clark's breed. His will devises "horses, mares, and colts both in the Colony of Massachusetts and in Plymouth Colony," and the inventory of his estate shows "mares and horses, young and old, 12 at £5 each £60"

He left only one son, John, also a physician.

Clark, John,² son of the preceding, pursued his father's calling. He was interested in civil affairs, and was chosen representative from Boston in 1689 and 1690. He married Martha, daughter of John Whittingham, and had sons John, William and Samuel. He was a freeman in 1673, and graduated at Harvard in 1687. He died on the 19th of December, 1690, without leaving a will.

Clark, John,³ son of the preceding, was born 27 January, 1668, graduated at Harvard in 1687. He was married three times, first to Sarah Shrimpton, 30 April, 1691, who died 20 November, 1717; second, to Elizabeth Hutchinson, 16 April, 1718, who died 2 December, 1722; he married for the third time, 15 July, 1725, Sarah Leverett, who survived him, and subsequently married Rev. Dr. Benjamin Colman.

In Copp's Hill burying-ground is this epitaph:

Reliquæ
JOHANNIS CLARKE ARMIG.
laudatissimi senatoris et medicinæ doctoris
probitate modestina
et mansuetudine præclari
terram reliquit Decem 5 1728 ætatis 62
Nomen et pietas manent post funera

He had several daughters and one son, John,¹ born December 15, 1698. He was a representative for Boston in 1708 to 1714, and 1720 to 1724, and was thrice chosen speaker of the House. While he was a representative in 1721, a controversy arose between the House and the Council, and at the same time the small-pox began to spread. Hutchinson, in his history, says: "In the midst of the dispute, Mr. Hutchinson, one of the members for Boston, was seized with the small pox and died in a few days. The speaker, Mr. Clark, was one of the most noted physicians in Boston, and notwithstanding all his care to cleanse himself from infection after visiting his patients, it was supposed, brought the distemper to his brother member." This occurrence so terrified the Court that they could not be kept together. From 1721 to the time of his death he was in the Council of the Province.

Clarke, John, was a physician in London before he came to this country. He came to Boston in 1637; as a favorer of Mr. Hutchinson, he was driven thence, and the next year went to Rhode Island, and is venerated as the father of the settlement at Newport, where he died 20 April, 1676. He was from Bedfordshire, and son of Thomas and Rose. He was the author of "Ill News from N. E.," and an account of his life in Rhode Island is to be found in Rev. Dr. Allen's American Biographical Dictionary. He is not known to have been related to those of the name who follow. During his life in Rhode Island he was more interested in theology than medicine, forming a church at Newport, being the second Baptist church established in America, and of which he was pastor at the time of his death.

Cook, Elisha, was a prominent physician as well as a politician of this period. He was the son of Richard, a tailor of Boston, where he was born, 16 September, 1637, and graduated at Harvard College in the class of 1657, being one of the first natives of the town that studied medicine. While esteemed as a physician, his reputation is based more on his labors in connection with the body politic than the body physical. Hutchinson says: "Though esteemed as a physician, he was most remarkable in his political character, having been more than forty years in places of public trust and being always firm and steady to his principles." He married Elizabeth, a daughter of Governor Leverett. He had a son, Elisha, who was also a prominent politician, speaker and counsellor. He died 31 October, 1715.

Cutler, John, was a "chirurgion," and served in King Philip's war in 1676-7, and drew pay so much larger in amount as to suggest the

supposition that he held the office of chief surgeon. He came originally from Holland, where his name was written Demesmaker. On coming to this country he adopted the English translation of his Dutch patronymic, and called himself Cutler; and ever afterward the family was so designated. His marriage is thus given in the town records of Hingham:

Johannes Demesmaker, a Dutchman (who say his name in English is John Cutler) and Mary Cowell the daughter of Edward Cowell of Boston were married by Captaine Joshua Hobart on the fourth day of January 1671.

The births of seven children are also recorded in the same records. The entries of the two oldest and the two youngest of these children are given, as they show how the distinction between the names was made at the outset, and that it was dropped in the course of time. The oldest child was John, who became the physician, and signed the circular relating to the epidemic.

Johannes Demesmaker, whose name in English is John Cutler, the son of Johannes Demesmaker a Dutchman and of Mary his wife was born on the sixth day of August 1676.

Peter Demesmaker (the son of Johannes Demesmaker a Dutchman & of Mary his wife an English woman) was born on the seventh day of July 1679.

David Cutler, ye son of Doctor John Cutler & of Mary his wife was born the first of November 1689.

Ruth Cutler the daughter of Doctor John Cutler & of Mary his wife was born ye 24th of February 1693.

He removed to Boston about the year 1699, and built a splendid house, for that time, in which he lived in Marlborough street, now a part of Washington street, near the Old South Meeting-house. Tradition says that this house was of wood, three stories high; the tapestry of its rooms was made of leather. He had a large practice, and was the preceptor of Dr. Zabdiel Boylston, who afterward became famous during the time of the small-pox inoculation. He died intestate, leaving an estate inventoried at £5,740 15s. His death occurred before 17 February, 1717, at which time his wife administered his estate.

Cutler, John, was the son of John Cutler, the preceding, and was born August 6, 1676, at Hingham. He graduated H. C. 1698. He inherited from his father his practice, as well as the homestead. The son married the widow, Mrs. Joanna (Dodd) Richards; and he was actively connected with the King's Chapel, of which church he was warden. He died 23 September, 1761, having lived a long life of use-

fulness. It is supposed that he was sent to England for his education. With Drs. William Douglass, William Clark and Edward Ellis, on the 10th of July, 1739, he certified to the health of a cargo of negroes. Dr. Boylston was his pupil.

Cutler, Peter, was a brother of the preceding. He was born in Hingham, August 6, 1679. He made a voyage in the ship *Swallow* to Trieste as a "surgeon." He was afterwards a shopkeeper, and died in 1720, it is said, on an island in the harbor.

Dinely, William. The pathetic story of William Dinely has often been told. He was a barber-surgeon and tooth puller, and perished during a severe snow storm, 15 December, 1638, between Boston and Roxbury, whither he was going to pull a tooth. It was many days before his body was found, and his poor widow suffered great anguish. Her grief hastened the coming event which she was anticipating with so much joy, and she named the baby *Fathergone* Dinely. She afterwards married Richard Critchley.

Ellis, Edward. It is said that Dr. Ellis came from Wales. He married, in Boston, 6 August, 1652, Sarah, daughter of Robert and Susan Blott. Blott lived in Boston, at the time of the marriage of his daughter, at the corner of Newbury, now Washington, street and Blott's lane. Dr. Ellis inherited this estate, and the corner of Newbury and Winter streets was called Ellis's corner until 1732. The baptism of each of his children are given in the records of the First Church. He died 23 April, 1695, aged seventy-four. Sewall says, "Neighbor Ellis died to-day." Sarah, widow of Dr. Ellis, "chirurgion of Boston," Robert Ellis, chirurgion, and other surviving children mortgaged the land on Blott's lane, 17 June, 1698. His widow died 18 December, 1711.

Ellis, Robert, son of the preceding, was born September 24, 1611. He was a merchant as well as a physician. He married, June 4, 1638, Elizabeth, daughter of James and Sarah Pemberton, of Boston, and had eleven children, whose baptisms are given in the records of the old First Church. He was appointed "Chirurgion" for the expedition to Port Royal, 19 August, 1710, William Rand and Wheatley Gooch being his assistants. He died 7 April, 1720.

Ellis, Edward, son of the preceding, was born 23 February, 1698-9; was also a chirurgion, and is the only one known to have had descendants.

Eyre, John, was born 19 February, 1683-4, son of Simon (given later), and married Catherine, daughter of Thomas Brattle. They had eight children, five of whom died young, as his will mentions only three. A posthumous child was born 7 August, 1700, John, who was graduated from Harvard College in 1718. John Eyre was a member of the Artillery Company in 1682; in the Committee on Safety in 1689; representative in 1693 and 1698; and died in June, 1700. His widow married Waitstill Winthrop, 13 November, 1707.

Eyre, Jonathan, son of the preceding, was born 20 March, 1638. Savage says he "was educated for a surgeon 1656, but no more is known of him."

Eyre, Simon, surgeon, came, in 1635, from London in the *Increase*, being forty-eight years of age, bringing his wife Dorothy and eight children. He settled in Watertown, where he was freeman 1637; he held several offices—selectman 1636-41, town clerk 1641-5, and representative 1641—until 1645, when he removed to Boston, where his wife died 11 August, 1650. He married again—Martha, daughter of William Husband, sister of the historian, and widow of John Whittingham, of Ipswich. He had several children by each wife. He died 10 October, 1658. His youngest child by his second wife was Dr. John Eyre, already given.

Firmin, Giles, jr. Dr. Green writes as follows: "Another among the early settlers of Massachusetts who practiced medicine was Giles Firmin, jr., who came to this country in 1632. His father—'a godly man, an apothecary of Sudbury in England,' according to Winthrop—arrived here about the same time; and in some accounts the two have been confounded from the similarity of their names. It is very likely that Giles, senior, was a medical practitioner. The son did not long remain in Boston, but soon returned to England; coming again, however, to these shores a few years subsequently. He had been educated at the University of Cambridge, and was learned in medicine. He is the first man known to have taught in New England this branch of science, and he seems to have left a professional imprint on the minds of his students. He soon removed to Ipswich, where he was widely known as a successful physieian. His practice does not appear to have been a lucrative one, for he writes to Winthrop some years afterward, —'I am strongly set upon to studye divinitie, my studies else must

be lost: for physick is but a meene helpe.¹ Subsequently he carried this plan into execution, and studied theology, after which he returned to England, where he was ordained and settled as a rector. Nevertheless, he continued to practice his early profession.

"The apostle Eliot, under date of 24 September, 1647, writes to Mr. Shepard, the minister of Cambridge, and expresses the desire that—

"Our young Students in Physick may be trained up better than yet they bee, who have onely theoreticall knowledge, and are forced to fall to practise before ever they saw an Anatomy made, or duely trained up in making experiments, for we never had but one Anatomy in the Countrey, which Mr. *Giles Firman* (now in England) did make and read upon very well, but no more of that now."²

Savage says that he came perhaps with his father in 1630, but settled in Boston before him. He was at Ipswich in 1638, a freeman 22 May, 1639, removed probably to Haverhill with his brother-in-law, Rev. John Ward, having married his sister Susan, daughter of Rev. Nathaniel Ward. In 1644, or soon after, he returned to England, where he was settled as rector in Sholford in Essex. Savage writes: "In a sermon before Parliament and the Westminster Assembly, he said, that in our country, in seven years 'I have never heard one profane oath, and in all that time never did see a man drunk,'" and quaintly adds, "which is better proof of his keeping good company than for searching for opportunity," adding that "punishment was frequent enough for such offences; but his presence was, no doubt, protection to both eyes and ears." He was ejected in 1662, and died at Ridgewell, in April, 1697.

Firmin, Giles, sr. This "godly man, an apothecary of Sudbury in England," as Winthrop styles him, instead of being a medical practitioner, as Dr. Green surmises, very likely continued to follow his early calling of an apothecary. The following extract from the early town records, appointing him as an "overseer," would indicate that he was more likely to be about home rather than one who was visiting among the sick, although, like many of his ilk of the present day, he may have combined counter practice with the dispensing of drugs.

Snow's "Description of Boston," published in 1817, gives a fac-simile of the first entry in the town records, in which Giles Firmin is recorded

¹ Hutchinson's Collection of Original Papers, &c., page 109.

² Massachusetts Historical Collections, third series, iv, 57.

as present with nine others, "1631; . . . month 7th daye," and the following orders were passed:

Whereas it hath been founde that much damage hath already happened by laying of stones and logges near the bridge, and landing place, whereby diverse boats have been much brused for prevention of such harmes for time to come, it is ordered that whosoever shall unlade any stones, timber or logges, where the same may not be plainly seen at high water, shall set up a pole or beacon to give notice thereof, upon pain that whosoever shall faile so to doe, shall make full recompence for all such damage as shall happen to any boats or other vessels, by occasion of said stones, timber or logges, the same to be recovered by action at the court; and this order to be in force from this day forwarde

It is also ordered, that no person shall leave any fish or garbage near the said bridge or common *landing place*, between the creeks, whereby any annoyance may arise to the people that passe that way, upon payne to forfeit for every such offence five shillings, the same to be levied by distress of the goods of the offenders.

And for the better execution of these orders the aforesaid Giles Firmin is appointed overseer of said landing place, to give notice to such strangers and others as come hither with boats.

And to take knowledge of all offences committed, and to levye the penalties which shall be forfeited — Pages 72 and 73.

Giles, sr., came with Winthrop in 1630, and settled first in Watertown, remaining two years, when he removed to Boston. In 1633 he was chosen deacon by the imposition of hands. He was a selectman, a freeman 4 March, 1631, and died in September of the same year.

Gager, William, a surgeon, came with Winthrop to Boston. He joined the church in Charlestown. Winthrop, in a letter to his wife November 29, 1630, speaks of his death: "Yet I have lost of my family . . . Mr. Gager. . . . We conceive that this disease grew from ill diet at sea and proved infectious." Prince also says: "Died of a fever, Mr. Gager, a skillful surgeon, a right godly man and one of the deacons of our congregation." This occurred 20 September, 1630. Toner is in error in saying that he practiced many years in Boston. "Lord's Day, 1 August, 1630, five were joined to the church in Charlestown . . . Mr. William Gager, surgeon."

Glover, John. Savage says: "Cambridge, son of Rev. Josse, born in England. H. C. 1650, in 1654 was living in England, had a degree of M. D. at Aberdeen, and probably never came again to our shores."

"Josse, rector, it is said, of Sutton, in Surrey, made contract with Stephen Day, of Cambridge, England, to come over with wife, children, and servants in the *John of London*, at expense of Glover, his

design being to set up a printing press here; died on the passage, and his widow married Henry Dunster, afterwards the first president of Harvard College."

Another authority says: "John was the son of John, and born in Dorchester. After receiving his degree in Europe returned to New England and settled in Roxbury. He was a benefactor of his alma mater and is supposed to have died before the end of the century."

His connection with Boston is that he was taxed here in 1674.

Hall, Nathaniel, was taxed in Boston, 1695, and we are sure of no more. Possibly he may be the Nathaniel of whom Savage writes: "A captain in the Indian war at the E. under Church; fought with great bravery in defence of Falmouth, September 21, 1689; was son of the first John, of Falmouth, and married Ann, daughter of Rev. Thomas Thornton; had no children; kept a tavern, and practiced as a physician; removed to Hingham, thence to the Delaware River."

Hawkins, Jane, was a physician of some notoriety. According to Governor Winthrop:

She used to give young women oil of mandrakes and other stuff to cause conception; and she grew into great suspicion to be a witch, for it was credibly reported, that, when she gave any medicines (for she practised physic,) she would ask the party, if she did believe, she could help her.—("The History of New England," i. 316.)

Thomas Welde, in "A Short Story," etc. (London, 1644), says that she was "notorious for familiarity with the devill." Her reputation in the community was anything but good. She was looked upon as a witch, and for that reason greatly feared by her neighbors. Her case was considered at the session of the General Court, beginning 12 March, 1637-8, when it is recorded that:

Jane Hawkins the wife of Richard Hawkins had liberty till the beginning of the third mo. called May, & the magistrates (if shee did not depart before) to dispose of her, & and in the meane time shee is not to meddle in surgery, or physick, drinks, or oyles, nor to question matters of religion except w'th the elders for satisfaction.—(General Court Records, i. 219.)

The effect of this order is not known; but some years later summary steps were taken to get rid of her without much previous notice. At the session of the General Court, beginning 2 June, 1641, it was voted that,

Jane Hawkins is enjoined to depart away tomorrow morning, & not to returne againe hither upon paine of severe whipping, & such other punishment, as the Court

shall thinke mee to & her sonnes stand bound in 20^l to carry her away according to order.—(General Court Records, i. 309.)

Hughs, William. "Dr. William Hughs" is recorded in list of inhabitants 1695. "Doctor William Huse" is taxed in 1687, and here our knowledge ends. Savage makes no mention of such a person. Toner says "William Hughes practised in Boston between 1685 and 1695."

Hutchinson, Anne, was born in Lincolnshire, England, about 1600. She was the wife of William Hutchinson, whom she accompanied to Boston in 1636. She taught doctrines which were condemned as heretical by the Synod of 1637. Shortly after the death of her husband, in 1642, she was banished and removed to what is now Westchester county, N.Y. The next year her house was set on fire by the Indians, and she and her family, consisting of sixteen persons, except a child taken captive, either perished in the flames or were killed by the savages.

Dr. Green writes:

The women had their representatives in the profession in olden times as well as in our day, though they were not so strenuous in regard to their political rights as are their modern sisters. Anne Hutchinson was among the earliest of the sisterhood who practised medicine in Massachusetts. She came to Boston in the year 1636, and in "A Short Story," &c., by Thomas Welde (London, 1644), she is spoken of as a person "very helpfull in the times of child-birth, and other occasions of bodily infirmities, and well-furnished with means for those purposes." (Page 81.) She was a noted character in colonial history, and by her heretical teachings and preachings soon threw the whole settlement in a flame, for which she was subsequently banished.

Anne Hutchinson left Boston 28 March, 1638 (Ellis's Life of Anne Hutchinson, v. 320, Sparks's biog.)

Kittredge, John, was born in Billerica, 24 January, 1666, son of John, who came with his mother from England, and settled in Billerica as a farmer. Farmer, in his "Genealogical Register of the First Settlers of New England," says of John: "Being the first of the name in America styled Dr., a prefix so common among his descendants" He married Hannah French, 2 August, 1685, and had eleven children, six of whom were sons. He was probably of Boston, and died 27 April, 1744.

Knopp, Nicholas. During the first winter, 1 March, 1630, at Boston, the Court of Assistants fined Nicholas Knopp five pounds:

For taking vpon him to cure the scurvey by a water of noe worth nor value which he solde att a very deare rate, to bee imprisoned till hee pay his fine or giue security for it, or els to be whipped & shalbe lyable to any mans accoon of whom he hath receaued money for the s'd water.—(General Court Records, i. 67.)

The record, however, does not state which dose he took in the way of punishment, but as three pounds of the fine were subsequently remitted, it is fair to infer that he was not whipped. This shows that he was a practitioner, if not a physician. He may be the person of this name who was a proprietor in Watertown, 1636-7.

Lake, Lancelot, a physician, of whom it is only known that he married 6 May, 1708, widow Catherine Child, and died 17 September, 1715. In his will he left his widow all his estate. His gravestone was lately found in the burial ground at King's Chapel.

Ludowick, Christian. The Rev. Thomas Prince, in speaking of Dr. James Oliver, of Cambridge, says he "had a singular Help in the Art of *Chymistry* by the ingenious *Dr. Lodowick a German*, who was also accounted an excellent *Physician*, and the most skilful *Chymist* that ever came into these Parts of *America*." Dr. Green thinks that Dr. Lodowick was the same person as Christian Lodowick who wrote a letter to Increase Mather, about the Quakers. It is dated 1 February, 1691-2, and was subsequently printed.

Lunerus, Polus. Dr. Lunerus was a German or Polish physician, who married, 1 June, 1652, Margaret Clemens, a widow. By the record of the General Court in 1654, he was to determine when an offender should be whipped, the offender being then too ill. Savage says: "I trust the advice of the physician was on the side of merey, for the poor Scotch prisoner, a waif from the civil war in Great Britain, died soon after."

Lyall, Francis. Savage gives the following spellings of the name: Lysle, Lisle, Lioll or Loyal, and thinks that it may even be the same as Seyle. According to this authority, Francis Lyall was a barber-surgeon of some importance, and went with Leverett, Brunce, Houghton and others to England to serve in the cause of Parliament, where he became surgeon in the life guard of the Earl of Manchester. He returned to Boston in 1645. In 1641 he bought of Elizabeth, widow of Walter Blackborne, "the dwelling house & shopp with outhouses, garden and 2 acres and halfe of land in centry field of the said Walters." The lot of land here spoken of was in Washington street, very nearly

opposite where the Old South Church now stands. He also had a lot in the "new field."

Mather, Increase, and his son *Cotton*, both ministers of the North Church, are hardly to be classed as physicians, although they were practitioners to a certain extent, perhaps only among their own parishioners. They united the professions of theology and physic, in the "angelical conjunction." Increase was born in Dorchester, 21 June, 1639; died 23 August, 1723. Cotton was born 12 March, 1663, and died June 27, 1785.

Dr. Increase Mather wrote a pamphlet entitled "Some further Account from *London* of the *Small-Pox Inoculated*. The Second Edition. With some Remarks on a late Scandalous Pamphlet Entitled, Inoculation of the Small-Pox as practis'd in Boston," &c., Boston, 1721. The first half of this pamphlet appeared in the *Boston Gazette*, of 5 February, 1721-22, No. 115, covering the third page of the newspaper; and this impression constituted the first edition. Dr. Mather was also the author of a broadside printed at Boston, in November, 1721, giving "Several Reasons proving that Inoculating or Transplanting the *Small-Pox* is a Lawful Practice, and that it has been Blessed by GOD for the Saving of many a Life."

Cotton Mather, if not a physician, was able to furnish a case which was probably of interest to those who were, for Sewall, in his diary, records under date of "March 28, 1693, Mr. Cotton Mather had a son born, which is his first; it seems it was without a posterior for the voidance of excrements: Dies Satterday, April 1."

Holmes speaks of Cotton Mather as a "meddlesome pedant," tormenting his daughter by giving her an "uncertain and violent drug, in that spirit of well meant but restless quackery, which could touch nothing without mischief, not even a quotation, and yet proved at length the means of bringing a great blessing to our community" (the inoculation for small-pox).

Morley, Robert. Although Robert Morley was appointed to "serve as a barber and surgeon," I can find no record that he ever came to these shores.

Morton, Charles, was only a sojourner, coming to these parts in 1686 with his uncle, Charles Morton, who was the first vice-president of Harvard College. Savage, speaking of the latter, says: "His nephew Charles, an M. D., came with him, but went home in July of next year."



E W Timison

Mountfort, Jonathan, the son of Edmund, a tailor, was born 15 June, 1678. Married, 7 January, 1702, Hannah Nichols. He was said to have been a man of liberal education, a physician and apothecary, and lived for many years at what was called "Mountfort's Corner." He was independent in his means and eccentric in his habits. He was founder of tomb fifty-nine in the Granary Burying Ground and also of tomb nineteen in Copp's Hill Cemetery. In 1719 he was one of the seceders from the North Church, and among the founders and building committee of the "New Brick" or "Cockerel Church" on Hanover street, of which he was also treasurer.

His descendants in the male line are extinct.

Oakes, Dr. Thomas, son of Edward, was born at Cambridge, 18 June, 1644, a brother of President Oakes, and a graduate of Harvard College in 1662; he settled in Boston as a physician. He joined the Artillery Company in 1684, and is styled "Lieut." by Whitman, as he was an officer of the militia. Dunton calls him "the greatest Esculapius of the Countrey," and says that:

His wise and safe Prescriptions have expell'd more Diseases and rescu'd Languishing Patients from the Jaws of Death, than Mountebanks and Quack-Salvers have sent to those dark Regions. And on that score, Death has declar'd himself his Mortal Enemy: Whereas Death claims a Relation to those Pretenders to Physick, as being both of one Occupation, viz. that of Killing Men.—("The Publications of the Prince Society," iv. 93).

Cotton Mather, in speaking of the physicians who were consulted in the case of the Goodwin children in 1688, says that Dr. Oakes "found himself so affronted by the Distempers of the children, that he concluded nothing but an hellich Witchcraft could be the original of these Maladies." He was a representative and speaker, and a leader in the opposition to Dudley's government; he went to England in 1690 as an agent of Massachusetts and assisted in procuring a new charter. He returned to Boston 23 October, 1692.

Probably to gratify his son Josiah, he removed to the part of Eastham now called Wellfleet on Cape Cod, where he died 15 July, 1719, his wife, Martha, having died in Boston on the 19th of the preceding April at the age of seventy years.

Oliver, James. Toner says that James Oliver practiced in Boston about 1640, but this is probably an error, as Rev. Thomas Pierce calls "the Learned *Dr. James Oliver* of Cambridge; one of the most esteemed

Physicians in his Day," and it was this Cambridge physician whom Toner thought to be of Boston.

Oliver, Thomas, was a practicing physician of Boston, and was a most useful citizen, active both in town and church matters. In 1644 he is mentioned with high appreciation in Winthrop's Journal, as an experienced and skillful surgeon. In John Hull's Diary, published in the "Archæologia Americana" (III. 182), it is recorded that "The 1st of the 14th month [1 January, 1657-8], Mr. Thomas Oliver, one of the ruling elders of this church, died, being ninety years old,—a man by his outward profession a chirurgeon."

In 1645 he presented the following petition to the General Court:

May it please this honored Court to Consider of y^e Paines and Cost: I have bin at in dressing Joseph White of y^e disease called y^e kings evill. w^h hath bine vnder my hand vpon. 20. months both for sergery. and phisick. y^e disease being in my Judg-ment hard to be Cured w^t out amputation (w^e y^e boy would never Consent vnto) yet I know not what y^e lord will do in blessing y^e meanes vsed. for he is in good ease for y^e pressent and is able to worke for his living and begine to tread upon his foote

Y^{rs} in all dewty to be co

THO. OLIVER

I would for the tme past if it. please you. demand for my Pains and Cost 12-00-00
The magistrates judge it reasonable that the Petitioner demand should be granted & desire the concurrence of the Deputyes herein

JO: WINTHROP: D. GO:

(Massachusetts Archives, c. 10).

Palgrave, Richard, a physician, from Stepney, London, came over in Winthrop's fleet. He settled in Charlestown, though neither himself nor his wife was ever connected with the church in that town. Their ecclesiastical relations were always with Boston, where those of their children who were born in this country were baptized. His will, dated 1 June, 1651, was proved in October of the same year. In this he signs his name "Paulgrave." As Dr. Palgrave was connected with the church here, it seems probable that he must have practiced his profession on this side of the Charles River as well as where he resided.

Pemberton, Thomas, was the son of James, who was of Newbury, 1616. He was born 17 February, 1653, in Boston. Savage says he was "a surgeon in that unhappy expedition of Phips against Quebec, 1690, and died 26 July, 1693." Under this date Sewall records, "Dr. Thomas Pemberton dies."

Perkins, John, was the son of Abraham Perkins, of Ipswich, where he was born 23 August, 1676; graduated at Harvard College, 1695, and

soon after began the practice of medicine in Ipswich. He is said to have come to Boston, but when or for how long I have failed to determine.

Pighogg, —. Farnier says: "The singular cognomen of *Pighogg* is found in the Boston records, one of this name, dignified with the title of *Mr.*, being received as a townsman."

Savage says Mr. Pighogg "admitted a townsman 28 February, 1652, with prefix of respect, and entitled a 'churrurgeon,'" and that no baptismal name is given. Dr. Holmes in his Lowell lecture (1869) hopes for the honor of his profession that this name was only Peacock disguised under an *alias*.

Pratt, Abraham, a "chyrurgeon," was said to have been in Boston in September, 1630. He was an inhabitant of Charlestown, and Wyman, in his "Charlestown Genealogy and Estates," says that he and his wife were "both lost, near Cales [Cadiz], on Coast of Spain, with Capt. Coitmore, 1644."

Pratt, John, who was "accounted an abell man," came to this country, but settled in Cambridge.

Scottow, Thomas, was the son of Joshua and Lydia. He was born 30 June; baptized 10 July, 1659, and graduated H. C. 1677. How long he remained in Boston is unknown. Mr. H. F. Waters has recently discovered his will in London, from which the date of his death can be proximately determined: "Thomas Scottow, of Boston, in New England, chirurgeon, now bound forth on a voyage to sea in the ship *General of London*, Captain William Dennis, commander, 14 November, 1698." The will, penned 4 September, 1699, provides: "To my loving sister, Elizabeth Savage, of New England, aforesaid, all my real and personal estate in New England of what kind soever." Evidently he had neither wife nor child.

Snelling, William, son of Thomas Snelling, esq., of Chaddlewood, in Devonshire, was of Newbury in 1651, in 1654 he purchased an estate in Boston, selling it in 1657, to again buy in 1660. His wife was Margery, eldest daughter of Giles Stagge, of Southwark, where he married 5 July, 1648, and died 18 June, 1667, aged forty-six years, in Boston. He came to Boston before 1655, says Farmer. His children were: William, born 24 June, 1649; Ann, born 2 March, 1652, probably died young; Ann, born 7 May, 1654. His will is dated 7 May, 1674.

Sewall says:

Cousin Ana's water was carried to Dr. Snelling on Sat. morning. He affirmed her not to be dangerously ill. My Father-in-law from the first feared her death, from her trembling pulse, wormes coming away without amendment, and the well looking of her water, when she was manifestly very ill.

25 April, 1660, treasurer to pay Mr. Snelling fifty-four shillings for phisic administered to Robert Higgins.

Starr, Comfort, a physician or surgeon of Ashford, in County Kent, England, came in the *Heracles* from Sandwich in 1635. He settled first in Cambridge, then in Duxbury, and in Boston after 1643; Savage says, dying here 2 January, 1660. He was chosen surgeon in 1637 to go with the troops under Captain Patrick in the Pequot war, and reached the scene of warfare after the Pequot fort had been destroyed by Underhill and Moran. His bequests show him to have been a man of means. One of his sons bore his Christian name, and graduated at H. C. in 1647, and is catalogued as "Consolantius."

Starr, Thomas, a younger brother of the preceding, a surgeon, came soon after, or perhaps with him, from Canterbury, County Kent, and brought his wife Susan and one child. The Colonial records show that he served in the Pequot war in 1637; he died perhaps in 1640, for in March, 1641, his wife Susan had grant of administration by the General Court.

Stewart, ———. "Dr. Stewart of Boston," is all we know.

Stone, Daniel, was of Cambridge until about 1656 he removed to Boston. In the town records, 28 April, 1673, we find the following entry: "Agreed with Dr. Daniel Stone for taking care of infirme and sick people of the towne that are poore on the condition of abatinge or allowinge his rate and paying him 20s. in money." Ten years later, 30 July, 1683, it is "ordered 33s. to be paid Doctr. Daniell Stone for lookinge after and dressing an ulcerous Leg of Griffine, who was form-erlie a serv't to Lt. John Smith." We also find that "Dan'l Stone is fined 20s. for entertaynement of John Hunt and wife and to pay 20s. per weeke as long as they continue with him." Sewall records, "Sabbath March 20 1684 Dr. Stone and . . . dye—"

Stone, Samuel. In 1671 Dr. Samuel Stone agreed to attend to "the town's poor for twenty shillings in money and a remittance of taxes."

Sloan, Thomas, was of Roxbury, and married Mary, daughter of Thomas Lamb; Savage surmises that as he had a son, Henry, born in

Boston, 16 May, 1665; he pursued his profession here, returning to Roxbury so that his son, Francis (H. C. 1689), was born there 15 September, 1669. He died probably in February, 1688.

Swan, Thomas, son of the foregoing, was graduated at H. C., 1689. He married Prudence Wade, of Medford, 27 September, 1692. He practiced at Castle William, dying there 19 October, 1710. A petition for relief of his widow was presented to the Legislature, stating that

Whereas Mr. Thomas Swan lately deceased, did practice Physick and Chyrgergerye at . . . Castle William, upward of Seven Years last past, for which service he was allowed Twelve pence per week for every Twenty Soldiers Garrisoned there towards ye supplying himself with medicines, for that service, but by reason of Sickness and other Casualties, happening in s'd service, ye said allowance fell short . . . not-withstanding Mr. Swan did from year to year make several Ungnents, Oils and Syrrups which were not charged . . . by which means he was forced to Expend a part of his Salary . . . besides his extraordinary Care in Attending ye Sick at all times &c. by all which means he has left his family very necessitous. The Legislature 10 Nov. 1710 voted to her twenty pounds in consideration of his extraordinary Charge and Pains in the Service.

It is possible that in regard to their profession the father and son have been confused by Savage. He gives the senior as a physician, but not the son.

Taylor, Henry, styled by Savage "a surgeon," a freeman 1665. His wife's name was Mary, and he had children: Hannah, born 7 July, 1665; John, born 4 August, 1666; Mary, born 6 June, 1668; and Henry, born 12 October, 1670. He was one of the petitioners in 1666 to prevent a quarrel with the government in England. In 1669 had his rate omitted (?) in consideration of his agreement to attend the sick poor.

Thacher, Thomas, was the son of Rev. Peter Thacher, of St. Edmunds, Salisbury, England, where he was born 1 May, 1620, came to this country in the *James* from Southampton.

Neal says, "This Mr. Thacher was both a good devine and an excellent Physician and did a good deal of Good in both Capacities; he was first minister of Weymouth and from thence removed to the New Church of Boston (the Old South), among whom he spent the rest of his days; he died October the 13th, 1678 in the 59th Year of his age."

He is distinguished in medicine as being the author of the first contribution to its literature in this country; it was a broadside, twelve inches by seventeen in size, bears date 21 January, 1677-8, and was printed and sold by John Foster, Boston. The title is "A Brief Rule

To guide the Common People of New England How to order themselves and theirs in the Small Pocks, or Measels." A second edition was printed in the year 1702. It is reprinted in Toner's "Annals of Medical Progress."

Wadsworth. In a "List of the male Persons in the town of Boston from Sixteen years old and upwards," the following entry is found, "Doct. Wadsworth." In the same list occurs the name of "Timothy Wadsworth," it is therefore impossible that they were one and the same. Timothy was one of the constables of the town, and his name only appears in a list of the inhabitants in Boston in 1695. Our knowledge is limited to the simple fact that Doctor Wadsworth was taxed in Boston in 1688. In the genealogy of the Wadsworth family recently published, Timothy is called a gunsmith, the son of Samuel and grandson of Christopher, and born in Boston in 1662. He married Susannah Cooke and had Susannah, born 1687, married Edward Langdon; Recompense, born 1688, graduated at Harvard College 1708. Timothy Wadsworth, the gunsmith, joined the Artillery Company in 1691.

Waldron, Isaac, came to Boston in 1676 from York, where he was in 1670. His wife's name was Priscilla; they had children, Isaac, born 23 June, 1677; Priscilla, born 6 December, 1678, died young; Priscilla, born 23 June, 1680, died young; Priscilla, born July 12, 1681; all were baptized at the Old South Church. He died 1683, and little else is known of him.

Weeden, Elizabeth, was apparently the regular attendant on Sewall's family, he mentions her as "Goodwife Weeden."

Wilkinson, Thomas. Dr. Holmes in his address before mentioned says, Thomas Wilkinson in 1676 was complained of for practicing contrary to law. The law at that time appears on page 175 of this article. In what particular Wilkinson transgressed must be left to conjecture. He continued an inhabitant and is found in the tax list of 1679. Savage says, he was of Billerica, "but continued an inhabitant and is found in the tax list of 1679."

Williams, Richard. "Dr. Richard Williams" appears in the list of inhabitants in 1695, printed in the first volume, issued by our Record Commissioners. Savage gives two of this name, Richard, who had Phebe, born 1643; and Richard who by wife Bathsheba had Joseph, born December, 1672. These may be one and the same and the inhabitant of

1695. It may be however, that, the Richard of whom Savage speaks was a physician in New Haven in 1691, and of whom no more is heard; tiring of Connecticut, he came to Boston and was here in 1695.

Winslow, Edward, governor of Plymouth, had a knowledge of medicine, and even among the Indians had a wide reputation for his treatment of disease. He was once summoned to visit Massasoit, a prominent chief, who was seriously sick, but who recovered under his care. As a mark of his gratitude, the faithful sachem revealed to the English a plot that was forming against them, which was averted by the timely information. A full report of the case with the treatment is found in Winslow's "Good Newes from New-England," (London, 1624.) pages 25-32.

Winslow was an English gentleman from Worcestershire, born in 1595, and came in the *Mayflower*. His wife was among those who died the first winter, and he married the widow of William White, 12 May, 1621, this being the first marriage which took place in New England. She was the mother of the first child born here. He died at sea in 1655.

Winthrop, John, the founder of Boston and governor of Massachusetts, was well versed in medicine, but his public services to the colony were so marked that his minor ministrations among friends and neighbors are thrown into the background. The venerable Cotton says of him just before his death, that he had been a "*Help for our Bodies by Physick, for our Estates by Law.*"¹ He was born in Suffolk, England, in 1588; and died in Boston in 1649.

Winthrop, John, jr., son of the preceding, for some years an inhabitant of Massachusetts and afterward governor of Connecticut, was a noted physician. He was born in England in 1606, and died in Boston, 1676. He was one of the earliest members of the Royal Society of London and an accomplished scholar. He had a large correspondence with scientific men, from which many interesting facts are gathered about medicine in the early history of the colony. Dr. Holmes says he "practiced so extensively, that, but for his more distinguished title in the State, he would have been remembered as the Doctor."

Winthrop, Wait, represented the third generation of this noted family; a son of John, jr., he was born in Boston 17 February, 1641-2, and was also proficient in the profession. In Cotton Mather's sermon,

¹ Magnalia, Book ii., Chap. iv. 15.

preached at his funeral, November 7, 1717, there is an "Epitaphium," from which the following is an extract:

MEDICINÆ Peritus,

Qui Arcanis vere Aureis, et Auro preciosioribus potitus,
 Quæque et *Hippocratem* et *Helmontium* latuerunt,
 Remedia panaceaasque Adeptus
 Invalidos omnes ubicunque sine pretio sanitati restituit
 Et pene omnem Naturam fecit Medicam.

Mr. Sewall, in his funeral sermon, says he was "a skillful physician, and generously gave, not only his *advice*, but also his *medicine*, for the healing of the sick, which, by the Blessing of God, were made successful for the recovery of many." April 20, 1689, he was appointed sole major-general of Massachusetts, which office he held at the time of his decease. Whitman says he was "Captain of the Ar. Co. the year he joined, which is the second instance known, and the first duly authenticated. By profession he was a physician, and as such was celebrated for his skill; he practiced extensively, *but gratis*, finding his own medicines." He died 7 November, 1717, aged seventy-five.

List of practitioners in Boston, 1700 to 1800:

Adams Samuel.	Davis William.	Jackson Hall.
Appleton Nath'l Walker.	Dexter Aaron.	Jackson William.
Barnet William.	Doubt Nyot.	Jackson ———
Barret ———	Douglass William.	Jarvis Charles.
Bertody Francis.	Eliot Ephram.	Jeffries John.
Boylston Zabdiel.	Euslin John Frederick.	Jeorku ———
Bulfinch Thomas.	Eustis William.	Kast Philip Godfrey, or Godfrist.
Bulfinch Thomas, jr.	Fay Nahum.	Kast Thomas.
Cheever Abijah.	Fleet John	Kennedy Hugh.
Church Benjamin.	Fleet John, jr.	Latham ———
Clark John.	Gardner Joseph.	Leavitt Josiah.
Clark John.	Gardiner Joseph.	Lloyd James.
Clark John.	Gardiner Sylvester.	Lord ———
Clark John.	Gelston Samuel.	Linn John.
Clark William.	Godfrey Phillip.	Marion Joseph
Cooke Elisha, jr.	Greenleaf John.	Marshall Samuel
Crozier Henry Will	Hall George Holmes.	Mather ———
Curtis Benjamin.	Hayward Lemuel.	Nazra Mathew.
Cutler John.	Hill ———	Noyes Oliver.
Dalhonde Lawrence	Homans John, 1753-1800.	Pecker James.
Danforth Samuel.	Hunt Ebenezer.	

Perkins John.	Roberts ———	Tufts Cotton
Perkins Nathaniel.	Rogers Theophilus.	Townsend David.
Perkins William Lee	Rogerson Robert.	Warren John.
Peters Alexander Aber- crombie.	Spooner William	Warren Joseph.
Philips Nathaniel.	Sprague John.	Welsh Thomas.
Pope John.	Sprague John, jr	Whipple Joseph.
Pyncheon Charles.	Stewart George	Whitmarsh Miles.
Rand Isaac, jr.	St. Medard Peter.	Williams Nathaniel
Rand Samuel.	Swetzer Henry Sebastian.	Windship Amos.
Rand William.	Tamer ———	Windship Charles.
Read William.	Thomas Joshua.	Young Lemuel.
	Thomas William.	Youquet ———

Adams, Samuel, was born in Boston, 27 October, 1751, and was the son of Governor Samuel Adams. He was a Latin School boy, and graduated from Harvard in 1770. He was a student of medicine under Dr. Joseph Warren, of Revolutionary fame, and practiced in Boston one year. He entered the army as surgeon on the breaking out of the war for independence, and his duties there broke down his health and constitution, so that on his return to Boston he was unable to recommence the practice of his profession. He was a member of the Massachusetts Medical Society. His death from scrofula occurred 17 January, 1788.

Appleton, Nathaniel Walker, was a grandson of the venerable Nathaniel Appleton, D.D., of Cambridge, and son of Nathaniel and Mary (Walker) Appleton. He was born in Boston, 14 June, 1755, and graduated at H. C. in 1773. He studied medicine with Dr. Holyoke, the centenarian and first president of the Massachusetts Medical Society. He was one of the founders of that society, and also of the American Academy of Arts and Sciences. He was the first secretary of the Medical Society, and was active in its behalf; he resigned in 1794 with a view of removing from Boston, and presented the society a portion of his library and anatomical cabinet as a token of his regard. After a few years' residence in Marietta, Ohio, he returned to Boston, where he died 15 April, 1795, aged forty-three. His wife was Sarah, daughter of William Greenleaf, of Boston. Eliot says of him: "Was a most estimable man, but too diffident to show his real worth and abilities, which were far above mediocrity."

Barnett, William, was from Elizabethtown, N. J., and was one of the prominent inoculators in 1764. He was appointed by Congress, 6 January, 1776, surgeon of the First Jersey Battalion. In February

of the same year he was appointed major of the regiment of light horse in the Eastern Division of the State of New Jersey.

Barret, ———. Toner says that Dr. Barret was in practice in Boston in 1764, and in good repute. I think this is an error for Barnett.

Bertody, Francis, resided on Leverett street in 1796. He was from Prussia, and was naturalized 19 June, 1788. He left one son.

Boylston, Zabdiel, the son of Thomas and Mary (Gardner) Boylston. He was born 1679, and probably did not practice before the year 1700. He married in Boston, 18 January, 1705-6, Jerusha, born 28 January, 1669, daughter of John and Elizabeth (Birch) Minot, of Dorchester. He was an eminent physician of Boston, though much employed in his native town of Brookline, and in all the region about. He studied under Dr. John Cutler, of Boston, and, in a few years, arrived at great distinction in his profession, and accumulated a handsome fortune. He introduced inoculation in Boston and America in 1721, in response to the invitation of the Rev. Dr. Cotton Mather, and in spite of violent opposition. He visited England in 1725, where inoculation was common, and was received with the most flattering attention, chosen member of the Royal Society, and was admitted to the intimacy and friendship of the most distinguished characters of the nation.

After a long period of work, his age and infirmity induced him to retire to his paternal estate in Brookline, where he passed the remainder of his days. He died 1 March, 1766. He published some account of what is said about inoculating or transplanting the small-pox by the learned Dr. Emanuel Timonius and Jacobus Pylarinus in 1721.

Of the position of the physicians of Boston toward inoculation, Dr. Green writes as follows:

With one exception, however, they seemed to be either indifferent or opposed to the whole matter. This exception was Dr. Zabdiel Boylston, who took up the practice of it amid the most violent opposition of his professional brethren; and on the 26th of June, 1721, he inoculated his own son, Thomas, six years of age, his negro man, Jack of thirty-six years, and a little negro boy of two and a half years. They all had the disease very lightly, and he was encouraged to try the experiment on others.

Within the period of one year Dr. Boylston inoculated 247 persons, and of this number only six died; and during the same time 39 other persons in the neighborhood were inoculated by two other physicians, and all made good recoveries. This low rate of mortality, as compared with that among persons who had taken small-pox in the natural way was a telling argument in favor of inoculation. The array



Geo. T. W. Southline

of these statistics carried the public to the side of Dr. Boylston, who was now honored to the same degree that he had previously been libeled by a fickle populace. He was invited by Sir Hans Sloane, the Court Physician, to visit London, where he received the most flattering attentions from the scientists of England, as well as from the reigning family. He was chosen a member of the Royal Society, and read a paper before that learned body on the subject of small-pox inoculation in New England. This was published in London in the year 1726, and dedicated by permission to the Princess of Wales. In this pamphlet he gives a minute account of many of his cases, telling the names of his patients in full, besides stating their ages; and in the preface he apologizes for the liberty he has taken in doing so. A second edition of this pamphlet was published at Boston, in the year 1730. In the course of time inoculation conquered all opposition, and finally became a well established fact in the community. Some of those who had bitterly opposed it were now its warmest friends.

Dr. Boylston wrote, in 1726, an historical account of the small-pox inoculation in New England, with a statement of the nature of the infection and short directions to the inexperienced. His son Thomas, born 30 July, 1715, practiced in Brookline.

Bulfinch, Thomas, was the son of Adino Bulfinch, a merchant of Boston, who came to this country from England about the year 1680. He was born in 1694, and began the study of his profession with Dr. Zabdiel Boylston as his preceptor. He afterward went to London and received instruction in anatomy and surgery under the famous Cheselden, and subsequently to Paris, where he completed his professional education. He soon required the reputation of an excellent physician, and enjoyed a very large practice. He married, 11 June, 1724, Judith, daughter of Rev. Benjamin Coleman, of Brattle Square Church. He died 2 December, 1757, in his sixty-third year, leaving a son, Thomas, jr., who followed in the footsteps of his father as a successful practitioner. He had a brother, Adino, who married, 10 October, 1727, Susannah Green; he was an apothecary.

Bulfinch, Thomas, jr., was born in Boston in 1728. Graduated in 1746 from Harvard College, he studied medicine with his father, also going abroad he received his degree of M.D. at Edinburgh in 1757. Shortly after he was called home by the death of his father, and began to practice his profession in Boston. He married Susan, daughter of Charles and Guissilde (Estwick) Apthorp, 13 September, 1759.

Dr. Elliot has this mention of the younger Dr. Bulfinch:

Had a good share of very genteel practice, and lived in good style. He kept a chariot, was very tender and affectionate, and greatly valued by those who employed him. Dr. Bulfinch declined joining the Medical Society.

Cheever, Abijah, son of Abner and Elizabeth (Newhall) Cheever, was born in Lynn, 23 May, 1760; graduated at Harvard College in 1779; was a surgeon in the navy during the Revolutionary War. He afterward established himself in the practice of his profession in Boston, where he married, 5 July, 1789, first Elizabeth Scott, and second, 18 April, 1798, Sarah, widow of Jonathan Williams, daughter of Daniel and Bethial (Ingersoll) Pearce. About the year 1810 he removed from Boston to Saugus, where he died 21 April, 1843, aged eighty-four. He was a member of the Massachusetts Medical Society.

Church, Benjamin, senior. Hollis Street Church records state that Benjamin and Hannah had a daughter baptized in 1745, the parents being in communion with the church at Newport.

He joined the Artillery Company in 1742. Whitman in his history says, "Boston, physician; father of the famous Dr. B. Church, was a violent Whig at the commencement of the Revolution, but when the tug of war came on, became a Tory. An assessor, 1770. He graduated at Harvard College, 1777."

Church, Benjamin, jr., son of Deacon Benjamin Church, born at Newport, 24 August, 1734, of the Latin School of Boston 1745, H. C. 1754, studied with Dr. Pynchon, later was a student of the London Medical College, married Miss Hannah Hill, of Ross, Hertfordshire, England; was the surgeon who examined the body of Crispus Attucks, pronounced the oration on the massacre; representative, member of Provincial Congress, 1774; physician-general of the army, 1774; director-general of the hospital, 1775; court martialed for some treasonable correspondence with the enemy, 3 October, 1775; imprisoned at Norwich, Conn.; released May, 1776; sailed from Boston to London, and the vessel was wrecked. Of him Eliot says that he "was gaining practice among the Whig interest; but, for reasons that are sufficiently known, was banished from the country."

Clark, John,¹ son of Dr. John² and Sarah Clark, the counsellor, was born 15 December, 1698; he died 6 April, 1768, of paralysis. He had sons John and William, to the latter he gave by will all his drugs and medicines, and also a daughter Elizabeth, who was wife of Jonathan Mayhew, D.D. To his grandson John, son of John, were bequeathed all his books, chests of utensils, etc., relating to surgery and physie, as his son, the physician, had died before him.

*Clark, John,*⁵ grandson of the counsellor; he was also a physician and died before his father, in 1768, but left a son who inherited his grandfather's professional outfit.

*Clark, John,*⁶ son of the preceding, graduated at Harvard 1772, then studied with Dr. James Lloyd and later visited the hospitals in Europe, intending on his return to participate in the practice of his preceptor. He married Abigail Turner, and had son John, born 1778. His health failing he removed to Wrentham, where he died July 29, 1788.

*Clark, John,*⁷ son of the preceding, born 1778, graduated at Harvard College 1799, received the degree of M.B. in 1802. He died at Weston on Sunday, 21 April, 1805, aged twenty-seven, leaving no male issue, and thus ending a famous line of physicians bearing the name of Clark. His only child, Emily, born 8 May, 1801, married first Joseph Merriam, of Lexington, and had three sons and one daughter; and secondly, George D. Soren.

Clark, William, son of John and grandson of the counsellor, graduated at Harvard in 1736.

The *Boston Post Boy and Advertiser* under date of June, 1760, has this notice of his death:

Yesterday departed this life Dr. William Clark, a Physician of Principal Note in this town. He was a Gentleman of Extensive Learning, of great knowledge in that Profession and Success in his Practice. He was easy in his manners; humane and benevolent in his Temper; a Lover and Encourager of Art and Industry; a tender Husband, a good Master, and a steady Friend. His Death is universally lamented.

In 1758 he visited the schools; in 1759 he was chosen on a committee to make application to the General Court for relief from taxes. He is styled "Surgeon" in a power of attorney given him by his father in 1760.

Cooke, Elisha, jr., son of Elisha and Elizabeth (Leverett) Cooke, was born December 20, 1678. He was graduated from Harvard College with the degree of A.M. in 1697. He succeeded to the practice of his father. He was clerk of the Supreme Court in 1702, but was displaced in 1718. He died in 1737.

Crozier, Henry Will Crozier, under this latter spelling he inoculated and attended gratis four patients in 1764. He entered into the agreement with the selectmen (see pages 179-181).

Curtis, Benjamin, son of Benjamin and Abigail (Bridge) Curtis, was born in Roxbury, September 16, 1752, and graduated at Harvard College in 1771 with the degree of A.M. He was a pupil of Dr. Joseph Gardner. He married Eliza Billings, of Sharon, Mass.

Eliot writes that in 1780 among the gentlemen doing the business of the town, viz.: beginning at the south, Dr. Benjamin Curtis, who was employed there considerably. Toner: "Settled in Boston, maintaining a good reputation and practice until his death, which occurred in 1784 in the thirty-second year of his age."

He joined the Massachusetts Medical Society in 1781, and died in Boston, 26 November, 1781. His widow married in 1791 Elisha Ticknor, and was the mother of George Ticknor.

Cutler, John, born at Hingham, August 6, 1676, is supposed to have been sent to Europe for his education. He inherited the house and practice of his father. He certified to the health of a cargo of negroes, with Dr. William Douglass, William Clark and Edward Ellis, 10 July, 1739. He married, 21 August, 1716, Mrs. Joanna (Dodd) Richards; no children. He adopted first his nephew, Peter Cutler, who died unmarried; secondly, his nephew, John Cutler, who cared for his old age. He died at eighty-five and was buried in King's Chapel burial ground, 28 September, 1761.

Dalhonde, Lawrence. Toner spells the name *Dalhonde*. He sided with Dr. Douglass in the controversy with Dr. Boylston regarding inoculation in 1721. Wyman is authority for the statement that Elizabeth Delhonde, a daughter of Lawrence and Elizabeth Delhonde, of Boston, married 28 February, 1741, at Boston, Dr. John Sprague, and had a son, John.

The Boston *Gazette* of November 25, 1746, records that:

Yesterday died here at an advanced Dr. Lawrence Dahonde a noted and skillful physician among us.

In the Shepard Genealogy, it is stated that Dr. John Delhonde, a French Protestant refugee, came first to Boston, went thence to Salem; was born 21 May, 1716, and married, 1 December, 1737, Elizabeth Pike; died 10 December, 1793. He was probably the son of Dr. Lawrence Dalhonde.

Danforth, Samuel, was the son of the Hon. Samuel Danforth, judge of probate for the county of Middlesex at the time of the Revolution; he was born in Cambridge on 1 August, 1740, and graduated at H. C.

in 1758. He studied medicine under Dr. Rand, of Charlestown. He first resided in Weston, then went to Newport, R. I., where he remained a few years, but finally settled permanently in Boston.

Eliot writes:

Dr. Samuel Danforth was then (1780) rising to an eminence in the profession which has not been exceeded in Boston. Setting theories aside, he formed one of his own; he endeavored to enlist no man, but he persevered in it himself till he acquired a very great confidence in his judgment, and was probably consulted in more cases than any other physician in his day.

He was one of the founders of the Massachusetts Medical Society, and its president 1795 to 1798, having previously served as vice-president. He was A. M., M. D., hon., 1790, of Harvard; Fellow American Academy; Cor. Memb. Med. Soc. of London. His death occurred at the age of eighty-seven from a paralytic affection, 16 November, 1827.

Davis, William, of him we learn but little. In the *Boston Gazette* or *Weekly Journal* we find this notice of his death:

On Friday last died here, aged about fifty-eight years, Dr. William Davis, a gentleman much improved and greatly beloved among us, a skillful physician and surgeon, and was held in Esteem for his strict Piety. We hear his funeral will be tomorrow.

The bond given by the administratrix of the estate was dated March 28, 1746. An inventory of his property contained among the items "Druggs [£] 284:4:4;" "Chirurgical Instrum'ts of all Sorts 120;" "3 Glass Cases of Veins & Anat: 50." This appraisal was made according to the paper money of New England, which at that time was much depreciated; and it would be difficult to calculate the gold value.

Dexter, Aaron, the son of Richard and Rebecca (Peabody) Dexter, was born at Malden, 11 November, 1750, graduated at Harvard College in 1776. He studied medicine with Dr. Samuel Danforth. He made several voyages to Europe as a medical officer, once having been made a prisoner. At the close of the Revolution he settled in Boston. In 1783 he was elected Erving Professor of Chemistry and Materia Medica in the medical department of Harvard College, continuing as such until 1816, when he was made professor *emeritus*. In 1786 he received from his alma mater the honorary degree of M. D., Dartmouth College conferring the same in 1805. He died at Cambridge, 28 February, 1829, at the age of seventy-nine. He was a contributor to the early volumes of the communications of the Massachusetts Medical Society, of which

he was one of the founders and its first treasurer, serving but one year when he became the society's librarian, an office he held for ten years. He was a member of the Massachusetts Historical Society and a Fellow of the American Academy.

Doubt, Nyot. He inoculated and attended gratis fifteen patients, and agreed to discontinue inoculation after the 20th of April, 1764. His wife's name was Sarah, and they had a son, Nyot, born 16 September, 1761. He died 11 June, 1764.

Douglass, William. Dr. Douglass was a Scotchman who came to Boston as early as the year 1716, for he was elected a member of the Scots Charitable Society, 7 February, 1716, of which he was vice-president in 1721 until elected president 1736, which office he held at the time of his death. An extended biographical sketch has been published in the communications of the Massachusetts Medical Society. He received his medical education in Paris and Leyden; was a man of fine intellectual parts, and a versatile writer. He knew astronomy and could calculate eclipses; he had a taste for natural history, and was withal an excellent botanist. He studied his medical cases, and took careful notes by the bedside. With a large practice, he wrote on a great variety of subjects, and it is not strange that occasionally he was inexact in his statements. It was wittily said of him by some one that he was always positive and sometimes accurate. He had little tact, and it is not surprising that he found himself continually in controversy. He was the leader of the opponents of inoculation during the epidemic of small-pox which occurred in the summer of 1721. At that time he was the only regularly graduated physician in the town. Some of the ministers were the peers of the doctors in medical knowledge, though with less clinical experience. In this state of affairs, it can readily be understood that it was a free fight whenever there was a medical controversy. He died on 21 October, 1754, having passed his whole professional life in Boston, where he had much influence as a physician; and in the small-pox epidemic of 1752, even Dr. Douglass both practiced inoculation and spoke of it as a "most beneficial improvement."

He published in 1736 an essay on epidemic fever, and later, 1749 and 1755, a work entitled "The British Settlement in North America," in two volumes.

In 1743 Dr. Douglass bought Rev. William Cooper's house, and when Dr. Douglass died, in 1754, mention was made of his mansion in Green Dragon lane. In 1753

Catherine Kerr, a sister of Dr. Douglass, conveyed the house to St. Andrew's Lodge of Freemasons, and it afterwards became famous as the Green Dragon Tavern.

Eliot, Ephraim, was the son of the Rev. Andrew Eliot, D.D., pastor of the New North Church in Boston, and brother of the Rev. John Eliot, D.D., author of the "Biographical Dictionary," etc. He was graduated at Harvard College in 1780, with the degree of A.M., studied medicine with Dr. Isaac Rand, but did not graduate in medicine or join the Massachusetts Medical Society. For many years he was a well known druggist. He was interested in historical matters, and a member of the Massachusetts Historical Society. He died in September, 1827, aged sixty-five, leaving a sketch in manuscript of the physicians of Boston during and after the Revolutionary war, embracing a notice of the formation of the Massachusetts Medical Society. This is printed in the Proceedings of the Massachusetts Historical Society, 1863-1864 (vol. VII, p. 177), and from it I have freely quoted.

Euslin, John Frederick, resided on Batterymarch street in 1796, and this is all I have been able to find about him.

Eustis, William. This distinguished man was born in Boston, 10 June, 1753. He studied at the Boston Latin School, and was graduated at Harvard College in 1772. He studied medicine with Dr. Joseph Warren, and at his request was commissioned surgeon of Gridley's artillery regiment 19 April, 1775. 1 January, 1777, he was commissioned hospital surgeon and physician, and served as such during the rest of the war for independence, taking a high position as an officer. At the close of the war he commenced practice in Boston. He joined the Massachusetts Medical Society in 1785, and resigned his fellowship in 1813. In 1786-87 he was a volunteer surgeon in the army which put down Shays's rebellion. In 1788 he became a member of the General Court, serving six or seven years with distinction. He was a member of Congress from 1800 to 1805, and was appointed secretary of war by President Madison in 1809, holding the office till 1812, when he resigned. In 1815 he was appointed minister to Holland. In 1821 he was again elected to Congress, and became governor of Massachusetts in 1823, which office he held until his death in 1825.

He received the honorary degree of LL.D. from Harvard College in 1823, and high honors from other colleges. He was for a long time vice-president of the Massachusetts Society of the Cincinnati. His

elegant mansion in Roxbury, close to the Dorchester line, was a conspicuous object until recent years.

Fay, Nahum, in 1796 lived on Fleet street, and in 1798 on Garden Court street. He was graduated at Harvard College A. M. in 1790; M. B. in 1793. He died in 1804.

Fleet, John. He was born 9 September, and baptized 15 September, 1731, at Old South Chapel. His wife's name was Elizabeth; they had one son, John, born 29 April, 1766.

Fleet, John, jr., was born April 29, 1766. He graduated at Harvard College in 1785; received degree of M. B. in 1788, and M. D. (hon.) in 1795. His residence was at 5 Cornhill. He joined the Massachusetts Medical Society in 1796; was its recording secretary from 1798, serving until 1802. At the time of his death, in 1813, he was the society's librarian. He was the first to receive a medical degree from Harvard University.

Gardiner, Sylvester, was a rising young surgeon who had studied his profession in London and Paris. He began the practice of medicine in Boston, where he also lectured on anatomy, which he illustrated by preparations brought from Europe. His enterprise led him to establish an apothecary's shop, in which he carried on an extensive wholesale and retail business. His career as a physician and surgeon was attended with remarkable success, and he soon acquired from his profession both fame and fortune. His prosperity, however, was interrupted by the political troubles which preceded the Revolution, and during the struggle he took sides with the mother country. He thus became obnoxious to the patriots, and when Boston was evacuated by the British troops, he was compelled to leave his native country and pass eight or ten years in exile. He finally returned, and died at Newport, R. I., 8 August, 1786, in the eightieth year of his age.

The following advertisement appears in *The Boston Gazette*, 19 June, 1744:

Just imported in the Ship from London, And to be sold by Mr. Sylvester Gardiner, At the sign of the Unicorn and Mortar in Marlborough-Street.

All Sorts of Drugs and Medicines, both Chymical and Galenical; where all Doctors, Apothecaries or others, may be supply'd with the very best and freshest of Either at the lowest Price; and Captains of Ships with Doctor's Boxes put up in the neatest and best Manner; with printed Directions. Likewise all Merchants may be furnished at the same Place with Surgeons Chests put up in the same Manner, and at the same Price, as they are for the Royal Navy, at the Apothecary's Hall in London;

where *only* are to be sold by Appointment of the Patentees, the true Doctor *Bateman's* Pectoral.

As early as March, 1761, Dr. Sylvester Gardiner had made a proposition to the town of Boston to build at his own cost an inoculating hospital on a piece of land, northward from the building which he had previously put up during the French war for sick and wounded sailors: but it does not appear that the offer was accepted. In the account, as printed in the "Proceedings of the Massachusetts Historical Society," for June, 1859, it is stated that—

No person in town is to pay more than four dollars for inoculation, medicines, and attendance, and three dollars per week for diet, nursing, and lodging, during his or her illness.

Toner says Dr. Gardiner was a native of Kingston, R. I. He died 1786, aged sixty-eight.

Eliot says of him, that his reputation was high as an operator in surgery, and that he did the largest business as a druggist of any person in Boston.

He was one of those proscribed in 1778 as an enemy of the new State.

Gardner, Joseph, was a son of Rev. John Gardner; he was born at Stow, Mass., 24 May, 1727; he practiced in Boston, and died about 1788.

"Was employed," writes Eliot, "both as a physician and surgeon, probably more than any other gentleman in the profession. He pretended to look upon learning as superfluous; that the bedside was the only school for a physician; but he *did* study, and was a more learned man than he chose to appear. He was witty and satirical, and very greatly esteemed."

In 1776 he was a representative from Boston. He was one of the founders of the Massachusetts Medical Society.

Gelston, Samuel. Samuel Gelston, son of Judge Hugh and Mary (Maltby) Gelston, was born Southampton, L. I., 24 March, 1727. Married a Miss Oliver, of Boston, and resided at Nantucket. We find in Sabine's "Loyalists" that

Samuel Gelston, Physician, Jan'y 1776, held to answer before joint committee of the Council and House: During the proceedings escaped to Rhode Island, where he was apprehended and brought back.

While here engaged in inoculating, Drake says, he resided constantly at Noddle's Island.

Godfrey, Phillip, was born in 1724. Toner says, he was in practice in Boston in 1761, and in good repute. I am inclined to think this is an error for Dr. Phillip Godfrey Kast.

Greenleaf, John, son of Rev. Daniel Greenleaf, was born at Yarmouth, Mass., 8 November, 1717. He was invited to accompany the selectmen on a visitation of the free schools 7 July, 1773, and 24 June, 1774. He died 27 August, 1778, and is supposed to have been buried under Brattle Square Church. He was a druggist but bore the title of "Doctor," although he was not a practicing physician.

Hall, George Holmes, son of Willis and Sarah Hall, was born in Medford, Mass., 8 January, 1763. He was graduated at Harvard College in 1781, and in 1788, with John Fleet he received the degree of Bachelor of Medicine from Harvard. These were the first medical degrees conferred. He soon went to Brattleborough, Vermont, where he kept a drug store. He died 1807.

Hayward, Lemuel, was born in Braintree, 22 November, 1749, was graduated at Harvard College 1768, and received the honorary degree of M.D. in 1808. For one year after graduating he taught the public school at Milton, and subsequently commenced the study of medicine under Dr. Joseph Warren. Having completed his studies, by the advice of his preceptor, he settled at Jamaica Plain, where he acquired a large and lucrative practice. In 1775 he was appointed a hospital surgeon by Congress, but resigned his commission on the removal of the army southwards. In 1783 he removed to Boston, and in 1781 was elected member of the Massachusetts Medical Society. He died 22 March, 1821.

Homans, John. He was the second son of Capt. John and Elizabeth (Alden) Homans. Captain Homans came to this country from England about 1720, settled in Dorchester, and became 4 January, 1773, by vote of the town one of the Committee of Correspondence.

Dr. Homans was born in Dorchester, 8 April, 1753. He studied for college at the Boston Latin School, was graduated at Harvard College in 1772, and studied medicine with Dr. Joseph Gardner, of Boston. He was commissioned surgeon of the Sixteenth Regiment (Col. Paul Dudley) 1 January, 1776, and from 18 December, 1776, to 4 August, 1781, was surgeon of Second Regiment Light Dragoons (Colonel Sheldon). He was in many engagements, notably at Harlem, White Plains, and in the campaign against Burgoyne. He resigned in 1781 and practiced

in Boston till June, 1800, when he started on a voyage for his health, but soon died at sea. His name is still ably represented by members of the family active in the profession.

Hill, Dr. The "selectmen's minutes" of a meeting held 27 November, 1774, read:

This Day information was given by Dr. Hill, Surgeon of the 59th Regiment that a Child belonging to that Regiment in a Barrack at Doans Wharf was broke out with the Small pox, upon which Dr. Jarvis was directed to examine into the circumstances of said Child.

Dr. Jarvis soon after Reported, that he was of opinion that the Child had not the Small Pox.

Hunt, Ebenezer, was born in Northampton, 1744; H.C., 1764; studied with Dr. Pyncheon, of Springfield. He was a son of Deacon Ebenezer Hunt of, Northampton, and was born there, but lived in Boston, and the stones erected to him and his wife are in the Granary Burying Ground. He was many times member of the Legislature, an elector of the president of the United States; practised physic for more than half a century. He died 26 December, 1820, aged seventy-six years.

Jackson, Hall, was the son of Dr. Clement Jackson, of Portsmouth. Dr. Jackson resided at Boston two or three months, and carried several classes safely through the small-pox by inoculation; a large number came from Portsmouth to put themselves under his care. He was one of those who, in 1764, agreed with the selectmen not to inoculate after the 20th of April. It is recorded that he inoculated thirty-three patients. He had had the disease in 1773 at the Essex Hospital.

Jackson, William, joined the Massachusetts Medical Society in 1795, and died in 1800, aged thirty-five years.

Jarvis, Charles, was the son of Colonel Leonard Jarvis, born in Boston, 1748, was a Latin School boy, and a graduate of Harvard College in the class of 1766; a member of the American Academy. After finishing his medical studies in Boston, he went to England and took practical courses in medicine and surgery. On his return he established himself in Boston, where he enjoyed a large and successful practice. Dr. Jarvis gave but little medicine, and to-day would be considered a good representative of the "expectant school" of the profession. He took a prominent part in public affairs, and was a "Jeffersonian" in politics.

Dr. Eliot says:

He stood high in rank, and deservedly; his practice would doubtless have been large if he had not chosen to devote himself to political life, which prevented him attending to his profession as was desired. The style of a gentleman which marked his conduct in the chamber of the sick, and the tender sympathy which he evinced when attending to his surgical practice, endeared him in a peculiar manner to his employers.

He studied medicine with Drs William Lee Perkins and Joseph Gardner. He was one of the founders of the Massachusetts Medical Society, and Dr. Ebenezer Alden, in his sketches of them, says he received the degree of M.D. in 1793, but certainly this could not have been from his alma mater, as no such record appears in the catalogue. He was a powerful and impressive orator, and in the Legislature received the sobriquet of the "bald eagle." During the presidency of Thomas Jefferson he was appointed physician and surgeon to the Marine Hospital, then situated at Charlestown, and died there 15 November, 1807, aged fifty-nine years. His wife was the granddaughter of the first Baron Pepperille.

Jeffries, John, the son of David and Sarah Jeffries, was born 5 February, 1744 (David for thirty-one years was the town treasurer of Boston), graduated at Harvard College in the year 1763, with the highest honors of his class, and began at once his medical studies under Dr. Lloyd. Subsequently he studied in England, and took his degree of M.D. at the University of Aberdeen in Scotland, 1769; hon. M.D. from Harvard, 1819. He returned from his studies at Aberdeen just as our strife was opening and entered the British naval service; went with General Howe as surgeon to the forces in Nova Scotia. He returned to England, and while there crossed the British Channel in a balloon, and came back, 1789, to practice his profession in Boston. His name appears on a list of inhabitants of Boston who, on the evacuation by the British, March, 1776, removed with the army. He died 16 September, 1819, deeply lamented by his friends. He was buried in the Granary Burying Ground.

Jeorku. Dr. Ephraim Eliot, writing of the time he began his professional studies in 1780, says:

To the credit of the country, *there was not a quack or empirical physician in this place.* Such persons were always frowned upon by the people, and soon hid themselves. The only one I recollect who had a footing here was a German, named Jeorku. It was said he had been a dresser in the British military hospital in Quebec. He removed into Boston and got some business among the Dutch inhabitants and

their posterity. He was never acknowledged by the physicians as a brother, but he dressed a wound and applied a bandage with great dispatch and neatness. I never knew him to perform an operation, and [he] was thought to be a very ignorant man.

Kast, Philip Godfrid, was of Salem, before coming to Boston, as will be seen by the following advertisement from a Salem paper in 1768:

Philip Godfrid Kast at the sign of the Lion and Mortar

The famous anadyne necklace for children while teething, Dr. Hill's pectoral balsam of honey; British oil; Turlington's balsam of life used forty years ago, Greenough's tincture for preserving the teeth; extract of hemlock for cancers, etc. Dr. Anderson's and Dr. Lockyer's pills.

He married a daughter of Joseph Proctor. In settling an estate on Prince street, he mentions "Elizabeth Proctor, the great-grandmother of infant son Thomas." In 1749 he lived in Queen street. Eliot says that, being a very old man in 1780, he had "retreated" from practice. His wife's name was Anna; they were attendants at King's Chapel, where their child Marie was baptized in 1756. He lived in Bradford, Mass., long enough to have the birth of one child recorded. He had also a son, Thomas, a physician.

By the diary of John Thomas, under date of 1 July, 1755, published in the "New England Historical and Genealogical Register," 1879, we learn that Drs. Kast and Whitworth went to Nova Scotia in Winslow's expedition against the Acadians.

Kast, Thomas, the son of Dr. Philip Godfrist Kast, with whom he studied, was born in Boston, 12 August, 1750. He graduated A. B. at H. C. in 1769, receiving his A. M. in 1774. In 1770 he was appointed surgeon's mate of the British ship *Rose*, and continued as such for two years, then for an equal length of time attended lectures at Gray's and St. Thomas's hospitals in London. He returned to Boston in 1774, and began a practice which lasted until 1804, when he was attacked by a severe illness. To improve his health he visited Europe in 1810, and remained until 1817, when he again returned to Boston, dying here 20 June, 1820. He was a founder of the Massachusetts Medical Society, and its second treasurer, serving from 1783 and 1798.

Dr. Thomas Kast had a large practice among the lower and middling classes of people, with whom he was a great favorite. He accumulated much property, making every one pay him something; and being an economist he turned it to much advantage.—(Eliot.)

Kennedy, Hugh, was a Scotchman, and of him our knowledge is very meagre. Hugh was baptized at the New Brick Church, 10 February,

1739-40. He married, 28 December, 1720, Mary Wyer, and 2 November, 1739, Susanna Pico.

Latham, Dr. At a meeting of the selectmen, 23 November, 1774, "Dr. Latham attended and informed the selectmen that a soldier of the Main Guard House of the Fifty-ninth Regiment is broke out with small-pox." In an advertisement which the selectmen published in several newspapers, they stated that they were made acquainted with this outbreak by a surgeon of the army; we therefore conclude that Dr. Latham was a medical officer of the troops stationed here.

Leavitt, Josiah, was born in Hingham, 21 October, 1744, the son of Hezekiah and Grace (Hatch) Leavitt. He practised his profession in his native town until 1777, when he sold his house and removed to Boston. Here he did not practise but engaged in the business of building organs. He died in March, 1804, aged fifty-nine years.

Lloyd, James, the son of Henry and Rebecca (Nelson) Lloyd, was a native of Oyster Bay, Long Island, where he was born 24 March, 1728. His preliminary education was obtained at Stratford and New Haven, Conn. He began his professional studies in Boston, under the guidance of Dr. William Clark, with whom he remained nearly five years. At the end of this time he went to England, where he enjoyed the most favorable opportunities of seeing the practice of the best physicians and surgeons of that time, occupying for one year the place of first dresser of wounds to Mr. Warner. He returned to Boston in the year 1752, and at once entered upon the duties of his chosen profession, in which he soon became eminent. He has the name of being the first educated obstetrician in the country, as well as the credit of introducing the practice of amputation by the flap operation, or double incision, as it was then called. Dr. Lloyd was a man of many accomplishments, and during the latter half of the last century the prominent figure of the profession. He died 14 March, 1810, at the advanced age of eighty-two years.

Dr. Lloyd had studied midwifery under the distinguished Smellie, of London; and after his return home he was considered throughout the province the best authority in this branch of medicine. Ephraim Eliot writes:

Dr. James Lloyd was ranked high in the profession. He took the lead in regard to the practice of surgery; was the first who introduced the male practice of the obstetric art as a general appendage to the office of a physician; was very successful in



Francis J. Curry

it, and consequently greatly esteemed among the ladies. He entertained a great deal of company, kept a genteel equipage, and a suite of servants; his horses were esteemed equal to any in the town. He was a gentleman of the old stamp, and deservedly respected and valued. He observed to a dear and valued friend of mine [Eliot's], in regard to his practice in a lying-in chamber. "I never in my life refused to attend a call, even to the poorest class of society, in those cases which often require immediate assistance. If there was only a bed of straw, I saw that it was beaten up, and rendered as easy and comfortable as it was possible, and with my own arms invariably laid the delivered woman upon it; and I assure you, sir, I have been amply paid by the esteem and affection of my patients."

Harvard conferred upon Dr. Lloyd the honorary degree of M.D. in 1790. He was one of the founders of the Massachusetts Medical Society.

An extended notice of the life of Dr. Lloyd will be found in Thacher's Medical Biography, written by his son, Hon. James Lloyd, LL.D., etc., who graduated at Harvard College in 1787.

From Sabine's "Loyalists" we extract the following:

Lloyd, James, of Boston, born on Long Island 1728, educated in Connecticut, studied medicine in Boston, attended London Hospitals two years, returned to Boston in 1752, obtained an extensive practice. A moderate Loyalist, he remained in that town while it was occupied by the British troops, zealously devoted to his profession. In the French War, Sir William Howe (then a colonel) was dangerously ill at Boston, and ever after attributed (gratefully and publicly) his recovery to the skill and unceasing attentions of Dr. Lloyd, and when in 1775 he came on the hopeless mission of subduing a wronged and roused people, he immediately renewed the acquaintance formed under circumstances so interesting to himself and, as events proved, to the Anglo-Saxon race. He owned an estate on Long Island, of which the royal army took possession, and three thousand acres of it were stripped of a valuable growth of wood. In 1789 he went to England to obtain compensation. On being told an allowance would be granted on declaring himself a British subject he at once declined. He returned to Boston without success.

He was highly accomplished in all branches of his profession, and in surgery and midwifery was without a superior, probably, in New England. He kept a genteel equipage and entertained company with great liberality. He was an Episcopalian and worshipped at Trinity Church. He died in 1810, aged eighty-two.

The Lloyds were ancient and extensive land owners; the manor of Queens Village, L. I., having been in possession of the family as early as 1679.

Lord, Dr., is recorded to have, with Dr. Church, inoculated fifty persons in 1764. He was probably only here during the time inoculation was being so extensively practised.

Linn, John, was one of the founders of the Massachusetts Medical Society. He came from Pennsylvania, was a surgeon during the Revo-

lution, afterwards settling in Boston, he returned to his native place, where he is supposed to have died about 1793, aged about forty-three.

Marion, Joseph, contemporary with Dr. Douglass, and Dr. Dalhonde, made a sworn deposition of their personal experience of the dangerous character of inoculation.

Marshall, Samuel, was one of those who in 1764, although sent to, did not attend the meeting of the selectmen, when an agreement was entered into by the physicians not to inoculate after the 20th of April. He was probably only a transient inhabitant of the town, but may have been the Samuel, son of Francis and Abigail Marshal, who was born in Boston, 12 May, 1747.

Mather, Mr. There were two Mr. Mathers, one who agreed with the selectmen at their meeting with the "Gentlemen Physicians" in 1764, not to inoculate after the 20th of April, and one who, although notified, failed to attend and enter into the agreement.

Mather, Thomas. Dr. Thomas, the son of Rev. Dr. Samuel and Hannah (Hutchinson) Mather, was born August, 1738. He was a surgeon in a Provincial regiment. He died unmarried in Nova Scotia in 1762.

Nazra, Mathew. Of him we only know that his widow, Mary, died 12 September, 1759, in her eighty-eighth year.

Noyes, Oliver, the son of John and Sarah (Oliver) Noyes, was born in 1675, and baptized 22 October, 1676. He married first Ann, daughter of the Hon. Andrew Belcher, and second Katherine, widow of the second David Jeffries.

He graduated at Harvard College in 1695, was representative for many years, and very prominent in town affairs, and highly esteemed as a physician. Sewall speaks of Dr. Noyes in 1707. In 1710, with others, he proposed to build a wharf, where Long Wharf is now situated. In 1716 he was one of a committee on the erection of a market house. Hutchinson writes of him that he was of a very humane, obliging disposition, and very strongly attached to the popular party. 14 March, 1720-21 Sewall writes: "Dr. Oliver Noyes is seized with an apoplexy at 10 at night." March 16, "Mr. Foxcraft preaches [Thursday lecture], prays for Dr. Noyes who died at 4 p. m." March 20, "Dr. Noyes is buried in his New Tomb in the South Burying-place."

He joined the Artillery Company in 1699, was an officer in the Boston militia, being an ensign in 1708. He was a member of the Old South Church. He had a son, Belcher, who sold real estate, formerly his father's, in 1743.

Pecker, James, was born in Haverhill, the son of Dr. James Pecker, of that town. He graduated at Harvard College 1743 with the degree of A.M., and settled in Boston. He was a founder and first vice-president of the Massachusetts Medical Society. Towards the close of his life he had a stone in the bladder, which was successfully removed by Dr. Rand. He was a loyalist, and his arrest was ordered by the Council of Massachusetts April, 1776. He died in 1794.

Pecker, James. Whitman, in his "History of the Anc. and Hon. Artillery Company": "Capt. James Pecker, Boston, physician; in his will styled wharfinger. Founder of the New Brick Church. He died in Boston, 30 April, 1734, after a lingering illness, very much lamented. Inventory, real and personal, £2,873 10 3. Grave-stone in the chapel ground. Member of the Old South Church." He joined in 1718.

Perkins, John, was born in Ipswich, 28 August, 1676, H. C. 1695. He first practiced in Ipswich, but soon removed to Boston. He married 11 December, 1697, Mrs. Mary McFarland; she died in Boston. He married secondly, Mary, daughter of Anthony Checkley, of Boston,

Perkins, John, son of the preceding, was born 9 March, 1698, and was an eminent physician of the town; he studied two years in London, and practiced forty years in Boston. In 1755 he published a tract on earthquakes, also an essay on small-pox in the *London Magazine*. He left a manuscript of 368 pages, containing an account of his life and experience, which is preserved in the library of the American Antiquarian Society. On account of old age he had retreated from practice in 1780, Eliot says. In 1736 he was one of the subscribers to Prince's "Chronological History of New England." His wife Clarissa died in 1749, and he wrote a poem on her death. He died in Lynnfield in 1780.

Perkins, Nathaniel, son of John and Mary (Checkley) Perkins, was born in Boston about 1714-15. In 1723 attended the Boston Latin School.

Sabine writes:

Nathaniel Perkins of Boston, Physician, H. U. 1734. When in 1764 hospitals were established in Boston Harbor for treatment of the small pox by inoculation, he was one of attendant physicians. Dr. Perkins was an addresser of Gage 1774, went to Halifax with British Army 1776, was proscribed and banished 1778, died 1799.

Eliot says he was supposed to attend a larger number of patients as a physician than any other practitioner in the town. In 1760 his home was on Wing Lane.

Perkins, William Lee, the son of Dr. John and Abigail Perkins, was born in Boston, 10 February, 1736; baptized at the New Brick Church, 13 February, 1736 7. He was a descendant of Rev. William Perkins, of Topsford. Eliot says that in 1780 "was respectable as to business and reputation." His name appears on the list of those who in 1778 were proscribed as enemies of the new State, but if Eliot is correct, he was not of those who left the town. Toner says he practiced in Boston about 1764 and was in good repute.

Sabine, in his account of the Loyalists, says:

William Lee Perkins of Boston, physician, An Addresser of Gage 1775. Went to Halifax 1776. Washington on taking possession of Boston ordered his stock of medicines to be seized for the use of the Continental Army. In 1778 Dr. Perkins was proscribed and banished. He died at Hampton Court, Eng. He was an author of "several medical publications of much merit."

Peters, Alexander Abercrombie, in 1780 resided on Marlboro' street, and is found only in the directory.

Phillips, Nathaniel, son of Nathaniel and Mary (Waterman) Phillips, was baptized at King's Chapel 14 October, 1757. Toner says he "resided in Boston at an early date and kept an apothecary shop in Orange (now Washington) street, at the corner of Bennett." His name is in the Directory for 1789 as an apothecary, and it may be an error to include him among the practitioners.

Pope, John. In the *Massachusetts Centinel*, 21 September, 1785, we find this notice of a pedagogical charlatan:

John Pope, who, for eighteen years past has been noted for curing Cancers, schropulus Tumour, fetid and phagedemic Ulcers, etc., has removed into a house, the north corner of Orange and Hollis Street, South End, Boston, where he proposes to open a school for Reading, Writing, Arithmetic.

Pynchon, Charles, born 31 January, 1719, was of Springfield, and only temporarily here during the small-pox epidemic of 1764. He was one of the founders of the Massachusetts Medical Society. He died in Springfield, 19 August, 1783.

Rand, Isaac, jr., the son of Dr. Isaac Rand, of Charlestown, was born in Charlestown, 24 April, 1743; married Anna, daughter of John Adams. He settled in Boston; he died 11 December, 1822. He received his A.B. from Harvard in 1761, an honorary M.D. in 1799; was an overseer of the college. He was one of the founders of the Massachusetts Medical Society, and its president from 1798 to 1804, and gave the first annual address before that society, choosing as his subject "On Phthisis Pulmonia *and the use of the Warm Bath.*" His father was vice-president of the society from 1787 to 1790, and also one of the incorporators.

Dr. Isaac Rand was one of the most learned men of his day. Being much of a mathematician, he was seeking for something like demonstration on which to lean in his profession. For want of it he was always dissatisfied, and probably read more books than any physician among us. He was apt to pin his faith upon the *last book*. He was, however, a successful practitioner, had a discriminating judgment, was a good surgeon, and remarkably neat in his operations."—Eliot.

Rand, Samuel. Whitman gives, among those who joined the Artillery Company in 1718, "Capt. Samuel Rand, Boston, physician," and adds, "Lieutenant of the Art. Co. 1731; officer of the militia. I suppose him an ancestor of the late Dr. Isaac Rand, of Boston. His will was dated January 9th, proved Feb. 21st, 1748. His gravestone was recently standing in the Granary ground. A member of the Old South Church."

Rand, William. Whitman, in his history of the Anc. and Hon. Art. Co., gives this name as first appearing on the roll in 1732, simply adding, "Boston, physician, member of the Old South." He was probably son of Thomas, and born 4 May, 1689, died 29 May, 1759. He kept an apothecary store at the sign of the Unicorn, near the Town Dock, in 1733. Was admitted to Old South Church 24 February, 1722; his grave stone is in King's Chapel yard. His daughter Sarah married Benjamin Lord 13, August, 1735. He is probably the graduate of Harvard of the class of 1721.

Rand, William, another William, son of Samuel, and grandson of Thomas, was born 27 August, 1716, dying in 1758; was also an apothecary. He was an army surgeon at Louisburg in 1745. His estate was administered by his nephew, Henderson Inches. He was perhaps the graduate of 1742 at Harvard College.

Read, William. I have found the name of Dr. William Read, and nothing more.

Roberts, Doctor—Dr. Roberts in 1764 inoculated forty-three persons, supplied the necessary medicines, and attended them gratis (see page 180).

Rogers, Theophilus, son of Capt. Ezekiel and Lois (Bligh) Rogers, was born at Lynn, 1 October, 1699; removed to Boston in 1720, but soon emigrated to Norwich, Conn., and married the daughter of Wm. Hyde, of that town, where he died 29 September, 1753; his wife died soon after, on the 24th November of the same year, aged fifty-three years and seven months.

Rogerson, Robert. Of him or his name I have only learned that Robert and Lucy Rogerson had a son Robert born 30 January, 1768, and that Robert Rogerson and Lucy Dearing were married 24 March, 1785. A Robert Rogerson received an honorary A. M. from Harvard College in 1765, and died in 1799.

Spooner, William, the son of John, jr., and Hannah (Jones) Spooner, born in Boston, 24 March, 1760; H. C., 1778; studied medicine with Dr. Samuel Danforth, of Boston, and was surgeon in ships of war in 1781-2. In 1782 he went to Edinburgh to complete his professional studies, where he received the degree of M. D. in 1785; he returned to Boston in 1786, and immediately commenced the practice of medicine. He was a member of the Royal Medical Society of Edinburgh; of the Massachusetts Medical Society; of the American Academy; of the Massachusetts Historical Society in 1796. He was several times representative and senator in our State Legislature; a trustee of Humane Society of Massachusetts, and a member of Board of Overseers of Harvard University. He married, 21 October, 1788, Mary, daughter of John and Mary (Winthrop) Phillips. She was born 23 September, 1763. He died in Boston, 15 February, 1836.

Sprague, John, was born in 1713; graduated at H. C., 1737; was a pupil of Dr. William Douglass at the time of his death, and later of Dr. Dalhonde, whose daughter he married. He began practice and continued to reside in Boston, until the death of his wife. He again married Mrs. Esther Harrison, widow of Charles Harrison, esq., a lady of fortune, and removed to Dedham, where he remained until his death, in 1797. He acquired a considerable fortune, which, it is said, was due not so much to his successful practice as to the rise in soldiers' claims, which he largely purchased. He considered himself one of the incorporators of the Massachusetts Medical Society, an honor which

was claimed by Dr. John Sprague, of Newburyport, as being the elder of the name in the State. The latter having been elected to fellowship, wrote that he considered himself an original member, whereupon Dr. Sprague, of Dedham, resigned, but was immediately elected a fellow. In 1799 he was a delegate to the Massachusetts Convention for framing a constitution. He resided in Federal street in 1780, and was there in 1796.

Eliot says he had retired (1780) on an ample fortune, his practice had been large, and that he had a confidence placed in him which followed him in his retreat; he was sent for and consulted by physicians in Boston for many years.

He received the honorary degree of M.D. from his alma mater in 1792.

Sprague, John, jr., perhaps the graduate of H.C. in 1765, and Fellow of the American Academy, and who died, 1800.

St. Mard, Peter, called himself a surgeon, and in 1796 resided in Garden court, North square; he became a licentiate of the Massachusetts Medical Society in 1811, and died in 1822.

Stewart, George, married 2 June, 1715, for his second wife, Ruth, daughter of John Cutler, who was born 22 February, 1691-2, at Hingham. Dr. Stewart was treasurer of the Episcopal Charitable Society in 1731, and an attendant at King's Chapel, and of him I know nothing more.

Swetzer, Henry Sebastian. The *Boston Weekly News-Letter* of 11 January, 1717, has the following, which necessitates including Swetzer among the *practitioners*:

Boston, On the Lords day Morning the sixth Currant, a strange thing fell out here, One Thomas Smith a Sawyer about four Month ago, bought a Lusty Tall new negro, fit for his Employ, who after complain'd of something within him that made a Noise Chip, Chip, Chip; his Master sent for a Doctor, one Sebastian Henry Swetzer, a German, who told him he had Worms, whereupon he gave him some Physick on Wednesday: from Thursday till the Lords Day he gave him some Powders, which on the Lords Day had that effect as to cause him to vomit up a long Worm, that measur'd a hundred and twenty eight Foot, which the negro took to be his Guts: it was almost as big as ones little Finger, its Head was like a Snakes, and would receive a Mans little Finger into its Mouth, it was of a whitish Color all full of Joynts, its tail was long and hard, and with a Microscope it seem'd to be hairy; the Negro before voiding the Worm had an extraordinary Stomack.

Tamer, Mr. Of him it is only known that he was one of those who entered into the agreement with the selectmen in regard to inoculation in 1764.

Thomas, John, a surgeon, born in Plymouth, son of Dr. William Thomas.

Thomas, Joshua, was born 1766. Married 1 October, 1789, Anna Thomson. H. C. 1772; Fellow American Academy; member Massachusetts Historical Society. He died in 1821.

Whitman gives:

"JOSHUA THOMAS, Boston, physician," as joining the Art Co. in 1792.

Thomas, William, born 1718; died 1804; had son John, mentioned above.

Townsend, David, the son of Shippie and Ann (Kettell) Townsend, was born in Boston, 7 January, 1753. He graduated at Harvard College in 1770, and received from that institution the honorary degree of M.D. in 1813.

Dr. Townsend studied medicine with Dr. Joseph Warren. He was at Cambridge at the time of the battle of Bunker Hill and aided in caring for the wounded after that engagement. He was commissioned 12 July, 1775, as surgeon in Col. Jonathan Brewer's Regiment. He was commissioned 1 January, 1776, surgeon in the Sixth Regiment (Col. Asa Whitcomb). In March, 1777, he was appointed senior surgeon in the General Hospital of the Northern Department with the army for the invasion of Canada. On the reorganization of the army, he received, 1 January, 1781, a commission as surgeon-general of the hospital department, to date from 10 October, 1780, which position he held by subsequent reappointments until the close of the war, after which he successfully practiced his profession until his death, 13 April, 1829.

He was secretary, vice-president, and president of the Society of the Cincinnati.

Tufts, Cotton, was born in Medford in 1731. Graduated at Harvard College 1749, studied medicine with his brother, Dr. Simon Tufts, and settled in Weymouth, where he died in 1815, aged eighty-four.

Dr. Ebenezer Alden in his "Early History of the Medical Profession in the County of Norfolk," says:

He was esteemed as a well educated and judicious physician. In early and middle life he had an extended medical practice. * * * He was much in public life; a

finished and well-bred gentleman of the old school, courteous, dignified, not even assuming to himself titles or places which did not belong to him, nor shrinking from the performance of any duty to which he was properly called. * * * Toward the close of life his time was so much engrossed with public trusts, that he was not so much occupied in general practice.

He was an incorporator of the Massachusetts Medical Society, and its president from 1787 to 1793. He received the honorary degree of M.D. from Harvard in 1785.

Warren, John, was born in Roxbury, 27 July, 1753. He was graduated at Harvard in 1771, and received the honorary degree of M.D. in 1786. He was one of the founders of the Massachusetts Medical Society, its corresponding secretary from 1787 to 1800, vice-president from 1800 to 1804, president from 1804 to his death, which occurred 4 April, 1815, aged sixty-two. He was Hersey professor of anatomy and surgery, a fellow of the American Academy.

Warren, Joseph, the eldest son of Joseph and Mary (Stevens) Warren, born in Roxbury, 11 June, 1741. Graduated at Harvard College in 1759, kept school in Roxbury in 1760, studied medicine in Boston with Dr. James Lloyd, and settled there as a physician. He married, 6 September, 1764, Elizabeth, daughter of Dr. Richard Horton, of Boston. He pronounced the town oration of 5 March, 1771, 1775; was active in battle of Lexington, and in a combat which terminated in the destruction of a British ship of war on Chelsea Beach; he was president of the Provincial Congress, received commission of major-general from that body, was killed at the battle of Bunker Hill, aged thirty-four years and six days. At the time of his decease he was Grand Master of all the lodges of Free Masons in the United States.

Of his practice, Eliot writes that it "was large and increasing when he lost his life and immortalized his name."

Welsh, Thomas, was born in 1751. Graduated at Harvard College in 1772, receiving the honorary degree of M.D. in 1811; was a fellow of the American Academy, and a founder of the Massachusetts Medical Society, its vice-president 1815 to 1823, its treasurer 1783 to 1798, corresponding secretary 1805 to 1815; was an active surgeon during the Revolutionary War, at one time attached to the Marine Hospital at Charlestown, later quarantine physician of the port, and for many years a consulting physician of the Massachusetts General Hospital. He died

February, 1831, the oldest physician in the city and the last survivor of the founders of the Massachusetts Medical Society.

Whipple Joseph, one of the founders of the Massachusetts Medical Society, and its corresponding secretary from 1800 to 1805. In 1780 he resided on Orange street, and in 1796 on South Bennet street.

Eliot says that "in 1780 was rising into notice, Dr. Joseph Gardiner having taken him under his protection."

He lived on Bennet street in 1791. He died 1804, aged forty-eight. Toner says he acquired a large professional business.

Whitworth, Miles. This name occurs very frequently in the records of the town. He was a surgeon under Pepperrell at Louisburg, in the campaigns against Ticonderoga and Quebec, and in Nova Scotia under Winslow. In 1774 he was an addresser of Hutchinson. He remained in Boston during the siege and was attending physician and surgeon to the Whig prisoners who were wounded at the battle of Bunker Hill. In 1776 he was arrested and confined by order of the Council of Massachusetts. He died in Boston in 1779 of a fever contracted while in prison.

Of him Eliot says:

He had once a respectable share of practice. He was unfortunately the attending surgeon at the jail in 1775. The wounded prisoners from Bunker Hill were thrown into the common prison, and provided with little better than jail provisions. They suffered, and some died; in particular, Lieutenant-Colonel Parker, a very respectable man. Much blame was laid upon the doctor; whether justly or not, is dubious. He remained in Boston, was neglected, and died in 1778.

His wife was Deborah Thayer; they had a son, Miles, who graduated at Harvard University in 1772; entered the naval service as a surgeon, and died unmarried in England in 1778.

In the minutes of the Boston selectmen for 1764, we find this entry:

The selectmen appointed Dr. Myles Whetworth to take charge of the Province Hospital New Boston as Physician to the Sick that may be sent there from time to time; and also agreed with him to provide and furnish the Patients with what Provisions and Medicines may be necessary and that he does not suffer the Sick to want anything for their Comfort while under his care.

Ezekiel Price, in his Diary under date of Saturday, 20 April, 1775, records that:

Dr. Whitworth and son were yesterday on their examination and afterwards ordered to give bail. It is said the justices have evidence of the Dr. not having acted the part of an honest surgeon in his practice on the late unfortunate Col. Parker, that

his limb was unnecessarily taken off, a cruel neglect of attendance on him, by which means he lost his life.

In the town records we find the name given as Whitworth, occasionally as Whetworth, and in some accounts more erroneously as Whitmarsh.

Whitwell, Samuel, was born in Boston, 12 January, 1754; studied at the Boston Latin School, and in 1774 graduated from Princeton College.

He studied medicine under Dr. James Lloyd, and on 1 January, 1777, was commissioned surgeon of Col. John Greaton's Regiment (Third Continental), and served throughout the war. He was one of the thirty-six officers who signed the original "Institution" of the Cincinnati Society, adopted by the representatives of the American army at the cantonment on Hudson River, 13 May, 1783. On 4 July, 1789, he delivered an oration before the Society of the Cincinnati, which was printed at the request of the society. He died at Newton, 21 November, 1791.

Williams, Nathaniel. Of him Dr. Green writes:

He was an active and useful man in his day and generation. In the affairs of life he performed the triple rôle of preacher, doctor and schoolmaster. The union of these three characters was no infrequent occurrence in former times. In each he appears to have played well his part; and his career entitles him to more than a passing notice. He was the son of Nathaniel and Mary (Oliver) Williams, and was born in Boston, August 23, 1675. He graduated at Harvard College in the class of 1693, and in the summer of 1698 was ordained,—according to the sermon preached at his funeral by Thomas Prince,—“an EVANGELIST in the *College-Hall*, for one of the *West India Islands*. But the climate not agreeing with his Constitution, He soon returned to this his *native City*.” At one time he was engaged in giving private instruction to boys, and he had the reputation of being an excellent classical scholar. In the year 1703 he was appointed usher at the Free Grammar School, now known as the Boston Latin School; and subsequently, in 1708, he was chosen to the mastership, which position he held until 1734. He studied “*Chymistry and Physick* under his Uncle the Learned Dr. *James Oliver* of *Cambridgee*; one of the most esteemed *Physicians* in his Day;” and even while teaching continued to practice his profession of medicine. He died January 10, 1737–38; and “The Boston Weekly News-Letter” of January 12 calls him “the Reverend and Learned Mr. *Nathaniel Williams*,” and speaks of him “as a very skilful and successful *Physician*,” and says that “as his Life has been very extensively serviceable, so his Death is esteemed as a public Loss.” A posthumous pamphlet by him was printed many years after his death. The title was “The METHOD of Practice in the *Small-Pox*, with Observations on the Way of *Inoculation*.” Taken from a Manuscript of the late Dr. NATHANIEL WILLIAMS of Boston in N. E. Published for the Common Advantage, more especially of the *Country Towns*, who may be visited with that Distemper.”—

Boston, 1752. At the end it contains four pages with the heading "Small Pox by Inoculation, in 1730." Dr. Williams had a large practice.

Winship, Amos, who lived on Hanover street, near the Mill Bridge, in 1780 and in 1796, was probably born in Lexington, 19 December, 1750, the son of Jonathan and Elizabeth Windship. He graduated at Harvard, receiving his A. B. in 1771, his A. M. and M. B. in 1790, and his M. D. in 1811, the year of his death. He was a corresponding member of the London Medical Society. In the first volume of the *Boston News-Letter* he is spoken of as of Lexington, Mass. A child of Dr. Amos Winship, "Letsance," was presented at Hollis street Church for baptism in 1791 by his grandfather, Mr. E. May, "the father being absent." From this circumstance we may doubt if Dr. Winship of Boston and Dr. Winship of Lexington are one and the same.

Young, Dr., was here in 1761, and inoculated seventeen patients.

Young, Lemuel. Toner says that Elijah Hewins, who was born in 1717, and after serving in the Continental army as a surgeon, "studied with Dr. Young of Boston."

Young, Thomas. He was one of the Boston Tea Party, and also was one of the Committee of Correspondence with Joseph Warren and Benjamin Church.

It was proposed to substitute the celebration of the Boston Massacre for that of the Gunpowder Plot. Accordingly when the evening arrived in 1771 an address was delivered by Dr. Thomas Young to a collection of people at the Manufactory House.

The following physicians are given in the first Boston Directory, 1789. In the general list of names are the following, and except as given differently, the word "physician" only, follows the name and precedes the residence:

Appleton Nathaniel W.	†Pecker James.
Bullfinch Thomas.	Rogerson Robert.
Danforth Samuel.	*Rand Isaac.
Dexter Aaron.	*Spooner William.
Eustis William.	*Townsend David.
Hayward Lemuel.	°Whipple Joseph, physician and surgeon.
Jarvis Charles.	*Warren John.
Kast Thomas.	Windship Amos, physician and apothecary.
Leavitt Josiah.	*Welsh Thomas.
Pope John, School-master and surgeon, particularly a curer of cancers and malignant ulcers, &c.	

In a separate list of the physicians and surgeons are the following, in addition to those given above:

- | | |
|------------------------|------------------------------|
| *Lloyd James. | *Cheever Abijah. |
| *Homans John, 47. | *Fleet John. |
| *Sprague John, junior. | Peters Alexander Abercrombie |

With the exception that the names of Leavitt and Pope are omitted.

In a list of the omissions given at the end of the volume, the names and residences of Homans, Lloyd and Peters are given,

Physicians in the Boston Directory for 1796 (the second one):

- | | |
|---|----------------------------|
| Bertody Francis. | *Jarvis Charles. |
| Bulfinch Thomas. | *Jeffries John. |
| *Cheever Abijah. | *Kast Thomns. |
| *Dexter Aaron. | *Lloyd James. |
| *Danforth Samuel. | *Rand Isaac. |
| Enslin John Frederick. | Read William. |
| *Eustis William. | *Spooner William. |
| Fay Nahum. | *Sprague John. |
| *Fleet John, jr. | St. Medard Peter, surgeon, |
| *Hayward Lemmel. | *Welsh Thomas. |
| *Homans John. | *Warren John. |
| *Jackson William, apothecary and physician. | *Whipple Joseph. |
| | Windship Amos. |

I have prefixed an * to the names of those who were Fellows of the Massachusetts Medical Society.

In closing this sketch I desire to acknowledge the kindness of many of my professional friends in freely rendering me assistance; to Doctors Samuel A. Green and Francis H. Brown I am especially indebted.

THE STREET RAILWAY SYSTEM OF BOSTON.

BY PRENTISS CUMMINGS.

THE street railway for the transportation of passengers was an American invention; and the first successful horse railroad for that purpose¹ was laid in New York city in 1852. Its engineer was a Frenchman named Lombât. The principal advantage of the system claimed at the outset was economy of horse-power from the use of a permanent rail. The saving of power by such use is, in fact, much greater than a casual thinker would suppose,² and accounts in part for the smallness of the fares necessary to support a street railway; but experience has shown many other advantages of perhaps still greater importance, of which its earliest advocates did not dream.

Probably there is no locality where a greater change has been wrought by street railways than in Boston and its suburbs. It will be borne in mind that at the time of the advent of the street cars in 1856, Charlestown, Roxbury, West Roxbury, Dorchester and Brighton were independent municipalities. Cambridge was a small city of 20,000 inhabitants; and Cambridgeport was to a very considerable extent a mere marsh with a few insecure roads across it. All the bridges leading into Boston were then toll bridges, and the Milldam and Chelsea roads,

¹Tramways operated by horse power were used in coal mines in England many years before that date; and to some extent horses were there used on railways for passengers, before the steam engine was perfected, *but not on the streets*. A car drawn by horses was also run at one time over vacant land between Harvard Square, Cambridge, and Union Square, Somerville, connecting with the Fitchburg Railroad.

²Some engineers have estimated that one horse can haul as large a load on a good rail as thirty-three horses could haul on an average country road. Of course this proportion would vary greatly according to conditions of grade and street construction.



Wm. A. Allen

and perhaps others, were turnpikes upon which tolls were charged.¹ The only public means of communication between any of these places and Boston was by lines of coaches. Cambridge, then, as now, was the largest of the suburbs, and the best service at any time between Cambridge and Boston was a coach every half-hour during the business portion of the day; and this service was irregular and uncertain, the coaches often foundering in the muddy streets; and the patronage was precarious.² The service between Boston and Roxbury, Charlestown and other suburban towns, was little, if any, better. It was in the main impossible for men doing business in Boston to live outside the city; and no great amount of business could be done either in the city or suburbs.

At this day it is difficult to realize that a state of things so suggestive of the dark ages existed here within the recollection of comparatively young men now living; and it is not too much to say that the street railway has wrought a complete revolution in the habits, condition, and even civilization³ of the community. In short, it is the street railway that has made Boston possible.

CONSTRUCTION OF MAIN LINES.

The opening of a horse-car line in New York in 1852 was suggestive of what might be done in this vicinity; and a charter was obtained that same year from the General Court for a horse railroad connecting Dorchester and Roxbury, but it was not constructed until several years later.⁴ In 1853 the Metropolitan Railroad Company and the Cambridge Railroad Company were incorporated to connect Boston with Roxbury and Cambridge respectively.⁵ The Metropolitan charter then granted

¹The Cambridge bridges were made free January 30, 1858, and the Charlestown bridges in April of the same year. Tolls were collected on the Milldam until December 8, 1808. In order to free the bridges to Cambridge, the Cambridge Railroad Company paid \$32,000, and this expenditure is represented by that amount of the capital stock of the West-End Company to-day.

²In some cases coaches were run under a guaranty of a certain revenue.

³Philosophic writers agree that railways and all else that facilitates intercourse between man and man are efficient agents in civilization. Macaulay, in speaking of the evils arising from bad roads in England, says that inventions that abridge distance are second only to the printing press in improving the condition of the race. Missionaries have noticed the vast influence for good of railways in heathen countries.

⁴The incorporators were William D. Swan, Charles C. Holbrook, and William Hendry.

⁵The incorporators of the Metropolitan road were J. P. Ober, Moses Field Fowler, and Henry N. Hopper; and of the Cambridge road, were Gardner G. Hubbard, Charles C. Little, and Isaac Livermore.

turned out to be defective, and no action was taken under it until after it had been amended the following year; but the Cambridge company was at once formed, and obtained its first location in Boston on Cambridge, Chambers and Green streets, December 4, 1854. This road encountered great opposition, particularly in Cambridge, and its tracks in Cambridgeport, where it was obliged to build the streets anew in order to get a firm foundation, were repeatedly torn up at night.¹ Capitalists felt great distrust of the enterprise, claiming, not unnaturally, that there was hardly business enough to support the coach line; and the contractor who built the original tracks between Harvard Square, Cambridge, and Bowdoin Square, Boston, and who took his pay in stock at par at the rate of \$30,000 per mile, became insolvent owing to the decline of the stock to less than \$50 per share. The original stockholders were unwilling to advance the necessary funds for equipping the road when built; and a new corporation, the Union Railway Company, was chartered for that purpose, with authority to lease the tracks of the Cambridge Railroad.²

The first street car in Boston was run March 26, 1856, from Cambridgeport to Charles street, and shortly afterwards the line was running regularly between Harvard and Bowdoin Squares.

The Metropolitan began the running of cars between the old Boylston Market at the corner of Washington and Boylston streets, and Eliot Square in Roxbury, the following September. The Cambridge Railroad reported over a million paying passengers for its first year's work, and the Metropolitan road over eight millions; and it at once became apparent to everybody that there was a demand for local transportation facilities far in excess of what had generally been supposed.

The success of the Metropolitan and Cambridge roads speedily led to the construction of other street railways. The Middlesex Railroad Company was chartered in 1854,³ and the first car ran into the city from Charlestown in 1857. The Broadway Railroad Company, from South Boston, was chartered in 1854, and commenced running in 1858.⁴ Ten

¹ When the writer graduated from Harvard in 1864, there were no paved sidewalks in Cambridge and no paved streets except the pavement between the rails, and in the spring of the year the whole community habitually walked on the car tracks.

² The incorporators of the Union Railway were John C. Stiles, Moses M. Rice, and T. Russell Jencks. The Cambridge road was operated under this lease until 1882.

³ The incorporators of the Middlesex road were Asa Fisk, Richard Downing, and Asa Kimball.

⁴ The incorporators of the Broadway Railroad Company were Charles J. F. Allen, Seth Adams, and John P. Monks.

years later its name was changed to the South Boston Railroad Company.

The Suffolk Railroad Company was chartered in 1857 to construct lines in East Boston, and in the city to run from the East Boston Ferry through Hanover street to Scollay Square, and thence to extend to the Metropolitan tracks on Boylston street.¹

The Boston and Chelsea Railroad Company was chartered in 1854, to construct lines in Chelsea, and connect with the Middlesex road in Charlestown.² This road first assumed importance on being leased by the Lynn and Boston Railroad Company, which obtained a charter in 1859.³ The Lynn and Boston is the only street railway in Boston to-day (June 1, 1893) which is not a part of the West End system. It reaches its terminus in the city at Scollay Square by way of Charlestown, and extends in a northerly direction to Marblehead and Salem, and makes connections with other street railways running as far as Newburyport.

The above are the principal lines operated in Boston, but most of them had several branches which are not of sufficient importance to require detailed description, but with which they afterwards consolidated.⁴

CONSOLIDATION OF BRANCH AND MAIN LINES.

The Chelsea and East Boston road laid tracks from Chelsea connecting with the Suffolk Railroad in East Boston; and this road was consolidated with the Metropolitan in 1865, the Suffolk having been absorbed by the same company the previous year. The Metropolitan had made a similar union with the branches of the Dorchester roads in 1863, and purchased the franchises of the Brookline and Back Bay road in 1868. The latter company had tracks leading from Brookline village to Roxbury crossing; and by means of its charter, the Metropolitan road acquired the right to obtain locations in Brookline.

¹ The incorporators of the Suffolk road were George H. Plummer, Ebenezer Atkins, Edward F. Porter, David L. Webster, Asa Fisk, and John G. Webster.

² The incorporators were Isaac Stebbins, John Low, Bradbury C. Bartlett, John Rice, and Thomas Russell.

³ The incorporators of the Lynn and Boston road were Charles Porter, William W. Wheildon, E. B. Phillips, Henry A. Breed, John Story, Benjamin Shurtleff, and Moses F. Rogers.

⁴ In fact there was at this time a most exaggerated idea of the value of street railway franchises, which resulted in something like an epidemic on the subject. Many charters were obtained which were never used, and many small roads were built long in advance of any sufficient demand to justify their cost. All the branch roads above named laid tracks which have been maintained to the present time.

The Metropolitan road, largely through the Suffolk charter, which gave rights in the centre of the city which at the outset would have been granted to no company, long before the West End consolidation had become the largest street railway in the world.

In like manner the Middlesex road absorbed branch lines in Somerville, Medford, Malden, and Everett.¹ The Cambridge Railroad Company acquired in the same way tracks in Arlington, Watertown, Newton and Brighton.²

Some of these branch roads were doubtless built in good faith, and some for the express purpose of being sold at a profit. There have been several periods in Boston when it has been a regular industry to build roads to use the tracks of the old companies, and intentionally to become such a nuisance as to lead to their being purchased at a large price.

PERIOD OF EXTENSIONS AND ENCROACHMENTS.

The four great roads I have named—the Metropolitan, Middlesex, Cambridge, and South Boston—grew rapidly and made many extensions within their proper territories, some because they were needed, and some to prevent the formation of rival companies.

As the tracks of the Metropolitan Company in the centre of the city were the most profitable of any to operate, the other roads sought every pretext of public convenience to secure the right to cross the city. The Middlesex road, whose earliest terminus was near Haymarket Square, soon obtained permission to run its cars to Scollay Square; and the South Boston road, whose early terminus was Summer street, speedily obtained the right to run to the same point; and after a stubborn fight, the Cambridge company obtained the same privilege for its East Cambridge cars, which passed the Northern depots. Thus all the roads met at the old Scollay Building, which was employed as a transfer station; and the Legislature made a limited provision for commutation checks to be there used. When that building was removed, the Middlesex and South Boston roads obtained the right to run to the Southern and Northern depots respectively. Charlestown, meanwhile, had

¹ The several companies originally owning these lines were the Somerville Horse Railroad Company, the Medford and Charlestown Railroad Company, the Malden and Melrose Railroad Company, and the Cliftondale Railroad Company.

² The companies here referred to were the Watertown and Waltham Railroad Company, the West Cambridge Horse Railroad Company, and the Newton Railroad Company, the charter of the latter covering Brighton also.

become a part of Boston; so both of those roads had direct influence in the Board of Aldermen. Cambridge being an independent city, had no such influence; and it is fair to say that its Bowdoin Square cars were necessarily kept at that point by the narrowness of Court street. That company did, however, obtain the right to run through Charles street to Park Square.

There is no doubt that the running of cars from all sources far into or through the city proper was in the public interest, and also no doubt that the motive for so doing was greed; and the methods employed to obtain rights were simply piratical. It will give some idea of the extent to which this system was practiced to say that at the time of the general consolidation in 1887 the South Boston road was actually running more miles upon the tracks of the Metropolitan Company than upon its own; and one of its lines, known as the "Blue Line," only ran a few rods on the South Boston tracks, but made a wide circuit on the Metropolitan tracks through the business portion of the city.

RIVAL ROADS.

In 1872 the Highland Street Railway Company¹ was chartered for the avowed purpose of competing with the Metropolitan in the business of its original line between Roxbury and the city proper; and in 1881 the Charles River Street Railway² Company was chartered to compete with the Cambridge Railroad on its original line over West Boston Bridge. Of course, the main object of the promoters of both roads was to make money, but they were much aided both in obtaining capital and franchises by popular feeling against the two pioneer railways. The public had some real grievances to redress in both cases; and the two old roads were making money, which in the public mind is itself a grievance.

But the Highland Railway was a great benefit to the community in many ways. Its management introduced a better style of cars than had before been run in Boston; they exercised great care in selecting polite and competent employees, and were the first to uniform

¹ The original roads were chartered under the name of "Railroads" or "Horse Railroads." In 1874 an act of the Legislature provided that new companies should be entitled "street railway companies."

² The incorporators of the Highland Railway were Moody Merrill, Samuel Little, Henry Pfaff, Jacob Pfaff, Donald Kennedy and Charles G. Hayden; and of the Charles River Railway were Samuel L. Montague, Charles E. Raymond, Daniel U. Chamberlain, Edmund Reardon, Walter S. Swan, H. O. Houghton, J. M. W. Hall, Henry P. Woods.

them. The principal tracks of the Highland road were on Shawmut avenue, Blue Hill avenue, Columbus avenue, Dudley and Warren streets. This road is entitled to a large share of the credit of the present park system of Boston, for it was almost wholly due to its influence that Franklin Park was purchased and laid out by the city; and the whole Roxbury district was benefited and built up by its improved service. Its lines, however, were never pecuniarily profitable until long after the company had passed out of existence.

The Charles River Railway was also of some benefit in improving the service in Cambridge; but in other ways has been a permanent detriment to that city. Most of its tracks were located so close to existing lines as to be unnecessary, and therefore a needless encumbrance in the streets. Most of them have since been removed by order of the city authorities, and the money invested was therefore wasted, and has become a burden on the present company and on the public.

The Highland and Charles River roads, in another way, were a public detriment. Their very existence depended on the business they could secure on the tracks of other companies, and they sought to encroach wherever they could. Naturally, this excited much bitter feeling, and the management of the other railways were determined the so called piratical roads should not do a profitable business on their tracks. It is a well-known habit of the public to take the forward of two cars running near together, even if it be crowded; and the Metropolitan and Cambridge roads were at great pains so to arrange their time tables as to have a car to lead every car of other roads when on their tracks; and the other roads would keep shifting their time tables to prevent this. Employees had almost more partisan feeling than the managements, and there was a general practice of racing cars to get in ahead; and the car that was left behind would then fall back and go as slowly as possible in order to get passengers from the car in the rear. All this led to blockades, accidents, and other serious injury to the service.¹

¹ During this warfare, and while there was the greatest bitterness of feeling, the presidents of the several companies, under the name of the "We-Are-Seven Club," dined together monthly. They were Calvin A. Richards, president of the Metropolitan Railroad Company; Charles E. Powers, president of the Middlesex Railroad Company; Moody Merrill, president of the Highland Street Railway Company; Charles E. Raymond, president of the Charles River Street Railway Company; Charles H. Hersey, president of the South Boston Railroad Company; Amos F. Breed, president of the Lynn and Boston Railroad Company; Prentiss Cummings, president of the Cambridge Railroad Company. The ostensible object of the meeting was to have an opportunity for consultation for the mutual benefit of the roads and the service; but the real motive was to fathom

The successful efforts of these several roads to get rights upon each other's tracks led to a great many involved and zig-zag lines, which are still continued, the cause of which would be inexplicable to strangers unacquainted with the facts. It is impossible to change an established line without causing great dissatisfaction. People are very conservative in their habits of travel;¹ and in many cases have acquired homes on a particular spot which is convenient to a special line of street cars; and in other cases their place of business, or their occupation itself has been determined by that line. This is one illustration of the force street railways have been in establishing the habits and manner of life of the community; and even a slight change in the running of a line, which, to an outsider, would seem a manifest improvement, might, with certain people, unsettle the habits of a lifetime.

In 1886 an Act was passed by the Legislature authorizing the street railways running cars in or into the city of Boston to consolidate. This legislation was obtained owing to the efforts of the Highland and Charles River Companies, which had found competition unprofitable. By virtue of this act, the Cambridge and Charles River roads at once consolidated, under the old name of the Cambridge Railroad Company; and shortly afterwards the Highland and Middlesex Companies united under the name of the Boston Consolidated Street Railway Company.

THE GENERAL CONSOLIDATION.

In the fall of 1886, two new street railway companies were formed under the general laws by the same men, the West End and the Suburban. The original incorporators² started as a land company with the

the purposes of the other members if possible. The dinner was always a good one, and there was a great appearance of cordiality and frankness: but in discussing business, the whole truth was not always spoken.

¹ A business man who leaves his office to lunch at the same place every day will almost invariably take the same sidewalk, and cross the streets at the same points each time, though quite unconsciously. His partner, between the same points, may take a very different route, but it will be no less uniform. The staunchest advocates of the Highland and Charles River roads would abuse the old companies, but almost always ride in the old companies' cars to which they had become accustomed.

² The idea of the Beacon street improvement originated with Henry M. Whitney, of Brookline, who purchased or bonded large tracts of land along the proposed avenue. His plans were so far matured while at his summer house in Cohasset, that he made them known to certain other gentlemen in Cohasset for the summer who became associated with him. The original West End Land Syndicate were Henry M. Whitney, Asa P. Potter, Henry D. Hyde, G. T. W. Braman, and Isaac T. Burr. In addition to the above Jarvis D. Braman, Ezra H. Baker, Jonas H. French, Grenville D. Braman, M. F. Dickinson, jr., Chas. U. Cotting, N. W. Jordan, Elmer P. Howe, W. D. Forbes, and Dwight Braman, were among the original incorporators of the West End Street Railway Company.

design of uniting Beacon street, Boston, and Beacon street, Brookline, and widening the street in Brookline into a boulevard, and thus enhance the value of land owned by them along the route. In order to make this land marketable, it was necessary to provide transportation facilities; and at the outset these two railways were incorporated simply for that purpose. This Beacon street improvement was the most important in the recent history of Boston, and the West End Railway obtained the right to enter Boston through the new avenue and the Back Bay.

The Metropolitan Company opposed the new railway, regarding it as "another Highland;" but the advantage of the new line to the public was evident and irresistible. The two pioneer roads, the Metropolitan and the Cambridge, had always been friendly; and while these events were taking place, a plan to consolidate the two companies was formed and the details arranged. This alarmed the West End management, and they suddenly formed the purpose of buying a controlling interest in the stock of all the old roads except the Lynn and Boston, and uniting them; and in a few weeks they had acquired enough of the stock to be masters of the situation; and shortly afterwards obtained from the General Court the necessary legislation to bring about this general consolidation.

The Act provided that the new company might purchase the other roads, paying for the same in its own preferred eight per cent. stock, providing, however, that the entire amount of preferred stock so issued should not exceed the total existing capitalization of the roads so purchased. This legislation naturally met with opposition, but on the whole was sustained by public sentiment, for the intelligent part of the community could see that competition over the same tracks was not in the public interest, and the stockholders of the old companies knew that the existing rivalries were not only unprofitable, but actually imperiled the financial soundness of their several properties.

The final consolidation under the name of the West End Street Railway Company took place November 11, 1887.¹

¹The original officers of the company were: Henry M. Whitney, president; Prentiss Cummings, vice-president and clerk of the corporation; Calvin A. Richards, general manager; Joseph H. Goodspeed, treasurer; Charles S. Sergeant, auditor; Henry P. Woods, purchasing agent; Henry D. Hyde, general counsel. These officers are unchanged at this date except that Charles S. Sergeant has become general manager, and H. L. Wilson been chosen auditor in his place. Mr. Richards was general manager till February, 1888, and was succeeded by D. F. Linnstreet, who held that position till May, 1889. Then Frank H. Monks (a son of John P. Monks, one of the incorpor-

There is no doubt that this consolidation was a public benefit. Blockades at once ceased, and for three or four years were of infrequent occurrence; and while they are happening again in spite of the most careful management, the cause now is the insufficiency of the streets, and is recognized as being something for which the railway is not responsible. The best evidence that the consolidated road has been better run in the public interest than formerly is the fact that the recent increase in its travel is beyond precedent, and has taken place much faster than the increase in population.¹

In making this comparison it is to be considered that increase in travel in former years grew largely out of extensions into new territory; but the old roads in the main extended as far into the suburbs as is the proper mission of street cars to go, so that the West End road has made few extensions, and its increased patronage has sprung from better facilities on the old lines.

DIFFICULTIES OF THE BUSINESS IN BOSTON.

Owing to the narrow area which comprises the business district of Boston, and the fact that all of the eight or nine hundred cars, daily run by the company, pass through some part of that district on every trip, coupled with the further fact that the narrowest and most involved streets of the city are within that area, the problem of how the ever increasing business of transportation is to be handled has for many years been most perplexing, and has not yet been solved. The problem is still further complicated by the position of the Common and Public Garden, and the fact that on one side they adjoin Beacon Hill, which is impassable for street cars or heavy teams, thus forcing through Boylston street all street cars as well as other teams and vehicles coming from a wide area on the westerly and southerly side of the city. The Common was laid out as such when the Back Bay district was in

ators of the Broadway Railroad), became general manager, and was succeeded by Mr. Sergeant in April, 1892. From November, 1890, to November, 1891, while certain Power House construction was going on, Edmund H. Beardon was vice-president and clerk, Mr. Cummings meanwhile acting as counsel of the company and head of the Accident Department. Except as above stated the officers have remained the same.

¹The number of paying passengers for the years 1886-1892 were as follows: 1886, 86,246,780; 1887, 91,808,210; 1888, 97,039,919; 1889, 104,243,150; 1890, 114,853,081; 1891, 119,264,401; 1892, 126,210,781. It is estimated that the number for 1893 will be about 135,000,000. The average length of a round trip in 1887 was 7.11 miles; in 1892 it had increased to 7.74 miles, an increase of sixty-three one-hundredths miles or nine per cent. Since the introduction of electricity many more cars are run on the long lines than formerly. At present the company is running an average of about 55,000 miles per day.

fact a bay, and it was no obstacle to business; but now that the whole district is filled in between the old Mill-Dam and Roxbury and has become densely populated, and affords the most attractive of all the entrances into the city, there is no doubt that the Common is located in the worst possible place, so far as interference with business is concerned.

This fact is to be taken into account in considering the street railway business in Boston. In fact, Boston is the most difficult and expensive place for that business in the country, not only from the insufficiency of the streets, but the ordinary severity of our winters, the great cost of supplies, the rates of wages, and the higher grade of service demanded.

THE ELECTRIC SYSTEM.

One of the first things considered by the directors of the West End Company was the adoption of some new motive power, in order to gain room on the streets by the disuse of horses.¹ All the old roads were operated by horse power, and the West End Company required in 1887 nearly ten thousand horses. With its present business, twelve to fifteen thousand would be needed, if horse power were used exclusively.

Long continued and costly experiments with storage batteries were tried without success. Then careful investigation was made of the cable system. The difficulties of using that system in Boston were very serious, owing to the crookedness of the streets and the large number of drawbridges; and when petitioned for the right to use it, the several city governments were very reluctant to consent. While this question was under general discussion, it was reported that the overhead electric system had been proved a success in Richmond, Va.; and on investigation, this report was so far substantiated that the West End Company determined to try that system on its new line on Beacon street. It was a street admirably adapted for the purpose. Considerable opposition to the granting of the right to use overhead wires was

¹ On June 1, 1893, the company owned 2,158 cars, including both box and open cars. Of these about 900 are in daily use, and, being mostly long cars, occupy about five miles of street space. Short cars, having the same aggregate seating capacity, with horses attached, would occupy about eight miles of space. In four horse time the discrepancy would be much greater. When all the cars are on time there would always, during business hours, be 305 of these cars within the limits of the congested district of Boston; and thus one mile of street space would be there saved by the electric system. In case of a blockade there might be double that number of cars accumulated, in which case two miles of space would be saved.

made, but was finally overcome by an agreement to use an underground conduit for carrying the wires on the Back Bay. The conduit proved a failure; but the overhead system gave so much satisfaction that a general right to use it in Boston was granted in 1889; and it is now in use on about seven-eighths of the road.¹

POWER HOUSES.

The power is supplied by three power houses belonging to the company. The first was built in Allston, and contains a plant of 1,120 horse power. The principal power house is known as the "Central Station," and has a capacity of 14,320 horse power. It was begun in 1889 on the site of the old Hinkley Locomotive Works on Albany street. The third power house is located in East Cambridge on the old Glass Company site, and has a capacity of 4,200 horse power. These power houses have had visitors from all parts of the world.

ADVANTAGES AND DISADVANTAGES OF STREET RAILWAYS.

The street railway has sometimes been described, not inaptly, as a "necessary nuisance." This is a concrete way of expressing a general truth applicable to most things in this world, that good and evil are united inseparably. I refer not simply to a union of different things, like that of the wheat and the tares mentioned in the Scripture, but to the fact that the same thing is both good and bad from different points of view. Thus a railway is impossible without a rail, and a street railway is impossible unless its rails and its cars occupy a street.² All its distinctive advantages and disadvantages are necessarily involved in the same fact. The rail in the street is a nuisance to light vehicles;³ and the use of the streets by numerous cars is a source of danger and inconvenience in many ways. If the operation of street cars could be confined to some lonely field in the remote country, they would neither be unsightly nor in the way, nor a source of accident or apprehension; and they could be run on time, never be crowded, nor offend by noise—in short, would be quite unobjectionable, and unfortunately, quite useless also.

¹ On June 1, 1893, the West End Company owned 1,803 car service horses, 45 tow horses, and 338 driving and teaming horses.

² On June 1, 1893, the West End Company had in the public streets 243½ miles of tracks.

³ The rail is a positive advantage to heavy teams, particularly on country roads or other unpaved streets.

Crowded thoroughfares are a necessary incident to a large city, and means of transit for a numerous population are indispensable, and the transit mainly must be through those thoroughfares. The problem is how it can best be accomplished. Four hundred thousand fares,¹ in round numbers, are collected daily on the West End lines, and substantially all the passengers, not to mention those who walk or use some other conveyance, pass through a small district in Boston. This is a fact, without which Boston would not and could not be Boston. Provided the sidewalks were adequate to enable everybody to walk, which they are not, only a limited number would do so, and in a short time there would be no congested district, but the business, like the people, would be somewhere else. If some other means of conveyance were possible, it would necessarily be too expensive for free and general use; but such other means of conveyance is physically impossible for want of space, and would be vastly more dangerous than the street car, if attempted.²

¹ As the receipts of the company pass through the Receiver's and Auditor's Departments the following explanation of how the business is done in those departments may be of interest:

The Receiver's Department consists of twenty-six employees, whose duties are as follows: Eight station or division receivers, two collectors, six cash counters, five ticket and check counters, five entry clerks.

At the end of the day's work the conductor makes out a separate report for all cash, tickets, checks, etc., collected on each route run. These, together with the cash and the tickets, are enclosed in a canvas bag and deposited in the safe at the station from which he starts. This safe is an automatic affair with a hole in the top, into which the conductor drops the bag, which, falling through the shoot into the safe, rings a bell, which proves that it safely reaches its destination. Early each morning two collectors, with separate teams, drive to each of these stations, open the safes and bring all these bags to the receiver's office at headquarters. Here the money counters verify the cash, the ticket counters verify the tickets and checks, and the entry clerks enter the day-cards upon sheets provided for that purpose, under separate heads for each route. At the end of the day these sheets are totaled, which shows the earnings for that day. The sheets, together with all day-cards, are then forwarded to the auditor, where each entry is examined and each conductor's report compared with the register returns, which are sent direct to this office from the inspectors at the different stations. If a conductor turns in more than the register calls for, the money is returned to him; if less than it calls for, he is charged with whatever there may be short. By this simple method the company is assured of every fare that is registered. A day's earnings of \$20,000 is returned to the receivers, divided up about as follows: \$10,000 in bills (mostly small), \$500 in silver dollars, \$1,700 in silver half-dollars, \$3,000 in silver quarter-dollars, \$2,000 in silver dimes, \$1,400 in nickels, \$1,400 in eight-cent checks, etc.—total, \$20,000. The change is mostly disposed of to banks and retail merchants, who send for what they want daily. The Auditing or Accounting Department consists of thirty-eight clerks, each one of whom has some regular work assigned to his charge: Seven clerks on revenue work, three clerks on disbursements, two clerks on pay rolls, two clerks on general accounts, two clerks on road department accounts, twelve clerks on mechanical, car and building department accounts, eight clerks on store and supply room accounts two stenographers and type-writers.

² The accidents of the West End Company, though numerous in the aggregate are relatively few considering the amount of business done and the crowded streets. A computation in 1891 showed that on the doctrine of chances a passenger riding twice a day would not meet with even a slight accident but once in 118 years, and would not be killed in less than 69,000 years, and that a person

The use of the rail makes it easy to know the course a car will take, and to guard against it, but there is no such certainty as to a carriage; and cars following one another closely on a rail can carry these vast numbers and carry them exactly where they wish to go in comparative security and comfort, and for a nominal sum. Most of the criticism of street railways is inconsiderate, and grows out of an imperfect apprehension of the truth that the advantages and disadvantages are inseparable. It is impossible for cars or any vehicles to go at a reasonable rate of speed and not cause many accidents, some of them fatal; nor can cars enough be run to accommodate the people without occupying a great deal of space, and if they run where they will best accommodate they will occupy very important space.

Since it is the street car that has rendered possible the concentration of business in the city, and only the street car that can keep it so, it is worth considering what the advantages of concentration are, if any. They are several. It leads to great convenience and economy in doing business. Men in the same profession or line of business find it a great advantage to be near each other and near those engaged in a kindred business, and all like to be near the banks and other similar institutions. The fact that a whole community can be brought to the very doors for five cents makes large retail establishments possible, and hence lower prices to the consumer, and larger assortments from which to select. The numerous employees, and the working classes generally, can occupy cheap and wholesome houses in the suburbs, and yet reach their places of employment at a price they can afford to pay; and thus are greatly benefited in a financial as well as a sanitary and moral point of view.

Thus life is made more cheerful and wholesome, and the cost of living is greatly cheapened. The aggregate of saving to the community from this concentration of business, in economy of doing business, and cheapening the cost of living, amounts to an enormous sum; and the benefit of suburban homes in the mere prevention of disease is manifestly so great as to render street car accidents a trifle in comparison. Fifty deaths from typhoid fever would make less impression on the average person than a single fatal accident on the streets, but the ratio is none the less fifty to one.

born upon the cars, and riding all the time during the business day, would live to be 8,000 years old if he did not die till killed by an accident. I have used the cars constantly for over thirty years, much of the time officially, and never yet saw a street-car accident serious enough so that a claim was made upon it. I have seen a great many carriage accidents, though the number of people using carriages is insignificant in comparison.

EFFECT ON THE VALUE OF REAL ESTATE.

But one of the most significant benefits from street railways is the effect on the value of real estate. That they enhance values in the suburbs is manifest; but in fact they effect a much greater increase in the congested district. In 1855, being the year before street railways started in Boston, the real estate valuation of what is now Ward 10 was \$35,120,500. It was then as thickly covered with buildings as at present, yet in 1892 the valuation of Ward 10 had grown to \$127,252,200. Ward 11 (the Back Bay ward), which is the second ward in the city in valuation, and one of the finest residential districts in the world, had in 1892 a real estate valuation of \$88,366,500, or \$3,765,200 less than the *gain* in Ward 10. Ward 11 itself could never have been built up as it has been, nor could it maintain itself to-day, but for the street railway. Not even the servants could be retained otherwise, and there is no substitute conveyance that would not change the whole character of the district. Transportation in carriages, even if it were physically possible without streets across the Common and Public Garden, would necessitate so many stables in that neighborhood as to ruin it and its value. The town of Brookline had very meagre street car facilities prior to the formation of the West End Company in 1886. Its real estate valuation increased during the thirty years between 1855 and 1885 from \$5,500,000 to \$16,000,000; but during the *five* years from 1885 to 1890 it had increased to upwards of \$30,000,000 and in 1892 was \$36,958,100.

Excellent building land, if a mile distant from any public conveyance, has a small market value; but no sooner is a street car line extended to a point near that same land than it becomes available for house lots, and will command a large price. If that land be several miles from the city, the electric car service will cause a much more rapid increase in its value than a horse car service, since the latter is much inferior for long distances. Districts in Brighton, which had had horse car accommodations for thirty years, have made almost fabulous increases in value since electric cars were substituted. The value of all the real estate in the several towns and cities accommodated by the West End Company is, in round number, a billion of dollars; and it is a moderate estimate to say that twenty-five per cent. of this is dependent on the street car service.¹ The annual interest on that sum at

¹ Of course many places derive comparatively little benefit, but in other localities the absolute withdrawal of street cars would destroy nearly all real estate value.



P. E. Miller

six per cent. would exceed the capital stock of the company; and when all other pecuniary benefits to the community are added, it will be seen that the investment by the stockholders yields the public a revenue vastly greater than the stockholders themselves receive.

WHY STREET RAILWAYS ARE UNPOPULAR.

The question naturally arises why the street railway, being so undeniably useful, is so unpopular. The Boston road is no wise exceptional in this respect. If we go to any city in the country and pick up the daily papers, we find as many complaints, and the same kind of complaints, which so regularly appear in our papers. The cause in part grows out of the unreasoning belief, before alluded to, that by good management inconsistent things might be accomplished, as for example, that cars enough might be run to give every passenger a seat, and yet not occupy space in the streets. There seldom occurs a street railway hearing where there is not great complaint of lack of accommodations, and an equal complaint that the road "owns the streets." Again, as to crowded cars, at times, it is not considered that the cars must run at stated intervals in order to serve their purpose, while people ride just when they please, so that the demand and supply cannot possibly coincide. Again, it is not considered that the cars must be so run as to pay, in order to run at all. It is here I think that we find the chief reason why the public are always so hostile to the street railway,—that they expect too much for five cents. I have many times asked our critics if they could tell me of any other way in which they could get so much for five cents as from the West End Railway; and there never has been one who has not admitted that there was nothing. In fact, the low fares, considering the service rendered here, are nothing less than wonderful. Again, a road with three thousand drivers and conductors must have some who are incompetent and unfit, and who at times give way to infirmities of temper which is often severely tried.¹ The street car is in such universal use, and enters so intimately into our daily lives, that sooner or later, everybody has real as well as fancied grievances, and attributes to the malevolence or stupidity of the management mischiefs which must happen in the nature of things. In truth, all the employees of the street railway, from the president to the

¹ The total number of persons regularly employed on the West End system during 1802 was 4,014.

conductor, occupy in their relations to the public a most trying position, and one replete with detail and vexation. It is usually conceded that the street car service in Boston is the best in the world; and from very considerable experience I say without hesitation that the service has been better than the road really could afford to give, and that the officers of the road have usually understood the problems with which they had to deal much better than their critics, and have been every bit as public-spirited.

THE WHOLESALE SHOE TRADE OF SUFFOLK COUNTY, 1629 TO 1892.

BY
FRANK W. NORCROSS,
OF THE "SHOE AND LEATHER REPORTER."

A HISTORY of the shoe and leather trade of Suffolk County will necessarily include the whole State of Massachusetts, for Boston is simply the center of a great industrial circumference. The shoe and leather industry originated with the early settlers in the Commonwealth, and its growth and development is creditable to the energy and ability of their descendants. They have raised their calling to a high rank among the mechanical arts. They have popularized their product to such a degree that they have revolutionized the business to the success of which their labors have been directed. Forty years ago few ready made shoes were worn; now few except ready made shoes are worn, and in point of excellence of material and of workmanship the modern American article is not surpassed in excellence anywhere on the globe.

CHAPTER I.

The Cordwainers' Era—Early Shoemakers and the Material They Used—Progress of the Art Previous to the Revolution—England and France Compete for Our Trade—Early Tariffs—Improved Methods.

"Still from the hurrying train of life
Fly backward far and fast,
The footprints of the fathers,
The landmarks of the past."

THE first shoemaker in New England was Thomas Beard, who came over in 1628, in one of the later voyages of the *Mayflower*. He brought

with him a supply of "hides of leather" for his use. It was directed that "fifty acres of land should be allotted to him, as one that transported himself at his own charge." The first shoemaker in Boston was William Copp, who owned Copp's Hill at the North End. He was made a freeman in 1640. The General Court passed a law in 1648 "incorporating the *shoemakers* of Boston and vicinity, to regulate the trade for three years."

The shoes worn in 1680-90 were coarse, square toed, and adorned with buckles. A pair of boots were expected to last a lifetime. For a hundred years previous to the Revolution no poor person wore any shoes as fine as calfskin. Servants wore cow hide shoes. Calfskin shoes had a white edge of sheepskin stitched into the top edge of the sole; this was kept clean and white for dress purposes. There appears to have been no essential change in the style for nearly a century. In 1629 the "town leaders," or selectmen, ordered shoes made "of large size, at two shillings to two and sixpence a pair, for the use of emigrants." Shoestrings, as now worn, took the place of the shoe-nose under the Stuarts, and buckles resembling a horse bean came into use in 1688. Boots of large size, and for beaux, of flimsy Spanish leather, russet color, were then much worn in England, but were not approved of in Massachusetts, and not very generally used here, except by Morton's colonists at Mt. Wolloston.

The first attempt towards manufacturing in this country was made in Lynn. In 1750 a Welsh shoemaker, John Adam Dagyr, settled in Lynn, and soon became known through all the Province as the Essex shoemaker. Many persons acquired from him a better knowledge of the art, and obtained the reward of superiority in the increase of business. A Boston correspondent of the *London Chronicle* in 1764 wrote that shoes for women were made in Lynn exceeding for strength and beauty any that were usually imported from London.

It was claimed in 1752 that as many shoes were made in Essex county as in all the rest of the State. Lynn carried on the manufacture for three quarters of a century before any marked improvement was manifest. The art was not understood; the workmen unskilled. To attain greater excellence in mechanizing of shoes, the manufacturers sometimes procured choice qualities of shoes from England and took them apart to see how they were made. Up to 1750 only three manufacturers in Lynn employed journeymen, although a surplus of shoes were made for exportation

The tools used by the shoemakers were, the lapstone, an ordinary flat stone from the beach, on which they pounded the sole leather; a hammer; longstick, for rubbing down and polishing the sole preparatory to scraping; "shoulder sticks" of ebony and soapstone for setting up the edges; "stirrup" to secure the shoe on the knees; leather breast plate for protecting the chest while working the longstick; scraper, "steel," "pretty boy," for shaping the sole to the last; "fender," "last hook," "rubbing down bone," "lining fork," awl and bristles, blacking bottle, knife strops, pegging awl, tacks, wax, etc., made up the "shoe kit" of the journeyman shoemaker for a century previous to about the year 1810. Shoes were made in little buildings erected in the yards or beside the road, wherein two or four workmen could have "a seat to work." The shoes were bound by women at their homes, all by hand. In the Museum of Roman Antiquities at Mayence, Germany, are preserved the working tools of a Roman shoemaker. They are almost identical with those used in New England up to the year 1850.

Considerable quantities of shoes for the use of the army were drawn by Congress from Massachusetts during the Revolution. Immediately after that event the shoe business attracted a larger amount of capital, and increased rapidly. It received a severe check, however, owing to large importations soon after the proclamation of peace. Before the close of the century trade revived and new factories sprang up. In 1788 there was a considerable production of men's shoes in Reading. This town, with Quincy and Braintree, engaged in the shoe manufacture soon after the Revolution. In 1788, Lynn exported one hundred thousand pairs of women's shoes. In 1795 there were two hundred master workmen and six hundred journeymen in Lynn. They produced three hundred thousand pairs of shoes of prunella, silk, or morocco (which was mostly imported), or of neats leather. These shoes were sold to dealers in Boston, Philadelphia, Savannah and Charleston; some were exported. The largest manufacturer made twenty thousand pairs in seven months of that year. General George Washington passed through Lynn in his trip to New England after the war. In his letters he spoke of the place as "the greatest shoe town of the country." It has so remained to this day. It was estimated that eight million pairs were consumed by four million inhabitants; three-eighths of that number were made in Lynn.

The shoe goods of that date were mostly imported from Europe—lastings, callimanco, all kinds of fancy leather, linings, bindings, thread and nails. Considerable sole leather was imported from England. David Ferris and Zechariah Ferris had large oak sole leather tanneries at Wilmington, Del. They were members of the Society of Friends, and they sold a good deal of leather to Lynn manufacturers, many of whom were Friends also.

By the extended importation of shoes from England and France soon after the Revolution, many manufacturers were well nigh ruined. After the adoption of the Constitution, and at the first Congress that met in 1789, Roger Sherman, of Connecticut, a senator, judge of the Supreme Court, a signer of the Declaration of Independence, and a shoemaker, who represented the shoemakers in that body, acting upon the advice of Ebenezer Breed, of Lynn, and Stephen Collins, formerly of Lynn but at that time a shoe merchant in Philadelphia, adjusted the tariff on shoes. Raw hides and skins were admitted free. The first tariff was fifty cents on imported boots, and seven cents a pair on shoes. These rates were increased in 1791 to fifteen per cent., with further increase of ten per cent. when imported in foreign bottoms. In 1816 the tariff on men's boots was put at \$1.50 a pair! Since 1789 the shoe manufacturing interest has always had governmental protection. Since 1816 the tariff on shoes has been *ad valorem*, and ranged between 24 and 35 per cent. The present tariff (1892) is "25 per cent. on boots and shoes made of leather."

In 1790 wooden heels began to go out of fashion. Leather spring heels were introduced and were used on women's shoes up to 1853. This was a radical and sudden transition, as heels on shoes had been worn very high. The change made walking very uncomfortable, and, indeed, it is said, many women had to go about "on tiptoes," but gradually they found their level. There has been a moderate heel used since 1853, say one inch to one and a half inch high. Spring heels for children's and misses' shoes are in vogue now.

The leather used in the soles of shoes was always worked on the flesh side up to about 1800. Then it began to be finished on the grain side, making what was known as "duff bottoms." The pictures of Colonel Trumbull in the rotunda of the capitol at Washington, and the print, "Signing of the Declaration of Independence," shows the kind of shoes worn by gentlemen in 1776, and for many years thereafter.

The representation is of a low-cut strap shoe with large buckles. Turn and channel pumps were fashionable.

Boots came into general use after the Revolution. The Hessian boot was first worn about 1789. Its peculiarity was a white top turned down over the leg. The Suwarrow boot with a tassel on the front leg followed. Then the Wellington, ostensibly the same as worn now, was introduced. The Jefferson boot derived its name from Thomas Jefferson and was much worn during his presidency. It was laced up in front as high as the ankles. After that a side lace boot was in style for men's wear, but inconvenience in lacing prevented its general adoption.

The following excerpts from the memoirs of Col. Ariel Bragg, of Milford, give some idea of the methods of the pioneers: He learned the trade from Asa Norcross, worked for him afterwards as journeyman four weeks and made fifteen dollars. Began to make negro brogans in 1795. He borrowed a horse and took them to the city. On Boston Neck he was met by two men who asked: "Have you shoes for sale?" He answered: "Yes, twenty-four pairs." "At what price?" he was asked. "A dollar a pair!" "Will give you \$22.50 for the lot!" The offer was accepted, and with the money Mr. Bragg went into the city and bought leather to make some more shoes. In 1801 he went South with a lot of shoes. He says very little regard was paid to the quality of stock or work on these "shoes for slaves." He could make eight pair a day; his wife could close forty pair a day. He sailed with them to Baltimore in a sloop from Boston, sold the shoes and came home by land. Then he made calf shoes in the winter, and at the end of six months his profits were \$350. The business was regularly increased by an addition of *one man a year* to 1809. In 1819 he states he had brought up eleven children, had no debts, built a factory and house that cost \$5,152, all in ten years. He served two terms in the General Court, the last in 1842 as senator; served in the military thirty years, and rose to command a regiment. His sons, Appleton, Fowler, Ariel, Willard and Alexis Bragg, were all well known shoe and leather dealers in Boston and New York forty years ago. The two last named, with Capt. C. S. Parsons, founded in 1840 the jobbing house now known as C. S. Parsons & Sons.

Shoes were packed in barrels and large square boxes for transportation. In this way they were sent to all southern cities in packet ships. When unpacked they were flat, and it required a good deal of manipu-

lution to get them in shape again. Shoes were made with long quarters and short vamps. Up to about 1814 soles were sewed on or nailed with Spanish nails. Shoe boxes began to be made about 1830. Cartons came in 1840. Both originated in Lynn.

CHAPTER II.

The First Boston Shoe Firms—Rise and Progress of the Jobbing and Auction Trade—Sketches of the Founders—Gradual Introduction of Machinery.

ONE of the early shoe firms was Perez, Bryant & Co., who had a store on Ann street and another in Savannah, Ga., in 1810. Isaiah Faxon had a shoe store on North Market street in 1812. His sign, a wooden boot, eight feet high, stood outside that store up to 1872, when it was transported to Detroit, and until recently was in use there to designate a shoe warehouse. Samuel Train sold shoes on Merchants' Row. He was afterwards a large shipowner. He used to tell the story that he walked, when a boy, from his home in New Hampshire to Boston, with all his possessions in a pack on his back. He sat down under a tree in Medford and ate the last of the lunch his mother had put up for him before leaving for the city. Twenty-five years afterwards his elegant mansion stood on these grounds, and this tree formed part of his possessions.

The introduction of wooden pegs for fastening soles gave an impetus to the business. Shoe pegs, made from maple, were invented in 1811. The grandfather of Hon. Joseph H. Walker, of Worcester, has the credit of making the first pegged shoes in New England. Up to the time of the invention of the sole sewer, about seven-eighths of the sale shoes were pegged. Shoe lasts, rights and lefts, were first used in 1807. A patent was granted that year to Samuel Milliken, of Lexington, for making shoes with metallic bottoms.

An important invention, a machine for turning irregular forms, was patented by Thomas Blanchard, of Sutton, Mass., January, 1820. He contrived a lathe to make shoe lasts. They had been made previously by hand, were seldom uniform, and always expensive. By the use of this lathe, they were made correct in shape, rights or lefts, and at a

moderate cost. This, and the machines to make pegs, made shoe manufacturing on a large scale possible. Shoe nails were first made in South Abington, in 1812, by Elisha Hobart; also by Ezekiel Reed, of Hanover. Shoe manufacturing was not established permanently in any town in the State, except Lynn, until near the commencement of the present century. The business was introduced in Danvers by Caleb Oakes and Moses Putnam about 1810. They made coarse brogans, which were sold South. Caleb Oakes was the first to send shoes to Baltimore. He accompanied them himself in the sailing vessel, and sold them from the wharf, foot of South Calvert street. During the war of 1812-15, the embargo was in force, and Mr. Oakes took shoes in wagons as far south as Savannah. Georgetown and Topsfield manufacturers began to make brogans about this time.

These shoes were known as negro brogans. They were made from coarse finished cowhide leather, sometimes black, but usually finished in russet color. The soles were heavy, and oftentimes thickened by a piece of shingle inserted between the two soles. These shoes were looked upon by the negroes as a badge of servitude, and they were not marketable after the civil war. Women's shoes, called buskins, were sold, but most of the demand was for lasting gaiters. Children's shoes made from sheepskin originated in Marblehead. They were known as roan batts.

As leather was bought in Boston, the shoes were gradually sold there. Jobbing houses sprang up. The dealers were anxious for trade, and used to go out to Roxbury on Wednesdays or Saturdays to meet manufacturers coming into town; also to Charlestown, to intercept them at the bridge.

The first vessel freighted at Boston with a full cargo of shoes was the sloop *Delight*. She sailed for New York in May, 1818. The shoes were consigned to Spofford & Tileston, No. 19, Fly Market. The members of this firm were from Haverhill; they accumulated large fortunes.

The shoe business had its inception in almost every city with young men from Boston, who went out usually as agents for manufacturers. Haddock, Haseltine & Co. was a pioneer Philadelphia concern. The two senior partners went from Haverhill in 1817. John Adden and John F. Henry went to New Orleans a little later, and were followed by the Tirrells, who did an extensive business. Up to about 1835 all shoes destined for the Southwest were sent to New Orleans

and up the Mississippi. The long journey was made by water, or sometimes by teams, over the mountains.

The first wholesale shoe dealers in Boston did business on South Market street. That short thoroughfare had its stores about equally divided between shoe and hardware dealers. Then the shoe men spread out and occupied Broad street on the south, and Fulton street on the north side of Quincy market. The shoes were sold to the South—there were no western markets. St. Louis and everything below it was looked upon as South in those days. Long credits were given; eight and even twelve months' time. Southern jobbers purchased only once a year—in the autumn.

An old merchant furnishes the following experience in the Boston shoe trade:

“In 1833 I went into a wholesale store the largest in the trade. The business amounted to nearly \$200,000 a year. This included shoes of all kinds, sole and upper leather, findings, etc. The firm did a barter business, buying shoes and paying in stock, with perhaps a little money or a note at short date, say eight months. We sold the shoes either for note or any kind of merchandise we could utilize in the business, or sell. It was all right as long as nothing happened—but something did happen. In 1837 the whole country broke from Maine to New Orleans. In most cases the firms settled up, somehow, and went on again.”

The shoe trade took rank as a leading industry about 1830, caused by a change in the methods of conducting the business. It was formerly the custom to seek a market by consigning shoes to be sold in all the southern cities. That arrangement was remunerative for a time, but on account of competition and increase in trade it became a losing business. Then manufacturers began to sell their own goods and Boston became at once the emporium of the trade. Dealers who did not have stores secured offices and show rooms in the city.

The pioneer shoe auction house in Boston was T. P. & O. Rich, established on Broad street in 1825. In 1847 the firm dissolved, Otis Rich retired, and T. P. Rich became connected as special and general partner with the house of Townsend, Mallard & Cowing, afterwards Rich, Cowing & Hatch. Mr. Rich retired in 1868. He was a member of the Massachusetts Senate in 1859 and 1860, and of the Board of Aldermen four terms. His brother, Otis Rich, served in both branches of the Legislature, and died in June, 1876. The firm, founded by the brothers Rich, continued through the above changes to Henry & Hatch, and is now merged in John J. Henry & Co.

Shoe manufacturers, fifty years or so ago, sold on such long credits that they needed all the time they could get on stock or work. This led them to pay their workpeople in orders on the stores on which they bought groceries and dry goods. These orders were, of course, not as good as money, but work even with this kind of pay was an advantage. The members of a family could assist at closing, binding or making during the winter seasons when work could not be done on the land, and the manufacturers not feeling able to spare the money, as their sales would not be made until the next autumn, found this method of payment a convenience. Some manufacturers had stores and sold to the workmen. These methods ceased something like forty years ago.

A good deal of stock was sent into Maine and New Hampshire to be made into shoes. The farmers and their families worked on them during the winter and spring, and when they returned one, the money to pay for making was sent with the next lot.

In this way many stalwart young men and active women learned to make shoes. They eventually came to Massachusetts to find steady work, and then commenced the drain from the "hill towns" of New England of their young people. The shoe business wrought a great and happy change in many families. Until that was introduced, the young people in country towns had few or no occupations to choose from except farming and the ordinary village industries, but in the days before machines were invented there was plenty of work to be had on shoes.

The first pegging machine was invented by Samuel Preston, of Danvers. His patent, issued March 8, 1833, was signed by Andrew Jackson, president of the United States. Herrick Aikin, of Dracut, invented the pegging haft that year. Previous to the invention of a machine for making pegs, in 1820, shoemakers cut their own pegs. The peg strip, or ribbon of wood, having one end sharpened, so that pegs could be cut off for the machine, was invented by B. F. Sturtevant, of Boston. The device is still used. A Methodist preacher, A. C. Gallihue, patented a pegging machine in 1851.

John Kimball, of Boston, was an inventor. He began the shoe business in 1834, and that year introduced the slide block last and metal sole to the trade. In the next thirty years he invented machines for hammering stiffenings and sole shapers. He published a guide for measuring and making shoes, and in 1885 perfected a system of standard measurements. He died March, 1886, aged eighty-five years.

India rubber overshoes were first imported from Brazil in 1822. A few were sent to Boston that year and T. B. Wales sold them.

B. F. Sturtevant was born in Norridgewock, Me. When he was six years old he cut pegs by hand for a cobbler. He was a shoemaker in after life, but in 1850 he came to Boston with a model of a pegging machine. He perfected and introduced it in 1859. He also invented a machine for making peg wood and wooden toothpicks. They are in use now. He invented the blower used in tanneries, and the projectile known as the "Swamp Angel," famous during the war. Mr. Sturtevant received medals for his inventions at the Vienna, Paris and Centennial Expositions.

In 1851 Fogg and Burbank, of Boston, exhibited pegged boots at the first World's Fair in London. This was the first pegged work ever seen in England. No trade grew out of this exhibit, unless it was for the pegs, which, from that date began to find sale in Germany among toy makers. At the New York Exhibition of 1853, C. R. Goodwin, of Boston, showed a machine for sewing the soles of shoes. This was afterwards exhibited at Paris, and several of the machines were sold for \$375 each. No steam power could be applied to the machines, and they would sew only 100 pair a day.

The date of the adoption of machinery in shoe factories is only a little more than forty years ago. The roller and splitter were in use in 1840, but that was all. Dies were used for hammering out in 1847. In 1851 a Worcester manufacturer used the first sewing machine for stitching shoes. Elias Howe, jr., of Cambridge, took out his first patent in 1846. Isaac M. Singer worked on this sewing machine in a shop now standing in Harvard Place, off from Washington street, opposite the Old South Church in 1845. He took out his first patent in 1851, and for the chain stitch in 1854.

Die machines were made in 1851. Shoe pegging machines were in use in 1857. Elmer Townsend and B. F. Sturtevant patented one of the first machines which came into general use. Mr. Townsend was an auctioneer at that time on Pearl street. He introduced the shoes made on his machines by selling them at public auction. Steam power for driving shoe machinery began to be used in 1857. During the war it was generally introduced in all large factories. Baneroff and Purington, of Lynn, did the first manufacturing by string teams about 1860.

The McKay sole sewing machines wrought another of the revolutions to which the shoe industry has been subject. It was invented by Lyman R. Blake, of Boston. The first patent was taken out in 1858. An arrangement was made by Mr. Blake with Gordon McKay,¹ a machinist, to perfect some of the parts, and he engaged to introduce it to the notice of shoe manufacturers. A trial was given the machine in the presence of a number of members of the trade in a room on Tremont Row. Stock was cut in Lynn and brought up to be sewed. This machine was very unlike the machines now in use. Nevertheless it was conclusively shown that it could do the work. Mr. McKay then purchased the machine from Mr. Blake for \$8,000 cash, and \$62,000 to be paid from future profits. He introduced radical improvements and in 1862 it was put on the market. In 1864 the movable horn was added. Eleven machines were put in Lynn factories, then one each in Philadelphia and Cincinnati. As it was in war time, and journeymen were scarce, there was no opposition made to its introduction. In 1863 the stock was divided into 50,000 shares, valued at five dollars a share. A royalty was charged on all shoes sewed on the machine and 10,000 shares set apart for those who purchased stamps for shoes. They were entitled to one share for every hundred dollars worth of stamps used. This was called "The Shoemakers' Gift Enterprise." The shares rose from five to seventy dollars each, and paid good interest on the investment. The inventor and owners of the machine made great fortunes. The royalties, paid in stamps affixed to the bottom of the shoes, were as follows: On slippers, misses' and youths' shoes, one cent; women's and boys' shoes, two cents; men's boots, three cents a pair. The income from sales of stamps, \$99,157.63, in 1864, increased each year, and reached \$529,973.81 in 1873, and so on up to \$750,000 a year. One Massachusetts manufacturer paid fifteen thousand dollars in one year as royalty on the use of thirteen machines. At last, in November, 1880, the manufacturers held a mass meeting in Philadelphia, and taking the ground that the patents had expired, refused to pay royalty any longer. A compromise was effected; the manufacturers bought the machines, and the payment of royalty ceased.

In 1867 Charles Goodyear¹ introduced the Goodyear turn and welt machine. The first patents on this were granted in 1862. Mr. Goodyear is the son of the discoverer of vulcanization, and inherited the

¹ See Biographical Department.

inventive genius of his father. The Goodyear Shoe Machinery Company was organized in 1882. The capital is \$1,250,000. Jonathan Munyan¹ is president; John H. Hannan, of New York, vice-president; S. V. R. Hunter,¹ treasurer. They have a factory, No. 398 Federal street. It is five stories high.

In the Goodyear system is an inseamer for sewing welts, machines for stitching the outside of the welt either chain or lockstitch, also one for outsole and insole channeling, machines for grooving and beveling welts, splitting welts, and for beating out the welt after it is sewed. The inseam or welt machine is also used for sewing turn shoes. The cost of the welt and sewing the inseam is claimed to be offset: First, by saving of stock; second, by the fact that the shoes being stitched and finished on the last requires no second lasting; third, that the lasts do not require iron bottoms; fourth, that there is no necessity for a sock lining in a welted shoe; fifth, that the welt supplies the place of a slipsole in giving a heavy edge. The advantages represented to apply to the Goodyear welted shoes are that there are no nails, tacks or wax inside the shoe, that the shoes are pliable and as comfortable to wear as hand sewed, that they can be repaired the same as hand sewed, that owing to the solidity and uniformity of the work they are not liable to rip, that shoddy insoles cannot be used, and that the shoes must be made of the best material.

About the year 1870, Dr. George H. P. Flagg, of whom a biographical sketch appears in this volume, became interested in the Union Edge Setter. This brought the enormous capabilities of the shoe business to his attention, and he embarked in the manufacture of shoe machinery. He built the stores 110-112 Lincoln street, adapted thoroughly for the business. He invented and perfected a number of machines. A lasting machine was one of the greatest wants of the trade. He bought out the Boston Lasting Machine, which, he says, "does the work a little better and a little more of it than any other," and has sold more than a thousand of them. The Union Edge Setter has been the standard machine, keeping in the lead for more than twenty years. The Rapid Inseam Trimmer trims inseams, and beats out welts at the same time, without injuring the work. He formed the Flagg Manufacturing Company a few years ago. They make the above machines and many others.

¹ See Biographical Department.



Geo. W. Wood

Self-feeding eyeletting machines came in about 1864; sole moulders 1865; beating-out machines 1867, and crimping machines the same year; shoe heel pressing, pricking and trimming machines 1869-70; edge trimmers and hot kit burnishing machines 1871. In this machine a flexible gas-pipe is run into the interior of the tool, which keeps it well heated. The tool is made to reciprocate over the surface of the heel, passing from breast to breast at each oscillation, with an elastic pressure. The cable nailing machine of 1872 gave place to the standard screw machine in 1876. Almost all nailed work is done on this machine. The date of edge setting machines was 1873-4; sole rounding, sole fitting and channeling machines 1880; lasting machines, on men's work, 1880, and on women's work, five years later; button fastening machines, 1882. These represent nearly all kinds, but their variety and "improvements" are legion. In lasting machines alone dozens of patents have been taken out, and inventive genius is still active on perfecting all the machines named.

Machines used in shoe factories are as follows. For stock fitting:

Stripping machines.	Dieing machines.	Tacking machines.
Splitting machines.	Channeling machines.	Molding machines.
Rolling machines.	Stock fitting machines.	Channel opening machines.
Skiving machines.	Tap trimming machines.	Heel pricking machines.
	Shank machines.	

On McKay sewed work, by which it is estimated one hundred million pairs of shoes are made yearly, these machines are used:

Lasting machines.	Heeling machines.	Heel burnishing machines.
Tacking machines.	Heel trimming machines.	Sand-papering machines.
McKay machines.	Edge trimming machines.	Buffing machines.
Beating-out machines.	Edge setting machines.	Brushing machines.

The first stripping machine was simply a straight knife that severed the sole leather at a blow. A machine for dividing into sole blanks was invented and first used in 1851. With this machine the business of sole cutting was inaugurated. Stock was graded and selected for uniform quality and weight, and sold to shoe manufacturers ready to be shaped into soles for men's, women's or children's work. Perry Newhall was the first man to engage in the sole cutting business in Lynn.

The priority for making shoe machinery may be claimed for David Knox & Sons, David T. and George A. Knox. The senior partner invented a sole cutting machine in 1855, when not much except stitching

machines had come into use. Most soles were then cut with a knife, the patterns being marked out on a side of leather. Mr. Knox's invention had cutting knives attached to the different beams with lever arms which swung down, alternately cutting the two sides of the sole blank. It is now almost universally used for sole cutting. With the introduction of machinery, steam power began to be used to make it more efficient. Gas engines are common now; they are cleaner, and take up less room than is required for steam. Electric motors are of recent introduction, say about 1888. These are convenient, as motors can be put in each room, and the machinery of any department run independently of the remainder.

In fitting rooms the following machines are used: Closing, staying, lining, top closing, top stitching, buttonhole cording, foxing, vamping, all done on sewing machines. Then the seam rubbing, beading, buttonhole cutting, working and finishing machines, eyelet, lacing stud and vamp folding machines are used.

Machines for making india-rubber goring for congress shoes were invented in 1814.

CHAPTER III.

The Rubber Shoe Business—Early Statistics—Trade Fiduciary Institutions—Early Shoe Jobbers—Prominent Manufacturers.

In 1835 six companies were formed in Massachusetts to make rubber shoes. Their aggregate capital was \$850,000. Charles Goodyear, of Roxbury, took out his first patent June 17, 1837, for gum elastic shoes. In 1839 he discovered vulcanization.

In 1830 the shoe manufacture of Lynn was 1,675,781 pairs, valued at \$943,171; there were 3,496 hands employed.

The first report of the industry of Massachusetts was published in 1837. It stated the value of boots and shoes made that year at \$11,642,520.

The first moneyed institution connected directly with the trade was the Shoe and Leather Bank, incorporated in 1836, with \$500,000 capital, increased in 1876 to \$1,000,000. The first president, Enoch Baldwin, was succeeded in 1857 by Caleb Stetson. The original directors were

all members of the shoe and leather trade. Among them was Cheever Newhall who began in the shoe business in Ann street in 1802. He was a wholesale dealer from 1812 to 1849, when he retired. Mr. Newhall died April, 1878, aged ninety years. Josiah M. Jones, who served his time with Mr. Newhall, went into business in 1823. He was one of the first to build in Pearl street. The firm of J. M. Jones & Company is continued by a son of the founder. George W. Thayer, one of the original projectors of the bank, was also its second cashier. He founded the firm of G. W. Thayer & Brothers, dealers in shoes, in Merchants' Row. His sons, George L. and Edward P. Thayer, succeeded to the business when, in 1847, their father was elected president of the Exchange Bank. Caleb Stetson, the second president of the bank from 1857 to 1867, was a shoe and leather dealer on Washington street in 1829. He moved to Broad street three years later and went into the wholesale trade. He sold out in 1835, but started again in 1838 with his brother as partner. The firm was C. Stetson & Company. He became a prominent merchant. The head clerk of C. Stetson & Company was Samuel Atherton, later the president of the New England National Bank. He connected himself with Amos S., a son of Caleb Stetson and with his brother, William Atherton, formed the house of Atherton, Stetson & Company. For many years theirs was the leading house in the shoe and leather trade in Boston. They were agents for Philadelphia tanners in the days before the war, when nothing but oak sole leather was cut in women's shoes in Massachusetts. John C. Potter was president of the bank from 1867 to 1870. He was originally with the firm of Amasa Walker & Company, and Walker, Emerson & Company, and third partner in the firm of Allen, Harris & Potter. He died in 1870. Luke Brooks was another of the directors. He invented the splitting machine still used in tanneries. Isaac Williams, another director, went into the shoe business in 1824, retired 1849, died 1857. Henry L. Daggett, an importer of shoe goods and dealer in shoes from 1833 to 1865, married his daughter. Mr. Daggett was Boston agent for Horace H. Day, manufacturer of rubber webbing, and one of the pioneers in the rubber business. James Tirrell was a director twenty years. He began trading in Fulton street in 1855, having previously established a shoe jobbing house in New Orleans. His brothers, Albert and Minot, were connected with him in business. Benjamin E. Cole became a director in 1875. His connection with the shoe trade dates from 1850. Jonathan

Forbush, an old shoe merchant, was director, 1836 to 1847. John Albee, another of the original directors, was said to be the first to carry shoes westward. He crossed the Alleghanies in 1832, founded the house of Albee & Childs in Pittsburgh. He sold out and returned to Boston. He died in 1863.

The Hide and Leather Bank was founded in 1857. Frederick Jones, William B. Spooner, Henry Poor, William Clafin, and other dealers in shoes and leather, were among its early stockholders.

Previous to 1825 the shoe trade in Boston was all done by wholesale dealers. Manufacturers had not established themselves here. The largest house was that of Carleton, Walker & Co., afterwards Amasa Walker & Co.

Amasa Walker was born in Woodstock, Conn., in 1799, and died in North Brookfield, Mass., October 29, 1875. In 1825 he was doing business in South Market street. His sales were \$25,000 the first year, \$30,000 in 1830, and increased to \$600,000 in 1836. The style had been changed to Walker, Emerson & Co., and Emerson, Cochran & Co. Mr. Walker retired with a fortune in 1840. Mr. Walker, in 1834, built the first shoe factory in Maine. It was in the town of Minot. He was a State senator in 1849, secretary of state in 1851-2, and 1861 and 1862 a member of Congress. He was for many years professor of political economy at Oberlin College, and published two books on this subject. From 1861 to the time of his decease he was lecturer on political economy at Amherst College. Mr. Walker's son, Gen. Francis Amasa Walker, was made brigadier-general by brevet for gallant services in the war. He was superintendent of the census of 1880, professor of political economy and history at Yale College, and is now (1892) president of the Institute of Technology in Boston. A daughter, Emma, married Alfred H. Batcheller, of E. & A. H. Batcheller & Co. Freeman Walker, a brother of Amasa Walker, joined him in business in 1826. In 1830 he became a member of the firm of T. & E. Batcheller & Walker. This continued to 1834, when he left that house and did business alone to 1842, when he retired.

Henry Wilson, as everybody knows, was a shoe manufacturer. He was born in Farmington, N. H., February 16, 1812, and died in the vice-president's room at Washington, November 22, 1875. His name was originally Jeremiah Colbath, but at the age of seventeen years it was changed by act of Legislature. He worked at shoemaking, and on attaining his majority he had only received twelve months' schooling,

but had read more than a thousand books. These were loaned to him by a gentlemen who lived two miles from where young Wilson worked. He had to go for them after his work was done, read them nights, and when one or at most two were read and returned, he could take others. He said afterwards that for the first three months after that library was placed at his disposal he only slept from three to six o'clock in the morning, devoting his spare time to reading. In 1832, with his earthly possessions all on his back, he walked from Farmington to Natick, where he was employed a few years at shoemaking. His old shopmates, long after, told of his ability and the rapidity with which he worked. He engaged in business for himself about 1836. He manufactured pegged brogans. In 1840 his interest was first awakened in politics, and he "took the stump" in support of Harrison and Tyler. He was jeered at and nicknamed the "Natick Cobbler." His friends adopted the sobriquet as a decoration. He was three times elected a representative, and twice a State senator. In 1848 he quit the Whig party on account of its pro-slavery attitude, and supported the Free Soil candidates, Van Buren and Adams. In 1850 and 1851 he was president of the State Senate. In 1855 he was chosen to succeed Edward Everett in the United States Senate. In 1859 he was re-elected by nearly an unanimous vote. In 1865 he was elected for the third time; in 1872 he was nominated for vice-president on the ticket with General Grant and elected by an overwhelming majority. General Grant's father, Jesse R. Grant, was a tanner, and his son had had sufficient familiarity with the trade in his boyhood to be reckoned as one of the craft, so during his second term his was looked upon as a thorough leather administration, having a tanner and a shoe manufacturer at its head. Henry Wilson wrote several books. His history of the rise and fall of the slave power was being issued from the press at the time of his death.

Samuel Atherton was one of Boston's most honored merchants. He was born in Stoughton, January 26, 1815. In 1835 he went to Boston as clerk for William Capen, a shoe dealer. About 1838 he had established a shoe business in Washington street with Edwin Battles. The firm was Battles & Atherton. After one year this was dissolved and Mr. Atherton went as clerk with Caleb Stetson, wholesale shoes and leather, at the corner of Broad and Central streets. Here he was admitted a partner in 1842. In 1845 Mr. Stetson drew out, but retained connection as a special partner. About 1850 Amos W. Stetson, afterwards president of the State Bank, with Mr. Atherton formed the firm of

Atherton, Stetson & Co. It almost immediately took front rank in the trade. The partners were rich, their connection influential, and during its existence five or six partners retired at different periods with large amounts of money accumulated in the business. Mr. Atherton lived in Dorchester, represented that town for 1867, 1870 and 1877 in the State Legislature, and died there about ten years ago.

CHAPTER IV.

Styles of Shoes—Rise of Shoe Associations—History of the New England Shoe and Leather Manufacturers' Association—Its Executives—Boot and Shoe Club—Note Brokerage—Great Jobbing Houses.

CONGRESS shoes were introduced about 1845. J. Sparkes Hall, of London, claimed the priority of invention. He made a pair for Queen Victoria, and for many years Her Majesty wore no other kind. Of course this popularized them, but they have intrinsic merit, being so easy to put on and off. With recent improvements in goring they are a very desirable kind of shoe. They were made without heels for women's wear up to 1853; since then heels of various heights have been used. Shoes with very thick soles were worn by all sorts of people during the Civil War. Later, they were made medium thickness, and at the present time they are required to be very thin and flexible. Gaiter boots, lasting or serge, were laced on the side about 1840. This fashion went out twenty years later. Polish, or high cut boots, called also polkas, began to be made in 1860. Button boots, which were first made in the 50's, became very popular along in 1864, and have continued so for women's wear.

Men's shoes are seldom made to button now. Cloth tops and cloth gaiters are fashionable for the time being. Women's shoes of fine kid came in fashion about 1865. French leather was used largely in their construction. Great improvements in American kid have been made in a few years past, and now there is as good kid produced here as anywhere. Patent leather is a fashionable material for both men's and women's shoes now, and tanners are beginning to produce it here.

Shoe manufacturing was a profitable occupation, with few drawbacks, up to the year 1837. In 1822 there were a good many failures, but

they were for small amounts. No one had much capital in the business. There was not a shoe manufacturer in Massachusetts, at that time, worth \$40,000. In 1837, the time of the greatest "panic" that had ever been heard of all over the country, the losses by bad debts and shrinkage of prices were terrific. The business had been overdone. Multitudes of firms had commenced making shoes since 1830. A majority of them were unable to meet their engagements at maturity. They obtained extensions, but they took hold with renewed vigor. Although constant accessions were made to their ranks, they enjoyed a season of great prosperity for twenty years. Then occurred the "panic" of 1857, but the trade was on so firm a foundation that there were very few failures. From 1857 to 1861 the business thrived. Then the Civil War commenced, and for a while all was chaos commercially.

Up to 1830 the Boston wholesale shoe dealers were all jobbers. The manufacturers sold from their shops in the country, where buyers visited them regularly.

While the number of manufacturers has greatly multiplied in Boston—indeed all of them have stores or offices here—yet the jobbing trade has not retrograded. In 1828 there were \$1,200,000 worth of shoes sold at wholesale. In 1840 ten houses were located in the vicinity of Quincy Market and Broad street; they sold \$2,500,000 worth. In 1857 the number had increased to nineteen; the sales approximated \$4,000,000. The largest, Atherton, Stetson & Co., sold \$500,000 worth a year. They also sold leather. Benjamin P. Hutchinson, lately celebrated as a Chicago grain speculator, was a jobber of shoes on Central street. Brigham & Gore is perpetuated by the house of George P. Gore & Co., of Chicago. Only one of the firms of 1857 remains—Amos P. Tapley & Co. This house dates from 1837. The senior partner, still active (1892), has transacted business fifty-five years, and always paid a hundred cents on the dollar. In 1865, at the close of the Civil War, there were the same number of jobbers as in 1857—nineteen. They sold \$7,800,000 in that year. Prices were at least fifty per cent. higher than they are now, and on some kinds much higher. Women's grain shoes that sell for 85c. and \$1 now, were jobbed for \$2 in 1865. In 1880 there were twenty-two houses; sales, \$9,000,000. In 1891 there were twenty-seven, three of them dealing in rubbers exclusively. Their sales were \$20,000,000, by far the largest shoe jobbing business done in any city in the United States.

Batchelder & Lincoln is the title of one of the largest houses in the world doing an exclusive jobbing business in shoes. It was established in 1852. Mr. Batchelder is not living. Joseph B. Lincoln is the principal of the house. His connection with the trade dates from boyhood. He was first a clerk for, and afterward a partner with, George A. Mansfield & Co., in Dock square. His career has been one of uninterrupted success. The store, Nos. 91 to 98 Federal street, Boston, occupied by the firm, has seven floors, with 4,500 square feet of space on each floor. A passenger and two freight elevators are run. Everything is systematized. The office clerks, receiver's stock clerks, order clerks, salesmen, porters and shippers, all have their allotted work. The whole is under the supervision of Mr. Lincoln. Mr. Lincoln's method is to market the entire product of manufacturers whose shoes are of acknowledged superiority. There are several in Lynn, all of whose goods he disposes of. It is the same course pursued in regard to men's fine shoes. Nearly a dozen of the best known makers on the South Shore turn in their product to the firm. All the goods are warranted as represented. They have so large an assortment in stock—almost a million dollars' worth—that they can keep retailers constantly "sized up" with any width, size, style or variety of shoes. This is a great object to dealers; it enables them to do a safer, closer business. Mr. Lincoln says: "It is of little importance which house does the largest business, if the lines carried are ready sellers and orders are promptly filled."

Winch Brothers also do an immense business. The house was established in 1862 by Joseph R. and John F. Winch, who with George F. Winch and John H. Gibbs now compose the firm.

Parker, Holmes & Co. started in 1880; they also do a large business.

From 1865 to 1870 shoes were jobbed at net prices. If time was wanted, interest was added. Sales are now made mostly on thirty days. The Boston jobbers usually control the production of various factories. This enables a retailer to stock up entirely from one establishment, and renders the jobber a valuable distributor of New England's largest industrial product.

In 1830 the firm of G. W. Thayer & Brothers started in business on Merchants' Row. In 1835 they were on State street, and the style was G. W. & S. T. Thayer. Their principal traffic was in rubbers. These were the old-fashioned, all-rubber shoes that first were brought here from Para in 1823. They were imported rough and had to be lasted

and finished here. The firm hired lofts over the store and employed women and girls to last and prepare the goods for market. After a while they sent out lasts to Para and had the rubbers made over them there. These old rubbers are a very scarce article now. After vulcanization was discovered they were bought up and ground over to furnish rubber for the new style of goods. The Thayer firm sold leather shoes as well, and became one of the largest in the trade. George L. Thayer, the oldest son of George W. Thayer, succeeded him. James B. Field, Edward P. Thayer, W. W. Whitcomb and Emery H. Munroe have successively been interested in the business. The house was then Field, Thayer & Whitcomb. G. L. Thayer and Mr. Whitcomb retired, and were succeeded by Field, Thayer & Co., now the Field-Thayer Manufacturing Co. They have the books and papers of the firm from the beginning. Some one of the descendants of George W. Thayer, the founder of the house, has been active in the firm from its inception: They are jobbers and manufacturers.

A. W. Clapp & Co. have conducted their business under the same style, and manufactured at the same place, Weymouth, since 1855.

There has been no change in the firm name of J. W. Brigham & Co. since the senior partner commenced business on Pearl street in 1858. He has a factory at Worcester, and was one of the first to make fine goods expressly for the retailers.

Charles Hayden formed the firm of Hayden & Downing in 1845. Mr. Hayden bought the business and moved in 1859 to Pearl street, where in 1867, the house was changed to its present style, Hayden, Gardener & Co. They were on the west side of Pearl street, but immediately after the fire moved to their present location.

In 1856 there were in Boston 218 wholesale shoe and leather dealers. Their combined sales were \$61,140,000. Only one firm, T. & E. Batcheller, did a business of as much as \$1,000,000 a year; two firms sold \$800,000; nine \$500,000, and thirty \$200,000 each. That year there were 44,308,302 pairs of shoes made in the State; 265 tanners used 2,101,872 hides, principally for upper leather, and 247 curriers finished \$6,087,737 worth of leather.

When the shoe and leather trade reached large proportions the expediency of establishing an exchange or place of meeting for buyers and sellers began to be considered. The nature of the business seemed to call for such an institution. Twice a week—Wednesday and Saturday—the manufacturers came into Boston by the hundreds, and here numerous buyers of shoes and sellers of leather waited to receive them.

Aforetime when stage coaches supplied the early transportation, except that some men living not very far off came on their vehicles, "Wildes Hotel" in Elm street was the resort of the shoe and leather men. Wednesdays and Saturdays were known as "shoe days." Sol Wildes, the popular host, made a large fortune entertaining them. The dealers had stores contiguous to Elm street, being located on North, Blackstone, Fulton, Shoe and Leather, and North and South Market streets. In 1851 Lewis Rice fitted up the American House on Hanover street, and the shoe men congregated mostly at his hotel. In the vestibule a vast amount of business was transacted. There Putney & Watts and Gardner, Carleton & Co., of Richmond; H. S. Wyche, of Petersburg; G. W. Dunbar and E. Marqueze, of New Orleans; D. F. Fleming and Henry Daley, of Charleston; L. L. Warren and Low & Whitney, of Louisville; J. H. Henry, of Little Rock; George R. French, of Wilmington; with others, bargained for negro brogans, lasting gaiters, long leg calf boots, and other goods suited to the wants of the slaves, or of their owners, of both sexes and all ages. Their purchases were sent South in packet ships, and in those days the ships carried the American flag at the masthead. There also came Oliver Bennett, or his successors, Fiske, Knight & Co., W. H. Comstock, Samuel C. Davis, John R. Lionberger, and Follenstein & Gauss, of St. Louis. Most of these men went from Massachusetts originally, and up to about 1845 the shoes they bought were sent to New Orleans and thence up the Mississippi, a long voyage. Their credit was A 1. It was told by Amasa Walker that in the dark days of 1837 a merchant from St. Louis came into his store and wanted to buy some shoes. The following colloquy ensued:

"How many shoes will you take home this trip?"

"As many as I took last year, or more."

"But, why do you buy so freely in these hard times?"

"Because my customers want the goods, and can pay for them."

"How can the Missouri trade pay for shoes when all the rest of the country is bankrupt?"

"I don't know, unless it is because we have got no banks."

Amasa Walker, after that, was known as an "anti-bank" man. Most of the western banks were "wild-cat" institutions in those days.

The pioneers of the Northwest were popular visitors to the American House. Bradley & Metcalf, who went out from Spofford & Tilton, of New York, to Milwaukee in 1843. The firm still exists, but W.

H. Metcalf died in April, 1892. Its members are millionaires. Merchants from Detroit—giants in those days—came also. Zach Chandler bought dry goods and shoes as early as 1834. A. C. McGraw, whose continuous career in the shoe trade extends over sixty years. H. P. Baldwin, afterwards governor of Michigan and senator in Congress. Milton Tootle established in St. Joseph, Mo., in 1849. He built the St. Jo Opera House. C. Gotzian, St. Paul. L. L. Warren, of Louisville, who went from Boston about 1835. For many years he did the largest shoe business in the South. He built the Warren Memorial Church in that city at a cost of \$60,000. W. E. Doggett and M. D. Wells came from Chicago. O. A. Childs, of Cleveland, and J. R. Cummings, of Toledo, were buyers from the West. From Cincinnati, William F. Thorne, John Gates and John Simpkinson. Their purchases, as well as those of H. Childs and H. S. Albree, of Pittsburgh, were sent over the Alleghany Mountains and to Pittsburgh by wagon. The buyers from Ohio River towns received their quota by flat boats or steamers. Haddock, Hazeltine & Co., J. H. Hendry, and M. M. Paul, of Philadelphia. Chauncey Brooks, James Carey, T. J. Magruder, and others of Baltimore got their shoes by sailing vessels. These were the strong houses of the olden time. Their buyers visited the market once—in the fall—sometimes again in the spring.

These parties congregated in the American House rotunda until 1859. Then, as the *legira* to Pearl street was making progress, the owners of real estate at the north end took the alarm and tried to arrest the movement. The Codman building, adjoining the American House, had just been erected and the second floor was fitted up as an exchange. It was opened with considerable *clat*. Governor Nathaniel P. Banks made a speech. The opposition of Pearl street dealers, however, proved too strong for the movement. The room was cut up and used for offices. It still bears the name of the "Shoe and Leather Exchange," but it is only that in name.

There was no regular place of meeting for ten years after this, except at the American House. That place of rendezvous was inconvenient. Most of the dealers were located in Pearl, High and Congress streets. Buyers began to stop at the Revere, Parker's and the Adams House.

In 1869 a plan for the "Boston Union Merchants' Exchange" was formulated. Different mercantile bodies were interested and the board was incorporated. It was proposed to erect an exchange to accommo-

date all the wholesale merchants of the city, irrespective of the class of goods they dealt in. It was also proposed to build on the spot where the "Old State House" stands, but the project was never carried out.

On the evening of July 3, 1869, a number of members of the trade met at a dinner at the Revere House. As stated in the invitations, it was an initiatory movement towards forming a "Board of Trade," or other similar organization. Francis F. Emery, presided. He forcibly urged the object proposed. Charles A. Grinnell, George W. Merritt, Warren Sawyer, S. R. Spaulding, Eben S. Poor, B. E. Cole, and other merchants spoke in favor of an organization. A committee was appointed to "devise a plan for the formation of an association." The committee reported at a meeting held at No. 98 Pearl street, December 15, 1869. S. R. Spaulding was chairman. They decided to organize, and nominated the following officers: President, William B. Spooner; vice-presidents, William Claffin, Newton; John Cummings, Woburn; A. C. Mayhew, Milford; Francis Dane, Boston; J. H. Walker, Worcester; treasurer, Warren Sawyer. Fifty directors were chosen, and the name New England Shoe and Leather Manufacturers' Association adopted. The first meeting after organization was held at the store of William Claffin & Co., December 29, 1869, at which, on motion of John Cummings, a committee of three was appointed to "nominate a committee of credits, to consist of seven members." Mr. Cummings stated the object "to be to establish a bureau of information as to the commercial standing and solvency of shoe and leather buyers." This was the commencement of the Bureau of Credits.

The name of the organization was altered in February, 1870, by the omission of the word "Manufacturers." Rooms were taken on the first, second and third floor of No. 107 Pearl street, corner of High. There were five hundred members enrolled. Edward P. Bond was the first secretary.

On Saturday, May 14, 1870, the new rooms were opened. There was a banquet in which over four hundred members of the trade participated. William B. Spooner presided. Addresses were made by prominent merchants.

When the association got into working order the great fire of November, 1872, occurred. Temporary quarters were secured at No. 91 State street. Meetings were held there until 1874, when the association removed to 124 Federal street. In 1876 the rooms corner of Summer and Bedford streets were rented and occupied till 1883.

Charles S. Ingalls, formerly in the leather trade, had, in the mean time, been appointed secretary of the association and manager of the Bureau of Credits.

In 1883 the association rented spacious rooms on the south side of Bedford, near Kingston street. They remained there until 1890. Steps were then taken to erect a building. A building committee, with ex-Governor William Claflin as chairman, was appointed and the following Act of Legislature was ratified by an unanimous vote:

The New England Shoe and Leather Association may hold real and personal estate to an amount not exceeding \$500,000, and the income thereof shall be devoted exclusively to the purposes of said corporation.

The building is of light-colored brick, with terra cotta trimmings. It occupies a lot of 12,000 feet, with a frontage of 147 feet on Bedford and 64 feet on Kingston street. It is six stories high. The Association Hall occupies a large central space fronting on Bedford street. The area is about 4,000 feet, and there are telegraph office, electric lights, lavatories, and all the modern conveniences. There are two wide entrances on Bedford and one on Kingston street. The hall on the ground floor is used for the exchange. The building is eligible in respect of light, heat and ventilation. There are three elevators for freight, and two for passengers. The second, third and fourth floors are for offices. The fifth floor is the Bureau of Credits. There is a large and convenient main room, consultation rooms, and directors' room. On the sixth floor are the parlors and dining room of the Boston Trade Club.

The following gentlemen have been presidents of the New England Shoe and Leather Association:

William B. Spooner, 1869 to 1871. Mr. Spooner began in the leather business about 1833 as clerk for Josiah M. Jones. He bore a high character as a merchant, accumulated riches, and was owner of some fine blocks of stores on Congress street. Mr. Spooner was for many years president of the Massachusetts Temperance Society. He died October 28, 1880, aged seventy-four years.

John Cummings, 1872 to 1873. He was and is a tanner and leather dealer, doing business in Woburn and Boston. Mr. Cummings was commissioner from Massachusetts to the Centennial Exposition at Philadelphia, and one of the jury in the shoe and leather department. He was also president of the Board of Trade. He is president of the Shawmut Bank.

Thomas E. Proctor, 1811 to 1875. Mr. Proctor is now president of the Thos. E. Proctor Leather Company. They own ten or more tanneries in Massachusetts and Pennsylvania. His father, Abel Proctor, came to Boston and embarked in the leather trade in 1812. Thomas E. Proctor has been connected as partner and overseer of the business since 1852. He has erected and occupied three of the largest leather stores in Boston at various periods since 1872. The stock company of which Mr. Proctor is president was formed in 1887.

Charles A. Grinnell, 1876 to 1879. Mr. Grinnell was formerly a Baltimore shoe merchant, and for many years thereafter a member of the firm of J. F. Dane, Grinnell & Co.

Augustus P. Martin, 1880 to 1885. General Martin has been identified with the shoe trade many years. He was born in Abbott, Piscataqua county, Me., November 23, 1835. His father was Pearl Martin, a merchant of Boston. When seven years old, A. P. Martin came to Boston and entered the public school, and later attended a private school at Melrose. He went with Fay & Stone, shoe dealers on Pearl street, as a clerk, about 1851. That year he joined "Cobb's Battery," and was a member in 1861 when he enlisted for three months in the Civil War. In November he re-enlisted; was first lieutenant in the Third Massachusetts Battery, captain in 1862, and was made Chief of Artillery, 1st Division, 5th Corps. In 1863 he was named commander of the brigade formed from the 5th Corps. He fought in thirteen battles, and at Gettysburg held "Little Round Top" against all hostile forces sent to capture the position. He was made colonel by brevet March, 1865. He returned at the close of the war, and was for about four years in the house of Francis Dane & Co. In 1871 he formed the firm of Martin & Skinner, afterwards Martin, Skinner & Fay, and is now the senior of the house of A. P. Martin & Co., with a factory at Hudson. In 1878 Mr. Martin was captain of the Ancient and Honorable Artillery Company of Boston. In 1882 Governor Long commissioned him as brigadier-general on his staff, and in 1883 he was elected mayor of Boston.

William Claflin, 1886 to 1892. Ex-Governor Claflin is one of the most prominent citizens of this Commonwealth. He was born in Milford in 1818. His father, Lee Claflin, was a tanner.

William Claflin began to manufacture shoes when eighteen years of age. In 1838 he went to St. Louis and engaged in the hide and leather trade with John How, who had gone there from Massachusetts. Mr.



Thos Kelly

How afterwards became mayor of St. Louis. In 1851 Mr. Claflin severed this connection and formed the shoe jobbing house of Claflin, Allen & Co. He withdrew from business in St. Louis in 1888. In addition to his St. Louis connection, William Claflin became a partner with his father in the shoe business, in Fulton street, in 1841. With some changes that house continued until 1891, being the oldest shoe house in the city. William Claflin, Coburn & Co. was its recent style. N. P. Coburn, one of the partners, had been with Mr. Claflin since 1843. James A. Woolson entered the house, a boy, in 1846, and became a partner in 1857.

Of the political career of William Claflin it is superfluous to speak. It was honorable and useful to the highest degree. He was representative from 1849 to 1852; State senator 1860 and 1861, the latter year president of the Senate; lieutenant-governor four years, 1866 to 1869; governor of Massachusetts three years, 1870 to 1872; member of congress four years, 1879 to 1883; and four years chairman of the National Republican Committee. He is still connected with the shoe trade, as a partner in the house of Gregory, Shaw & Co.

Francis W. Breed, one of the largest shoe manufacturers in the United States, has extensive factories at Lynn. A more extended notice of him appears in the biographical department.

In addition to the New England Association, that embraces all the manufacturers in these States, there are the following local Boston clubs:

The Narragansett Shoe and Leather Club is a convivial coterie. They go down to Narragansett Bay every summer for a pleasure excursion. In 1891 they celebrated their fifteenth anniversary.

The Leather Manufacturers' Association dates from 1886. Theophilus King was the first president.

The Boston Shoe Associates was founded in 1886. Franklin Adams was the first president. The club is restricted to fifty members. At the death of one of the associates, each member pays \$10, and the gross amount is presented to the wife or nearest relative of the deceased.

The Boston Boot and Shoe Travelers' League dates from 1884.

The Sheepskin Club of Boston, as its name imports, is an organization of members of the sheepskin trade. A meeting and banquet is held in January of each year. The club dates from 1879.

In 1888 the Boston Boot and Shoe Club held its first meeting. Seven banquets occur during the year, at which topics of trade or gen-

eral interest are chosen for discussion. A "Ladies' Night" is held yearly, at which addresses are made by women. John J. Henry was the first president of the club. He was succeeded by Francis F. Emery. F. H. Nazro was elected president in 1891.

The Boston Trade Club was formed in 1888. Thomas E. Proctor was the first president. He declined the office the next year. Horace W. Wadleigh was elected, with Frank B. Converse as treasurer. Mr. Converse is president for 1892. The objects of the Trade Club are social. In the fine dining room in the Association building visitors connected with the trade are entertained, and most of the members dine there regularly.

The Boston Leather Associates organized in 1885, with Gordon Plummer of the Boston Leather Company as president.

Notes given for the sales of shoes, or to raise money for purchases, have been bought and sold ever since the shoe business has become an important industry. The earliest dealer was Gilbert Dean, who had an office under the "Old State House." There was a law at that time against all interest above six per cent., but it was evaded by adding an extra charge made for exchange. Tisdale & Hewins, who kept a leather store on Long Wharf, were dealers in shoe notes. Mr. Tisdale was a director in the New England Bank, and a great deal of such paper went through that institution. John Cushing was a well known note broker thirty or forty years ago, and W. F. Lawrence still later. During the war the government issued certificates to pay contractors for furnishing shoes and other equipage. These certificates were numbered and redeemed in regular order. By far the greater portion of the shoe contracts were placed in Massachusetts and note brokers did a good business in loaning money on them. They were taken for security for a note for about ten per cent. less than their face value and two per cent. a month charged for doing the business. Before the war shoes were sold on eight months' credit. From 1861 to 1867 the terms were generally cash, thirty days. Gradually more time was given and notes were again taken—as in *ante-bellum* times—"payable to our own order," and on six months' time. These could be sold, if necessary, "without recourse." At the commencement of the season brokers notified their customers at what rate and how much of their paper they could sell. These one name notes of shoe and leather promisors can always be placed on favorable terms. Note brokers keep lists of paper they have, and the buying or selling rate. Manufacturers can secure

themselves against loss by disposing of such notes as they may take in this way. The note brokers disposed of \$50,000,000 of such obligations in 1880, and \$65,000,000 in 1890.

CHAPTER V.

Trade Statistics—The Great Fire—Labor Organizations—The Shoe District of Boston—Shoe Towns.

In 1860 Essex county produced shoes to the value of \$14,500,000; Worcester, \$9,500,000; and Plymouth, \$9,250,000. In the State, \$46,440,209 worth; of these, \$4,867,399 were made in Lynn, and \$4,130,500 in Haverhill. The largest production of any one establishment was at North Brookfield, \$750,000.

It is estimated that the cost of making shoes by machinery is less than three-fifths as much as by hand work. The labor is only about fifty per cent. Use of buildings and machinery, say ten per cent., makes sixty per cent., or three-fifths. This estimate varies in different localities. The saving on cheap shoes is ordinarily more than on other grades.

An elucidation of the relative advantages in using machines is fully set forth in the following statistics of Massachusetts shoe industry at different periods for half a century.

In 1845 there were made in this Commonwealth 20,896,312 pairs of shoes; value, \$14,799,140; hands employed, 45,877. This was one and fifty-two-hundredths pairs per capita for each working day. No machinery of any kind was used.

In 1855 there were manufactured 45,066,828 pairs of shoes; value, \$37,501,727; hands employed, 77,827. Each person produced 579 pairs that year, an average of one and ninety-three-hundredths pairs daily. Sewing machines for stitching had recently been introduced. These were used for fitting the uppers and stitching the linings.

In 1865 there were made 31,870,381 pairs of shoes; value, \$56,113,987; hands employed, 52,821. This was the year the war closed and business was badly disarranged. The product was small. The value per pair greater than it ever was before, or has ever been since that time. Two pairs a day was the product of each person. Some ma-

chinery was used, but work-people were not proficient in its application.

In 1875 there were manufactured 59,762,866 pairs of shoes; value, \$89,375,972; hands employed, 48,090. Full sets of machinery were used. The average yearly product of each employee was 1,242 $\frac{1}{4}$ a year, or 6 $\frac{1}{2}$ pairs daily. Almost twice as many shoes were made in 1875 as in 1865, while 4,731 less persons were employed. The United States census of 1870 gave the following statistics for Massachusetts shoe trade: Number of factories, 2,392; hands employed, 54,831; wages paid, \$27,265,283; value of product, \$88,399,583.

The total was 78,512,194 pairs of boots, shoes and slippers made that year. Massachusetts produced 57 $\frac{1}{4}$ per cent., and New England 67 $\frac{1}{10}$ per cent. of all the boots and shoes made in the United States that year.

In 1885 there were made in the State 92,485,400 pairs of shoes; value, \$119,079,000; hands employed, 61,858. Each employee made 1,426 pairs, an average of 4 $\frac{2}{3}$ pairs daily. Lynn and Haverhill turned out that year 37,124,320 pairs with 17,500 workpeople, an average of 2,121 $\frac{1}{2}$ pairs yearly, or *seven pairs a day* for each worker. The wages paid averaged \$7.75 a week for each employee.

The United States census for 1880 furnishes these statistics for the Massachusetts shoe trade for that year:

BOOTS AND SHOES (FACTORY INDUSTRY).

Number of factories	982	Value of all materials	\$59,906,773
Capital	\$21,098,133	Pairs boots made, including women's and children's lace and button	23,018,813
Hands employed	61,651	Pairs of shoes made	55,493,381
Wages paid	\$24,875,106	Total value of product	\$95,900,510
Sides sole leather used	3,852,455		
Sides upper used	11,754,766		
Other leather, pounds	22,632,639		

The report of the Massachusetts Bureau of Statistics of Labor for 1891 contains table of cost of production as follows:

PERCENTAGE OF COST IN PAIR OF SHOES.

Stock	69.29	Taxes	.16
Wages	27.65	Repairs	.15
Salaries	1.23	New equipment	.08
Freight	.58	Other expenses	.08
Rent	.56		
Insurance	.22	Per cent	100

A comparative table of the shoe industry for each decade, from 1845 to 1885, was:

CLASSIFICATION.	1845	1855	1865	1875	1885
Number of establishments.....	—	—	206	3,037	7,306
Capital invested.....	—	—	\$6,574,004	\$17,108,020	\$44,317,421
Value of stock used.....	—	—	\$23,196,717	\$49,086,164	\$79,173,097
Persons employed.....	48,577	77,827	92,821	485,000	64,858
Wages paid.....	—	—	—	\$17,586,410	\$20,016,658
Motive power (horse power) ..	—	—	—	4,030	1,425½
Value of goods made.....	\$14,790,149	\$37,591,725	\$35,741,393	\$83,153,755	\$114,729,533

The value of all machinery in shoe factories in 1885 was \$4,513,370. In rubber factories \$1,695,523. Wages ranged at \$10 to \$20 for males and \$6 to \$12 a week for females, but 2,305 males and 151 females made more than \$20 a week. Ten hours was an average day's labor.

At the commencement of the war, in 1861, a great many manufacturers failed. Collections South were stopped. Francis Dane was a prominent manufacturer whose indebtedness was principally in that section. He went through the panic unscathed. Mr. Dane had great faith in his customers, and they proved themselves men of probity. At the time war was declared, Gardner, Carlton & Co., of Richmond, Va., tried to remit to him a payment for a lot of shoes, and for that purpose purchased a bill of exchange on London for £200. This was sent by mail, but communication being suddenly cut off, the letter went to the western section of the Confederacy, and was returned to them after the lapse of more than a year. They were, however, determined to forward it, and in 1863, upon the occasion of the coming North of Mr. Chamberlain, one of the partners, the bill of exchange was sewed in his overcoat. He got it safely through, although he was thoroughly searched by the Confederate and Union officials. When he gave it into the hands of Mr. Dane, its value had increased nearly threefold, from rise in premium on gold. The extra amount placed to the credit of the senders was of great advantage to them after the close of the war.

In April, 1865, a great outdoor meeting was held in Pearl street. Several members of the Southern shoe trade addressed the assemblage. Amicable relations had been restored, and they were again in the shoe district as customers. Great efforts had been made to cancel the indebtedness. A few had saved some cotton; others possessed gold hoarded for four years. A good proportion of Southern shoe merchants paid a dividend; some settled in full. A majority of the jobbers were

in a position to continue business. At the meeting referred to, a few of them created a sensation by telling how they had sent their boys north at the commencement of the struggle, and that "not one of them ever fired on the old flag."

On the night of November 9 (Saturday), 1872, the "great fire" in Boston occurred. The entire business portion was burned. Massive granite and marble warehouses, with the greater portion of their contents were destroyed. The fire broke out at the corner of Summer and Kingston streets, burned over the territory to Broad, and north to Milk street, where the open site of the post-office, then being erected, stayed its progress.

The losses of the shoe and leather trade were about as follows:

Leather	\$ 5,650,000
Boots and shoes	3,800,000
Boots and shoes, rubber	950,000
Findings	600,000
Total	\$11,000,000
Buildings owned by members of the trade	\$ 1,250,000

About half of this amount was recovered from the insurance companies. The comparatively small loss of the findings dealers was due to the fact that one large house had recently moved to Hanover street, and all the others were at the head of Pearl or in Milk street, and had ample time to get goods away before the conflagration reached them. Every team and wagon in the city was pressed into the service to save merchandise in the district. A great many shoe goods were stored in Quincy Block, at the foot of State street. A fire broke out there a few days later, but fortunately did not do much damage.

Some of the buildings burned belonged to members of the trade. E. B. Phillips, a dealer in tanner's oils, lost twenty-two stores. B. G. Boardman, hide and leather dealer, owned a fine block. Frederick Jones and his brother Josiah M. owned several stores. Thomas E. Proctor, William B. Spooner, Henry Poor, William Clafin, were among the property owners. They rebuilt immediately, putting up much finer structures than before. Frank L. Fay was the first to build on High street. Stephen Dow put up a fine block a little further down the street. David L. and John G. Webster erected their spacious store. The streets in the burned district were straightened and widened. Ninety acres of flats were filled in and built upon at the foot of Congress street.

The second great fire in the shoe and leather district occurred in 1893. At 4.25 p.m. on Friday, March 10, of that year, an alarm was rung in from the ill-fated box, No. 52, corner of Summer and Lincoln streets, Boston. On the arrival of the firemen a brisk blaze was in progress in the magnificent Ames building, corner of Lincoln and Essex streets. The fire broke out in the second floor, occupied by Horace Partridge & Co., dealers in toys, notions and small wares, and so rapidly did it spread that in less than ten minutes the entire structure was enveloped in a sheet of flame, and in an incredibly short time was a mass of ruins, and the walls had fallen into the street. In less than ten minutes after the flames broke out, the Farlow building, on the opposite side of Lincoln street, took fire, and a second and third alarm was sounded, calling the entire department, and also summoning aid from Newton, Cambridge, Salem, Lynn, Somerville and other places. The Farlow building was completely destroyed, and the fire communicated with the adjoining block, which was soon reduced to ruins. Such was the intensity of the heat, and so rapid the spread of the fire, that none of the occupants of the buildings were enabled to save anything. When the fire reached the fourth floor of the Ames building, occupied by the Redpath Bros. Manufacturing Co., shoe manufacturers, E. W. Redpath and his brother, Leonidas H. Redpath, had no chance to escape by the stairway, and were compelled to jump from the windows. E. W. Redpath escaped with some bruises, but his brother received injuries which proved fatal a few minutes afterward. Two or three others were killed, and a large number of men and girls who were compelled to jump from the windows were seriously injured. Many of them were at once conveyed to the Emergency Hospital, but before their injuries could be attended to, the hospital took fire and all the patients were hastily removed.

The elegant new building adjoining the Woonsocket Co., on Essex street, occupied by Brown, Durrell & Co., small wares, was totally destroyed, and the Emergency Hospital rendered untenable. All the parties burned out were obliged to make such hasty exit that they could not even save their personal effects. The front walls of all the buildings fell into Lincoln street, filling it completely with debris. The United States Hotel took fire and only by almost superhuman efforts on the part of the fireman was it saved. There were three hundred guests in the hotel. The utmost excitement prevailed, and it looked at one time as if a large section in that vicinity would be destroyed. The loss by this fire was \$4,500,000.

The domain now appropriated to the shoe and leather business in Boston is the finest and most extensive of any used for a similar purpose in the world. The buildings are ample in size, ornamental in appearance, and erected and arranged for the special requirements of the trade. Before the fire the business was cooped up within narrow bounds, and in buildings mostly erected for other purposes. It is now in a compact area, and each street is devoted to a particular branch of the business. The rapid growth of the trade has created a necessity for just such buildings as now adorn the district.

In 1856, when the merchants began to move into Pearl street, that thoroughfare was occupied in part by residences of the oldest Boston families. The Quincy estate and Governor Gore's mansion were there. Daniel Webster studied law there. James and Thomas H. Perkins lived in this street. James Perkins gave to the city the Blind Asylum in South Boston, or rather, he gave his Pearl street mansion for such use, and it was afterwards exchanged for the present building. Gilbert Stuart and Washington Allston, the great painters, during the early part of the last century had studios there. John G. Spurzheim, the phrenologist, lived at the corner of Pearl and Milk streets. The "Old Pearl Street House," on the opposite corner, was for many years a headquarters for young men in the trade. Harrison Gray Otis was born in Pearl street. Near the foot of this thoroughfare, between that and Congress street, is an old wharf, and a sign reads: "From this wharf the tea was thrown overboard." Dry goods firms occupied stores on the west side of the street previous to the time the shoe trade began to tend in that direction. The dry goods men moved to Franklin street, and Pearl street was noted all over the country as the great mart for shoes when the conflagration occurred. After the burned district began to be rebuilt the streets were all widened and straightened, but on account of the want of a spirit of accommodation on the part of one of the property owners, the trade was attracted in a westerly direction. There are, however, a few shoe houses there yet.

Purchase street originally ran along the border of the water. Fort Hill was on one side. That eminence, one of those that gave Boston the title of "Tri-Mountain," was leveled many years ago. Purchase street is now chiefly occupied by the hide trade.

High street, with its irregular shape, is occupied principally by dealers in morocco, sheepskins and light leather.

Congress and Federal street are occupied by shoe jobbers in part.

Summer street was formerly lined on both sides by fine residences. Now the shoe manufacturers have the main portion of the street built over with their stately warehouses. Edward Everett and his father-in-law, Peter C. Brooks, lived on Summer street. Daniel Webster lived here on the site now numbered 136. A tablet on the building commemorates the fact. Devonshire street runs north from Summer, and several stores on it are used by the shoe trade.

South street is chiefly occupied by the sole leather dealers. The Boston and Western, and Old Colony railway depots are on this street.

The upper leather dealers are mostly on Lincoln street. The rubber shoe trade and some prominent firms who sell shoe goods are there also.

In this district about thirteen hundred firms and individuals carry on the shoe and leather business.

While the shoe manufacturers have enjoyed a measurable degree of prosperity for thirty years, they have suffered periodically from the interference of labor organizations. These associations began to be formidable when machinery was introduced. Lynn was an objective point of these disturbers and has suffered considerably by their machinations. A general strike was started in 1859. The women favored it because they objected to sewing machines. The men joined in without stating any specific grievance. There were processions, music and speeches for a few weeks, but the machines held their place. They couldn't be starved out, but the operatives were very nearly, and ultimately went back to work. There was another outbreak in 1872. The Knights of St. Crispin—organized in 1865—were very strong in Lynn and measurably dominated the manufacturers for years. Then came the Knights of Labor. This order was far more powerful than the "Crispins," as in its ranks were marshaled all industrial classes. They brought about a strike in 1878, and walking delegates were appointed to visit the factories and take note of complaints of the workpeople. They also instigated the "boycott" in this country. Then the manufacturers were induced to move out of town to preserve their self respect and their business. Of late years the tendency has been to organize unions of employees in different departments. The "Lasters' Union" is the strongest ever known in the shoe trade. It was thought shoes could never be lasted by machinery. Inventive genius worked steadily on the problem, and now it is solved. The union lasters "stumbled in their path," for, of course, skilled labor was wanted on the machines. By order of their

leaders they put every obstacle in the way of their introduction, and new men were, in most instances, taught to run them. The lasters found, too late, that inventive genius was too powerful for them.

In the spring of 1892 the tanners of sole leather held a meeting and agreed not to work on hides for sixty days. The object they had in view was to prevent overstocking the market and get more price for their leather. Both these objects were attained. In the spring of 1893 they undertook to form a combination to control the manufacture and sale of leather and the purchase of hides. This plan culminated in the formation of the United States Leather Association with a capital of \$120,000,000. A truly gigantic corporation. Thomas E. Proctor, of Boston, is president of the organization. They control most of the tanneries, and the bark lands in the Eastern and Middle States. It is difficult at this early day to forecast the effect of this combination on the trade. They claim to be able to greatly reduce the expenses of conducting the leather business.

The hide and leather trade of Boston has assumed great proportions. The number of hides received at this port for 1891 and 1892 was:

	1892.	1891.
Foreign	1,221,053	1,187,588
Domestic	761,782	981,827
Total	1,982,835	2,169,415

The receipts of leather in Boston for 1892 were:

FINISHED.			
Rolls	427,153	Cases	13,919
Bdls.	202,469	Sides	14,528
Bales	57,838	Cars	58
ROUGH.			
Sides			2,020,357
SOLD.			
Hemlock sides	4,704,145	Bellies, bdls.	58,197
Union sides	2,653,092	Oak sides	70,063
SCRAP.			
Bags	99,547	Packages	693
Bundles	95,984	Crates	372
Bales	42,194	Boxes	312
Pieces	27,714	Casks	73
Sacks	18,295	Trusses	48
Barrels	8,934	Cars	46
Cases	7,572		

Shoe manufacturing has not been carried on to any great extent in Boston, although a majority of the goods made in New England are sold here. The shoe production of the city, however, is now increasing, and three million dollars' worth were made in 1891 in ten factories. The grades range from the poorest to the highest price. The city affords good facilities for obtaining labor and power, and the workshops are convenient for buyers to visit.

The Brookfields have been famous shoe towns for almost a century. Otis Ward made "sole shoes" in North Brookfield in 1810. Tyler and Ezra Batcheller worked for him; they were brothers. In 1819 they began for themselves making shoes, which at first they consigned to Enoch Train of Boston, who had a line of packets running to Havana. He also shipped the shoes South. It was a profitable business. The goods were low cut, sewed and pegged, and packed in barrels for shipment. In 1824 the brothers built a shop, two stories high. It was enlarged in 1825, and at regular periods thereafter, until it was one of the largest in the State. Tyler Batcheller went to Boston and opened a store; Ezra Batcheller superintended the factory at North Brookfield. Both were in an appropriate position, and the business took a front rank. From 1830 to 1834 the house was T. & E. Batcheller & Walker; T. & E. Batcheller to 1852, after which time Chas. Adams, jr., Alfred H. Batcheller, Wm. C. King and George E. Batcheller were in turn admitted, and the firm was T. & E. Batcheller & Co. up to about 1862, when Ezra and his two sons, Alfred H. and Geo. E. Batcheller, formed the firm of E. & A. H. Batcheller & Co. It is a corporation now under the same name.

Chas. Adams, jr., was with the house. He was a representative in 1850-1-2; State senator 1865-68; treasurer and receiver of the Commonwealth 1865 to 1868 inclusive.

Aaron Kimball began manufacturing shoes in Brookfield in 1821. In 1830 John P. Robinson came with him. They made boots and brogans. In 1852 they had a store in Fulton street. Afterwards they went to Hanover street, and, Chas. S. Kimball being admitted, the house became Kimball, Robinson & Co. Mr. Kimball retired in 1864; died in Brookfield, 1866. John P. Robinson was a direct descendant of Rev. John Robinson, the well known pastor of the Pilgrim Church. Mr. Robinson came to Boston in 1852. About 1865 he formed a partnership with Jas. Longley, jr., who married his daughter Julia. This firm was Robinson & Longley. They were succeeded in 1867 by

Loring & Reynolds, but had special capital in the firm. Mr. Robinson sold out his shoe interests and retired in 1881. He died at North Conway, August 5, 1882.

The census of 1890 gives the following report of Brockton:

SHOE AND LEATHER MANUFACTURES OF BROCKTON, 1890.

	Boot and Shoe Cnt Stock.	Boot and Shoe Findings	Boots and Shoes Factory Product.
Establishments	12	14	73
CAPITAL EMPLOYED—Aggregate.....	\$116,029	\$227,418	\$6,180,181
<i>Mixed Property</i> —Total.....	26,200	84,250	750,100
<i>Plant</i> —Total	11,737	11,049	1,186,637
Land	525	3,300	1,2075
Buildings.....	1,000	5,050	344,766
Machinery, tools and implements.....	10,212	2,329	658,896
<i>Liabilities</i> —Total	78,002	111,528	4,243,451
Raw materials	10,025	27,366	790,875
Stock in process and finished product.....	15,480	10,419	603,492
Cash, bills and accounts receivable, and all sundries not elsewhere reported	53,487	64,713	2,770,084
WAGES PAID—Aggregate	\$43,875	\$58,562	\$4,016,936
Average number of hands employed during the year.....	81	115	8,120
Males above 16 years	71	72	2,025
Females above 15 years	5	13	609
Children	—	—	52
Pieceworkers.....	5	30	4,454
MATERIALS USED—Aggregate cost	\$195,098	\$220,430	\$8,844,474
Principal materials	195,448	164,371	8,044,603
Fuel	512	1,724	33,857
Mill supplies	1	—	43
All other materials.....	37	54,335	765,971
MISCELLANEOUS EXPENSES—Aggregate	\$13,587	\$16,092	\$904,326
Amount paid for contract work	—	—	14,912
Rent	1,797	5,016	52,428
Power and heat	423	1,244	9,666
Taxes	388	314	22,980
Insurance	386	1,365	31,815
Repairs, ordinary, of buildings and machinery	500	2,845	57,200
Interest on cash used in the business.....	3,318	310	54,687
All sundries not elsewhere reported	6,775	5,868	660,620
GOODS MANUFACTURED—Aggregate value	\$275,255	\$371,642	\$16,171,624
Principal product	241,574	301,443	16,134,452
All other products, including receipts from custom work and repairing	33,681	70,500	37,172

It is just about eighty years ago that Micah Faxon began shoe manufacturing in Brockton. The name was North Bridgewater then. It was changed in 1873. The Old Colony Railway has two stations: Brockton, and one in the village of Campello. There are in both these places sixty-four shoe factories. Men's and boys' calf, split and buff shoes are made. David Howard and his son, of the same name, followed Faxon early. There have since been many Howards, and the



W. H. Atwater

Packards also are numerous. The Keiths were great operators. Thirty years ago Martin L. Keith was quoted on Pearl street as an uncommonly large producer: he made "a thousand pair a day." There are others of his name in Brockton now who make four or five times as many.

In 1865 the town's product was \$1,112,756; in 1875, \$3,585,103; and in 1885, \$11,035,338.

One of the largest industries in Brockton is that of the "Hub Gore Makers," otherwise the Herbert & Rapp Company, who produce goring for congress shoes. They employ several hundred operatives.

Beverly, sixteen miles from Boston on the line of the Boston and Maine Railway, has been a shoe manufacturing site for half a century. Slippers and fine shoes are produced there. Seth Norwood & Co. is the oldest house, established in 1850. B. E. Cole, D. Lefavour & Co.—now Davis & Morgan—and Woodbury Bros. are old houses. There are thirty-one manufacturers in the town.

Danvers was mentioned in the United States census of 1810 as a town in which shoes were largely manufactured. Caleb Oakes and Moses Putnam were among the first who engaged in the business. Col. Gilbert Tapley and John Fowler made up a lot of shoes and took them to Baltimore by teams in 1814. Upon reaching there the English were about bombarding the place. Col. Tapley put the teams at service, carrying troops and ammunition to North Point, while Mr. Fowler sold the shoes. During that war the soldiers in our army were supplied extensively with shoes made in Danvers. Heavy goods for men's wear were formerly the product of Danvers shops; now men's and women's pegged and sewed shoes are made. There are twenty-two factories in the town. E. & A. Mudge date from 1837.

Grafton, Worcester county, is an old shoetown. J. W. Slocomb was the first to make shoes there in 1813. There are three manufacturers in the place now. The Grafton Flax Mills produce shoe thread there, and William Paton, porpoise; J. R. Leeson & Co., Boston, are the agents of both concerns. J. W. Slocomb & Co. were the first. Samuel Warren tanned card leather there in 1800.

Hudson is thirty-four miles west of Boston, perched on the crest of the tall hills that separate Worcester from Middlesex county. There are eight large factories; women's polkas, grain, buff and split are the main product. Men's heavy "bals" are also made. The oldest firm is F. Brigham & Co., dating from 1834 without change in style. Mr.

Brigham adopted sewing machines in 1851 and pegging machines in 1857. The firm, of which he is the head, have four factories and two miles of waterways that furnish power.

L. T. Jefts began manufacturing shoes here with a capital of about \$500 in 1859. He is now one of the largest manufacturers in the town. He served as a State representative in the Legislature in 1883, and as senator in 1886 and 1887. In the Senate he was chairman of the Committee on Manufactures and on the liquor law. He is president of the Hudson National Bank, also of the New England Conservatory of Music and the Boston University. General A. P. Martin, ex-mayor of Boston, has a factory there. About 5,000,000 pairs of shoes are made in the place yearly.

Haverhill is the largest slipper manufacturing town in the world. That is the specialty of the place, although a good many button boots are made. The business was established about 1800. Moses and James Atwood were in the vanguard of shoe producers. Moses Atwood went to Philadelphia in 1812 with a wagon load of shoes, which he sold. That led to and founded a wholesale shoe house in that city.

David How was a large shoe manufacturer during and before the last war with England. The material he used was roan skins; there were no goat skins in those days, and roan sounded better than sham, though it was the same thing. He is credited with having made and sold as much as \$100,000 worth yearly at that early period. His son, Moses How, succeeded him.

Paul Spofford manufactured shoes here in 1811-14. The firm was Hatch & Spofford. He went to New York with Thomas Tileston, a printer in Haverhill, and formed the house of Spofford & Tileston, shoes. This was about 1815.

About 1820 turn shoes were made; morocco began to be tanned in the town.

For many years all shoes were transported from Haverhill in large covered wagons drawn by oxen or horses. In 1836, 26,955 cases were carried to Boston that way. In 1832 there were twenty-eight shoe manufacturers in Haverhill; ninety-eight in 1860; one hundred and fifty-two in 1876; and one hundred and sixty-five in 1892. There are about seventy dealers in leather and shoe stock.

In 1876 there were 5,821,267 pairs of shoes made in the town; in 1885 13,551,905.

The census of 1890 gives the following report of Haverhill industry:

SHOE AND LEATHER MANUFACTURERS OF HAVERHILL, 1890.

	Boot and Shoe Cut Stock.	Boot and Shoe Findings	Boots and Shoes— Factory Product.	Slippers— Factory Product.
Establishments.....	82	13	201	25
CAPITAL EMPLOYED—Aggregate.....	\$1,525,865	\$177,351	\$5,926,222	\$449,353
<i>Hired property</i> —Total.....	395,600	50,000	1,450,000	134,500
<i>Plant</i> —Total.....	81,327	22,515	673,184	28,875
Land.....	----	----	37,600	----
Buildings.....	----	----	72,200	----
Machinery, tools and implements.....	81,327	22,515	503,384	28,875
<i>Live Assets</i> —Total.....	1,048,938	104,836	3,813,038	270,978
Raw materials.....	109,827	50,461	835,742	48,410
Stock in process and finished product.....	438,057	3,075	627,886	53,604
Cash, bills, and accounts receivable, and all sundries not elsewhere reported.....	500,154	50,700	2,330,410	174,874
WAGES PAID—Aggregate.....	\$402,962	\$64,308	\$4,445,164	\$342,452
Average number of hands employed during the year.....	799	429	6,803	1,007
Males above 16 years.....	484	58	1,833	134
Females above 15 years.....	2	160	395	39
Children.....	----	1	1	----
Pieceworkers.....	307	210	7,574	834
MATERIALS USED—Aggregate cost.....	\$3,109,686	\$261,852	\$7,339,815	\$612,914
Principal materials.....	3,104,261	261,705	6,782,227	563,203
Fuel.....	3,257	97	12,669	631
Mill supplies.....	----	----	----	----
All other materials.....	2,168	50	544,979	49,080
MISCELLANEOUS EXPENSE—Aggregate.....	\$92,014	\$10,970	\$1,167,455	\$168,139
Amount paid for contract work.....	300	----	781,350	134,100
Rent.....	27,480	3,734	101,449	9,483
Power and heat.....	7,759	1,080	34,415	2,224
Taxes.....	4,591	568	15,881	1,439
Insurance.....	8,023	1,392	30,124	2,791
Repairs, ordinary, of buildings and machinery.....	2,460	627	22,462	1,485
Interest on cash used in the business.....	8,118	540	27,017	1,025
All sundries not elsewhere reported.....	32,392	3,038	153,862	15,592
GOODS MANUFACTURED—Aggregate value.....	\$3,854,043	\$347,588	\$14,993,642	\$1,273,710
Principal product.....	3,854,043	347,588	14,875,192	1,261,210
All other products, including receipts from custom work and repairing.....	----	----	88,450	12,500

Thomas White was born in Holbrook (then East Randolph), April 30, 1816. His father was a shoe manufacturer there in 1810, and when Thomas White left school he went into his shop. In 1839 he commenced business for himself. In 1843 he took a partner, Samuel Whitecomb, but the firm of White & Whitecomb was soon after dissolved by the death of the latter. He married in 1842, Miss Harriet E. Keith, a sister of F. H. Keith, who was his partner in the village store, and afterwards a prominent dealer in shoe machinery in Philadelphia. Mr. White, however, conducted the shoe business alone. He passed

through the panic of 1857 unscathed; lost heavily in the South in 1861, but made that good and met all his liabilities. He made a great many army boots during the war period. The business was lucrative. In 1866 he took in his brother, and the firm became T. & E. White. They opened a store on Pearl street, and purchased a large factory in Holbrook. They took a front rank in the trade and were known as among the largest manufacturers.

In 1871 Edmund White withdrew and T. Edgar and Henry M. White, sons of Thomas White, were admitted. The house became and is now Thomas White & Co. They lost largely by the great fire in 1872, when their Pearl street store, full of goods, was burned. In 1880 they built a factory at Great Falls, N. H., where they can turn out 1,500 pair of shoes daily. They gave this up, and now manufacture in Brockton and Holbrook. Mr. White lives in Holbrook, and is one of the most liberal and public spirited citizens of the town. He has held many town offices and been its representative in the Legislature.

Holbrook is a very prosperous place, made up of pretty and comfortable-looking houses; and almost every one of them is owned by its occupant. The valuation of the town is nearly \$1,000 for every man, woman and child living in it. Holbrook was known as East Randolph until 1872, when Elisha Niles Holbrook, a millionaire shoe manufacturer, who had already built a church there, left a legacy of \$50,000 for a town hall, conditional upon the name being changed. Randolph objected to the separation, which caused a spirited contest in the Legislature.

Elisha Niles Holbrook was born in that town October 31, 1800. At the age of twenty years he began manufacturing shoes. He continued the business alone, and with uniform success up to 1870, when he took his son, E. Everett Holbrook, as partner. Mr. Holbrook died February 5, 1872. He left a great fortune, and was throughout his life a liberal, charitable man. A brother, Caleb S. Holbrook, was a shoe manufacturer and a great pomologist.

Lynn has held prestige as the foremost shoe town in the world for more than a century. In fact it was the cradle of the shoe manufacture.

The first Lynn shoemaker was Philip Kertland. Little is known of him save that he came here from Buckinghamshire, Eng., in 1635, and made shoes for Boston, Salem and Lynn people. He served as a soldier in King Philip's (the Wampanoag) war. In 1638 ten acres of land

were allotted to him by the town. He also purchased an estate of Nathaniel Tyler in 1652. He left this property by will to his wife, together with £10 to each of his four daughters, Mary, Sarah, Hannah and Susanna Kertland. He had two sons, Philip and Nathaniel. He died in 1686, aged seventy years. His widow afterward married Evan Thomas, of Boston. John Thornton Kertland, president of Harvard College, and Rev. S. K. Lothrop, of Boston, are mentioned as among his descendants. Rev. Samuel Kertland, who by request of the Provincial Congress labored to induce the Six Nations of Indians in Northern New York to espouse the American cause and was to a considerable extent successful, especially with the Oneidas, was a direct descendant from Philip Kertland. Kertland street is named after the first Lynn shoemaker.

It is a tradition that John Adams Dager, a Welshman, gave a great impulse to the business. He came to Lynn in 1750. The trade of a shoemaker was then quite popular in Great Britain. The most artistic workers were to be found in London, where Dager undoubtedly worked, if he did not serve his time there. He knew how to fashion the shoes of white tawed leather, of "calamink," a fine sort of woolen stuff woven in tasteful figures, the morocco, which had then just begun to be used, or the still finer English kid skins, colored, of all hues, and imprinted with beautiful figures. These stuffs were very fashionable; the toes of these shoes were sharp pointed, the heels high, made of wood and covered with the same material as the shoe. Mr. Dager is said to have imported English shoes and taken them apart to see how they were made. Philip Kertland did the same thing a hundred years earlier. It is done to-day. Mr. Dager became famous, and the *Boston Gazette*, of October 21, 1764, said: "It is certain that women's shoes made at Lynn, by the celebrated shoemaker of Essex, do now exceed those usually imported, in strength and beauty, but not in price. Surely, then, it is expected the public-spirited ladies of the town and province will turn their immediate attention to this branch of manufacture." Although Dager was an excellent shoemaker, he was slovenly in dress and his habits were bad. He was a hard drinker. He married Susanna Newhall, whose father and grandfather both bore the name of Moses Newhall, and were shoemakers. His shop was in Boston street, near where Carnes street comes in. He had a son, Joseph, and a grandson, Thomas Dager, who worked for Benjamin F. Newhall in 1840. Mr.

Dagyr became poor and besotted, and died in the Lynn almhouse in 1808. The name is extinct in Lynn.

There were only three shoemakers in Lynn, in 1750, who employed journeymen. William Gray was one of these. His son, Abraham Gray, who followed in the footsteps of his father, extended the trade to Salem and went there every week, supplying the rich families and some tradesmen with shoes. Salem was at that time larger and more important commercially than Boston. The house where Abraham Gray resided in Lynn is still standing on Marion, near Boston street.

Abraham Gray had a son, born in 1750, and named William, after his grandfather. When he grew up his father undertook to teach him the trade, but confinement at the bench was unfavorable to his health. The family had, meantime, moved to Salem, and young Gray was taken in the counting room of Richard Derby, an eminent merchant. He made several voyages as supercargo, taking ventures of his own, as was the custom at that time. By so doing he accumulated money sufficient to engage in business for himself. From the time Mr. Gray entered upon a mercantile career he prospered exceedingly. He moved to Boston in 1808, and was then considered the richest man in New England. He always maintained business relations with Lynn manufacturers. For more than forty years he supplied them with Russia sheeting, which was used for shoe linings. He built Gray's Wharf, in Boston, at the North End, and did business there. Mr. Gray was elected lieutenant-governor of the State twice (1810-12). He died in Boston in 1825. His grandson, Horace Gray, is an associate chief justice of the United States Supreme Court.

John Mansfield, of this trio of "shoe bosses," lived in Boston street, at Mansfield's End. He was a descendant of Joseph Mansfield, brother of Andrew Mansfield, for many years the town recorder. John Mansfield inherited a good property, and was able to employ journeymen or apprentices, as was the custom of that day. His fame, however, rests mainly on the fact that he was colonel of the Lynn regiment which was stationed at Cambridge, and marched out to take part in the battle of Bunker Hill, but didn't get to the scene of the conflict. He was afterward cashiered, but he claimed that orders were transmitted to him that prevented his marching to the battle.

Prominent Lynn manufacturers of the early days were:

Isaiah Breed, who began an apprenticeship at shoemaking when he was fourteen years old (1800), and began manufacturing on his own ac-

count when he was eighteen years old (1804); in 1820 was one of three of the names who were classed as manufacturers. The others were William B. and Nathan Breed. For more than fifty years Isaiah Breed was in business here and he was uniformly successful. He was one of the eight who passed unscathed through the panic of 1837. At twenty-two he had a large business for those days. He took shoes to Boston in saddlebags on horseback.

Mr. Breed was elected a director in the Lynn Mechanics' Bank (now First National) in 1823. This bank was incorporated March 24, 1814; it was located at the head of the Common, opposite the present city Hall. For several terms Mr. Breed was representative in the Legislature, and he was elected a senator in 1839. His services as a trustworthy and industrious working member were highly appreciated. In person he was commanding, and in manners dignified. One of his daughters married George W. Keene, the present members of the firm of Keene Brothers, being grandsons of Mr. Breed. Mr. Breed built a fine residence at the northeast corner of Broad and Exchange streets, and died there May 23, 1859.

Micajah C. Pratt was one of the most prominent of the early manufacturers in Lynn. It was his birthplace. From 1812 till he died, in 1866, he made shoes. He was a member of the Society of Friends. In 1830 Mr. Pratt began to send shoes to Maine to be made, and families worked for him for a quarter of a century and sent their children up to Lynn to work for him there. He used to do a large business, making some 250,000 pairs yearly. Mr. Pratt was president of the First National Bank, and Lynn Fire and Marine Insurance Company for several years. He lived and died in the large house No. 116 Broad street. C. A. Coffin & Co. succeeded to the business. M. P. Clough, of this firm, is his grandson.

Benjamin F. Doak was born in Lynn, 1826; died there, 1876. He began to make shoes about 1853, and was soon rated as one of the foremost business men. He bequeathed to the city \$10,000 to be invested and the income expended for the benefit of the city poor. It is called the "Doak Fund."

Nathan Breed, born 1794, died 1872, was a manufacturer during all his business life. He was for thirty-six years a director in the Lynn Mechanics' Bank and trustee of the Institution for Savings. In his will he left \$50,000 to found a school and asylum for destitute children.

Abner S. Moore, at one time a partner with John B. Alley, went to Baltimore in 1865 and established the first shoe factory, for machine work, in that city. His firm was Crane, Moore & Co., afterward Moore, Larrabee & Co., in Baltimore. Mr. Moore furnished the stock sewed on the McKay machine at its first trial in 1858-9. Mr. Moore did business about four years in Baltimore, then returned and died in Lynn in 1871.

Philip A. Chase began making shoes in 1856. At that time Italian cloth was in use as a shoe material. Mr. Chase was one of the first to introduce lasting shoes. These had a great run for the next ten years, and he acquired a fortune. Francis W. Breed was a partner from 1867, but Mr. Chase sold out to him in 1875, leaving \$50,000 as a special capital. It didn't take Mr. Breed long to pay that out. Mr. Chase was trustee of the Lynn Institution for Savings from 1868, and elected president in 1871. He still holds the office, and has been president of the Central National Bank since 1875. He was on the School Board three years and its chairman two years. He is a native of Lynn. "Lynn Woods" is a memorial of his usefulness. He was park commissioner 1889 to 1893.

George W. Keene was born in Lynn in 1816. His father, Josiah Keene, owned a farm where Willow and Oxford streets now run. His mother, Avis Keene, was a preacher of the Friends Society. She was a graceful and influential speaker, amiable, charitable and endeared to an extensive circle of friends. She died in 1867, aged eighty-seven years. George W. Keene manufactured shoes on Exchange street, nearly opposite where the site of the depot is. He owned the "farm" on Willow street. The family own it yet. Mr. Keene married a daughter of the Hon. Isaiah Breed. He was an enterprising, far-seeing business man, and did his full share in elevating the shoe trade to a position of commanding importance. He died suddenly in the St. Nicholas Hotel, in New York, January 27, 1874. His two sons, W. G. S. and Frank Keene, succeeded to his business, which is now conducted under the style of Keene Brothers.

Benj. Franklin Spinney was born in Taunton, Mass., September 1, 1832. His father and grandfather were in the shoe trade. In 1858 Mr. Spinney came to Lynn, and with his cousin formed the firm of B. F. & G. W. Spinney. In 1869 they dissolved; the house of B. F. Spinney & Co. was formed, and has continued with different partners since that time. In 1873 they built a factory at Norway, Me. The firm

is among the largest in the trade. W. S. Spinney, of Faunce & Spinney, is a son of B. F. Spinney, and carries the shoe business into the fourth generation.

John Wooldredge was a man that did a good deal for Lynn. He was the first to introduce steam as a motive power. It was used to run a machine for making heels. This was in 1858. He also brought the first sewing machine to the city; it was a Singer. The operator held the work under the needle with one hand and ran the machine by turning a crank with the other hand. Mr. Wooldredge manufactured in 1852 at No. 41 Market street, and lived in Marblehead. His father was the first man to manufacture shoes in that town.

LYNN'S PRESENT AND FUTURE.

From the State census of 1885 the following figures are derived:

SHOE MANUFACTURERS.

Number of firms	174	Value of product	\$20,946,867
" employees	10,708	Gross product.....	\$8,097,296
Capital invested	\$4,263,250	Interest and expenses.....	\$2,350,482
Wages.....	\$4,931,530	Net profit	\$746,814
Stock used.....	\$12,918,221	Average earnings of employees	\$461

Of the employees, 72 per cent. were men; 28 per cent. women.

Lynn shoes find their way into every market, and the demand for them increases year by year. That is conclusive proof that they are such as the country demands. If buyers give Lynn the preference, the inference is natural that they do so because they can make purchases to better advantage there than elsewhere. Lynn has concentrated business far more than most other cities, and concentration is feasible on account of advantageous circumstances and facilities for economical production. The city has also the prestige of long experience. Its record runs back a hundred and fifty years. Much of the material used in its specialty—women's shoes—is made at its doors, enabling Lynn manufacturers to buy on the most advantageous terms. As a rule, the factories produce shoes of medium grades. But there are manufacturers there who turn out the finest qualities, equal in style, finish and excellence to anything in the market. They make what is called for. They are constantly on the lookout for methods for enhancing the value of their wares. Lynn shoes are worth fully fifty per cent. more in point of quality and style than those made there ten

years ago, yet they are sold for considerably less money. The latest improved machinery is used, as most of that of earlier date was burned up in the great fire of 1889.

The United States census of 1890 gives the following report of the industry in Lynn:

SHOE AND LEATHER MANUFACTURES OF LYNN, 1890.

	Boots and Shoes Factory Product.	Leather, Morocco.
Establishments.....	23	23
CAPITAL EMPLOYED—Aggregate.....	\$10,561,471	\$1,863,270
Fixed Property—Total.....	2,815,000	241,722
Plant—Total.....	1,750,000	410,807
Land.....	111,245	87,000
Buildings.....	259,846	123,645
Machinery, tools and implements.....	1,379,849	200,172
Live Assets—Total.....	6,003,540	1,290,749
Raw materials.....	1,278,007	274,300
Stock in process and finished product.....	1,431,105	485,637
Cash, bills and accounts receivable, and all sundries not elsewhere reported.....	3,294,428	440,812
WAGES PAID—Aggregate.....	6,812,038	740,820
Average number of hands employed during the year.....	12,816	1,210
Males above 17 years.....	2,373	984
Females above 15 years.....	652	5
Children.....	61
Pieceworkers.....	9,730	221
MATERIALS USED—Aggregate cost.....	14,757,380	\$2,000,520
Principal materials.....	13,586,903	1,047,854
Fuel.....	19,785	20,355
Mill supplies.....	742
All other materials.....	1,149,960	41,320
MISCELLANEOUS EXPENSES—Aggregate.....	1,188,446	157,724
Amount paid for contract work.....
Rent.....	107,038	18,120
Power and heat.....	1,2074	60.45
Taxes.....	38,770	5,051
Insurance.....	54,243	13,721
Repairs, ordinary, of buildings and machinery.....	42,543	14,005
Interest on cash used in the business.....	52,200	4,810.8
All sundries not elsewhere reported.....	700,000	51,700
GOODS MANUFACTURED—Aggregate value.....	25,863,000	3,343,500
Principal product.....	25,502,010	2,771,230
All other products, including receipts from custom work and repairing.....	147,990	2,435,010

Marblehead has been a manufacturing town since 1830, when John Wooddredge, formerly a sea captain, commenced making children's shoes here. He had two sons who afterwards became prominent manufacturers in Lynn. Joseph Harris & Son, established in 1845, rank among the largest producers in the town. W. P. Orne perpetuates an old name in the business. As far back as 1707 an Orne made



John P. Squire

shoes here. Samuel Sparhawk left following the sea, and made shoes in 1850. He died recently aged ninety years. There are fifty-one manufacturers in the town.

Marlboro' is a busy thriving shoe town. It has 11,000 inhabitants (1892). In 1890 it was made a city. Samuel and Joseph Boyd were the first shoe manufacturers there. They date from 1836. S. Herbert Howe has three factories, in which he made 2,128,000 in 1890. Rice & Hutchins have two, where the output was \$1,200,000 the same year. They own nine such factories in the State. Men's and women's split, kip and calf shoes are made in Marlboro'. The entire product for 1885 was \$5,831,004.

Milford was famous for producing boots fifty years or more ago. Benjamin D. Godfrey was one of the first to make long legged boots for the California miners. He sent them around the Horn and across the Plains in 1850 and thereafter. Aaron Clafin was born in Milford, and although he afterwards became a great shoe merchant in New York, was always identified with her business interests. He had a farm there, also a boot factory, afterwards run by his son and son-in-law under the style of Clafin & Thayer. Oresen Underwood, Samuel Walker, A. C. Mayhew acquired renown as boot manufacturers.

Lee Clafin, father of ex-Governor William Clafin, was born in Milford. He engaged in business in 1815; moved to Hopkinton about 1840, and established the manufacture of boots; he was also a leather dealer and banker. He led a busy life and accumulated a great fortune. He represented Milford in the General Court in 1835 and was State senator in 1838. Horace B. Clafin, the great New York dry goods merchant, was born in Milford. He was Aaron Clafin's brother. There are five large shoe factories in Milford now.

Natick, brogans have been known all over the country. Edward Walcott, John B. Walcott and Isaac Felch made shoes there about 1830-5. Henry Wilson was the most distinguished shoe manufacturer the town produced. He was in after years a senator, and held the office of vice-president of the United States when he died. Men's and boy's brogans, plough shoes and Dom Pedros are made in Natick now. Cochituate, Felchville, and South Natick are contiguous towns in which shoes are produced.

Quincy was one of the earliest of New England towns to develop the shoemaking industry. There is one example here of an uncommon character in business circles, at least in this county.

Noah Curtis commenced shoemaking in June, 1790, at Penn's Hill in Quincy. His shop was at first a small one, but he did good work and soon had to enlarge, and in a few years he began to make sale shoes of a finer character than were elsewhere produced in the State. He started out a two-horse team to sell his goods, and venturing into the Southern States he soon built up a good trade in Virginia, the Carolinas, and Georgia. He found a class of merchants and planters who wanted a certain style of "turned pump" or leg boots, with high heels, fancy shanks, and uppers made from the finest calfskin. Up to about 1825 Mr. Curtis made regular trips from Quincy, starting out with a wagon loaded with 800 to 1,000 pairs of pumps, and never turning back until he had reached his southern destination and disposed of his entire load. He sold these shoes for twelve dollars a pair, and became so favorably known that rich planters gave him their measures and ordered shoes ahead. It is said that even to this day old planters are found in Carolina or Lower Georgia who speak in warm praise of the boots they wore when young men, and which were made by Noah Curtis, the Yankee shoemaker.

Mr. Curtis once carried Daniel Webster in his covered wagon all the distance from Boston to Washington, and the statesman very much enjoyed the opportunity thus afforded to study the character and habits of the people on the route. After giving up his trips south, Mr. Curtis continued in business up to 1840, when he retired with a competency. Previous to 1833 his sign had read "Noah Curtis." In that year, being sixty-three years of age, he took his son Benjamin as partner; the sign was only changed by adding "and Ben, too," underneath, which illustrated the quiet humor of the old gentleman. Benjamin Curtis took the business in 1840, conducted it alone to 1859, when he admitted his two sons, Benjamin F. and Noah Curtis 2d and his brother, Thomas, as partners. Noah Curtis is now the head of the firm, with his son, Walter B. Curtis, as partner, thus making four generations engaged in the same firm and same line of industry, the manufacture of men's fine boots, shoes and slippers.

A more extended biographical sketch of this well-known family appears in the biographical department of this volume.

In Rockland, formerly East Abington, there are about \$4,000,000 of shoes produced annually. The precursor here was Jenkins Lane, who commenced in 1825. He had a very large factory for his time, and was the first in Plymouth county to introduce steam power. Randolph is

fifteen miles south of Boston. For nearly half a century men's and boys' calf boots and shoes have been made in the town. Alexander Strong was one of the early ones. He was the son of a clergyman of Randolph. James O'Brien made boots for Australia forty years ago. His son was consul there. In 1865 there were \$1,585,000 worth, and in 1885 more than \$4,000,000 worth made here.

In Stoughton, eighteen miles west of Boston, the main industry is shoemaking. There are twelve factories in the place. The oldest firm, Samuel Savels & Son, has been in business half a century.

Spencer, sixty-two miles west of Boston, was known as a "boot town," until recently; shoes as well are now made. J. Green & Co. were the first to manufacture. They date from 1811. Josiah Green, the founder of the house, made up a "horse load" of men's sewed boots, the only kind known at that day, and took them to Boston. They were offered at public auction on North Market street and brought \$2.30 a pair. In 1814 he made boots for the army at \$2.27 a pair. Isaac Prouty & Co. was established in 1820. They are the largest manufacturers of men's and women's staple lines of boots and shoes in the world. In 1885 the shoe product of Spencer was \$2,617,736. Elias Howe, the inventor of the sewing machine, was born in Spencer.

Stoneham is one of the oldest shoe towns in the State. Hand sewed shoes were made before the Revolution. The leather at that day was brought from tanners in Charlestown and Malden. Stoneham shoemakers took active part in the battles of Lexington, Concord and Bunker Hill. Shoes were made there for the army during the Revolution and the second war with England. The factories were small but numerous. Forty years ago the town was fourth in value of product in the Commonwealth. This rank is lost, presumably on account of lack of railway facilities. Stoneham has taken a fresh start in the last decade. There are now twenty-three manufacturers in the town. They produce 1,200 to 1,500 cases weekly.

Weymouth is a busy industrial town fifteen miles southeast from Boston. There are four villages, North, East and South Weymouth and Weymouth. In these are twenty-four large shoe manufacturers. All of "the Weymouths" are known as places where reliable shoes, only, are made. There are in East Weymouth several large concerns. Some of them are among the oldest in the State doing business without change of style. N. D. Canterbury & Co. were established in 1836, M. C. Dizer & Co. in 1843. In South Weymouth James Albert and Minot

Tirrell amassed great fortunes making calf boots for the New Orleans trade. This was the main business of the town fifty years or more ago. Patent leather boots were very fashionable about 1845, and a large part of the output of the Weymouths at that time was in patent and wax calf long leg boots for the South. Now it is all congress and lace boots. John S. Fogg was for many years a prominent manufacturer in Weymouth, and afterwards a banker in Boston. An extended sketch of Mr. Fogg appears in the biographical part of this volume.

James, Minot and Albert Tirrell were three brothers who did much towards giving the South Shore a high position in shoe manufacturing in early times. They were born in Weymouth early in the century. In 1831 they formed a partnership for manufacturing shoes in South Weymouth. James attended to making the goods; Minot and Albert went to New Orleans to sell them. This business they conducted successfully for more than forty years. They were in the hide trade and controlled it, as far as New Orleans was concerned, for many years. They sent shoes into Texas and took hides in exchange. They built, about 1860, three residences, which were the finest in their native town. Their firm name was J. & A. Tirrell & Co. Minot Tirrell, jr., son of one of these brothers, owned a large property in West Lynn. He got the Thomson-Houston Co. to locate there. This has resulted in building up a business there that gives employment to many thousand workpeople.

Marshall C. Dizer was born in Weymouth, September 23, 1822. His father followed the occupation of shoemaking for sixty years. The son commenced manufacturing in East Weymouth when he was twenty years old. He had thirty-five dollars, which he had earned, for capital. He built up a substantial business and rapidly acquired wealth. In 1861 he built a factory, which has been enlarged half a dozen times, and is now the largest in the world for the class of goods he makes. His two sons, Silas C. and Walter M. Dizer, are his partners. They tan most all the upper stock used in their shoes. No other firm in this country does this on any extended scale. The firm of M. C. Dizer & Co. celebrated the fiftieth anniversary of their going into business in 1893. The style has never changed in that time, and the firm has always paid a hundred cents on the dollar.

Elias S. Beals was for many years a prominent shoe manufacturer on the South Shore. He was born in Weymouth, October 20, 1811. He always did business in that town. In 1838 he went by sea with a cargo

of shoes to Charleston and Savannah. This venture was moderately successful. He built a factory at "Torrey's Corners" when he returned. In 1849 he became connected with a New Orleans jobbing house, but retired from that branch of the business two years later. He then built a large factory in Weymouth and made shoes for southern markets. He purchased the first sewing machine ever used in North Weymouth. He soon after bought another and found that they saved him the first year one thousand dollars in diminished expense and increased production. As his trade was all in the South, the outbreak of the Civil War broke up his business, and he closed manufacturing in 1861. Mr. Beals was appointed internal revenue assessor for his district in 1861, and in 1863 a second commission was given him by President Lincoln. He was in office until it was abolished in 1868. A son of Mr. Beals went to Milwaukee in 1868 and established the wholesale shoe house of Beals, Torrey & Co. The partners were Frank Beals, Alexis Torrey, and James L. Beals. They have built up a large and successful business.

Worcester has been styled the "Heart of the Commonwealth." It is a great manufacturing city, and in it are produced annually large quantities of boots and shoes. The first name to appear in the business was Captain Palmer Goulding, who tanned leather and made shoes in 1668. His son, grandson and great-grandson successively entered the trade and continued up to the time of the Revolution. The first to make "sale shoes" were John Dollins and Foster Newell. This was in 1813. It was sewed work. In 1818 Earle & Chase dressed black kid and made shoes. In 1824 B. B. Otis commenced. He continued alone up to 1850, when the house of Fitch & Otis was formed, afterward merged in C. H. Fitch & Co. In 1828 Scott & Smith made women's "double prunella shoes and pumps." In 1834 Chas. Wolcott and Thos. Howe & Co. began making shoes, and they contracted to furnish boots for the U. S. Military Academy at West Point. Timothy S. Stone began making boots here in 1835 in Washington Square. He took Samuel Brown as partner in 1864; A. G. Walker in 1868; and eventually sold out to them. They founded the house of Walker & Brown. In 1843 Joseph Walker came in from Hopkinton. He manufactured alone to 1852, when his son, Joseph Henry Walker, joined him. They dissolved in 1862, and went out of the trade ten or fifteen years later. Levi A. Dowley made brogans here in 1847. He was a Boston leather merchant after that. R. Wesson, jr., commenced in 1849. His son,

J. E. Wesson, has greatly enlarged the business, and the J. E. Wesson Shoe Co. still continues it. In 1853 C. C. Houghton started making boots in Lincoln Square. His firm now occupies "Houghton Block," and have another factory in New Hampshire. Luther Stowe began to manufacture in 1855. His son, of the same name, now owns the business. H. B. Jenks and H. B. Fay were large producers from 1860 to about 1880, but went out of the trade. J. U. Green, another of the old manufacturers, retired from business about 1885. J. W. Brigham and D. Cummings & Co., dating from about 1863, are large manufacturers. Bigelow & Trask, who built a factory here in 1864, are merged in the Bay State Shoe and Leather Company. Jonathan Munyan made boots here in 1817. He joined the Bay State Company, was vice-president and agent, and is now president of the Goodyear Shoe Machinery Company of Boston. E. H. Stark & Co. have continued without change since 1863. S. R. Heywood, who began in 1867, built a large factory in 1880, and four years later organized the Heywood Boot and Shoe Co. In 1866 the house of Rawson & Linnell was formed. This was changed to D. G. Rawson & Co., and is now known as Goddard, Stone & Co. They doubled the capacity of their factory in 1887, and it is now the largest in the city. Whitecomb, Dodman & Stowe commenced in 1870; this is now Whitecomb & Miles, and they have two factories on Shrewsbury street. Up to 1868 all boots were hand made; machinery is now generally introduced. Before that time most any shoemaker was able to take the sides of leather and produce an entire boot or shoe. Now there is a division of labor, and few persons are skilled in any but their particular part. Most of the workmen are permanent residents, and many own their houses. There have been only two strikes in the history of the trade: one in 1867, another in 1887. Like in all such outbreaks, the wage earners were the sufferers. A good, substantial article of men's and boys' boots and shoes are made in Worcester. In 1875 the value of product was \$2,558,517; in 1885, \$4,051,384.

Hon. J. H. Walker, of Worcester, is one of the prominent men in the trade. He is the son and grandson of a shoe manufacturer. His firm, J. H. & G. M. Walker, was for many years one of the largest in the State. During the war Mr. Walker paid the highest income tax of any manufacturer in Massachusetts. He invented the sole cutter bearing his name, and the "saddle seam" boot. In 1865 he invested capital in tanning in Chicago. The firm there was Walker, Oakley & Co. Mr. Walker is serving his second term in Congress.

The census of 1890 gives the following report of Worcester

SHOE AND LEATHER MANUFACTURES OF WORCESTER, 1890.

	Belting and Hose Leather.	Boots and Shoes - Factory Product.
Establishments.....	3	7
CAPITAL EMPLOYED—Aggregate.....	\$508,570	\$2,417,743
Fixed Property—Total.....	4,060,711	3,751,111
Real Estate—Total.....	14,000	380,804
Land.....	—	65,700
Buildings.....	—	36,750
Machinery, tools and implements.....	14,000	147,142
Live Assets—Total.....	425,808	1,497,812
Raw materials.....	70,513	25,425
Stock in process and finished product.....	140,814	275,600
Cash, bills and accounts receivable, and all sundries not elsewhere reported.....	295,591	870,795
WAGES PAID—Aggregate.....	54,393	927,094
Average number of hands employed during the year.....	70	1,975
Males above 16 years.....	77	211
Females above 15 years.....	2	250
Children.....	—	20
Pieceworkers.....	—	988
MATERIALS USED—Aggregate cost.....	\$649,372	\$2,128,158
Principal materials.....	642,000	2,052,320
Fuel.....	925	9,539
All other materials.....	5,457	6,309
MISCELLANEOUS EXPENSES—Aggregate.....	23,342	200,602
Rent.....	3,900	10,518
Power and heat.....	600	4,000
Taxes.....	2,001	13,380
Insurance.....	3,330	11,418
Repairs, ordinary, of buildings and machinery.....	870	7,293
Interest on cash used in the business.....	6,900	17,101
All sundries not elsewhere reported.....	5,000	100,903
GOODS MANUFACTURED*—Aggregate value.....	757,033	3,503,877
Principal product.....	757,033	3,417,568
All other products, including receipts from custom work and repairing.....	—	86,309

CHAPTER VI.

Labor Disturbances—Rubber Manufacture—Mortuary of a Decade—Trade Methods—List of Shoe Machinery.—Conclusion.

IN 1878 there were in Massachusetts 159 strikes and lock-outs in the shoe trade; 118 of them originated in demands for higher or protest against lower wages. Almost all of them failed of the object aimed at, though they were sustained by contributions from the organizations. From 1860 to 1878 there was an increase of 24 $\frac{1}{10}$ per cent. in wages. The cost of living never has been as low as it is now. In Lynn wages were advanced fifty-six per cent., in other shoe towns from ten to twenty per cent.

Fashion has dictated that shoes worn now shall be made of light material, consequently rubbers are worn in the wet and cold seasons. The greatest rubber shoe works in this country, or in the world for that matter, are at Malden. They are owned by the Boston Rubber Shoe Company. These produce about 45,000 pairs daily in more than a thousand styles. In Rhode Island that of the Woonsocket Rubber Company is about as extensive. The trade amounts to \$10,000,000 to \$25,000,000 a year. Charles Goodyear discovered the secret of vulcanization. This rendered it impervious to heat or cold and made its use possible in shoes or clothing. Mr. Goodyear spent many years in experimenting fruitlessly. At last he gained the knowledge he was in search of accidentally. He was standing in his shop in Woburn, in 1839, explaining his views to a couple of friends, and holding rubber and sulphur mixed in his hands. The mass dropped on a red hot stove and on being recovered it was found that it had not melted or been burned in the least. The inference was plain. Intense heat was the thing he required. Mr. Goodyear obtained the great council medal at the London exhibition in 1851, and the cross of the legion of honor at Paris in 1855. He died in 1860.

Elisha S. Converse is rounding out half a century of experience in the rubber business. The Edgeworth Rubber Company built a factory in Malden in 1850. In 1853 it merged in the Malden Manufacturing Company. They were chartered by the Legislature with \$200,000

capital. Among the first directors were John Bertram, an importer of hides, rubber, etc., of Salem; T. C. Wales, one of the first to sell rubbers, and later the inventor and patentee of the Arctic overshoe; Nathaniel Hayward, who with Charles Goodyear was a discoverer of vulcanization, and E. C. Converse, a shoe and leather dealer of Boston. Mr. Converse was made treasurer and still holds the office. Mr. Converse was born in Needham, January 28, 1820. In 1844 he went in business as a clerk for his elder brother's firm, known at that time as Field & Converse. He soon began for himself, having Benjamin Poland as a partner. The firm of Poland & Converse did business on North Market street up to 1853, when they dissolved. Mr. Converse on taking hold of the affairs of the Malden company proceeded to reorganize it, and in 1855 the Boston Rubber Shoe Company was chartered; capital \$375,000, increased in 1860 to \$500,000. Their product was 260,000 pairs in 1857, 1,800,000 pairs in 1874, and now they make, in the season, more than 40,000 pairs daily. The company has two factories, one at Malden and the other at Middlesex Fells. On November 29, 1875, a fire burned all their buildings; they were rebuilt and opened the next year. The Boston fire of 1872 destroyed their store. Mr. Converse is one of the most charitable citizens of Malden. He has presented the town with a library, a church, a park, and has built up an industry in which more than three thousand persons find employment. The Woonsocket Rubber Company has factories in Massachusetts and Rhode Island. Their main selling agency is in Boston, but they have stores also in New York, Baltimore, Philadelphia and Chicago. They produce 30,000 pairs of rubber boots and shoes daily. Joseph Banigan, president of this company, began the rubber business at Jamaica Plain more than forty years ago. They have a house at Para and import their own stock. Mr. Banigan at a cost to himself of \$250,000 built and endowed a building at Providence, R. I., for the Little Sisters of the Poor.

The value of product of rubber shoes and manufactures of rubber for each decade since the commencement of the business is as follows:

CLASSIFICATION.	1855	1865	1875	1885
Number of establishments	5	16	33	41
Capital invested	\$438,000	\$1,032,484	\$4,655,988	\$10,893,079
Value of stock used	—	\$1,277,747	\$2,816,709	\$7,873,240
Persons employed	462	1,062	2,195	6,469
Wages paid	—	—	\$406,554	\$2,285,165
Motive power (horse power)	—	—	1,570	4,265
Value of goods made	\$968,000	\$1,808,936	\$6,508,096	\$12,638,741

The business portion of Haverhill was destroyed by fire February 17, 1882. Most of the shoe factories were burned. One year from that day the manufacturers met at a banquet to celebrate the rebuilding of the town.

November 26, 1889, a great fire occurred in Lynn; sixty per cent. of the shoe factories were burned, and many millions of dollars' worth of shoes and leather destroyed. The loss on buildings alone footed up \$1,009,160; that in merchandise was much greater. The total insurance was \$3,607,835. More than 4,000 persons were thrown out of employment.

A fire broke out in the Exchange Building, 69 to 81 Bedford street, Boston, November 28, 1889, badly damaging several buildings and burning stocks of shoes and leather. The loss was \$1,500,000; insurance, \$3,737,525. The fireproof material, of which the building of the Shoe and Leather Association directly opposite was composed, stopped the conflagration.

Within fifteen years the following prominent members of the shoe trade have died. Some were residents of towns in the vicinity, but all did business at one period in Boston:

Cheever Newhall, April 8, 1878, aged ninety. He began business in 1802, and from 1822 to 1826 had as partner, Joseph Eveleth, afterwards high sheriff of Suffolk county. He was a charter member of the Massachusetts Horticultural Society, 1840, a founder and first president of the Agricultural Club. Ebenezer Vose, February, 1877, in wholesale shoe business 1810, retired 1850. A. C. Mayhew, Milford, September, 1880. He served several terms in both branches of the Legislature and was a member of the council of Governor Banks in 1859. Charles D. Bigelow, May, 1883. He commenced manufacturing in Framingham in 1843; went to New York 1851; was the first to make pegged brogans there; first to use pegging machines, 1852; first to employ prison labor, contracts for which he held at Providence, Sing Sing, N. Y., Brooklyn, N. Y., and Trenton, N. J. In 1855 he introduced the system of division of labor in shoe factories; 1866 built the Bay State Shoe Factory at Worcester. His son, Charles E. Bigelow, succeeded him as president of the Bay State Shoe and Leather Co. Alexander Strong, June, 1881; manufactured in Randolph from 1840 to 1868. He retired 1868, succeeded by E. A. Strong & Burt, now George H. Burt & Co. Jasper S. Nelson died October, 1881; manufactured at Grafton from 1844 to the time of his decease. Aaron Clai-



George W. Gay

lin, January 7, 1890, aged eighty-three years. He had a store in New York, and before and during the war had jobbing houses in ten cities. Horace B. Claflin, the great New York dry goods merchant, was his brother. George Hussey Chase, Lynn, a shoe manufacturer from 1848 to 1860; then postmaster eight years, and collector of the port for a similar period. He was a cousin of John G. Whittier, the poet, who was himself a shoemaker in early life.

Lewis W. Nute went to Boston in 1841, and from humble beginnings accumulated a large fortune. He built a fine building and presented it, with a library, to Milton, N. H., his native town.

In August, 1881, the first exposition of the New England Manufacturers' and Mechanics' Institute Fair opened at their building on Huntington avenue. The structure covers 300,000 square feet. There was a large exhibit of shoe machinery, and an entire shoe factory shown in operation. At the exhibition of 1882, Edison's electric light and power display was very interesting. Shoe machinery was run by electric motor.

The law to regulate trade-marks was passed March, 1881. Many shoes are now trade-marked and price-marked. Fee for trade-mark, \$25.

The bankrupt law was repealed 1880.

One of the difficulties which shoe venders are subject to is the practice of "dating ahead." The manufacturers take orders for shoes, and deliver them, say in January and February. They date the bill four months from April 1. Or they take orders and deliver the shoes in June, dating the bills October 1, so at least eight months must elapse between the time of parting with the goods and realizing the proceeds. The New England Shoe and Leather Association in 1891 recommended the following basis of a system on which shoes should be sold:

First: That the date of bills shall be that of the date of the shipment of goods.

Second: That settlement of bills shall be made by notes or cash within thirty days, or within other reasonable time, subsequent to the date of bills.

Third: That the maximum time given be such that one season's bills shall not overlap the bills of the succeeding season.

The propensity to repudiate contracts and to demand reclamation for goods on the pretext that they are not of the prescribed quality, is more prevalent than it ought to be. It is a subject of deprecatory re-

mark at every convention of the trade. About ten years ago some manufacturers in Massachusetts, who had previously sold only to jobbers, began to sell to the retail trade. It was claimed that they secured both the manufacturer's and jobber's compensation by so doing. However this may be, the profits were soon cut down by competition, and it was found that to distribute shoes over a wide extent of country, the services of jobbers were indispensable.

The following table of shipments of shoes from Boston shows the growth of the industry in thirty years:

1860	682,165 cases.	1880	2,265,360 cases.
1865	710,162 "	1885	2,717,795 "
1870	1,231,369 "	1891	3,417,343 "
1875	1,410,073 "		

Shoes are almost always sold by sample. Manufacturers make up samples twice a year. Every season they make additional improvements in the styles. The samples are carried all over the country by travelers. They take orders for goods to correspond with them, and the work is all done in fulfillment of these contracts. Few goods are made up except on orders. This, of course, does not refer to jobbers' stocks.

The article mostly in vogue at present for women's outdoor wear are button boots. The material in the upper is kid or cloth; the sole, oak, union or hemlock tanned. There are fully fifty workpeople who have something to do in the production of a pair of shoes. The use of machinery has cheapened them fully one half. Improvements in the art of tanning contributed to this change, and now the consumer has all the benefit, getting a better shoe for three dollars now than those were for which he paid six dollars or more twenty years ago.

In a factory where medium grade shoes are made for women's wear, the following machines are used: For preparing sole leather, stripping, rolling, splitting, sole cutting, dieing-out, rounding-up, moulding, channeling, shanking, thinning edges and skiving stiffenings; for fitting the uppers: machines for closing, stitching and binding, and for stamping, scalloping, punching, eyeletting, staying, rubbing down, rolling and bobbin winding. In the making room, machines are used for lasting, sole sewing, pegging, beating-out, edge setting, heeling, heel grinding and burnishing are required. The bottoms are finished with sanding and brushing machines. The trade-mark, or other device, is stamped on the sole by a monogram machine. The shoes are then

buttoned or laced up by the trimmers, and laid away in a pasteboard carton ready for market. Fine shoes are made eight widths to each size, and any normally developed foot can be fitted.

A "set" of machinery for a modern shoe factory is expensive. Some manufacturers run four or five complete sets. For machine work, they are as follows, and we add approximate prices:

STOCK-FITTING DEPARTMENT.

Roller	\$100 to 275	Feather edger	8 30
Splitter	65 to 100	Molder	100
Dieing out	125	Channel flap turner	40 to 60
With sometimes a Hartford or Smith rounder	300	Veneer press (on cheap lines)	25
McKay channeler	30	Counter skiver	20

BOTTOMING ROOM.

Sole tacker	8 75	Breaster	8 25
Lasting machines, royalty $\frac{1}{2}$ c. per pair	\$100, \$250 or 300	Twin burnisher	850
McKay sewing machine	320	Electric finish	50
Beating-out machine	300	Heel beader	25
Shank buffer	65	Steam dryer	14
Nailer (National or McKay) McKay royalty $\frac{1}{2}$ c. per pair	500	Buffer	65
Smith shaver	150	Naumkeag cleaner	100
Busell trimmer	65	Brush shaft	15
Union edge setter	150	Monogram	15
		Extra trimmer for spring heels	65

GOODYEAR.

Full set of welt machines	\$675	Do. with turn channeler and molder	\$725
Do. with molder for turns	687	Turn set alone	350

Shoes made by the Goodyear system are subject to a royalty of $1\frac{1}{2}$ c. for children's, 2c. for misses', 3c. for women's, and 4c. for men's shoes.

A line of shafting, pulleys, belts, etc., \$380. A good many firms hire power at about \$300 a year for each line.

The Singer, Wheeler & Wilson, Union Special, and Standard Machine Companies fit a room entire. There are used in the stitching room: bench, with shellacked plank top; shaft suspended from the floor and fitted for single or double bank lines.

Devices for transmitting power are fastened to the under side of the bench by different methods. The Wheeler & Wilson No. 12, and all

Singer machines, are made with different modifications, so as to do all parts of the stitching.

STANDARD SEWING MACHINE CO.,

Cleveland, O., with offices in many large cities, fit up with power transmitters:

- Large arm single-needle leather machines, style 10.
- Medium arm single-needle leather machines, style 9.
- Two-needle leather machines—one thread below.
- Three-needle leather machines—one thread below.
- Leather trimming machines.
- Wheel feed leather machines.
- Zig-zag machines, with stop motion.

The various operations on kid or cloth uppers are performed as follows:

WHEELER & WILSON CO. OUTFIT.

- Skiving by Amazeen machines.
- Folding by Lufkin machines.
- Closing seams, No. 12, chain or lock stitch.
- Making linings, No. 12, chain or lock stitch.
- Fancy stitch on top facings, various designs.
- Staying seams by two-needle machines.
- Closing on the lining by machines with seam trimmer attachment.
- Top stitching, No. 12.
- Buttonholes, working, finishing and barring by machines invented for the purpose.
- Cording buttonholes, No. 12. Vamping by No. 12 double or single needle.
- Sewing on buttons by machine or hand.

THE SINGER MANUFACTURING COMPANY OUTFIT.

Closing, by automatic chain stitcher	\$25
Welt staying (California stay), A.C.S welt attachment and central bobbin cutting attachment	38
Lining, by automatic chain stitcher	25
Amazeen Skiver and Lufkin folder	160
Tape stay, Singer, A.C.S., two-needle	50
Fancy stitch on linings, long and short throw	75
Also new fancy stitch just introduced	75
Staying, stay stitch, two needle or L.M. two shuttle	75
Closing on I.M.C.B., C.A	36
Top stitching, I.M.C.B.	26
Buttonholes, I.B.H., with barring attachment	120

Also I. B. H. DeC. for cloth	120
Buttonhole finishing overseaming machine.....	50
Buttonhole cording, I. M. central bobbin.....	26
Vamping I. M. two shuttle or I. F. diagonal and F. U. A. cylinder, two needle.....	75
After vamping come button machines, Morley or Standard.....	150
Toe linings, A. C. S.	25
Barring button flies, by the Philadelphia barring machine.....	

To fit up for 600 pairs a day three sets of machines are required and the cost, including tables, counters, shafting, etc., would be from \$1,500 to \$1,800. The Singer Company makes 118 different kinds of machines.

The process of making women's shoes is, in most factories, about as follows: The soles come from the sole cutters blocked in sizes; the molded counters and built heels are purchased from the makers; the innersole leather is cut in shape by dies; the outer soles are put in a tank of water, when, after being properly tempered, they are dried and then rounded by machine; the channels are cut by a channeler, which grooves the sole at the same time and allows the stitches to lie and makes a perfectly smooth surface beneath the channel lip; the outer sole is then put through a Bresnahan moulding machine so it will take the proper form for the last, and, as this presses the channel down, it goes to another machine where the channel is turned up; then the outer sole is ready for lasting. The uppers and linings are cut by hand. A cutter has said: "Until a machine is invented that has brains the cutting of shoes must be done by manual labor." This is because the patterns have to be laid on the skin in a way that shall avoid imperfections and cut to the best advantage. The several sizes are kept separate. They are then taken to the stitching room, where the operators are mostly women who work on different machines and tasks. One sews seams, others perform the different operations of gumming the linings, blind stitching, turning, making buttonholes, sewing on buttons. The special machines all do their part, and when the upper is completed, the top of the lining is covered with a "hood holder," or otherwise, to keep the lining clean, and the uppers are sent to the stock room. The stock is "assembled"—that is, the upper, outer and inner soles, heels, counters, etc., are put together and sent to the lasting or making room. Here the process is continued either by hand, in old fashion, or by the various lasting machines; then the last is pulled out and the shoe put on the rack.

This is for the McKay machine, by which the sole is sewed to the upper. By the Goodyear system, as now adopted, there is in use a machine for sewing welts, an outsole stitchee for stitching the sole to the welt, a machine for beating out the welt, and channeling machines. The shoes are bottomed without removing the lasts. They are leveled by the Acme leveler, and the last is taken out to nail on the heel by machine, and finish it. Shanks are baffed, edges trimmed, blacked and set, and bottoms cleaned by machinery. Hard finish and black is applied by hand and the shanks burnished with a hot iron, uppers cleaned by machine, monogramed, and the goods are ready to be put in cartons for shipment. These are the processes that have supplanted the old shoe bench of half a century ago, and render it possible for well organized factories to turn out anywhere from 1,000 to 5,000, and even 10,000 pairs a day.

In Eastern Massachusetts block soles are used. In sections where manufacturers cut their own soles, large beam sole cutters cut a whole side at a time.

A factory where 1,000 pairs daily are made will require fully 3,000 pairs of lasts. Patterns are needed according to the number of styles produced.

The manufacture of dressing blackings and burnishing inks for finishing shoes is quite an important adjunct to the industry. One of the earliest beginners in this line was Charles L. Hawthaway, of North Bridgewater, now Brockton. He commenced in 1852, and drove through the shoe towns supplying his trade from a wagon. He built two great factories later. His business is continued by his sons. B. F. Brown & Co. began making blacking in 1855. Mr. Brown was a practical chemist. Boston manufacturers now supply Europe with these goods.

There are 1,000,000 shoe boxes used in New England yearly. They are mostly purchased ready made. The prices are for a boot case thirty-five cents; brogan, sixty pair, sixty cents; plough shoe, thirty-six pair, forty-two cents; same, twelve pair, twenty-six cents; sixty pair slipper case fifty cents. A large amount of lumber is used in their construction. Then there are pasteboard cartons in which every pair of fine shoes is packed. These cost with labels about three cents each. They are furnished free to buyers.

Competition is making it necessary to use constant effort to hold the business in New England. The rivalry is intense and comes from all

sections. Citizens of towns east and west are continually bidding for shoe factories. They offer exemption from taxation, loans or gifts of money and numerous other inducements to parties with a view to induce them to come and make shoes in their towns. Their efforts have multiplied factories so much that there is no sale for the goods and only employment a portion of the time for the hands, but Massachusetts holds her supremacy as a shoe producing State, and New England keeps equal pace in the march of progress.

Like all other staple commodities shoes are produced in great abundance and sold at very small profits. The manufacturer of the present day in order to succeed must be a master of his art, keen of perception, and prompt to see and seize all opportunities that come in his way. He must constantly progress. It is not enough that there should be no retrogression, he cannot stand still, however far in the advanced column he has reached. Unless he moves forward he is in danger of being passed. That there are so few that falter and fall back is the strongest evidence that can be adduced of the ability of the leaders in this vast industry.

THE HIDE AND LEATHER TRADE OF SUFFOLK COUNTY.

BY

FRANK W. NORCROSS,

OF THE SHOE AND LEATHER REPORTER.

CHAPTER I.

Tanning among the Puritans—Ample Supply of Deer and Cattle Skins—Sumptuary Laws for Regulating Trade—Tanning in the Eighteenth Century—Personal Sketches of Old Tanners.

THE hide and leather business in Massachusetts has kept pace with that of shoes and grown with its growth. Of late years the production of heavy leather has decreased, owing to difficulty in obtaining bark, but the capital of Boston merchants has been invested in tanneries in Maine, New York and Pennsylvania. The hides are now mostly taken to the bark and the finished product brought to Boston for sale.

Light leather, morocco, kid and sheepskins are made in the vicinity of Boston and marketed here. Something like one-quarter of the hides the tanners use are imported into Boston and New York. Boston merchants have a large La Plata, African and Calcutta trade, and most of the hides from these countries naturally come to this port. The upper leather hides imported are almost all of them tanned in Massachusetts. A history of the hide and leather business is coeval with the first settlement of this country.

The manufacture of leather and its conversion into numerous articles of elegance and utility, has attained a front rank as a branch of industry in this country. Boston has for more than a hundred years been the emporium of the trade. Tanning was one of the first occupations that

found a foothold in this State. It is the first trade of which any record is preserved in history. On the tombs of Thebes, painted four thousand years ago, are pictures of tanners at their work. Some of the currying tools delineated there are similar to those used now. Leather tanned with acacia bark and alum has been found in the mummy cases. Bronze leather cutters and scrapers have been found in Mexico among relics of a civilization older than the Aztecs, which denote a knowledge of tanning long before this country was discovered by Europeans.

The first neat cattle were brought into Massachusetts Colony by Edward Winslow in 1624. In the next six years over two hundred head were brought over from England "besides horses, sheep and goats." Mr. Higginson, of Salem, mentions the extraordinary increase of cattle in 1630 and speaks of "stores of sumack and other trees good for dyeing and tanning of leather."

The first white settlers of Lynn were Edmund Ingalls, a brewer, and his brother, Francis Ingalls, a tanner. There was plenty of raw material. Besides neat cattle introduced by Winslow, there were deer and moose in plenty, and, indeed, buckskin was the principal wear of the early colonists. Francis Ingalls put down his tannery on what is now Burrill street, on "Humfry's brook." This location is in Swampscott now. The vats were there until 1825, when they were taken up. Francis Ingalls was born in England in 1601. He lived in Swampscott, then a part of Lynn. Probably his establishing a tannery gave an early impetus to the shoe business. The leather being made here, it was natural enough to turn attention to means for directly applying it to the common necessities of life.

Another tanner of the early days was George Keyser. He dated from 1630. His tannery was in Lynn. An old record (1665) says: "Thomas Newhall's child was drowned in a pitt George Keyser digged. Hee had a tanfatt in the pitt, and George Keyser did take upp his fatt and leave the pitt open." Mr. Keyser is also mentioned in old annals as a miller. He probably followed both occupations. His wife was a daughter of Edward Holyoke, a man of note in the colony, who owned and settled the town that bears his name in Western Massachusetts. Mr. Keyser tanned in Lynn until he moved to Salem in 1680, where his two sons first established the business.

The Burrill tannery was put down in or about 1631, and kept in operation almost two hundred years. The Burrills were held in such reverence that they were called "the Royal family of Lynn." Lieut. John

Burrill started the yard. It was on Boston street. His house stood opposite. The premises are now covered by the morocco factory of John T. Moulton. John Burrill was for twenty-one years a member and ten years speaker of the House of Representatives of Massachusetts, and Governor Hutchinson, in his history, compares him to William Pitt, or to Sir Arthur Onslow, an accomplished speaker of the House of Commons. He was a member of the Board of his Majesty's Council for the Colonies. Mr. Burrill died in 1721, and left the tannery to his son, Theophilus. That gentleman, in his will, left it to his grandson, Samuel Lewis, who sold it in 1782 to Daniel Newhall and Nathaniel Sargent. They dissolved, and Mr. Sargent carried it on until his death, in 1798. Then Joseph Watson owned it until 1844. It is now a morocco factory.

Two curriers of Lynn—Hope Allen and Nathaniel Bishop—petitioned the General Court (1664) to forbid tanners and “shewmakers” exercising the trade of curriers. The request was denied, but later the court enacted (1698) that “no person exercising the mystery of a currier or shewmaker shall exercise the feat of a tanner on pain of forfeiture of 6s. 8d. for any hide tanned; also no tanner to exercise the trade of shewmaker or that of a currier, and no shewmaker should use leather made of horse hides for the innersoles on pain of forfeiture of the shoes.” One piece of legislation was commendable. A fine of twelve pence was exacted from any butcher who cut hides in flaying.

Leather has always been deemed a necessity in war, and we find in the Colonial Records (1704) that Capt. Benjamin Church, who commanded the expedition in the French and Indian war, ordered that “500 pairs of shoes be made in Lynn, also good store of cow hides tanned to make more, also hemp and wax to make thread, and a good store of awls furnished.”

Searchers and sealers of leather were appointed by the General Court of Massachusetts in 1642. A law was passed that no butcher should exercise the trade of a tanner, and soon after “that no leather should be over-limed, or not sufficiently tanned;” also forbidding any currier to use any “deceitful or subtle mixture,” or burn or scald leather under pain of forfeiture.

There were several tanneries put down in Boston previous to the Revolution. William Billings owned a tannery on Frog Lane (now Boylston), near Eliot street, in 1760. He published the “New England Psalm Singer” in 1770, and other musical books. He pursued the



Wm. H. Moody

tanning vocation all his life; he also taught church music and composed anthems that were popular long after the Revolution. There was a tannery on Hanover street, nearly opposite the American House, another on Milk, near Pearl, and George Robert Twelves Hewes, one of the "Boston Tea Party," had a tannery on Congress street. About 1770 his brother, Shubael Hewes, was a butcher at the corner of Washington street and Harvard Place during the Revolution. About the year 1790 Adam Colson was a tanner on Boylston street. He set out the trees, still standing, on the Mall from Park to West street. His name appears among those who threw the tea overboard; so does that of Matthew Loring, a shoemaker.

The manufacture of leather was confined to the maritime counties for a century and more after the settlement of Boston. Experience Mitchell, a tanner, came over in the third ship from England that landed passengers in Boston. He began to tan leather in East Bridgewater. The stone on which he ground the oak bark is still preserved there. His descendants continued the business, and in 1820 this tannery was dismantled after running continuously for one hundred and seventy years. One of the family went out to Hampshire county in 1790 and established the Cummington tannery. Gideon Lee & Co., of New York, sold the leather.

Soon after the commencement of this century hides began to be imported from South America. In 1810 it was estimated that one-third of the hides tanned in this country came from there. They were dry and cost $5\frac{1}{2}$ cents a pound.

In 1809 the Hampshire Leather Manufacturing Company, capital \$100,000, was incorporated by the Legislature. They purchased the tanneries erected by Col. William Edwards, near Northampton. Two Boston and two New York capitalists were stockholders. Ebenezer Francis, of Pemberton square, was one. The capacity of this tannery, 16,000 hides a year, was the greatest in the country at that time. The bark-mill had just been patented. Colonel Edwards invented a hide-mill, copper cylinders for applying heat to extract the tannin, and rolling-mills, the rollers to run by power. Before his time all the sides of leather were smoothed by running a roller loaded with stones over them. This leather was sold in Boston and New York, and when the smooth, shiny sides came into the market they caused great excitement. Jacob Lorillard, a rich leather dealer, made the long journey to Northampton to see the new machine work. As he stood by and

witnessed the operation, he said: "It covers a multitude of sins." All these inventions of Colonel Edwards are in common use in the tanneries of the present day. In 1815 hemlock bark began to grow scarce in that region, so the works were closed and the machinery transferred to Greene county, N. Y., in the vicinity of the Catskill Mountains. This was the first tannery of any note in New England. It was considered of sufficient consequence to be mentioned in the United States census of 1810—the first one taken—as being "the most important enterprise of the kind in this country."

The gains made in this tannery ranged from 16 to 25 per cent. on dry hides. The sides of leather were trimmed and shaved down, but about 1825 the tanners omitted the "skiving," and thereafter made heavier leather and greater gains. In 1835 they began to sweat hides instead of liming them to unhair in making sole leather, thus perfecting a great improvement in tanning.

Tufts College, in Somerville, was built with money left for that purpose by Nathan Tufts, a tanner of Charlestown. He did business from 1810 to about 1810. When he sold leather he delivered it in Boston, but never unloaded it from his team until the bill was paid.

In 1837 the first statistical tables of the industry of Massachusetts were prepared by John P. Bigelow, secretary of the Commonwealth. The product of leather, including morocco, was stated to be \$3,254,416; of shoes, \$11,612,520.

Samuel Philbrick had a leather store on Long Wharf in 1810. The New York dealers came to Boston and bought sole leather, tanned by the Southwicks and others, of him. Gideon Lee & Co. were among his customers. Afterwards they had their first account with the Cummington tannery. Gideon Lee, afterwards mayor of New York, and member of Congress, was a native of Cummington.

CHAPTER II.

Introduction of the Morocco Manufacture—The Pioneers, Lord Timothy Dexter, Elisha Mead, Wm. Rose, Joseph Moulton, P. P. Tapley, the Peckar Brothers, Thomas Dowse, the "Learned Leather Dresser."

IN 1784, when the manufacture of morocco was introduced into this country, the art began to flourish in Massachusetts. This leather has been for more than a hundred and fifty years a favorite material for fine shoes. Felt, in his "Customs of New England," notices that morocco shoes were charged in the import account of a Boston house in 1740. The chief seat of morocco manufacture a hundred years ago was in Charlestown and Malden. A famous tanner was "Lord" Timothy Dexter, who finished sheepskins in Malden in 1763. He was known far and wide in New England for his fortunate speculations and eccentricities. He left the business soon after the war, and went to Newburyport, where he became a merchant.

Elisha Mead was the first morocco dresser in Charlestown. He began in 1790 to make "black, white and colored" stock, which he marketed in Boston. His son, Isaac Mead, afterwards founded the firm of Mead & Van Voorhis, who did business up to 1840.

In 1810 the morocco workers of Lynn, Charlestown and Philadelphia tanned 44,053 dozen goatskins.

Phineas Dow, of Boston, patented a leather splitting machine in 1810.

Petitions were presented to Congress in 1811 by morocco manufacturers of Charlestown and Lynn for additional duties on imported leather, or its prohibition. The petitioners stated that 800,000 skins were annually manufactured in the United States, of which number 150,000 were made in Charlestown, and half as many in Lynn.

The duty on leather was put at five per cent. in 1815. In 1842 it was raised to 6c. on sole and 8c. a pound on upper, with goatskins \$2.50 a dozen.

William Rose came to Lynn in 1800, from England, attracted, no doubt, by the fame the town had attained in the shoe manufacture, and introduced what he called the art and mystery of morocco dressing in

Lynn. He had such immediate success that customers were compelled to leave their orders weeks in advance. Mr. Rose brought over English workmen to do the fine portions of the finishing. He bought an estate and built a house and factory on South Common street. Most of the shoe factories of the town were at that time in the vicinity, while many of the proprietors lived opposite on North Common street. Mr. Rose held a great monopoly, and had every opportunity to make a fortune, but his habits were such that he lost the confidence of the community and failed. He had, as he thought, retrieved his fortunes by marrying the widow of a son of Lord Timothy Dexter, a beneficiary under his will, but found when too late that her income was cut off in the event of a second marriage. Then Rose left Lynn and worked as a journeyman in towns in the western part of the State until his death.

When Mr. Rose left Lynn his place was taken by others; they were as unsuccessful as he had been. Joshua R. Gore tried morocco manufacturing, and soon removed to New Haven. Francis Moore, a preceptor of Lynn Academy, quit teaching and went in with Henry Healy, who had learned the trade with Rose. His experience with "kids" didn't help him; he lost his money. William B. and Joshua Whitney tried the business and retired insolvent. Carter & Tarbell ventured in and came out bankrupt. Samuel Mulliken, mentioned elsewhere, became interested in it with Major Daniel R. De Witt, but they abandoned it. Lovejoy & Stockwell went at the business in 1816 and were successful. John Lovejoy, of this firm, died in Lynn in 1876, aged eighty-seven years. He had been for fifty years a director in the First National Bank, and trustee of the Institution for Savings. He was one of the first captains of the Lynn Artillery. Rufus Brackett accumulated a fair estate; so did his brother, Newell, also George Brackett. Breed & Damon, Nathan Reed, Peter Hay, Samuel Viall, the Newhalls, Levi Robinson, William Gilson, Edward Carroll (father-in-law of P. P. Tapley) were successful in the occupation in early times.

In 1809 Jacob Perkins, of Boston, invented a machine for polishing and graining morocco. This was an important aid in its manufacture.

During the "embargo" of 1812-15 no merchant vessels arrived at or sailed from the ports of Boston and Salem, and goatskins were hard to obtain. Sheepskins were substituted, and the character of the material was sometimes disguised by classifying the goods made from them as "roan shoes," and those for children were called "roan batts."

Morocco was mostly tanned with sumac. Gambier was also used, and another process was the alum tannage. The methods have been changed and greatly improved in our time, but until within ten years there was very little alteration for eighty years, except in the use of machines for handling the stock in the process of tanning.

One of the Lynn pioneers was Joseph Moulton. He worked as an apprentice in the shop with William Rose. Mr. Moulton began for himself in 1835. Soon after he was chosen by Michael Shepherd and John Bertram, of Salem, to assort and classify all the goatskins they imported. He was a very competent expert.

Philip P. Tapley manufactured in 1843, and was the first in the country to introduce steam in a factory. This was in 1850. He was at that time a partner with John B. Alley and A. S. Mower. They made shoes as well as morocco. The firm was Alley, Tapley & Co. Mr. Tapley was, more recently, interested in the introduction of a leather measuring machine.

The two brothers, George K. and Henry A. Pevear, are the oldest morocco manufacturers in Massachusetts. Their father, Burnham Pevear, learned the business in Exeter, N. H., and came to Lynn with his family in 1838. The sons learned of him, but G. K. Pevear served apprenticeship with Kely & Tapley. In 1847 G. K. Pevear went into business and was soon joined by his brother. The firm was originally Roberts, Pevear & Co.; Thomas Roberts withdrew and the house of Pevear & Co. succeeded. Their factory was on Monroe street. They soon took the leading position in the trade they have since held. In 1858 they opened a store at Nos. 67 and 69 Kilby street, Boston, the first morocco house to do so. In 1859 they employed thirty-two hands, but had a good many skins finished in other shops. They manufactured that year 103,000 goatskins. Their sales in Boston, including sumac and patent leather, were \$96,000. About the time of the war they began to import South American goatskins, especially paytas. Their operations rapidly rose to the million dollar mark, and when incomes were assessed during the war, they paid to the government the largest personal tax collected in the morocco trade in Massachusetts. In 1864 they built a large factory on Boston street. In 1883 they dissolved and formed two firms as follows:

Pevear & Co. have the old factory, the store in Boston, No. 83 High street, and the South American business. The firm is G. K. Pevear and his sons, G. Irving, who attends to the Boston business, and Waldo

L. Pevear, who is the manufacturer. They tan in Lynn 250 dozen skins daily, combination tannage, and have a tannery in Philadelphia, where, in connection with J. P. Mathieu, they produce 200 dozen a day of the celebrated "Surpass" chrome kid.

H. A. Pevear & Sons built a factory on Boston street 50 by 200, five stories, of brick and wood, with coloring house, engine and store rooms separate. They took possession when the firm dissolved, July 1, 1883. This building is fitted up with the best machinery, automatic sprinklers, fire alarm, etc. The firm is H. A. Pevear and his sons, Frederick S. and William A. Pevear. This factory stands on the spot where George Gray, the celebrated Lynn hermit, lived and died. To commemorate this, and preserve the landmark, they named their product "Hermit kid." The capacity is 200 dozen a day, and they are rapidly carrying the production of their new process kid up to that amount. Their Boston store is at No. 61 High street.

G. K. and H. A. Pevear have always retained the land at the corner of Munroe and Washington streets, where they built their first factory. In 1892 they built on it the largest block, so far, erected in Essex county. It is a five-story structure, thoroughly fitted with all the modern conveniences. There are 100,000 feet of floor space in this building.

Henry A. Pevear has been president of the Thomson-Houston Company since its inception. The morocco manufacture is conducted by his sons. Frederick S. Pevear attends to the Boston business. William A. Pevear is the manufacturer.

Blaney Brothers succeeded to the business of their father, J. W. Blaney, founded in 1818. He was the first to finish skivers and make fancy colors in Lynn.

Augustus B. Martin was born in Charlestown, and learned his trade from James M. Wait. Mr. Martin's father, Newhall Martin, was in the shoe business there for about sixty years. Augustus B. Martin came to Lynn and commenced business in 1855 in company with Moses Norris. In 1858 they dissolved; each continued alone. Both had been journeymen, working at nine dollars a week, and for a long time after going into business they lived on that sum. Mr. Martin is now one of the richest manufacturers in the country. The year after he dissolved with Mr. Norris he did a business of \$30,000, employed eighteen hands and manufactured 50,000 goatskins. He continued alone until 1879, adding regularly to the capacity of his factory. He then associated

with him his two brothers, James P. and Edward F. Martin; both retired within ten years. In 1886 his son, A. B. Martin, jr., was admitted. He died in 1891. Since that time Mr. Martin has done business alone. His factory is 375 by 47, five and six stories. There are 250 hands employed. The beam-house machinery was all made by Hemingway Brothers, of Lynn. There is an ample supply of seasoning, glazing and staking machines. There is a large salesroom at the factory. The Boston store is at No. 76 High street. The chrome and combination processes are used in about equal parts. Patnas are employed for the former, South American skins for the latter. Mr. Martin imports most of his skins direct. The factory output is 250 dozen a day. Mr. Martin has been a member of the City Council and Board of Aldermen; is vice-president of the Lynn National Bank; a director in the Safe Deposit Company; proprietor of the Bay State Dredging Company, and owns a large block of Thomson-Houston stock.

P. Lennox & Co. are of high standing in the mercantile world. In addition to the morocco industry they have carried out, and have in hand, extensive building operations in Lynn, at Market and Broad streets and Harrison court. A shoe factory of 60,000 square feet is now being erected on Harrison court; another is projected for Broad street. A large factory was a few years ago erected on Market street next to the Lennox block, which was then looked upon as one of the most beautiful structures in the city. It is now nearly all occupied for shoe manufacturing by Coreoran, Callahan & Co. and D. A. Donovan & Co. P. Lennox & Co. date from 1853.

In 1859 there were 1,041,000 skins tanned in Lynn; 340 hands were employed, and the value of morocco produced was \$695,000. The largest manufacturer that year tanned 225,000 skins, and the amount of his business was nearly \$100,000. Lynn was then, as now, second in amount of morocco manufactured in the country, the first being Philadelphia.

A noted morocco manufacturer was Thomas Dowse, of Cambridgeport. He was born in Charlestown in 1773, and remembered distinctly all his life the time when he fled, with his parents, from their humble home when the town was burned by the British on the 17th of June, 1775. He returned after the war closed, and at the proper age was apprenticed to learn the tanner's trade. He worked as a journeyman in the shop of Abel Wait, at Roxbury, at twelve dollars a month. He remained there ten years, to 1803, and the highest wages he received

was twenty-five dollars a month. When he was thirty years old he commenced business for himself in Cambridgeport, and his house and factory still stand on the Main street. His sign was a lamb, carved full size. Some Harvard College students sawed the head off one night, and it remained in that condition as long as he did business. He died in 1856. The trade was profitable; the skins he finished were in request for shoe manufacturers and bookbinders; his gains were steady and frugally husbanded, and he became a rich man. His library, which he presented to the Massachusetts Historical Society at his death, was valued at \$40,000; it consisted of five thousand volumes of choice and rare books. In 1820 Mr. Dowse bought three tickets in a lottery in London. The two highest prizes, a collection of rare water colors and copies of engravings and paintings of the old masters, he was fortunate enough to draw. The first intimation he had of this was when the collection came to Boston by packet ship, and he was called on to pay about a thousand dollars for duties and freight. This collection was at the time placed on exhibition at Doggett & Co.'s rooms at North Market street, and attracted much attention. Gilbert Stuart and Washington Allston, then residents of Boston, said: "This gallery embodied in the aggregate richer treasures of art than were at that time to be found in the whole United States." This collection he left at his decease to the Boston Athenæum; it embraces the chief gems of the fine galleries of that association at their building on Beacon street. Mr. Dowse was a very busy man all his life. He suffered from lameness, due to an accident when a child, but he worked regularly at his trade nearly every day, and even after he was seventy years old went to Boston twice a week, delivering leather and transacting business with his customers. When he died the members of the Historical Society were summoned to attend at their rooms. Hon. Robert C. Winthrop stated the object of the meeting and introduced the orator, Hon. Edward Everett, who delivered an eloquent eulogy on one who was called, during his lifetime, "the learned leather dresser."

CHAPTER III.

Early Hide Importers—Salem and Boston Merchants—"Billy" Gray—"King" Derby—Statistics of the Leather Trade—Different Kinds of Leather and How Prepared—Export Trade—Machinery.

In the early years of the present century Salem was the great seat of the hide importing business. John Bertram, David Pingree, R. W. Ropes and E. Haskett Derby, "King Derby," as he was called, were the largest merchants in the trade. Their vessels went to Africa. Leonard B. Harrington, afterwards a renowned tanner, made, when a young man, several voyages to that continent. John Bertram continued the business until his death a few years ago.

William Gray was a son of Abraham and grandson of William Gray, shoemakers in Lynn. He was born in 1750. When he grew up his father undertook to teach him the trade, but confinement at the bench was unfavorable to his health. The family had, meantime, moved to Salem, and young Gray was taken in the counting room of Richard Derby, an eminent merchant. He made several voyages as supercargo, taking ventures of his own, as was the custom at that time. By so doing he accumulated money sufficient to engage in business for himself. From the time Mr. Gray entered upon a mercantile career he prospered exceedingly. He moved to Boston in 1808, and was then considered the richest man in New England. He was known familiarly as "Billy Gray." He always maintained business relations with Lynn manufacturers. For more than forty years he supplied them with Russia sheeting, which was used for shoe linings. He built Gray's Wharf in Boston, at the North End, and did business there. Mr. Gray was elected lieutenant-governor of the State twice (1810-1812). He died in Boston in 1825. His grandson, Horace Gray, is an associate chief justice of the United States Supreme Court.

Salem gradually lost this trade, and the great hide importing houses have, since 1830, been located at Boston and New York. In 1835 Bryant & Sturgis, of Long Wharf, sent vessels to California for hides. Richard H. Dana, jr., went as a sailor in one of the early voyages, and

printed his experience in "Two Years Before the Mast." At that time it took eighteen months to pick up a cargo of 10,000 hides on that coast, and they were sold in Boston for twelve and one-half cents a pound.

James Packer was one of the oldest morocco manufacturers in the State in active business when he died. He was apprenticed to Gny Carleton & Co., in 1819; commenced business for himself in 1837, and occupied a factory on Tremont street for thirty-five years. He died in 1889, aged eighty-seven years. His brother, Charles Packer, did business in Boston and Lynn for sixty years, and died in 1890, aged eighty-five years.

The following table shows the number of tanning and currying establishments in Massachusetts, and the growth of the industry in forty-five years:

LEATHER.					
	1845	1855	1865	1875	1885
Number of establishments.....	772	841	667	529	699
Capital invested.....	--	\$4,744,933	\$1,720,067	\$7,691,445	\$12,258,831
Value of stock used.....	--	--	\$1,430,272	\$14,382,897	\$19,713,559
Persons employed.....	2,601	4,808	5,321	6,620	9,228
Wages paid.....	--	--	--	\$3,383,054	\$4,313,674
Motive power (horse power).....	--	--	--	5,450	4,177
Value of goods made.....	\$4,259,451	\$13,790,107	\$12,062,046	\$21,899,272	\$28,008,851

It is estimated that the cost of production of leather at present is about as follows: stock, 78.95 per cent.; wages and salaries, 17.80 per cent.; rent, taxes, etc., 3.25 per cent.; total, 100.

The bark used in tanning in Massachusetts, and indeed all the northern section of the country, is hemlock. Oak grows at so great a distance that it is unavailable, on account of the expense of transportation. Hemlock leather is well adapted for plain, substantial shoes, but for the more tasteful and expensive kinds, oak is used. Formerly all the oak leather the shoemaker cut up was brought East from Philadelphia and Baltimore, in which cities it was tanned somewhat extensively. About 1845, A. I. Schultz, the father of Jackson S. Schultz, of New York, conceived the idea of producing leather having the complexion and general appearance of oak leather, but tanned partially with hemlock and partially with oak bark, the former greatly predominating. This was called union leather, and after it had been in use a short time in New York city factories, it was adopted in Lynn and Haverhill. It is trimmed differently from hemlock. It is crapped;

the best part of the hide is detached and tanned separately from the offal portions. The leather is limed, which renders it soft, suitable for working under the machines, and susceptible of a fine finish. Fully 2,500,000 of these backs are tanned yearly.

Scoured oak backs are in use for bottoms of the finest shoes. They are made from green salted hides. When tanned, or partially tanned, they are trimmed and scoured on the grain. The backs of whole hides are tanned and trimmed for belting.

In 1850-2 Perry Newhall, of Lynn, began to cut soles for the trade. He was for some time the only person engaged in the business; now the cut sole trade is one of the largest industries. David Knox, of Lynn, invented a machine for cutting these soles in 1857. Others followed, and millions of pairs of soles are prepared for the trade by the use of machinery.

About 1865 grain leather began to be used in shoes. Cow hides are the raw material. These are split when partially tanned and then finished on the grain side in imitation of goat or seal skin. This leather was sold at first for high prices, but machinery was introduced and other methods that cheapened it so as to admit of its use in low grade shoes.

Buff leather is a substitute for calfskins, and a good imitation. It is finished on the grain side, and the top cuticle of the grain is then buffed off, so as to give a perfectly smooth surface.

Calfskins have been used ever since shoes were made. There is usually a pretty plentiful supply of calfskins, and they are finished by various methods. Wax-calf is stuffed with tallow and blackened, patent calf is finished with a varnish. Ooze calf is prepared by secret process and finished over an emery wheel. Calf kid is tanned with alum and softened by staking. All these are used in shoes.

About the year 1867 Col. Charles F. Harrington, at that time of the house of Johnson & Thompson, of Boston, went to England with samples of buff, grain and splits. He showed them in London and Leeds, but shoe manufacturers said the leather wasn't suited to the class of shoes they made. He left the samples with a London factor. The London factor could find no buyer for them, so he gave them away. However the seed thus sown bore fruit. These fabrics are now used in most every part of Europe. Almost all of it is shipped from Boston.

The following table shows the value of our upper leather exports for nine fiscal years:

Year.	Value.	Year.	Value.
1884	82,062,651	1889	83,143,699
1885	2,578,991	1890	1,249,110
1886	2,405,456	1891	5,161,211
1887	3,073,833	1892	3,880,475
1888	2,819,208		

Exports of sole leather for eight years were:

Year.	Pounds.	Value.	Year.	Pounds.	Value.
1884	22,421,293	81,613,106	1888	28,713,473	81,959,363
1885	27,313,766	5,416,830	1889	35,558,945	5,890,509
1886	21,256,880	4,825,615	1890	39,595,219	6,120,134
1887	30,530,488	5,695,151	1891	37,501,278	6,168,362

Hides that come from the Argentine Republic and Uruguay are the best dry hides we have. They are known in the trade as "straight," while most all others that are imported are termed "common." Some of the tanners import hides. The heavier weights are sent to tanneries in the Middle States, Pennsylvania principally, where the forests abound with hemlock. The thin, or light hides are tanned into upper leather. Much of this is done in Woburn, Winchester, Salem and Peabody.

Boston merchants have been in the Calcutta trade during most of this century. They import hides and goatskins from the East Indies. The Calcutta buffalo hides make sole leather of a coarse grade. The cow hides are used for mill and lace leather, and patna butts for upper leather.

The leather splitter was an important invention. Alvah Richardson and Luke Brooks, of Boston, made the first one about 1829. In 1863 an endless knife splitting machine for whole hides was introduced.

CHAPTER IV.

Leather Machinery—A Roster of Prominent Tanners—Salem—Woburn—Peabody—Hide and Leather Statistics—Cut Soles and Scrap Leather.

WITHIN a quarter of a century valuable labor saving machinery has been introduced in every department of leather finishing. Scouring, whitening, fleshing and unhairing processes can now be done by machines. A leather measuring machine came in use in 1878. Upper leather is mostly sold by the foot. It was formerly measured by a frame, with strings set in to indicate squares of a foot in size. Many disputes arose over the correctness of these measurements. By these machines all this is done away with.

E. D. Brooks & Co. are the oldest house in this country dealing in leather machinery. In 1825 Luke Brooks went to Boston and commenced trading in leather. In 1826 he formed a copartnership with Josiah M. Jones. They did business on India Wharf up to 1837, at which date Luke Brooks, Moses Hunt and Edward T. Noble formed the firm of Moses Hunt & Co. They made and sold the Richardson splitting machine. Eugene D., a son of Luke Brooks, came into the house in 1859. The firm was Noble & Brooks from that date until 1872, when the present style was assumed.

The Southwick family embraces many tanners. The name has been associated with the industry for 150 years. They descended from Lawrence and Cassandra Southwick, who, with their son, Josiah, and daughter, Mary, were whipped, imprisoned and banished from Massachusetts in 1659 for the crime of being Quakers. A son of Joseph Southwick became a tanner. His great-grandson, Philip R. Southwick, was the largest tanner in the State in 1835. He was connected with David Pingree and Robert Upton, of Salem. In 1850 Mr. Southwick became a hide broker in Boston. He retired in 1875, and died soon after. In 1859 William E. Plummer became connected with Mr. Southwick in the hide brokerage business. During the Civil War he induced the upper leather tanners to use bark extract, and formed a company to manufacture it in Canada under the Miller patents. Bark was scarce,

owing to a dearth of men to peel it. The use of extracts enabled tanners to fill their contracts. He became interested as superintendent with the United States Patents Company, owning scouring, whitening and other labor saving machines. Some of these have been generally adopted. Mr. Plummer was superintendent of the Shoe and Leather Building at the Centennial Exposition at Philadelphia.

Benjamin G. Boardman was, in his day, a dashing operator in hides and leather. He dated from 1831. He accumulated a fortune; he retired in 1879 and invested his money in real estate.

The Ropes brothers, five of them, were importers of hides for years in Salem. They had houses in Boston and in New York. They did an extensive business with the River Plata. The last two of them died in Brooklyn in the summer of 1890, Ripley Ropes and Reuben W. Ropes, both men of sterling worth.

Solomon R. Spaulding was in the leather business fifty years. He was the first to establish a leather store on Pearl street. Mr. Spaulding was the first president of the Merchants' and Miners' Transportation Company, and was a vice-president of the Board of Trade. He died September 1, 1874, aged sixty-nine years.

Major Alexander Vining, a prominent leather and calfskin dealer, died January, 1886. He was proprietor of the Mansion House at Hull. His daughter, Floretta Vining, is an authoress and lecturer and one of the large real estate owners at Hull.

Henry Poor died January 19, 1878, aged seventy-nine years. His family had been tanners for a hundred and twenty-five years. He established himself in business in South Danvers in 1830. He moved to Boston in 1845. Alexander Moseley was a partner from 1845 to 1851. Since then the firm has been Henry Poor & Son. Mr. Poor served terms in both bodies of the General Court, and his eldest son, Eben S. Poor, who died in 1871, was a State senator and member of the Governor's Council. John O. and Charles C. Poor constitute the present firm. Henry Poor was one of the most estimable and beloved of men.

Jacob Putnam was born in Danvers in 1782; died in Salem, January, 1866. When thirteen years old he was apprenticed to Mr. Endicott, a tanner. In 1805 he made a voyage to Calcutta. In 1810 he went into the tanning business, and in 1830 he imported hides from Para and the East Indies. In 1814 he built a large currying shop on Boston street in Salem. He introduced steam power in 1856, one of the first Massachusetts tanners to do this. His son, George F. Putnam, born in Salem



J. J. A. Hunter

July, 1832, learned the trade and then made two voyages to the East Indies in his father's ships. He succeeded to the business and greatly enlarged it.

Franklin Osborne dated from 1819. His sons succeeded to the business. N. W. Osgood began in 1820. Daniel C. Haskell was a tanner in 1835. Joseph R. Dalton, a colonel in the army, adjutant-general of this Commonwealth, and naval officer at Salem Custom House for some years, was a tanner of upper leather at Salem. Among those who commenced in 1845-50 were Joseph F. Walden, John Gibney, Albert Williams, J. A. Lord and John Culliton, Salem and Peabody tanners, famous in their day, who have passed away.

Abel Proctor was a Peabody tanner. He established this business about 1830, and was the first from that town to open a store in Boston. This was in 1842, at the North End, but he was one of the earliest to move to Pearl street. He had two sons, Abel, jr., and Thomas E. Proctor, who came in the firm in 1852. The oldest son, Abel, jr., died many years ago, and Thomas E. Proctor assumed the business about 1860. Abel Proctor for many years lived in retirement at his home in Peabody, where he superintended the tannery. He was a remarkable man. The older members of the trade will remember his tall form as he walked on Pearl street, towering above all his compeers, for he was six feet four in height, and of a powerful build. He was an enterprising merchant. He died December, 1879, aged seventy-nine years. His son, Thomas E. Proctor, is at the head of the largest leather house in Boston.

Nehemiah C. Rice founded the firm of Tyler, Rice & Co. They did a great business fifty years ago importing Buenos Ayres hides. He died in Portland, July 22, 1880. His son, N. W. Rice, continues the business as head of the house of N. W. Rice & Co.

In 1832 J. W. Converse and Isaac Field formed a co-partnership under the style of Field & Converse. In 1837 Isaac Field went out, and John Field, who was clerk for them, succeeded, without change of style. This continued until 1848. Then Joseph B. Whall, who had been junior in the firm of Levi A. Dowley, was taken into the concern, which became Field, Converse & Co., and so continued until 1863. It was the largest commission leather house in Boston. From 1866 to 1870 the firm was Field, Converse & Allen. John Field had been special partner. Wm. Henry Allen, who was a Boston boy, brought up in the house, was a partner. J. W. Converse retired in 1870. He

is still living (1892), and is eighty-four years old. Since 1873 the firm has been Allen, Field & Lawrence. For fifty-five years this house has grown and held a position in the very front ranks of the trade.

In Salem and Peabody for nearly sixty years tanning has been extensively carried on. As bark became scarcer and dearer, the business fell off, and centered into fewer hands. In 1887 there were 17,350 hides a week tanned in the two towns. Now the quantity is much smaller. Before the war the shoe manufacturers had to journey to Salem or Peabody if they wanted leather; but this gradually changed, and the tanners established stores in Boston.

Of late years there has been a limited demand for heavy upper leather, such as the old tanners produced. Tanneries at which it was made are mostly closed, or are making lighter stock. Others at which kid and sheepskins are produced are gradually taking their places. Two of the oldest sheepskin tanneries in this country are located in Peabody. One of them was established by Thomas Carroll, in 1775; the other by William Sutton, in 1800. They are in the same place and carried on in the same name to this time.

In Peabody there are thirty-two sheepskin and kid factories. In Salem there are thirty-three firms who make insoles and heels, seven who make morocco, and twenty-three shoe manufacturers. The latter industry has grown up during a decade.

The abnormal rise in values during the last three months of 1879 applied with peculiar force to hides and leather. In December River Plata hides were sold at 25½ cents and hemlock leather at 32 cents a pound. During this extraordinary inflation there were 189,848 sides of leather imported from England. The duty paid was fifteen per cent. One lot arrived in Boston from Chili, the first ever brought from that country to ours. The bubble did not remain distended long; the leather that was sold readily at 32 cents in December was something of a drug at 24 cents the following July. It has been declining ever since; so have hides. The price of the latter in 1892 is 12½ cents; of leather, 16 cents.

In Woburn considerable leather has been made for more than half a century. Abijah Thompson was one of the earliest tanners there, established in 1836. He worked over the beam in early life, but became a great merchant and manufacturer in after years. He was a bank president, and held other important offices. John Cummings, of Cummingsville, Horace Conn, Stephen Dow were notable tanners.

They made fortunes in the avocation. In 1882 there were thirty-three tanning and currying firms in the town. There were 224,000 hides finished and 20,000 cords of bark used. Grain, buff and calfskins were curried. The trade was subjected to strikes and labor troubles at intervals until 1888, when several of them transferred their business to Pennsylvania and other sections where bark was plentiful and labor free. It was a great loss to the town. In 1888 Woburn was made a city, and at the first election five leather dealers were elected members of the municipal government. The Russell Counter Company have a great factory in this town. Alexander Moseley, and Day, Wilcox & Co., of Boston, built tanneries at Winchester, adjoining Woburn, about thirty years ago.

The United States census contains this report of the leather industry of this State:

1870.

Number of establishments.....	386	Wages paid	\$3,152,399
Hands employed.....	5,543	Materials used.....	\$26,106,013
Capital	\$7,577,926	Total product	\$33,457,975

1880.

LEATHER TANNED.

Number of tanners	133	Number of hides.....	1,625,344
Capital.....	\$2,712,130	Number of skins.....	5,724,897
Hands employed	2,240	Value of all materials.....	\$11,320,288
Total wages, one year.....	\$1,093,973	Number of sides leather.....	3,250,688
Bark used, tons.....	107,324	Value of product	\$13,556,721

LEATHER CURRIED.

Number of shops	194	Gallons oil used	1,316,491
Capital.....	\$4,308,169	Total value materials.....	\$19,547,978
Hands employed	4,251	Total wages, one year.....	\$1,939,122
Sides leather curried.....	4,951,562	Value of product	\$23,282,775
Skins curried.....	5,178,609		

This is about one-third of the value of all the leather curried in the United States. Forty per cent. of the product of the country was curried in New England.

The census of 1880 also furnishes the following statistics of industries in Boston connected with the trade:

Industry.	Establishments.	Hands.	Product.
Belting and hose.....	3	28	\$204,000
Shoe, cut stock.....	13	268	\$352,200
Shoe findings.....	11	190	\$389,883

Industry.	Establishments.	Hands.	Product.
Shoes, custom work	83	1,350	\$1,928,710
Lasts	3	11	818,100
Leather currie I	20	542	\$2,520,792
Leather, dressed skins	8	202	8579,350
Rubber goods	10	923	\$2,095,460
Trunks and valises	20	164	8400,708

The receipts of hides at Boston were 1,810,493 in 1876, 2,463,787 in 1880, 1,945,513 in 1884, and 2,169,385 in 1891. These were foreign and domestic. The importations of hides are mostly into the ports of Boston and New York. Some of the largest importing houses are in Boston. They have branches in South American hide marts.

A little more than a quarter of a century ago Boston was chiefly a commission leather mart. A good deal of sole leather was bought in New York to be sold again, but the upper was chiefly consigned. This has all been changed. Southern and western rough and harness leather are sent here to be sold for owner's account, but producers of other kinds have stores here. The Milwaukee tanners were the first to come. There are six of them here. Their product is oil and glove grain and calfskins, and about half the leather produced in that city is sold here. Four Chicago tanners have branches here for the sale of calfskins and grains. Several New York sole leather houses, among them the largest in the country, have branch stores in Boston, and make the majority of their sales in this city. One controls eleven tanneries; two have ten each; others four and five each. Boston firms also have a great deal of money invested in tanneries in Maine, New York, and Pennsylvania, where bark is most abundant.

The growth of the leather trade is shown by a comparison of receipts in Boston at different periods:

In 1878 they were:	In 1884
1,725,828 sides.	2,218,501 sides.
561,578 rolls.	595,346 rolls.
165,040 bundles.	230,876 bundles.
In 1880	In 1890
2,016,614 sides.	6,138,514 sides.
661,678 rolls.	629,922 rolls.
276,664 bundles.	384,544 bundles.
In 1891	
	7,149,880 sides.
	578,752 rolls.
	285,414 bundles.

Receipts of hides were:

In 1876:		In 1883	
	952,828 foreign.		1,092,342 foreign.
	914,365 domestic.		856,838 domestic.
	<hr/>		<hr/>
	Total, 1,867,193		Total, 1,949,170.
In 1880		In 1884	
	1,168,701 foreign.		1,003,603 foreign.
	1,195,086 domestic.		943,910 domestic.
	<hr/>		<hr/>
	Total, 2,363,787.		Total, 1,947,513
	In 1891		
			1,187,558 foreign.
			981,827 domestic.
			<hr/>
			Total, 2,169,385.

No industry requires so much capital as that of leather production. Hides are sold for cash. At least six months must elapse before they are converted into leather. The leather is sold on credit, the term ranging from two to six months. Producers, therefore, must be out of the money they invest for a very long time.

The cutting of soles is an important adjunct of the leather trade. It was introduced in Lynn about 1853; Perry Newhall, David Estes, and Thomas A. Atwell, sole leather dealers, were the first in the business. They used oak sole leather, but it required considerable manipulation from the workmen to take the stretch out of it. The union leather—hemlock and oak tannage—has entirely supplanted oak stock. The shoemakers liked it, and when machinery was introduced it was found it worked smooth and hard under the machines. The first machine used for cutting soles was made by E. T. Ingalls, of Haverhill. Another was patented in 1844, and later John Thompson put one on the market. None of them seemed to do the work. They were slow and clumsy. David Knox brought out one about 1858; improved in 1860, and it is practically the only one used now for cutting soles. David Knox & Sons, of Lynn, have the monopoly of making sole cutters now, owing to unexpired patents and because of their superior facilities for building them. The early machines were run by foot power.

In 1863 steam power was first adopted in connection with the Knox machine, which was then made heavier and stronger. In 1860 a Mr. Griffin brought out a machine and assigned his patent to J. D. Richards & Sons, of Boston, who, in 1861, sued Knox for infringement, and

this suit was remarkable from the fact that Mr. Knox contested his own case. Richards had three counsel. The verdict sustained the Knox patent and killed the Griffin. Few of the Griffin machines were ever in practical use. In the early days it was the custom of the shoe manufacturers, in cutting up the leather they bought, to keep such grades of soles as they could use in their business, and dispose of the remainder to the dealers in roundings, who found a market for them with other manufacturers, and in this way gradually worked into the cut sole business on their own account, in time creating a separate branch of business, which has grown to large proportions. Very few manufacturers who use union leather now cut their own soles, for they cannot compete with regular dealers in disposing of the grades they have no use for. One side will cut up into from eighteen to twenty-eight different grades. Where formerly only eight widths were made, 350 different widths and sizes, in all kinds, from men's to infant's, are now cut. This shows how fine a selection it is possible for a manufacturer to secure.

Perry Newhall started in 1853 to make cut soles. He had been a shoe manufacturer in a small way. At that time two Lynn manufacturers, Lucien Newhall and Stephen Oliver, jr., had commenced using union sole leather, which they purchased of Young & Schultz, of New York, the first firm to make and sell it. Perry Newhall used to buy it, a roll at a time, from these men, cut it up and peddle it out from a wheelbarrow. He finally got to be a large operator, purchasing the leather in New York and cutting it on the Knox machines. Theodore Atwell began in 1854. He made mostly children's soles, which were used in Marblehead, where at that time, only misses' and children's shoes were made. Mr. Atwell retired in 1877.

Edward Hulin, established in 1859, did a large cut sole business up to the time of his death, in 1864. He liked fast horses and high living. He was known as "Bean Brummel of Lynn." Samuel Boyce, who was an old time shoe manufacturer, went into the cut sole business in 1860. Asa Mullin commenced at the same time, and retired rich in 1872.

Christopher Johnson is one of the oldest merchants in Lynn. He is eighty years old. He commenced cutting leather in 1835; retired from business in 1874. When he worked for Nathan Breed cutting sole leather, ten sides a day was a stint. Machinery was not thought of. He took his two sons, Christopher and T. C. Johnson, as partners at different times, also his brother, Peter. The latter went out, and Martin H.

Hood took his place. In 1868 the firm was Hood, Johnson & Co. Mr. Hood withdrew in 1886. O. H. Johnson was admitted by his father, and the present firm of T. C. Johnson & Son formed. Peter Johnson was in business alone from 1861 to 1866. Then the firm was changed by the admission of his son, H. F. Johnson, and in 1881 the father retired, and the two sons continue as H. F. & Herbert Johnson.

INDUSTRIAL HISTORY OF SUFFOLK COUNTY.

The influence of no American city has been more powerfully felt in all avenues of productive industry than Boston. It is the birthplace of a vast number of the most important and successful manufacturing ventures of modern times, while the inventive genius of Boston men has enriched many avenues of industrial progress. The first complete cotton mill in the world was established by Boston capital, and the development of the great factory system of the country, in all of its beneficent features, has also in great measure been the result of Boston capital and enterprise. In the manufacture of paper, textiles, watches and shoes this city has furnished to every community in America the main springs of prosperity. Especially is this true in the making of boots and shoes, in which industry Boston inventions and capital have revolutionized the business throughout the world. In the matter of musical instruments—the piano and reed organ—the ideas and triumphs of Boston are well known. The inception of some of the most essential comforts of life can be traced back to Boston invention. Here the first successful sewing machine was made, and modern architecture in great cities has been entirely remodeled through a Boston invention—the elevator. It was in this city that the system of steam heating was first introduced, and here gas, steam and water fittings as a separate industry were first inaugurated. Indeed, few industries in New England could be named that did not first gain headway in Boston.

The development of manufactures in Boston has been remarkable in many ways. Its progress has been on conservative lines, but substantial. Almost from the beginning of the city it has been a manufacturing centre. Before 1650 those industries, which to-day include a large proportion of the entire products of the Commonwealth, were well established in Boston and the immediate vicinity. Ship building, the manufacture of textiles, boots, shoes, rope, paper, brick, glass making

and iron working were well recognized industries during the first generation after the landing of the Pilgrims. The year after Winthrop arrived he built on the Mystic a bark of thirty tons burden, to which he gave the name of the *Blessing of the Bay*. Between 1631 and 1640 other vessels were built on the Mystic, at Marblehead and at Salem. The building of a ship of three hundred tons burden at Salem in 1640, we are told, stirred up the inhabitants of Boston to engage in the business, and they built one of one hundred and sixty tons in the shipyard of Nehemiah Bourne, who lived in a house not far from Union Wharf. Bourne lived first in Charlestown (1638) and then in Dorchester. "The building of Mr. Bourne's ship," says Mr. Winthrop, "was a work hard to accomplish for want of money, but our shipwrights were content to take such pay as the country could make." In 1642 three more ships were made at Boston, and the same year the author of "New England First Fruits" writes: "Besides many boats, shallops, lighters, pinnaces, we are in the way of building ships of a hundred, two hundred, three hundred or four hundred tons. Five of them are already at sea; many more in hand at this present, we being much encouraged herein by reason of the plenty and excellence of our timber for that purpose, and seeing all the materials will be had there in short time."

In May, 1644, the Assembly granted the shipbuilders an act of incorporation, which states that: "For the better building of shipping, it is ordered that there be a company of that trade, according to the manner of other places, with power to regulate building of ships and to make such orders and laws among themselves as may conduce to the public good." Captain Johnson says, in 1647: "Many a fair ship had her framing and finishing here, besides lesser vessels, barques and ketches; many a master, besides common sailors, had their first learning in this colony. Boston, Charlestown, Salem, Ipswich, etc., our maritime towns, began to increase roundly, especially Boston—the which, of a poor country village, in twice seven years is become like unto a small city."

"The people of New England at this time," says Hubbard, v. v. 1646–51, "began to flourish much in building ships and trafficking abroad and had prospered very well in these affairs, and possibly began too soon to seek great things for themselves; however that they might not be exalted overmuch in things of that nature, many afflictive dispensations were ordered to them in this lustre, which proved a day of

great rebuke to New England; for the first news they heard from Europe in the year 1646 was the doleful report of two of their ships that were wrecked the winter before upon the coast of Spain, one of which was built in the country the former year by Captain Hawkins, a shipwright of London, who had lived divers years in the country before, and had with others been encouraged to fall upon such dealings as he had formerly been acquainted with. At the last he had built a stately ship at Boston of four hundred tons and upwards, and had set her out with great ornament of carving and painting and much strength of ordnance. The first time she was rigged out for sea was the 23rd of November, 1645, when they set sail for Malaga with another ship in her company whereof Mr. Karman was master." He then gives a narrative of her loss at sea with nineteen persons on board.

In the year 1676, just a century before the Declaration of Independence, the following vessels are said to have been built in Boston and its vicinity and then belonged to this neighborhood:

30 vessels between 100 and 250 tons.	200 vessels between 30 and 50 tons.
200 " " 50 " 100 "	300 " " 6 " 10 "

There were at this time in the colony thirty master shipwrights. The trade of Massachusetts in 1717 employed 3,493 sailors, and 492 ships, whose tonnage amounted to 25,406. In 1731 there were 600 sail of ships and sloops, of thirty-eight thousand tons burden, engaged in the same commerce, one-half of which traded to Europe. From five to six thousand men and one thousand sail of vessels were at the same time employed in the fisheries. The vessels employed in these branches were chiefly home built. The shipyards at that date were actively employed, and many vessels were sold in foreign ports.

The enterprise which had been opened by Winthrop's *Blessing of the Bay*, steadily grew in importance until 1738, when there were built at Boston forty-one topsail vessels of 6,324 tons in all; in 1743 the number had fallen off to thirty; in 1746 there were but twenty, and in 1749 the number was reduced to fifteen, making but 2,450 tons of shipping. Burke in his "Account of the European Settlements in America," written in 1738, says: "The business of ship building is one of the most considerable which Boston or the other seaport towns in New England carry on. Ships are sometimes built here on commission, but frequently the merchants have them constructed on their own account."

The condition of the manufacturing and commercial interest of Boston at about this time is illustrated by two papers preserved in the Town

Records under date of January 1, 1735, and March 16, 1742, both representing the check the town had received, and calling upon the General Court to take into account the proper apportioning of Boston's share of the provincial expenses. The paper of 1742 declares:

The greatest advantage this town reaped from that trade [London] was by ship building, which employed most of our tradesmen. But that is now so reduced that whereas in 1735 orders might arrive for building forty sail of ships, there has been as yet but orders for two, by which means the most advantageous branch of trade to our mother country, being lessened to so great a degree, must necessarily oblige a great many of our useful tradesmen to leave town, as many have already done, so that this town will suffer exceedingly for want of that branch of trade being properly supported, and thereby rendered much less able to support a large tax, than from the decline of all other branches of trade together, by reason that that branch employed more men than all the rest.

"The ships built at Boston," says Dr. Douglass, in 1746, "exceed all other building yards, the many merchants, and ship masters, good connoisseurs, transiently inspect them; every bad piece of timber or length of plank is censured. Ship building is one of the greatest articles of Boston's trade and manufacture. It employs and maintains about thirty several denominations of tradesmen and artificers." One of the most eminent ship builders in the colonies at this time and at the commencement of the Revolution, and among the first in this country to apply the principles of science in the drafting and modeling of ships, was John Peck, of Boston. Peck is said to have been "the most scientific as well as the most successful naval architect which the United States had then produced." The ships built by him were so superior to any known, that they attracted the attention of Congress, and he was employed to build ships of war. The success of Mr. Peck as a marine architect, in combining the great essentials, capacity and swiftness, was admitted by intelligent foreigners. The *Belisarius*, the *Hazard*, and the *Rattlesnake*, constructed by him, were known during the War of the Revolution for their fast sailing, a quality to which the American cruisers owed their efficiency more than any other. They were also said to carry more than others of the same class. It was a common remark at that period, that "to have a perfect vessel it must have a Boston bottom and Philadelphia sides."

In the train of ship building came the making of rope. In 1641, probably in connection with the building of the *Trial*, John Harrison was invited to Boston from Salisbury, and set up his rope walk in the field presumably adjoining his house, which stood on Purchase street.

He seems to have been the sole rope maker in Boston until 1663, when John Heyman, of Charlestown, had permission to engage in the business, but only for making fish lines.

The making of salt was also an early industry. The General Court, in 1695-6, gave to the Boston merchants, Elisha Cooke, Elisha Hutchinson and John Foster, the monopoly of making salt, "after the manner as it is made in France," for fourteen years. They set up their works on the marshes of the Neck toward Roxbury, beyond the gate and on both sides of the road. In 1716 they admitted as associates Wait Still Winthrop, Samuel Sewall, Eliakim Hutchinson, Penn Townsend, Nathaniel Byfield, Samuel Shrimpton, John Eyre, Simeon Stoddard, John Mico, Joseph Parson, and Edward Hutchinson. In 1730 the plant and business were sold to Henry and Samuel Gibbon.

As a motive power water was employed much earlier than wind. It is said, however, that the first mill in New England was a wind mill, near Watertown in Massachusetts, which was taken down in 1632, and rebuilt in the vicinity of Boston. This first corn mill was removed from its original site in August of that year, and set up at the north end of the city of Boston on the hill previously called Snow Hill, and afterward Copp's Hill and "Wind Mill Hill," by which name it is mentioned in the Records of 1635. This mill was doubtless a conspicuous object throughout the settlement, as being the first attempt to supersede the mortars and hand mills previously used by the people. Crops of grain were gathered from the fields adjacent to the mill which are now covered by the solid masonry of the present city of Boston. Wind mills were soon after erected, and in 1636 two more wind mills were built, one at Boston and one at Charlestown. The last was blown down in 1648. Edward Holyoke, who took the Freeman's Oath in 1639, owned a wind mill on Purchase street, in Boston, near Fort Hill, which he afterwards sold to Richard Woodward. In 1701 John Arnold requested liberty to place a wind mill on Fort Hill, and was allowed to place one there "on the Town's land," paying such quit rent as the selectmen should order. A wind mill was, in 1740, removed from Roxbury and placed on the same hill.

Printing and bookbinding were among the very earliest avenues of the useful and industrial arts engaged in by the first settlers of Boston and vicinity. It is honorable to the intelligence of the first colonists and shows a commendable regard for the welfare of their posterity, that among their earliest cares they provided for the interests of education

and the diffusion of knowledge. Only eighteen years of the life in the wilderness had elapsed, when, in 1638, permanent provision was made for the first printing press at Cambridge. The history of the earliest achievements in printing in the United States is so closely allied with Boston that no excuse is necessary for following somewhat in detail the progress of these pioneer printers. For the following interesting facts we are chiefly indebted to the admirable work of J. Leander Bishop in his "History of American Manufacturers":

The press erected at Cambridge in 1638, and which went into operation in the beginning of the following year, was brought from England by Rev. Mr. Glover,¹ who had engaged in England a printer named Daye, to conduct it for him. Mr. Glover died on the passage out, but the press was set up by Daye at Cambridge, where, in 1639, he printed the "Freeman's Oath," which was the first issue of the Colonial press. The first product of Daye's press, it is said, exhibited much want of skill and practical knowledge in the printer. The next thing printed was an Almanac for the year 1639, "by William Peirce Mariner." In 1640, "the Psalms, newly turned into metre," which had just been translated from the Hebrew, by the Rev. Mr. Weld and Rev. John Eliot, was printed by Daye, and was the first production of the American press in book form. It is said to have gone through no less than seventy editions in about one hundred and fourteen years, during which it maintained its popularity in England and America. The original American edition was a crown 8vo, of 300 pages, bound in parchment, and was by no means creditable to the skill of the printer. Daye was supposed to have been a descendant of John Daye, one of the most eminent and wealthy of early English typographers, the original publisher of Latimer's Sermons, Fox's Book of Martyrs, and of Sternhold and Hopkins's Version of the Psalms.

Daye² was superseded in the management of the press in 1649 by Samuel Green, who, with his parents, came from England to Cambridge

¹ Of Jos. or Jesse Glover, to whose instrumentality the country owes the introduction of the press, little is known beyond the fact that he was a wealthy non-conformist minister and that he was the principal purchaser and owner of the apparatus and stock for printing and bookselling, which he intended to carry on at Cambridge. The other names mentioned as patrons of the Cambridge press are those of Major Thomas Clark, Captain James Oliver, Captain Allen, Mr. Stoddard, Mr. Freake and Mr. Hoes.

² The General Court of Massachusetts, in October, 1641, showed its appreciation of the services of Stephen Daye by granting him three hundred acres of land, as "being the first that sett upon printing." He had not obtained possession, however, in 1665, when the grant was confirmed to him. He died in 1668, at the age of fifty-eight.

at the age of sixteen with Governor Winthrop's company, eight years before Daye arrived. No reason is known for the transfer of the press to the charge of Green, whose first essays exhibit no improvement upon the work of Daye. From the general similarity in faults and workmanship, it is presumed he was not a printer by trade, and that he was assisted occasionally by Daye. It seems probable, however, that, being a youth whom he educated, he may have acquired his knowledge and style from Daye previous to his taking control. One of the first works printed by him was the *Cambridge Platform*, which was badly executed both in press and case work. A new edition of the Psalms, revised and improved by President Dunster and Mr. Lyon, was printed in 1650, which became the standard edition of the work.

The second press was designed exclusively for printing the Bible and other books. To assist in this labor Marmaduke Johnson, of London, was sent to Cambridge. In 1661 the New Testament was issued. In 1663 the entire Old and New Testament, with the New England Psalms in Indian verse, all translated by the Rev. John Eliot, minister of Roxbury, into the dialect of the Nipmuck or Natick Indians, was printed in quarto with marginal notes, and issued with the joint imprints of Samuel Green and Marmaduke Johnson, and a dedication to King Charles II. In the execution of the work, which took three years, Green was assisted by an Indian, whom he had taken as an apprentice in 1659 and named James Printer. Printer was afterwards of much service in the Indian publications, and was employed by Green as pressman. In 1709 an edition of the Psalter was issued with the imprint of B. Green and J. Printer in the English and Indian languages. A second edition of two thousand copies of the Bible, revised by Mr. Eliot and Rev. Mr. Cotton, was printed in 1685 by Green.¹

The first law securing the benefit of copyright in this country was enacted in 1672, when the General Court of Massachusetts granted to John Usher, a wealthy bookseller of Boston, the privilege of publishing, on his own account, a revised edition of the laws of the colony. At this time Hezekiah Usher had been a bookseller of Boston for about twenty years. Several of Green's works had been printed for him. One of the earliest of these was an edition of the Psalms, printed about the year 1661 or '65. It was printed on a handsome-faced nonpareil type,

¹ Green continued printing to an advanced age, and died in 1712, aged eighty-seven. He was much esteemed in Cambridge, where he held civic and military offices. He had nineteen children, and his descendants were printers in different parts of the country for over a century after his death.



Mr Jones

and is the only specimen of a book printed either at Cambridge or Boston in that type previous to the Revolution. Even brevier type was seldom used by the printers of Boston previous to 1760.

About the year 1674 John Foster, a graduate of Harvard, received permission to establish a second press at Boston. The same year the General Court added to the former licensees two additional ones. These were Increase Mather and Thomas Thacher, both learned divines. The latter wrote and published, in 1677, a treatise on small pox and measles, the first medical work published in Massachusetts, and probably in America. The first book known to have been printed in Boston was issued by Foster in 1676. He also printed almanacs and a few other small works. Sewall succeeded him in 1681. The printing was executed for him by James Glen, and Samuel Green, a son of the Cambridge printer. He was a bookseller and a magistrate, and subsequently filled the highest judicial offices in the colony. In 1684 Richard Pierce opened a printing establishment at Boston. He is chiefly entitled to notice as the printer of the first newspaper sheet ever published in the New World. It was started at Boston in 1690, and was suppressed by the Legislature, because it was alleged "it came out contrary to law and contained reflections of a very high nature." The first number of this sheet bears the following date and imprint: "Boston, Thursday, September 25, 1690, printed by R. Pierce for Benjamin Harris, at the London Coffee House, 1690." The publisher announces that the country "shall be furnished once a month (or if a Glut of Occurrences happen, oftener), with an Account of such considerable things as have occurred under our Notice; to give a faithful relation of all such things; to enlighten the public to the occurrences of Divine Providence; the circumstances of public affairs at home and abroad; to attempt the curing, or at least the chaining of the spirit of lying, then prevalent; and to aid in tracing out and correcting the raisers of false reports." It gives a summary of current events, as the departure of about 2,500 troops, and thirty-two sail of ships for Canada, under Sir William Phipps, the ravages of the small-pox, and of a malignant fever in Boston. It informs us that a fire broke out between the 16th and 17th, which destroyed several houses, and that besides the loss of one life, the "best furnished Printing Press of those few we know of in America was lost; a loss not presently to be repaired." It gives an account of the capture of St. Christopher from the French, and of the landing of King William in Ireland with 140,000 foot and horse, as well as

other veritable occurrences in Europe and America. It is to all intents and purposes a newspaper, and, as such, the first of its kind in America.

Harris, at the date of the above publication, kept a bookstore in Boston at the London Coffee House in King street, but removed two or three years after to Cornhill, where he engaged in printing chiefly for booksellers. He had a commission from Governor Phipps, in 1692, to print the laws. He was from London, where he had been a printer and bookseller, and as Dunton, the eccentric English bookseller, who was at this time in Boston, states, had, "as brisk asserter of English liberties," incurred by his publication the displeasure of the authorities in such a form as to induce him to travel to New England, "where he followed bookselling, and then coffee selling, and then printing, but continued Ben Harris still, and is now both bookseller and printer in Grace Church street, as we find by his *London Post*; so that his conversation is general (but not pertinent) and his will pliable to all invention."

Bartholomew Green, another son of the Cambridge printer, commenced printing in Boston in 1690, after the death of his brother Samuel, who died in the small-pox epidemic of that year. B. Green was for about forty years printer for the government, and the leading publisher in Boston. He was assisted by John Allen, another London printer, who commenced about the same time, and in 1707 established an independent business. In 1701 Green commenced the printing of *The Boston News-Letter*, the first successful attempt to establish a periodical in the colonies. It was printed weekly and published "by authority" for John Campbell, postmaster, who was the proprietor. It became the property of Green eighteen years later, during fifteen of which it was the only one in the colonies. From 1707 to 1711 it was printed by Allen, whose premises being burned in the great fire, it was again printed by Green. The publication continued in the Green family until the year 1766.

James Franklin, an elder brother of Benjamin Franklin, was another of the early printers of Boston. He had learned the art in England, and in 1713-14 brought thence a press and types, with which he printed for a time the *Boston Gazette*. It was in this office that Benjamin Franklin learned the first elements of the printing art.

About the year 1752 an edition of the English Scriptures was privately carried through the press at Boston. It was printed by Kneec-

land Green. This first American edition of the Bible in the English language was chiefly made for Daniel Henchman, of Boston, the most enterprising bookseller of British America before the Revolution. His place of business was on Cornhill, at the corner of King street, where he furnished much employment to the Boston printers and even those of London. He built also the first paper mill in New England.

Down to 1740 more printing was annually executed in Massachusetts than in all the other colonies. Massachusetts continued to lead in the publication of books for about twenty-five years longer. In 1769 the publishing business of Philadelphia had become nearly equal to that of Boston, and this equality was maintained until about the beginning of the War of the Revolution. To these two cities belongs the credit of having led the enterprise of the country in one of the most important of the arts, and they also divide the honor of having produced the greatest ornament of the profession in this or any other country—Benjamin Franklin. Born in Boston, where the earliest years of his life were passed, and where he acquired his first knowledge of his craft, he later conferred upon Philadelphia the benefits of his industry, inventive talent, and maturer wisdom.

At the beginning of the War of the Revolution there were seven papers published in Massachusetts, of which five were at Boston, one at Salem, and one at Newburyport. During the progress of the Revolution the press shared in the general insecurity and depression which interrupted nearly every form of industry. It did its full share in arousing the spirit of resistance in the hearts of the colonists, and in sustaining the fire of patriotism throughout the struggle. "Writers and printers," says Dr. Ramsey, "followed in the rear of the preachers, and next to them had the greatest hand in animating their countrymen."

The first paper mill in Massachusetts was projected by men of Boston in 1728. On the 13th of September of that year the General Court of Massachusetts granted, for the encouragement of a paper mill, to Daniel Henchman, Gillam Phillips, Benjamin Faneuil, Thomas Hancock, and Henry Dering, a privilege in the nature of a patent for ten years. The mill was erected at Milton, seven miles south of Boston, on the Neponset River. The proprietors employed an Englishman, named Henry Woodman, as their foreman. They furnished the Legislature a sample of their manufacture in 1731, and the mill was probably built early in the previous year. Henchman, who was the princi-

pal projector, was the leading bookseller and publisher in Boston at that time, and was a man of considerable wealth. Another bookseller of Boston concerned in the enterprise was Richard Fly. The Milton mill, after having been conducted a few years by the original managers, suspended operations. It was afterwards sold to Jeremiah Smith, who was unable to obtain workmen to carry on the business. During 1760 it was operated for a short time by James Boies, of Boston. It then fell into the hands of Richard Clarke, an Englishman from New York, who was said to have had superior knowledge of the business, and successfully conducted it for some time. He was succeeded by his son, George Clarke. In 1796 the town of Milton had three paper mills, and there were six on the same river and twenty in the State.

The manufacture of paper hangings was not introduced into the colonies until about the middle of the last century, and was not a well established branch of home industry until after the War of the Revolution. At that time there were several manufactories of the article in Boston. Three years after the war closed Boston produced annually twenty-four thousand pieces of paper hangings, not only sufficient to supply the State, but furnished considerable to other States.

The distilling of New England rum was at one time quite extensively carried on in Boston. In 1738 Burke makes the following reference to this business: "The quantity of spirits which they distil in Boston from the molasses they bring in from all parts of the West Indies is as surprising as the cheap rate at which they vend it, which is under two shillings a gallon; with this they supply almost all the consumption of our colonies in North America, the Indian trade there, the vast amount of their own and Newfoundland fisheries, and, in great measure, those of the African trade, but they are more famous for the quantity and cheapness than for the excellency of their rum." On Price's Plan there are eight still-houses indicated, divided between the mill-pond and the wharves near the foot of Essex street. Drake, in his "Old Landmarks of Boston" says: "The oldest one is that now, and for some time in possession of the French family, which appears to have been improved for that purpose as early as 1714 by Henry Hill, distiller, and by Thomas Hill after him. Besides this there were Avery's and Haskins'."

That the making of hats had early become quite an industry in Boston is evidenced from the fact that a company of feltmakers, in London, petitioned Parliament in February, 1731, to prohibit the importa-

tion of hats from the American colonies, representing that foreign markets were almost altogether supplied from thence, and not a few sent to Great Britain. The petition was referred to a special committee, which reported that in New York and New England, beaver hats were manufactured to the number, it was estimated, of ten thousand yearly. In Boston there were sixteen hatters, one of whom was stated to have commonly furnished forty hats a week. The exports were to the southern plantations, the West Indies, and Ireland. In consequence of this evidence, and that furnished by the Board of Trade in the same session, an act was passed that "no hats or felt, dyed or undyed, finished or unfinished, shall be put on board any vessel in any place within any of the British plantations; nor be laden upon any horse or other carriage to the intent to be imported from thence to any other plantations, or to any other place whatever, upon forfeiture thereof, and the offender shall likewise pay £500 for every such offense."

It was a Boston merchant, Colonel Josiab Quincy, who was the originator of glass manufacture in this neighborhood. He joined with Joseph Palmer, an Englishman, and with the aid of some German glassblowers, started the manufacture of glass at the point in the harbor to this day called Germantown, near the site of the Sailors' Snug Harbor, in Quincy. Shortly after one of the Boston Bowdoins was concerned in another glass house, as appears by his name to a petition in 1749 asking a legislative grant of wood land in aid of the enterprise.

In 1768 a type foundry was commenced in Boston by a Mr. Michelson from Scotland, who produced type which were said to be equal to any imported from Great Britain. But he did not succeed in establishing a permanent business. This was twenty-eight years after the first foundry was established in Philadelphia, and only five after the first attempt was made in New York to manufacture movable type.

The brewing of beer was among the earliest products of industry during the Colonial period of our country. The business was commenced here soon after the settlement of Boston. As early as 1637 it had become an established industry, as the General Court of that year ordered that "No person shall brewe any beare, or malt, or other drinke, or sell in gross or by retaile, but only such as shall be licensed by this Courte, on paine of £100; and whereas Capt. Sedgwick hath before this time set up a brewe house at his greate charge, and very comodious for this part of the countrey, hee is freely licensed to brewe beare to sell according to the size before licensed dureing the pleasure

of the Courte." The "size" mentioned refers to the strength of the brew, which was not to be stronger than could be sold at eight shillings the barrel. This is the earliest mention of a brew-house in the colonies. Ten years later, however, a number of breweries had been established in Massachusetts. Hops were the principal ingredient used in the manufacture of beer during the earliest period of the colonies, several years elapsing before barley was raised in sufficient quantities for the home production of malt and beer. A considerable quantity of malt was therefore annually imported. This in Massachusetts was subject to a duty, which the principal importers and merchants of Boston in 1655 petitioned the Assembly to repeal, as "pudittiall to this Commonwealth and also a discourridgm't to Marchants." One of the petitions of the early Boston advocates of free trade, written by Thomas Broughton and signed by him and Robert Pateshall, represents that "the well known advantage accruing by freedome of ports and hindrance of trade proportionally according to largeness of customs imposed, that this seeming good may not bring upon this countrey a reall evell, and from customs upon one grow to customs on another, till step by step, under specious pretences, we are insensiblie brought under taxes for every-thing, as the woful experience of other nations well known unto us showeth;" therefore, "for the good of the present, and to prevent this evell in future ages, we are become your humble petitioners to remove the customs upon malt, that after ages may remind you as fathers of their freedome, and the present may bow before you for their experience of your care of their welfare," etc.

At what date the manufacture of cloth for clothing was begun at Boston it is impossible to learn. Flax, hemp and cotton had been wrought into cloth as early as 1639 in Rowley, Mass., and in 1642 the author of "New England First Fruits," writing at Boston, September 26, 1642, speaks of their providential help, among other things, "in prospering hemp and flax so well that it is frequently sown, spun, and woven into linen cloth (and in short time may serve for cordage); so cotton wooll (which we may have at reasonable rates from the islands) and our linen yarne, we can make dimittees and fustians for our summer clothing; and having a matter of 1,000 sheep, which prosper well to begin withal, in a competent time, we hope to have woollen cloth there made. And great and small cattel being now very frequently killed for food, their skins will afford us leather for boots and shoes and other uses; so that God is leading us by the hand into a way of

clothing." In 1722 the General Court offered a premium for sail duck and linen made in Massachusetts of domestic material. Four years later John Powell, of Boston, presented a memorial to the same body, representing that he had found the flax and hemp of the country as well adapted to the manufacture of sail cloth as that of Great Britain or Ireland. He engaged, if suitably encouraged, to have twenty looms at work within fifteen or eighteen months, and to send home by the first ship for workmen and utensils, which would require an outlay of £500 for each loom, to produce fifty pieces of duck per annum from each. A committee was appointed to consider the proposition, and reported in June, recommending a bounty of twenty shillings to be paid out of the public treasury for each piece of duck or canvas of "thirty-six yards long and thirty inches wide, a good even thread, well drawn, and of a good bright color, being wrought wholly of good strong water-rotted hemp or flax of the growth of New England, and that shall weigh between forty and fifty pounds each batt, and for fourteen years, as is usual in Great Britain and elsewhere, and the memorialist be allowed £3,000, he being given such security as your court may appoint, £2,000 in hand, and the other one thousand when he has perfected five hundred pieces of canvas, that shall pass the survey."

The manufacture of linen was largely accelerated in Boston at this time by the influx of a number of Scotch-Irish settlers, most of whom had engaged in the work in their old homes. Their superior knowledge of the art and the improved machinery which they came provided with, gave an impulse to the business, and the flax wheel became a familiar sight in nearly every household. The stimulus thus given to this industry led to a public effort in Boston to establish a linen manufactory. A public meeting was called, at which Judge Sewell presided, and a committee of seven was appointed to report on the propriety of establishing "a spinning school or schools for the instruction of the children of the town." It resulted in the erection on the east side of Long Acre street, now Tremont street, near Hamilton Place, of a large, handsome brick building, called the "Manufactory House," having on its front wall the figure of a woman holding a distaff as emblematic of its future use. General enthusiasm prevailed at its opening. An immense concourse assembled, and the women of Boston, rich and poor, appeared on the Common with their spinning wheels, and vied with each other in the use of the instrument. Subscriptions were raised for the support of the project, and an Act of the

Assembly was obtained in 1737, laying a tax on carriages and other luxuries for the maintenance of the institution. At each recurring anniversary (it continued for three or four years) the trustees and company attended public worship, when a sermon was delivered suited to the occasion. The spirit under which it was undertaken, however, was too violent to secure permanent success, and the project was finally abandoned. The building, which stood until after the Revolution, was afterward used as a manufactory for worsted hose, metal buttons, etc. The Hon. Daniel Oliver, a merchant of Boston, also erected about the same time, at an expense of £600, a "Spinning School" for the employment of the poor, which at his death he bequeathed for the education of the children of that class. In consequence of the interest which had for several years been taken in the subject in Boston, Daniel Henchman, already referred to in connection with the paper interest, about the year 1735, reprinted a work published in Dublin, entitled: "Instructions for the Cultivating and Raising of Flax and Hemp, in a better manner than generally practiced in Ireland, by Lionel Slator, Flax and Hemp Dresser." So general was the cultivation of these articles, that two years after they were ordered to be taken at the public treasury in payment of taxes. The tax on carriages was in 1753 removed in Massachusetts for the support of spinning schools, and each town was allowed to send at least one person to be instructed in the art free of expense. In 1762 public notice was given that the spinning school in the Manufactory House of Boston was again opened, where any one who felt disposed might learn to spin gratis, and after the first three months be paid for their spinning. A premium of £18 was at the same time offered to the four best spinners.

About the year 1748 a society was formed in Boston for promoting industry and frugality, and was probably the forerunner of those associations which a few years later became the favorite mode throughout the country of sustaining resistance to the pressure of ministerial authority. To favor this design the Assembly purchased the Manufactory House, and granted four townships of land for the use of foreign Protestants, and the use of the Provincial frigate for their transportation. At the anniversary of the society in 1753, great enthusiasm was exhibited. About 300 young female spinners appeared on the Common, seated at their wheels arranged in three rows. The weavers also assembled, neatly dressed in cloth of their own manufacture, and one working at a loom upon a platform was carried on the shoulders of

men, accompanied by music. A large assemblage was addressed by Rev. Dr. Samuel Cooper.

At about this period the restrictions placed upon the growth of the industrial interest of the colonies by Great Britain had become especially oppressive. The home government had from the beginning discountenanced every attempt to build up industries here that would either render the colonists independent of home manufactures or rivals in trade. The means by which this was sought to be done had, however, an entirely different result. The repeal of the Stamp Act in 1766 was but a temporary lull in the system of unjust restrictions placed upon the colonies by Parliament. The year 1767 witnessed the imposition of a duty on sugar, glass, painters' colors and tea, providing for the quartering of soldiers in the colonies, and for the more effectual enforcement of the revenue system by the establishment of a custom house. This system of taxation was violently opposed by the colonists. Boston in town meeting commenced the system of retaliation and redress employed against the famous Stamp Act, by declaring that "the excessive use of foreign superfluities is the chief cause of the present distressed state of this town, as it is thereby drained of its money; which misfortune is likely to be increased by means of the late additional burdens and impositions on the trade of the province, which threaten the country with poverty and ruin." Resolutions were adopted to abstain from the use, after 1st of December, of such foreign articles as "loaf sugar, cordage, anchors, coaches, chaises and carriages of all sorts, house furniture, men's and women's hats, men's and women's apparel ready-made, household furniture, gloves, men's and women's shoes, sole leather, sheeting and deck nails, gold, silver and thread lace of all sorts, gold and silver buttons, wrought plate of all sorts, diamonds, stone and paste ware, snuff, mustard, clocks and watches, silversmiths' and jewelers' ware, broadcloths that cost above 10s. per yard, muffs, furs and tippets, and all sorts of millinery ware, starch, women's and children's stays, fire engines, china ware, silk and cotton velvets, gauze, pewterer's hollow ware, linseed oil, glue, lawns, cambrics, silks of all kinds for garments, malt liquors, and cheese." At the same time it was resolved "by all prudent ways and means to encourage the manufactures of British America, and more especially of this province." Retrenchment in the use of new or superfluous clothing and mourning apparel was pledged. The Assembly addressed a petition to the king, and later addressed a letter to the assemblies of

sister Provinces, stating what had been done and asking co-operation in their plan to obtain redress of grievances. Parliament in striving to replenish its treasury had done, without intending it, all that was necessary to facilitate the progress of our industries. The outspoken determination to use only home manufactured products was the only way to avoid the unjust burdens Great Britain was seeking to place upon her colonists in America. The effect of the new Parliamentary act, therefore, only tended to foster and encourage home industries.

After the passage of the act, an attempt was made to revive the linen factory in Boston, which had been discontinued. At the town meeting in Boston in March, 1767, a committee was appointed to frame a vote of thanks to John Dickinson, the author, of the "Letters of a Pennsylvania Farmer," which so ably indicated the rights of American subjects. A large committee on manufactures was at the same time appointed to procure subscriptions to aid a manufactory of duck lately established in the town by John Bennett. They reported in May that only one-half the required sum (£300) had been subscribed, and were directed to renew their efforts. Many efforts were made by merchants and others to excite an interest in the subject of manufactures. In August following the arrival of the Royal Commissioner of Customs, and after the seizure of the sloop *Liberty* had taken place for violating the revenue laws, the Boston merchants again entered into an agreement not to import any British goods from January 1, 1769, to January 1, 1770, except salt, coal, fish hooks and lines, hemp, duck, bar lead and shot, wool cards and card ware. A refractory merchant, not abiding by this agreement, was waited upon by a committee and informed that 1,000 men were waiting for his answer. The newspapers soon published that he had voluntarily ceased importing. Goods were even reshipped from Boston. Committees of superintendence were employed who were vigilant in preventing any violation of the agreements.

The effect of the non-importation system is exhibited in the returns of the British Custom House, which gives the value of articles exported from England to New England as being only £223,696 for 1769, while for 1768 it amounted to £430,807. The consequent loss of trade in Great Britain caused widespread distress among the merchants there, and a general demand for the repeal of the imports was made. This was acceded to by Parliament by removing the duty upon all articles except tea. This concession, however, did not cause the people to abandon their policy of non-importation, because the right to tax them

was still asserted, and the system was therefore continued in the hope of forcing an entire surrender of the right to tax them at all. This determination was strengthened in Boston by the conflicts which took place between the British soldiers and its citizens in 1770.

An increased attention to several branches of domestic industry was among the salutary results of the non-importation covenants. "To the good effects of these resolutions," says Bishop in his "History of American Manufactures," "was ascribed the encouraging facts that at the commencement exercises held in Cambridge, in the year 1770, the graduating class appeared in black cloth entirely of New England manufacture." In March of the same year a memorial was presented to the General Court by William Molineaux and others, who, in consideration of the increasing number and expense of the poor, had caused a large number of spinning wheels to be made, and engaged rooms for employing young females, from eight years old and upward, in earning their own support. In aid of these spinning schools, where children were instructed for two years free of cost, they had asked and received from the General Court a loan of £500, without interest. The petitioners state that at least 300 women and children had already been thoroughly instructed in the art of spinning, and to whom a large amount had been paid in wages. They had then on hand about forty thousand "scanes of fine yarn, fit to make any kind of women's wear."

The example of Mr. Molineaux produced great activity in spinning throughout the community, and Boston shared in the benefits it bestowed. Its good effect extended to every branch of industry. The manufacture of cotton and wool cards was carried on extensively. The making of pot and pearl ashes was still an important industry, although it had begun to decline on account of the scarcity of wood. This industry had been carried on in Boston at this time for at least a quarter of a century. William Frobisher, of Boston, had contributed to the reputation and manufacture of American potash, by investigating the principles of the process, and by demonstrating its superiority for soap making. Dr. Townsend had also published a pamphlet on the manufacture and inspection of pot and pearl ashes. Rope making, which had formed an important part in the industrial pursuits of the town from the early days of the colony, had grown to considerable proportions. Part of Governor Hutchinson's estate on Pearl, formerly called Hutchinson street, having been confiscated and sold by the Commonwealth, was converted into rope walks. There were also extensive

rope walks at the West End, others at the North End, and at the bottom of the Common. The bloody affray of 1770 has rendered John Gray's walk, on Atkinson street, historical. Brewing and the distilling of New England rum, which had grown to large proportions, gave employment to many. The making of morocco leather, which had been begun in Charlestown, in 1770, by the afterward famous Lord Timothy Dexter, and others, was in a flourishing condition. The printing and making of books was now largely carried on, and perhaps no place in the colonies furnished employment to a larger number of persons in this branch of industry, with the possible exception of Philadelphia. At this time there were ninety-two booksellers in the town, and more than a third of them made the binding and making of books a part of their business. Ship building was the leading industry, and gave employment to large numbers, while the making of hats, soap and candles, and the common trades furnished the remaining avenues of employment.

The foregoing represents the main industrial enterprises of Boston at the beginning of the sanguinary struggle for independence. The energies of the people now became absorbed in sustaining the conflict, and commerce as well as the useful arts made but little progress. "The infant manufactures of the country," says Bishop, "did not escape the baleful influences which a state of warfare always exerts upon industry. Many young and feeble enterprises were entirely ruined. But the mechanical genius of the country did not slumber, and the exigency of the occasion created some new branches and stimulated others, while it developed unusual examples of ingenuity and enterprise in the arts, as it did remarkable talents in the field and in the council."

The condition of affairs which followed the war was alike unfavorable to the trade and manufacture of the country. With a public debt of forty million dollars, exhausted in resources, and no public revenue system, private confidence fell in the wreck of the public faith. A flood of European manufactures poured in to supply the exhausted warehouses, and all possibility of success in manufactures was for a time excluded by the superabundance of foreign goods, some of which sold twenty-five per cent. cheaper than in London. During the Revolution much of the limited capital of the country had been employed in those branches of manufacture which were immediately subservient to the war. Not much beyond the household industry of the country had been preserved. A period of hard times was the natural result. An industrial problem of great magnitude for the weakened condition of

the country confronted the people. Our political independence had been sanctioned by treaty, but we were still largely industrially dependent upon Great Britain. The mechanics of Boston were by no means silent under the distressing condition of affairs. The *Boston Gazette*, in 1788, voiced the feeling of the people in this matter in the following:

“Until we manufacture more it is absurd to celebrate the Fourth of July as the birth-day of our independence. We are still a dependent people; and what is worse, after the blood and treasure we have expended, we are actually taxed by Great Britain. Our imports help to fill her revenue and pay the interest of a debt contracted in an attempt to enslave us.”

Arguments such as these could not fail to have their effect upon a people who had so dearly purchased the liberty they possessed. In 1784 the manufacturers of Boston petitioned the General Court for legislation to protect their products. To Governor Bowdoin and the manufacturers of Boston also belong the credit of first agitating the question of calling a convention of delegates from all the States for the purpose of deliberating upon the state of trade and manufactures. This convention grew out of the industrial condition of Boston, and out of this convention grew the one which framed the new constitution. The petition of the Boston manufacturers to the General Court resulted in the passage of various laws imposing a tax upon certain imported articles. These laws were consolidated and amended by extending the list, by an Act passed July 2, 1785, by which an import duty was laid upon most of the goods made at this time in and around Boston. The articles named were as follows: Wrought pewter, leather, books, nails, boots and shoes, plated ware, soap, candles, glue, carriages, harness, whip canes, carriage trimming, copper plate, furniture, umbrellas, muffs, tippets, combs, beer, ale, porter, clothing (excepting leather), woolen cloth, linen cloth, stockings, anchors, carpenters' tools, knives, bits for boring of pumps, carriage hoops and tire, mill saws, scale beams, steelyards, spades and shovels, hoes, wrought iron handirons, cast iron ware, shovels and tongs, crows, picks, tackle, hooks, thimbles, scrapers, marline-spikes, pumps and whaling-gear, wrought copper, worms for stills, hats, loaf sugar, cordage, cables, yarns, wrought iron and silver, cotton cards, buckskin breeches, leather breeches, leather gloves, wash leather, painters' colors, playing cards, tobacco (manufactured), paper hangings, clocks, house jacks, spirits, wines, watches, gold and silver, jewelry and paste work, gauzes and lawns, cambrics,

muslins, silks, hose, mitts, gloves, handkerchiefs, velvet flowers, feathers, shawls, ribbons, sarcenet, wigs, and hair work, tinware, starch, hair powder, toys, marble and china tile, linseed oil. The articles mentioned will give a fair index to the manufactured products of Boston in 1785.

Manufacturing, however, revived slowly after the war. The new constitution which had been submitted to the people contained provisions for the regulations of commerce. The representative manufacturers of Boston, in 1788, believing that the industrial interest of the country should be protected by the imposition of duty on imported goods, issued the following circular letter, which not only clearly illustrates the spirit of the time, but the condition of manufacturing in Boston at this early period:

BOSTON, August 20, 1788.

GENTLEMEN,— We being appointed by an association of tradesmen and manufacturers of Boston to write to our brethren throughout the several States, do now address you on the very important and interesting subject of our own manufactures.

The late system of commerce pursued since the peace of importing such articles as can be manufactured among ourselves, tends to discourage the whole body of our tradesmen and manufacturers of these States, who depend for the support of themselves and families on their various occupations, and this practice, unless speedily checked by the prudent exertions of those who are more particularly interested, must eventually prove ruinous to every mechanical branch in America.

Impressed with these sentiments, and finding the evils daily increasing, the tradesmen and manufacturers of the town of Boston, awakened by the sense of danger which threatened them, assembled to deliberate on measures to relieve themselves from the destructive tendency of such importations.

An association was accordingly formed, consisting of a representation from each branch, and in this body the whole manufacturing interest of this town becomes an object of general attention.

The first measure adopted by this association was to pass resolves respecting the importation of certain articles from Europe by our merchants and numbers of British agents residing among us; but knowing that nothing could be effected to any radical purpose unless we had the authority of the laws, we petitioned the Legislature of this State, praying that duties might be laid on the several articles enumerated in our petition. In consequence of which application our Legislature complied in a great measure with our request, by enacting laws for the encouragement of industry and for promoting our own manufactures.

However, as we are sensible that our present situation requires an extensive co-operation to complete the purposes we wish, we take this method to bring forward a confederated exertion and doubt not from a union of sentiment, the most permanent benefits may arise.

We, therefore, apply to you, gentlemen, to lend us your assistance; and like a band of brothers whose interests are connected, we beg you to join in such measures to advance the general good as your conscience shall suggest and your wisdom dictate.



Francis W. Dreed

We would, with submission, recommend an association of your tradesmen and manufacturers, formed upon the most extensive basis and supported upon the most liberal principles; we may then hope the manufacturers of this country will flourish, when each man becomes interested not only in his own branch, but in those of his brethren. Encouraged by such extensive patronage, each individual will be animated to pursue his business with alacrity, knowing that he acts in concert with those on whose friendship he can with confidence rely.

An association being established in your State, we shall be happy to correspond with, and we flatter ourselves from this social intercourse a general harmony will prevail throughout the whole manufacturing interest of this country.

As we hope to experience the good effects of the late acts of our General Court, we should recommend a petition for a similar purpose to your legislature, and from the known disposition of your State to promote the welfare of America, we doubt not some plan will be devised by your General Assembly to prevent the importation of such species of articles as are commonly manufactured in America.

We need not urge the necessity of some measures being immediately taken by the whole Confederacy. The embarrassments of our navigation, the large debts contracted in Britain, and the remittances of our currency— all serve to put every real friend to his country upon serious attention; and any mode that can be adopted to remedy these evils, we are convinced no American will be backward in espousing, but will join heart and hand to promote the desirable purposes.

The means we propose, we conceive, are calculated to put each State upon deliberating on a subject highly important to the manufacturing interests; and we cannot but hope that some lasting benefits will accrue from the united voice of the tradesmen and manufacturers of America.

The States are so extensive in their boundaries, so various in their climate, and so connected in their national interests, that if a plan should be adopted throughout the Confederation for the exchange of the produce and manufactures of each State, we conceive it would serve to cement a general union, and prove a means to promote the interest of the whole.

The Northern States might furnish many articles of manufacture which are now imported from Europe, and in return might receive those supplies peculiar to the growth and climate of the Southern.

An association formed throughout the States upon so liberal a plan, would establish many extensive branches of manufactures; and if prosecuted with spirit would put this country above the humiliating state of lavishing her stores of wealth to promote the manufactures of Europe.

We wish to communicate this letter to such towns of your State as you shall think proper.

We are, gentlemen, with every sentiment of respect,

Your most obedient servants,

JOHN GRAY,
GIBBENS SHARP,
BENJAMIN AUSTIN, JR.,
SARSON BELCHER,
WILLIAM HAWES,
JOSHUA WITHELE.

This appeal on behalf of Boston men did not fail to arouse the attention of the merchants and manufacturers throughout the country, and upon the assembling of the first Congress under the new Constitution, in 1798, the protection of American manufactures was among the first questions considered. Indeed, the second act passed by Congress was one relating to the levying of a duty on "goods, wares and merchandises imported into the United States."

For a decade after the Revolution there was a natural decline in manufactures. It was not barren, however, of industrial enterprises and undertakings which gave life and impetus to affairs. In the construction and adaptation of those labor saving methods and instruments by which iron and other materials are wrought up with facility into the varied forms which now employ so much of the industry of the State, rapid progress was made after the Revolution. Boston men especially at this period contributed their full share to the reputation for ingenuity, dexterity and versatility in the mechanical arts which is characteristic of the American artisan. The city had quite a body of skillful mechanics, who in 1785 were united in an association of tradesmen and manufacturers. Among examples of the practical skill of this class, involving the uses of metals, may be mentioned the following: At a fire as early as 1765 a fire engine of home construction was used and "found to perform extremely well." It was made by David Wheeler, a blacksmith in Newbury street, who announced his intention to manufacture fire engines as good as any imported. Wheeler at the same time prepared to "make and fix iron rods with points upon houses and other eminences for prevention from the effects of lightning." This was probably the first practical application in his native town of the grand theoretical and practical discoveries of Franklin. Dr. William King, of Boston, is said to have introduced, many years after, the use of rods with many points along them. Some improvements in the forcing-pump and its adaptation to the hydraulic mechanism of the fire engine, were made and patented some years after by Benjamin Dearborne, of Boston, the inventor of the patent balance, and numerous improvements in other articles. In 1768 Garven Browne, also a native of Boston, exhibited the frame and principal movements of a new and curious town clock, which he had manufactured. The two great wheels, it was said, "took near 90 lbs. weight of cast brass. It was calculated for eight days and to show the hours and minutes; to have three dials and a mechanical lever to preserve the motion during the

winding up; the pendulum wheel and plate to perform the dead beat; its 'mathematical pendulum' was so contrived that it could be altered the 35-100th part of an inch while the clock was going." In the second volume of the *Memoirs of the American Academy of Arts and Sciences* is also a description of the orrery or planetarium constructed by Joseph Pope, an ingenious clockmaker of Boston, made without previous acquaintance with such a machine, and pronounced by Dr. Wright to be, except in size and durability, "probably inferior to none in the world." It was purchased by the State for Harvard University. The inventor was also the author of an ingenious theory of gravitation, and the inventor of a threshing-machine, patented in 1802, and also an improved windmill. As early as 1755, Howland Houghton, a merchant of Boston, was the inventor of an instrument for surveying land, which he called "The New Theodolite." He obtained exclusive privileges for seven years for making and selling it, by an act of the General Court, which declared that "land could be surveyed with greater ease and despatch than by any surveying instrument heretofore projected or made within this Province."

After the peace, at Paul Revere's foundry on Lynn street, previously mentioned, cannon and balls were made. Neat brass cannon were cast at this foundry, and many iron articles, such as cabooses, stoves, clothier's plates, chimney hearths, anvils, and forge hammers.

The manufacture of wool cards by hand was commenced in Boston before the Revolution. In 1788 Giles Richards formed a company to carry on the business by newly invented and improved machinery of American invention, which it is very probable was mainly that invented several years before by Oliver Evans for cutting and binding card teeth and piercing the leathers. A factory was established near Windmill Bridge, where the card boards were cut by wind power, one man at a machine being able to cut and bend in twelve hours sufficient wire for twenty dozen cards, at a saving of one-half of the labor of any previous method. This factory was visited in the following year by General Washington, who was informed that about 900 hands were employed in it and 63,000 pairs of cards (of all kinds) had been made in a year. They undersold the imported and had even been smuggled into England. The business was also carried on by Mark Richards & Co., near Faneuil Hall market, in 1797, and the manufacture then employed about 1,200 persons (chiefly women and children) in sticking the teeth. Four-fifths of the cards used in the State were made by these factories, and they were largely imported into the Southern States.

In 1797 Amos Whittemore, an ingenious gunsmith, who, with his brother William, had been connected with Giles Richards & Co., and the previous year had taken out three patents, including one for cutting nails, received letters patent for his card cutting machinery. Previous to this the Whittemores had established a third card factory in Boston, in which the old machinery was employed. The three factories at this time manufactured about 12,000 dozen of cotton and wool cards, which consumed nearly 200 casks of wire, averaging \$130 per cask, 35,000 tanned sheep and calf skins, and employed nearly 2,000 children and 60 men. There were three smaller factories in Boston, and 2,000 to 3,000 dozen cards were made yearly in other parts of the State. The wire consumed by them was made at Dedham, where a wire mill was erected at considerable expense for the use of the card and fish-hook makers of Boston. The wonderful piece of mechanism invented by Amos Whittemore created a complete revolution in the business in England and America.

An important enterprise undertaken in 1787 was the building of the Charles River bridge. Its successful carrying out forms an index not only of the spirit and resources of the town, but throws a strong light upon the advance made in the mechanic arts. It was considered at the time one of the greatest enterprises ever undertaken in the country. It was 1,503 feet long, 12 feet wide, and had a 30 feet draw. Its cost was \$50,000. It was undertaken by a private corporation, of which John Hancock was a leading member.

In 1787 a spirited effort was made in Boston to revive the manufacture of glass. A company was formed, and in July, 1787, received a charter from the Legislature of the State with the exclusive right of manufacturing glass for fifteen years. A penalty of £500 was attached to any infringement of their rights by making glass in the town, to be levied for each offense. The capital stock was exempted from taxes for five years, and the workmen employed were exempt from all military duties. A pyramidal factory of brick was erected on a large scale at the foot of Essex street. Being found illy adapted to the purpose, it was afterwards taken down and a wooden one lined with brick differently constructed was put up in its place. Its dimensions were 100 feet in length and 60 feet in width. On account of difficulties in procuring workmen and other embarrassments, operations were not fully commenced until November, 1792. The corporation commenced with the manufacture of crown window glass, which they produced of a quality

equal or superior to any imported. Materials were found to be abundant, and some six years later they produced about 900 sheets per week, worth \$1.15 per sheet, or \$76,000 per annum.

The manufacture of paper-hangings grew to be quite an extensive industry in Boston after the close of the war of the Revolution. Before the war large importations of the article were made from England, and after the war from France, so much so from the latter country that, in 1787, the French government removed the export duty upon paper-hangings, on account of the great consumption of its manufacture in the United States. The great cost of the imported article led to the establishment of several American factories, one of which was in Boston. This was soon followed by others, and when the first secretary of the treasury made his report, was among the well established branches of home production. Three years later, the manufactories of stained paper in Boston were sufficient not only to supply the State, but furnished considerable quantities to other States. Boston at this period produced annually twenty-four thousand pieces of paper-hangings.

In 1789 a large manufactory of sail duck was established in Boston in Frog Lane, where a building, one hundred and eighty feet long and two stories high, was erected for the purpose. The company was incorporated by the General Court and encouraged by a bounty upon its manufactures. The duck made at the establishment was said to be the best ever seen in America and sold lower than imported sail cloth. In 1790 the ship *Massachusetts* had her sails and cordage made wholly of Boston manufacture. The factory in 1792 produced two thousand yards of duck weekly and employed four hundred hands. Its annual production for a number of years after was between two and three thousand batts of forty yards each. This factory affords an early instance of a workmen's union for mutual protection and improvement. The weavers and spinners were formed into a society with a system of laws for its guidance. Quarrels, profanity or other misconduct were immediately adjudged on the spot by a jury of the weavers, and a fine, deducted from the wages of the offenders, went into a common fund for the relief of sick members. Careless workmanship was punished in the same manner, and goods, if unsalable, were to be made good. The spinners admitted none into their company except by vote, and through the measures adopted to promote industry and self-government, were highly successful. President Washington visited the duck factory

at Boston, and under the date of October, 1789, thus speaks of it: "They have 28 looms at work and 14 girls spinning with both hands (the flax being fastened to the waist). Children (girls) turn the wheels for them, and with this assistance each spinner can turn out 14 pounds of thread per day, when they stick to it; but as they are paid by the piece, or work they do, there is no other restraint upon them but to come at eight o'clock in the morning and return at 6 in the evening. They are daughters of decayed families and are girls of character; none others are admitted." From the duck factory President Washington made a visit to the card factory, where he was informed 900 hands were employed. Of this industry he observes: "All kinds of cards are made; and there are machines for executing every part of the work in a new and expeditious manner, especially the cutting and bending of teeth, which is done at one stroke. They have made 63,000 pairs of cards in a year, and can undersell the imported cards—nay, cards of this manufactory have been smuggled into England." At this time there were three quite extensive manufactories of cotton and wool cards in Boston.

In 1793 Arthur Scholfield, with John Scholfield and his family, arrived in Boston from England. They settled in Charlestown. Here they built a hand loom, a spinning jenny of forty spindles and a card machine. The latter was the first carding machine for wool made in the United States, and upon this machine were made the first spinning rolls carded by machinery. It was afterward set up in the factory established by the Scholfield brothers at Newburyport, Conn.

The following account of the industrial condition of Boston, published in 1791, in a work entitled "A Typographical and Historical Description of Boston," and reprinted by the Massachusetts Historical Society, gives a fair idea of the extent and character of the manufacturing interest of the city at that time:

Boston, although denominated a commercial town, has a variety of manufactures carried on within its limits, among which are the following—Soap, candles, rum, loaf sugar, cordage, duck, twine and lines, cards, fish hooks, combs, stained paper, stoneware, chocolate, glass, etc.

In some of these great improvements have been made since the Revolution, not only in the quality of the articles, but also in the facility of making them. Soap, hard and soft, has been manufactured here for a number of years, and tallow candles. By newly invented American machines the work is greatly expedited in the latter manufacture, and great savings made in the article of cotton. Spermaceti candles are made here of a superior quality as to clearness and whiteness. Large quantities

have been exported. This business is now carried on at four manufactories in the town.

There are upwards of thirty distill houses in the town, at which New England rum has been made. Twenty-seven of them were occupied in 1792, but they turned out on an average two-thirds less quantities of gallons than they did before the disturbances in the French West Indies, and the excise levied by Congress. The revenue, according to our information, arising from New England rum at the above mentioned period, may be computed at the rate of one thousand dollars on an average quarterly from each distillery, from which, if we deduct one-third part for drawback, it will leave a very large sum net revenue. At present eighteen distill houses are at work. These distill not one-half so much as they could. The causes hinted at above, together with the demand for New England rum for exportation being lessened, have occasioned the decline of this business. The latter cause probably arises from the large quantities of fruit and grain spirit distilled in the Southern States.

In the town of Boston are seven sugar refining houses. At five of them the business is now carried on; they can manufacture annually, on an average, one hundred thousand weight. A large duty on clayed sugars of the second quality, as well as the new excise law on loaf sugar, operates against this manufacture.

Cordage is made at fourteen rope walks. The largest are at West Boston; one of them one hundred and sixty fathoms long, and can turn out a cable of about one hundred and forty fathoms in length. Hemp and yarns used in making ropes are by far the greater part imported from Europe. It is hoped that the bounty on hemp raised in this Commonwealth, and continued for two years by an Act of the General Court at their session in June last, though the sum is reduced from twelve pounds to nine per ton, will not operate to discourage the culture of this useful article, but that the present bounty, together with the communications and encouragements held out by the Agricultural Society, will stimulate the husbandman to pursue and increase its cultivation.

Twine and lines. For manufacturing these a company erected a large wooden factory. Various sizes of twines and lines from a mackerel to a codline were made and approved. More than forty persons were employed in it in 1792, and some score tons of hemp worked up. The sail makers were supplied from this factory. It might probably have answered the demand of the cod fishery, and the lines made at it equalled, if not surpassed in quality, the noted Bridport codlines imported from England. The bounty at first granted having ceased, the proprietors of the building contemplate employing it some other way. Twine and lines are now made at some of the ropewalks.

The duck manufacture was set up by a company in buildings which they erected in Frog lane, near the Common. They were incorporated by an act of the General Court. The sail cloth made here has obtained great credit. Certificates from merchants and sail makers testify its quality to be superior to the canvas imported from Europe. It will last longer, is not subject to mildew, and is sold at a lower rate than imported duck. This manufacture employs a number of females in spinning, and was encouraged by a bounty from the government. In 1792 four hundred hands were employed by it, and turned out not less than fifty pieces a week.

Cards of the various kinds used in other manufactures are made in this town in large quantities, and with great dispatch. The manufacture of cards was begun here

before the Revolution, but the improvements made in it since, have discouraged, and operated to exclude importation of this article into this Commonwealth, and in great measure into the Southern States, they being supplied with a large proportion of what is made at the manufacture in this town by Mr. Giles Richards, who was first named in a company that began this business, in 1788, by newly invented and improved machines, the effects of American genius. The principal manufactory is at Windmill Walk, contiguous to the grist mill at the mill bridge. The card boards are cut by the operation of a wind mill. One man working at the machine used for cutting and bending the wire, and pricking the leathers, can prepare a sufficient quantity of wires in twelve hours to stick upwards of twenty dozen pairs of cards. One-half the number of men skillful in using these machines can perform the same work, in the same given time, which can be done by any other method yet discovered. Between six and seven thousand dozen have been made annually, and, as hinted above, exported southward. Not less than twelve hundred persons, chiefly women and children, have found employment in sticking the cards; and as the manufacture advances in credit, the demand for cards will probably increase and furnish employment for a much larger number. This is a valuable manufacture, not as it employs women and children, but also a great number of others in the Commonwealth, in manufacturing the sheep skins, and making the tacks, etc. Four-fifths of the cards manufactured in the Commonwealth are made in the town of Boston. The new inventions in cutting the wires and boards, not only diminish the toil of labor and expedite the work, but also occasion the price of the cards to be used. Mark Richards & Co. also carry on this business in its various branches in a brick building near Faneuil Hall market.

Fish hooks are made by Mr. J. Mead, who is esteemed a good workman. The cod hooks of his make are approved of by the fisherman, being equal if not superior to the imported P. P. cod hooks formerly preferred. As the fisheries are encouraged, so this manufacture will be proportionally encouraged, and the fishermen supplied with hooks and lines, the manufacture of their own country.

Combs of various sorts are made at Graham's Comb Manufactory in Charter street, the workmanship well executed. The importations in this line have greatly decreased since the peace of 1783, and will probably entirely cease, at least into this Commonwealth.

Large quantities of stained paper were imported into this country from England previous to the Revolution; but at the manufactories in Boston sufficient is now made not only to supply their State, but also for importation to the others.

At the stone pottery lately put up in Lynn street, by Mr. Fenton from New Haven, all kinds of stone vessels are made after the manner of the imported Liverpool ware, and are sold at a lower rate. The clay for this manufacture is brought from Perth Amboy in New Jersey.

Cannon are made and balls now cast at the foundry in Lynn street, under the superintendance of Colonel Revere, the present proprietor. 'Till lately we have been obliged to foreigners for cannon and balls; but may now have them of American make. Some very neat brass cannon have been made at this foundry, and approved by competent judges. A variety of articles in the iron way are made at these works, viz. cabooses, stoves, clothier's plates, chimney hearths, anvils, forge hammers, etc.

Any article of iron manufacture, out of the common, may also be made here by leaving a pattern.

Chocolate has for many years been made in this town from the large quantities of cocoa brought into it from time to time, but the process is greatly expedited by late inventions. At the chocolate mills, contiguous to the northernmost grist mill, Mr. Welch can turn out upwards of twenty-five hundred weight in a day.

Calico printing has been undertaken in this town. The plain cottons brought here from India afford an opportunity for printing them. A duty on printed ones imported, and a bounty on such as are printed here would be encouraging. Specimens that have been given evince the skillfulness of some persons among us in stamping or printing plain cottons; and as emigrants are constantly arriving here, there can be no doubt some understand this art. If some public spirited wealthy citizen would provide materials and a building for this purpose, it might be carried on advantageously. The probability is that the proprietors would be well paid for the monies they might advance, the artists or workmen receive a handsome support, and the purchasers or customers make a saving of ten to fifteen per cent. between the American and English stamped cloths, in favor of the former. Since the peace, calico has become the general fashion of our countrymen, at all seasons of the year, both in town and country. Large quantities of printed calicoes are annually imported into this town, and large sums of money drawn from it for payment to Great Britain. As we are not restricted in our commerce, we can import the plain cotton cloths on good terms from a quarter we could not formerly. Let us avail ourselves of this advantage, and make the most we can of it.

Pot and pearl ashes are put among the manufactures of Boston, as they were begun here, particularly the former, about forty or fifty years ago, and have been made in it since the Revolution. They have now ceased in this town. The price of wood will not permit of their being carried on to advantage in the capital. They are made in many of the inland towns of the Commonwealth and brought to the capital for sale. Many tons are annually exported, the quality of which is ascertained by an inspector, chosen for the purpose by the government, that none but merchantable should be shipped off. Mr. Wm. Frobisher, of this town, claims the merit of being the first manufacturer of potash, who thoroughly investigated the process now in use, and communicated it, and demonstrated the superiority of American potash to that of Russia in making soap. Great improvements have been and are making in the manufacture of potash. The present inspector, Dr. Townsend, appears to have an intimate knowledge of the subject. Under his inspection it may increase its credit. We anticipate the period when it shall rival that of every foreign country.

The manufacture of glass in Boston was undertaken by an incorporated company of adventurers, to whom the General Court, in the month of July, 1787, granted an exclusive right to manufacture for a term of fifteen years. The stock to be employed for this purpose to be exempted from all taxes for five years; and the workmen employed, from all military duty. If any person manufactured this article in the town without consent of the company, a penalty was laid on him of five hundred pounds for each offence. This corporation erected a brick building in the form of a cone, at the bottom of Essex street, but not being sufficiently commodious, it was taken down and a wooden building lined with bricks, of a different construction, was put up in

its place. The present house is in length one hundred feet, and upwards of sixty feet in breadth. Many embarrassments attended this business at first setting out, but these being overcome, and suitable workmen arriving, they began to blow in the new house the 11th November, 1793. Their first trial was on window glass, which was much improved, and discovered the skill of the manufacturers, and gives a fair prospect of success in this undertaking.

A variety of other manufactures are carried on in the town; but having given an account of the principal of them, it will be needless to mention the others. We would not, however, omit particular notice of the manufacture of hats of various sorts in this town. It is a very considerable branch of business here. The fine beaver hats are preferable to those made in England.

If we extend our view of domestic manufactures, we shall find that many are carried on in the country towns of this Commonwealth. A great variety of articles are made in the neighborhood of the capital, and are disposed of in this market, or shipped hence to some other.

Paper has for many years been made at Milton, and we are told that there are not less than twelve paper mills in this Commonwealth. Saltpetre is made in almost every town. The following articles, with some others, are made a few miles from Boston, viz. tow cloth, cotton and linen sheeting, threads, checks, bedticks, striped flannels, cotton and worsted hose, gloves and mitts, cotton and woolen coverlids. These articles are brought to Boston for sale.

During the last decade of the preceding century Boston made rapid strides in material development. Improvements both of a public and private nature were carried on. The town was growing in size and importance; wooden buildings were being replaced by imposing stone and brick structures; mechanics of all kinds found ready employment at remunerative wages, and the press of competition was so great that it was difficult to hold apprentices to their agreement with their masters. To remedy this state of affairs the master mechanics formed an association known as the Boston Association of Mechanics, Col. Paul Revere being chosen president and Edward Tuckerman vice-president. The association rapidly increased in numbers, resources and usefulness, and within a few months the title of "The Association of Mechanics of the Commonwealth of Massachusetts" was assumed. Subsequently (1806), it was incorporated as the "Massachusetts Charitable Mechanics' Association," an organization which is still in a flourishing condition and which has been eminently useful in promoting ingenuity and good workmanship in the mechanical branches.

The ship-building industry, which had flourished quite extensively in Boston many years before the Revolution, was almost entirely suspended during the progress of the war. The most interesting features of the ship-building industry at Boston during the last decade of the

preceding century was in connection with the building of the two ships of war, *Constitution* and *Boston*, both of which were built in Edmund Hart's shipyard, which occupied the site now covered by the Constitution Wharf. The keel of the *Constitution* was laid March 27, 1794. She was designed by Joshua Humphreys, of Philadelphia, and constructed under the superintendence of Col. George Clagborne, of New Bedford. John T. Morgan, a master shipwright, Mr. Hartley, Gen. Henry Jackson and Major Gibbs, of Boston, assisted in her construction, while Edmund Hart was the master carpenter. Paul Revere furnished the copper bolts and spikes, drawn from malleable copper by a process then new. Ephraim Thayer, who had a shop at the South End, made her gun carriages. Her sails were made in the Old Granary building at the corner of Park and Tremont streets. The duck for the sails was made by an incorporated company in Boston, in the factory on the corner of Tremont and Boylston streets. She was launched October 21, 1797, having cost, when ready for sea, \$302,718. The subsequent history of this noted war vessel is well known and invests with more than ordinary interest the place where she was built.

The frigate *Boston*, the second ship of war built in Hart's yard, was designed by Mr. Hart and built under his superintendence. The building of this ship was undertaken and carried through with money provided by the citizens of Boston. At this time the commerce of our country had been subjected to much annoyance by the British and French ships of war. To aid in measures of defence the ladies of Charleston, S. C., built the *John Adams*, and presented her to the government; the inhabitants of Newburyport built and presented the *Merrimac*, and the merchants of Salem built and presented the frigate *Essex*. The merchants of Boston thereupon set about doing likewise, and in the *Columbia Sentinel*, of June 27, 1798, caused the following notice to be inserted: "Notice—A subscription will be opened this day for the raising of a fund to purchase or build one or more ships of war to be loaned to this government for the service of the United States. Those who would wish to join in this testimonial of public spirit are requested to meet in the chamber over Taylor's insurance office, at 1 o'clock precisely, to affix their signatures and make the necessary arrangements." The next issue of the paper, June 30, 1798, shows that \$115,250 had been subscribed. Among the subscribers were William Phillips, \$10,000; David Sears, Stephen Higginson, Eben Parsons, John Codman, Joseph Coolidge & Son, Theodore Lyman, Boott & Pratt,

Thomas Dickinson, \$3,000 each; Samuel Parkman and Samuel Eliot, \$4,000 each; Benjamin Joy, James & T. H. Perkins, Thomas Walley, John Parker, Stephen Higginson, jr., Abiel Smith, Thomas C. Amory, \$1,500 each; St. Andrews Lodge, \$1,000; Benjamin and Nathan Goddard and Josiah Quincy, \$500 each. Less than two months later the keel of the six-gun frigate *Boston* was laid. She was launched in May, 1799, and cost, when completed, \$137,900. The *Sentinel* declared she was "one of the handsomest modeled ships in the world." Her subsequent capture of *Le Berceau* and several French privateers are parts of our naval history.

The successful construction of these two ships at Boston had not a little influence in the establishment of the Navy Yard at Charlestown. The agitation of this subject in the closing years of the preceding century gave quite an impetus to business generally, and especially the building trades. It was a project which naturally stimulated the spirit of the industrial classes, and came at a time when manufacturing enterprises of all kinds were beset by many difficulties. The first vessel built at the new navy yard was the sloop-of-war *Frolic* (in 1813), whose broadsides made mournful music for many a British craft. In 1815 the three-decked *Independence* was launched. In 1826 the *Warren* was built, and soon after sailed to the far East, where she did memorable service against the Greek pirates in the Ægean sea. The next year the sloop-of-war *Falmouth* was launched. Among other war vessels built at Charlestown were the *Cyane*, *Porpois*., *Plymouth*, *Marion*, *Alligator*, *Boxer*, *Bainbridge*, *Eric*, *Princeton*, and the line of battle ship *Vermont*. At this yard were built in 1842 and 1854 respectively the famous war ships *Cumberland* and *Merrimac*. During the war of the Rebellion many famous vessels were built at the navy yard, including the ironclad *Monadnock*, *Nahant*, *Nausett*, *Nantucket*, *Canonicus*, *Casco*, *Chimo*, *Shawnee*, *Squanto* and *Suncook*. Of the thirty other frigates built here during the same period, and, as it were, born in Boston harbor, the most notable were the *Wachusett*, which captured the rebel gunboat *Florida*; the *Huron*, whose fatal wreck is well remembered; the *Tallahpoosa*, *Winooski*, *Ashuelot* and *Housatonic*. Thirty steamers and numerous sailing vessels were also refitted here for naval purposes. Most of them were prizes captured by the blockading squadrons off the Southern ports. Among them was the formidable rebel ram *Atlanta*.

About the year 1800 Thatcher Magoun located his well known ship-yard in Medford, a few miles from Boston, and in 1803 launched the *Mt. Etna*. He was followed by many other ship-builders, among them Turner, Lapham, Sprague, James, Fuller, Stetson, Waterman & Ewell, Curtis, Foster, Hayden & Cudworth, and others. Mr. Magoun alone built at his yard one hundred and eighty-five vessels, mostly of the largest size, among them the *Herald of the Morning*, which proved a remarkably fast ship.

Ship-building began in East Boston in 1834, and from that time until several years after the discovery of gold in California, which greatly stimulated this industry, it assumed considerable magnitude. In 1835 a merchant vessel of four hundred and sixty tons was launched from the yard of Brown, Bates & Delano. She was named the *Niagara*. In 1839 Samuel Hall, who had previously been engaged in ship-building in Marshfield and Duxbury, removed to East Boston and established the enterprise on a large scale. Within the following twenty years he built over eighty vessels, some of them, says Sumner, in his History of East Boston, were the "largest, fastest and best ships that ever 'skimmed the seas.'"

It was not until after 1840 that the building of the magnificent fleet of Boston freighting ships commenced, a fleet that for twenty years challenged the admiration of the commercial world. Up to 1840 a ship of five hundred tons was considered large, and trading ships were the rule, freighting ships the exception. The ships *St. Petersburg* and *Governor Davis*, built by Enoch Train, and the *Hope*, built by Weston, followed by the *Chaos*, *Nonanton* and *Atlas*, may be quoted as inaugurating the fleet of large Boston ships. After this it was a mere question of rivalry as to who should launch the largest ship. Among the boldest innovators was Donald McKay, who was a natural mechanic. He commenced business in Newburyport with Mr. Currier, and afterward with Mr. Picket, and with them built several vessels for New York firms. Enoch Train, of the extensive ship-owners, Enoch Train & Co., of Boston, had seen some of the vessels built by McKay, and gave him the contract to build the ship *Joshua Bates*, as the pioneer of the famous line of Train packets between Boston and Liverpool. Her success for speed and carrying was complete. At Mr. Train's suggestion, Mr. McKay removed to East Boston, and there built for the same line the ships *Washington Irving*, *Anglo Saxon*, *Star of Empire*, *Straffordshire*, *Ocean Monarch*, and others, all remarkable for their fine

sailing qualities. In the mean time he also built the *New World*, *Cornelius Grinnell*, *Jenny Lind*, the bark *Sultana*, and several smaller vessels. His first great clipper ship was the *Staghound*, of one thousand five hundred and fifty tons, which made the first passage from Boston to San Francisco *via* Valparaiso in one hundred and twelve days; then the *Flying Cloud*, of one thousand seven hundred tons, which made her first passage from New York to San Francisco in eighty-nine days and eighteen hours, and her next in eighty-nine days and twelve hours; then the *Flying Fish*, of one thousand six hundred tons; the *Bald Eagle*, of the same tonnage; the *Empress of the Seas*, of two thousand two hundred and fifty tons; the *Westward Ho*, of one thousand seven hundred tons; the *Straffordshire*, of one thousand nine hundred tons; and the *Sovereign of the Seas*, of two thousand four hundred tons.

The ship *Great Republic*, which Mr. McKay built in 1853, was four thousand, five hundred and fifty-five tons, and proved to be one of the swiftest vessels in the world. She made several successful trips to California, and afterwards was employed by the French government in the Crimean War. For English houses Mr. McKay built several fine vessels, among them the *Lightning*, the *James Baines*, the *Champion of the Seas*, the *Japan*, the *Commodore Perry*, and many others. In all he built over one hundred and twenty sail of all classes from the *Great Republic* of four thousand tons to oyster clippers of one hundred and ten tons. No one did more to give the highest character to the vessels built at Boston than Mr. McKay.

Other eminent shipbuilders kept up the credit of Boston for speed. Samuel Hall, who built the *Surprise*, *Game Cock*, *Florence*, and many more, ranked high as a successful shipbuilder. The quickest time ever made from San Francisco to Boston was made by the ship *Northern Light*, built by E. & H. O. Briggs at South Boston, making the passage in seventy-five days. Among other notable passages made by Boston built ships may be mentioned that of the ship *Midnight*, from Hong Kong to New York in eighty-two days; the *James Baines*, from Liverpool to Melbourne in sixty-two days; the *Charger*, from Calcutta to Boston in seventy-nine days; the *North American*, built by Paul Curtis, made the passage from New York to Melbourne, San Francisco and Liverpool, being two hundred and sixteen days at sea, and averaging eight miles an hour during the entire time; the same ship from San



Arthur W. Pope

Francisco to Cork was ninety-three days, making a record never exceeded by a sailing vessel.

Paul Curtis, James E. Simpson, Robert E. Jackson, Andrew Burnham, C. F. & H. D. Gardiner, G. & T. Boole, William Hall, Pratt & Osgood, Samuel Hall, jr., Joseph Burke, William Kelly, Burkett & Tyler, and Otis Tufts, were also at different periods engaged in ship building at East Boston between 1840 and 1860. The discovery of gold in California gave a wonderful impetus to the ship building interest of East Boston, and for several years thereafter a large force of workmen was engaged in the various branches of the industry. At East Boston was built the iron steamship *Le Voyageur de la Mer*, which was launched in February, 1857. She was the first instance in this country of the application of American iron to the construction of a first class vessel. This vessel was built for the Paeha of Egypt by Geo. A. Stone, of Boston. The model and details of the ship were furnished by Samuel H. Pook. From 1834 to 1858 over two hundred vessels were built at East Boston.

Among the eminent men who labored long and zealously for the development of shipping, Captain R. B. Forbes occupies a prominent place. For nearly half a century he was largely interested in ship building. Among many vessels he had built were the steamship of war *Meteor*, the *Paul Jones*, *Samoset*, *Farwell*, *Raduga*, *Hoaghly*, and *Laconia*; the *R. B. Forbes*, the first iron steamboat built here, the auxiliary steamship *Massachusetts*, and many others. Captain Forbes invented many improvements in the rig of vessels and for the saving of life. Captain Frederick Howes, who invented the present mode of double top-sail yards, is also worthy of honorable mention.

Jairus Pratt was another well-known ship builder of East Boston. He was born in Cohasset in 1793. As one of the firm of Pratt & Cushing he established a marine railway at the North End, and did an extensive business in repairing vessels. Later on he established himself in East Boston, where he carried on business several years. He died in 1869.

George W. Brown was one of the shipbuilders of Boston, who was extensively engaged in this industry. He was born in Scituate, Mass., 1815. When a lad he came to Boston and learned the trade of shipwright. He soon began on his own account, but for more than thirty years was a member of the firm of Brown & Lovell. In 1847 they bought a wharf in East Boston, where for many years they carried on a thriving busi-

ness. During the war they built steamers for the government. After retiring from business, soon after the war, he removed to Scituate, where he died January 21, 1888.

Salt was made at the "Salt Pans" in the early days of the settlement of Roxbury, near the town landing. Not far from this place Gen. Joseph Palmer erected salt works which were in successful operation when his sudden death, which occurred in 1788, brought the enterprise to a premature close. General Palmer was one of the most prominent characters in the Revolutionary annals of the State. He was a native of England, and came to America in 1716, and settled in that part of Braintree called Germantown, where he became a leading and influential citizen and acquired considerable property. He was conspicuous among the patriotic members of the Provincial Congresses of 1771 and 1775, and of the Committee of Safety, and as a brigadier-general of the State forces took part in the expedition to Rhode Island in 1778. He lost all his property in the war.

Roxbury was early famous for its manufactures. Here a fulling-mill was established by John Pierpont on Stony River, near the site of Day's cordage factory, in 1658. The manufacture of leather was for a long time the principal one in Roxbury. Early in the present century John Doggett founded the well known looking-glass and carpet works on Roxbury street. The Willards, celebrated clock and watch makers for over a century, established themselves here in 1773. In 1792 there were near the town landing-place, at Parker street, several establishments, one of them owned by Ralph Smith, for the packing of provisions and the manufacture of soap and candles. The large establishments of the brothers Aaron and Charles Davis, for packing provisions, and their distillery and tannery, were near the town wharf, now the junction of Albany and Northampton streets. In 1845 the value of Roxbury manufactures, in which 1,668 persons were employed, was \$2,247,684. The largest items embraced were four cordage manufactories, sixteen tanneries, three rolling, slitting, and nail mills, one carpet factory, three chemical works, three starch mills, one distillery, and one lead manufactory.

At the beginning of the present century the making of pot and pearl ashes, rum, ships and leather in all its branches, was carried on in Charlestown, as well as articles of silver, tin, brass and pewter. There were three rope walks recently built. Eight years later the printed statistics of Timothy Thompson, jr., showed that the annual value of the man-

factures was \$1,231,663, a little more than one-half of which consisted of bricks. Morocco was the next article in amount, and cordage third, while soap and candles to the value of \$89,000, and common weaving amounting in value to \$2,113 were named.

The first few years of the present century was an experimental era in the history of Boston's industrial progress. Among the new enterprises, not before mentioned, which properly belong to this period, was that of the chemical works of Dix & Brinley, at South Boston, which had, however, been established prior to 1800. Their establishment was on the shore near where the Boston Wharf was afterwards built. Another important enterprise completed in 1804, which ultimately became of great importance in the development of the cotton industry, was the Middlesex Canal, connecting Boston Harbor with Concord River. It was built by a company incorporated in 1789, and was the first great work of its kind finished in the United States. The distance was about twenty-seven miles, and the cost upwards of \$550,000. Colonel Revere's sons at this time were carrying on their copper works at Canton, but their business headquarters were at Boston. This was the only sheet copper works in the country at the time. In 1805 John Bannoek, of Boston, was granted a patent for a planing machine, and two years later Jesse Reed, who had made several inventions in the manufacture of nails, received an important patent for a machine for cutting and heading nails by one operation.¹ Patents were also granted to Elisha Callender, in 1808, for lightning-rods, the first in the United States, and, in 1810, to Phineas Dow for a leather splitting machine.

In 1808 petitions were laid before Congress by Paul and J. W. Revere, of Boston, praying for a duty of seventeen and a half per cent. on sheet copper, in which they professed to be able to supply the United States. This was, however, not granted, no duty being placed on copper till 1842. During the same year, 1808, the twine and line manufacturers of Boston, Charlestown, Plymouth, Salem and Beverly petitioned Congress for an increased duty upon these articles, with which they also claimed to supply the United States, stating that they manufactured annually from hemp 46,000 dozen of lines and 27,500 lbs. of twine. During 1809 the first cotton sail duck made in New England, if not in the world, was made in Boston. It was from the factory of a

¹ His machine came into extensive use. Previous to 1809 twenty-two of Reed's patents were put in operation at Malden, five miles from Boston, by Thomas Odiorne and associates, who purchased the patent. The machine was afterwards adapted to cutting tacks.

Mr. Bemis, established this year near Boston. It was made of Sea Island cotton. This grew to be an important industry, especially during the war of 1812, when an extra amount was required by privateers and merchant vessels. A capital of \$100,000 was employed at this time at Roxbury in the manufacture of soap and candles, where 370,000 lbs. of the latter and 380,000 lbs. of brown soap, 50,000 lbs. of Windsor and fancy soap were made. The manufacture of hats was largely carried on in Boston. Establishments for the manufacture of tin, japanned and plated ware also existed. The Boston Crown Glass Company, commenced in 1789 and incorporated in 1809, was now making crown glass equal to any imported. In 1810 a patent was granted John B. Lawin and J. B. Wait for a circular printing press. In the same year a printing press on a new plan and designed to secure, by means of a lever without a screw, greater power and speed, was completed, but not patented, by Benjamin Dearborn, of Boston, who had invented a wheel press about twenty-five years before. To Jacob Perkins, of Boston, was also granted a patent for a mode of preventing counterfeiting. The forging of bank bills, which this invention was designed to counteract, was very rife at this time, and was rendered easy by the rudeness of the art. The stereotype check plate, first patented by Perkins in 1799, was thought to render it nearly impossible, and the Legislature of Massachusetts required all bank notes to be impressed by his process. His mode of transferring engravings from one plate to another by means of steel roller dies, upon which he and Murray soon after jointly patented an improvement, was in 1808 applied to calico printing, and his method of engraving bank notes was subsequently introduced in England.

The first United States census which included inquiries relative to manufactures was taken in 1810. It indicates the lines in which the people of Boston were engaged, but it is far from a reliable index of the extent of its industrial interests at that time. The total product of manufactures of Boston at this period is given as \$2,478,391, probably not more than one-third of the total value. The principal items of the census were: fur hats, \$56,000; clocks and watches, \$21,000; gold and silver work, \$95,000; copper and brass goods, \$21,000; buttons, \$20,000; tallow candles, \$10,000; soap, \$30,600; boots, shoes and slippers, \$131,225; saddlery, \$90,100; spirits, \$761,400; beer, \$57,800; metals, mixed, \$151,481; cabinet work, \$115,000; sugar, refined, \$61,000; glass, \$36,000; cordage, \$515,000; musical instruments, \$17,200; spectacles,

\$10,000. It will be noticed that the distillery of spirits and cordage were the two leading industries. At this time the interruption of commerce with the Baltic had given a great impetus to the cultivation and manufacture of hemp. The morocco manufacturers of Charlestown, about this time, petitioned the government for further protection. At Charlestown 150,000 skins were annually manufactured, nearly one-fifth of the entire product of the United States.

From the close of the first decade of the present century to the end of the second war with Great Britain was a period of great industrial prosperity. The interference with commerce, caused by the restrictive measures growing out of the war, induced an advance in the price of all necessaries. There was great demand for all manufactured products, especially woolen and cotton. New industries of all kinds arose, and invention was stimulated in every direction, the most important being, however, in the direction of cotton and woolen machinery, which is fully treated of in the portion of this work devoted to the textile industry.

Wood engraving was introduced in Boston in 1811 by Nathaniel Dearborn, who three years later also introduced a new process of printing in colors. In 1811 Mr. Dearborn and John Fairbanks, respectively president and secretary of the Massachusetts Association for the Encouragement of Useful Inventions, presented a petition to Congress praying for such a revision of the patent laws as should secure inventors more fully against infractions of their patent rights. During this year patents were granted Cyrus Alger, of Boston, for a mode of casting large iron rollers for rolling iron; to Perkins Nichols for a rimming augur, and to Benjamin Bell upon sulphuric acid. In 1814 patents were granted to James Harrison, of Boston, on the time-piece of a clock, and to Moses L. Morse for a process for manufacturing pins of wire at one operation. This machine is said to have shown much mechanical genius, and was used to some extent, but being too delicate and intricate, and remaining unimproved in other hands, fell into disuse, or was superseded by other machines.

Cyrus Alger was a most active and prominent figure in the industrial progress of South Boston, where he began the foundry business in 1809 with General Winslow. He was of a high order of inventive genius, and was one of the best metallurgists of his day. He discovered a method of purifying cast iron, which gave it more than triple strength over ordinary castings, and which proved of immense value in the

manufacture of ordnance, in which he was for many years engaged. During the war of 1812 he supplied the government with large numbers of cannon balls. In 1817, not long after the Dorchester peninsula became a part of Boston, he established the South Boston Iron Works, a concern which has had a long and in many respects a remarkable history. At these works the mortar gun "Columbiad," at that time the largest gun of cast iron ever cast in America, was made under Mr. Alger's personal supervision. He also first introduced at these works the method of making cast-iron chilled rolls. In 1836 he manufactured the first malleable iron guns made in this country, and supplied the government with quite a number. The first gun ever rifled in America was done at his works in 1831. He manufactured the first perfect bronze cannon for the United States and for the State of Massachusetts. Mr. Alger died in 1856. His son, Francis Alger, who died soon after the close of the War of the Rebellion, succeeded him in the management of the South Boston Iron Works. He brought to the business a thorough training and taste for the work in which he was engaged. He achieved considerable eminence as a scientific man, and was the author of "Alger's Philip's Mineralogy." He inherited his father's inventive genius, and obtained patents for inventions relating to heavy ammunitions. He was frequently called to Washington during the late Civil War and consulted by the government engineers in matters relating to the ordnance department of the army. Under his supervision large orders for projectiles of every description were furnished to the government, particularly the rifled shot and shell and for the "Schenke projectile."

The South Boston Iron Works were kept at work day and night by the United States government during the late Civil War, and their guns and projectiles formed an important factor in defending the Union and bringing hostilities to a successful close. Their guns sank the *Merrimac* and the *Alabama*, and played a conspicuous part all along the coast from Norfolk to New Orleans. From March, 1863, to February, 1874, these works furnished the United States Ordnance Department with 580 guns (190 of them being fifteen inch guns and weighing twenty-five tons each), and also a large number to the navy department. In 1880 they built the first all steel gun made in this country, and were constantly in the "advance guard" in all experiments looking to the betterment of our defenses in case of war. They have furnished ammunition in large quantities to Chili, Peru, and the Argentine Repub-

lic. In 1863 they shipped to Chili three cargoes of shot and shell within six months.

In 1892 the South Boston Iron Works were removed to Middleborough, Kentucky. In the same year the Hunt-Spiller Manufacturing Company, with W. P. Hunt as president, was incorporated for the purpose of continuing at the old plant the manufacture of a pneumatic disappearing gun carriage, the invention of Henry A. Spiller. It is the first of its kind made in this country. Several of the European countries had made experiments with similar contrivances, but so far without success. Mr. Spiller's invention has been tested at the old fortification at Sandy Hook by distinguished experts, and has been found to work in a highly satisfactory manner. The first test was made December 4, 1891, when a powder charge of 170 pounds was used in the gun. Another trial, equally satisfactory as the first, was made in March following, when nearly the maximum charge of 250 pounds was reached. The carriage is made of steel, and its operation is automatic throughout, the great gun appearing to come to firing position with as little trouble as a soldier brings his rifle to his shoulder. After firing the recoil is checked so easily that the gun settles down behind the ramparts for reloading without the slightest shock. The carriage weighs complete fifty-four tons. Compressed air is supplied to the cylinder from a receiver, with the gun lowered at a pressure of 1,100 pounds to the square inch. In raising the gun the pressure is reduced to 325 pounds to the square inch, the air being again compressed when the gun falls back after recoil. This acts as a cushion to take off the force of the recoil. A valve, operated by a hand wheel, admits the air to the under part of the piston when the gun is to be raised, and side buffers assist in supporting the gun when it comes down. A small reversible air engine, used for training, raising and depressing the gun, is placed in a protected position beneath it. The gun is loaded by compressed air, and when it is being loaded it is concealed behind the parapet. As soon as the order is given to "cover," the big gun, weighing more than thirty tons, is silently and instantly raised above the wall, and ready to fire. The recoil which immediately follows the discharge is so extremely easy that when it settles upon its buffers there is hardly a shock. It is estimated that the gun can be loaded, hoisted, fired, and lowered in twelve minutes.

Seth Fuller was the first person in Boston to make an entirely distinct business of hanging mechanical bells and speaking tubes, founding the

business in 1809. His son, Seth W. Fuller, who succeeded to the business in 1835, while continuing it along the same lines, was the pioneer of the electrical business in Boston, if not in the United States, having begun to instal electric bells about 1867. At that time he was obliged to import annunciators, wire, batteries, and even the ordinary wood push button from Paris, but at the present time not an article used by those who succeeded Mr. Fuller is imported. Mr. Fuller continued at the head of the business until his death a few years ago, since which his son, Frank Fuller, has conducted it, the latter representing the third generation of the family in the same line of employment.

In 1811 the first successful attempt in this portion of the country to manufacture flint glass was made by Thomas Cains. At this time the proprietors of the Essex Street Glass Works, in South Boston, enlarged their works and sent to England for workmen. Among those who came was Mr. Cains, who possessed the art of mixing the material to make flint glass. He prevailed upon the proprietors to put up a small flint glass furnace. The manufacture of stained glass was introduced in Boston in 1830, but the workmanship was poor and the designs crude. In 1840 James M. Cook commenced the business, and by employing the best articles in the country, produced work of considerable excellence.

After the protection afforded by the war of 1812 was withdrawn, large importations of foreign goods were made to the United States. The effect upon the home industries was in every way disastrous. Many branches were yet new and imperfectly established, and few of the more recent enterprises had yet reimbursed the heavy expenses incidental to first undertakings on a large scale. But few branches of home industries were sufficiently strong to successfully compete with those abroad. During the first three-quarters of the year 1815 foreign goods to the amount of \$83,000,000 were imported, and in 1816 the value of foreign importations reached the sum of \$155,250,000. The evident desire of the English manufacturers to break down the formidable rivalry of growing but immature manufactures by the means of heavy consignments of goods, regardless of financial consequences to themselves, was made plain by the speech of Mr. Brougham in Parliament, when he declared, in reference to the loss sustained by English manufacturers in these transactions, that it "was even worth while to incur a loss upon the first importations, in order by the glut to stifle in the cradle those rising manufacturers in the United States, which the war had forced into existence, contrary to the natural course of

things." The results of this policy were soon felt; many manufacturers were compelled to close their factories, others who ventured to continue became in the end hopelessly bankrupt; large numbers of workmen were thrown out of employment and compelled to seek new avenues of labor to support their families. The only remedy for the evils which affected the country was through protective legislation. Petitions poured in upon Congress from manufacturers all over the country, praying for increased tariff, but before the remedy could be applied the most widespread distress prevailed; correction of the evils was slow. Indeed the conditions were not favorable to a proper prosecution of American industries, except in a few avenues, until the protective tariff of 1824 went into operation, and the more important act of 1828.

Still the period covering several years after the war of 1812 was not entirely barren of progress in the industrial arts in Boston. In the manufacture of cotton was seen the most remarkable and important results, which will be shown in succeeding pages. The mechanical ingenuity of the people was shown in many other directions. In 1816 John Adamson was granted a patent for a floating dry dock. In 1817 John L. Sullivan was granted a patent for propelling boats by condensed air, and in 1818 Aaron M. Peaseley received a patent for an organ attachment. In 1819 Robert Graves was rewarded a patent for cordage. This patent cordage, for which two others were granted in the following years, was extensively manufactured in Boston by Winslow, Lewis & Co., who used Graves's machinery, worked by horses, and in 1821 employed one hundred men and boys.

In 1820 the manufacture of chain cables was begun at Boston by Cotton & Hill, who for thirty years were the only successful manufacturers of cables in the United States. They were, however, ultimately compelled to abandon the business, on account of the low price of the imported English chains, but they resumed it in 1856. The manufacture of lead paint had also been commenced in Boston, while in Lechmere Point, in Cambridge, which in 1822 contained a population of more than one thousand persons, was a glass factory which employed one hundred and fifty workmen; 22,400 pounds of glass vessels were made per week, many of which were beautifully cut and sent to Boston for sale. At the same place one hundred and fifty men were employed in making bricks, the greater part of which were used in Boston.

Boston can justly lay claim to being the birthplace of American piano manufacturing. John Osborn, the first to engage in the business here, was between 1815 and 1835 one of the leading piano manufacturers of the United States. It was with Mr. Osborn that Jonas Chickering, the founder of the firm of Chickering & Sons, first secured employment in an industry he was subsequently to virtually revolutionize in the New World. The career and achievements of Mr. Chickering are so noteworthy and so much a part of the industrial history of Boston, that no apology is necessary for the following extended notice of his personal history and the business which he inaugurated.

Jonas Chickering was born in New Ipswich, N. H., April 5, 1799. At the age of seventeen he left home to learn the art of cabinet making. It was while engaged at his trade that he first saw a piano. It was owned by a Mr. Barrett, who had temporarily quitted Boston during the war of 1812 for fear of a bombardment by the British. The instrument had been imported from England. "It was shown to Mr. Chickering," says one historian, "by Mrs. Barrett, who entered into a pleasant conversation with him, drawn toward him by his modest, genial character, associated with a calm, self-trustful manner of speaking. After a prolonged and minute examination of the instrument he remarked in a very quiet way, 'I think I can make one,' of course very much to the astonishment of the lady, who was utterly incredulous of any such latent powers, or of any such remote possibility of result. 'Why, young man,' she said, 'this was brought way across the ocean from Europe.' 'Still,' he quietly replied, 'I think I could make one.' She afterward heard he had made one, and since then the whole world on both sides of that great ocean has heard that he made *several*, compared with which that little, modest instrument, would hide itself and blush, if it were a sensate thing, unless the knowledge of the service it had performed in awakening the latent powers of that young man made it swell with pride."

In 1818 young Chickering came to Boston, then the Mecca of all young New Englanders, where he obtained employment at his trade. One year later, together with Timothy Gilbert, he secured employment in the workshop of John Osborn, from whom he first acquired a practical knowledge of piano-making. He continued with Mr. Osborn for three years, giving attention to every detail of the manufacture and acquiring a thorough knowledge of the business. Mr. Osborn, soon after Mr. Chickering entered his employ, formed a copartnership with

James Stewart, a Scotchman, who had been induced to give up his business in New York, where he had the reputation of making the best pianos in the country. In a year or two the men quarreled and separated. Stewart, who had perceived that Mr. Chickering was a quick and intelligent workman, succeeded in persuading him to join him in the business of making pianos in his workshop on Tremont street, where the Historical Society's building is now located. Their pianos quickly met with favor, and were considered superior to any made in Boston. They remained together for two years, when Mr. Stewart retired, and Mr. Chickering continued the business alone with great success.

In February, 1830, Mr. Chickering became associated with Captain John Mackay, a gentleman of considerable means, who had previously carried on the business of piano-making with Alpheus Babcock, who had invented several valuable patents connected with the pianoforte. The firm of Chickering & Mackay, which lasted until 1841, conducted their operations at the factory on Washington street. During this period Mr. Chickering became known as the most experienced and perfect piano manufacturer in the United States. Mr. Mackay was the business man of the house and Mr. Chickering devoted himself entirely to the technical department. This harmonious employment of their energies was broken in 1841, when Mr. Mackay sailed for South America for the purpose of procuring large quantities of wood to be used in the firm's business and was never afterwards heard of. Mr. Chickering then became the sole proprietor of the business, and continued it alone with marked success until his sons, Thomas E., C. Frank, and George H. were old enough to lend him their assistance; all three, after having served a systematic apprenticeship at the business, being admitted to partnership with their father in 1852, under the firm name of Chickering & Sons.

To Jonas Chickering can justly be ascribed the honor of founding the piano industry in the United States on the basis of equality with foreign makers. Others had preceded him in making pianos in America, but they were of an inferior grade of workmanship. Mr. Chickering began experimenting in 1822, and offered his first piano for sale in 1823. Six years later he had made in a single year 717 pianos. His fame rests largely upon his inventions of the square metal frame, with improved damper attachment, patented in 1840, having in 1837, however, made the first successful application of an entire iron frame to a square piano; the plate for grands, made in one solid cast-

ing, patented in 1843; the upright piano, with full iron frame and over-strung bass, made in 1850, and the circular scale, produced in 1853. "This first iron frame, as all the musical world is aware, with the introduction of the circular scale," says one writer, "marked the commencement of the most important epoch in the history of piano-making. All the marvelous developments which have taken place in the construction of pianos during the past forty or fifty years were made possible by these inventions."

At the very threshold of his triumphs and of his well earned prosperity, Mr. Chickering passed from the scenes of his labors on December 8, 1853, leaving to his sons a name famous in the annals of musical mechanism, and a business which his genius and skill had increased from fifteen instruments, made by him the first year, to thirteen hundred per year. He was a genial, courteous, unassuming, kindly man. Notwithstanding the exacting nature and character of his labors, he found time to interest himself in the progress of art in Boston and in other useful work. In 1834 he was elected vice-president of the old Handel and Haydn Society, and afterwards was chosen president. For a number of years he was also president of the Massachusetts Charitable Association. An excellent authority has said of him: "His superior intelligence, his inventive genius, and his great moral force of character and purpose not only made him first and foremost as a manufacturer, but also helped materially to give our city (Boston) its pre-eminence as a musical center. When we think of our wonderful musicians who have brought to the ears so vividly the marvelous works of the piano-forte composers, let us not forget the maker of the instrument which has made this possible."

Prior to Mr. Chickering's death, the old factory of Chickering & Sons, on Washington street, was burned December 1, 1852, involving a loss of \$250,000. Undisheartened by this disaster, he laid plans for the erection of a new factory on Tremont street, but his death occurring before they were carried out, the work was completed by his sons.

Mr. Chickering's sons possessed in a very eminent degree the qualities which shone so brilliantly in the character and career of their honored father. They have not only maintained the high character of the business as conducted by their father, but in the wonderful progress made in the manufacture of pianos since his death, have kept the name of Chickering & Sons in the front rank of the piano manufacture of the world. Col. Thomas E. Chickering, the eldest son of Jonas Chickering,

ing, was born in Boston, October 22, 1824, and acquired under his father's direction a most thorough knowledge of the process of manufacturing every part of the piano. With his two younger brothers he was admitted to partnership with his father in 1852, and quickly gained recognition on account of the ability he displayed in conducting the commercial department of the business. He entered the service of his country in 1861 as colonel of the Forty-first Massachusetts, a regiment remarkable for the success and brilliancy of its operations. In recognition of his efficient military service he was, in 1865, brevetted brigadier-general. To the regret of everybody who knew him he died suddenly in February, 1871. He was devoted to music, literature and art, and held a deservedly high place in the business community.

C. Frank Chickering, the second son, was born in Boston on January 20, 1827. At the age of seventeen, his health having temporarily given way, he took a voyage to India, where he sold several Chickering pianos, which excited great interest among the European residents. In 1851 he superintended the exhibit of the Chickering pianos at the great exhibition in London, where they attracted great attention and were universally commended by musical critics. After the death of his father he assumed the direction of the technical and mechanical department of the business, for which he had shown the highest order of natural aptitude. In scale drawing he especially excelled, no scales having been used by the Chickering & Sons for the last thirty-six years that he had not drawn, with the exception of a few made by Col. Thomas E. Chickering. Numerous and valuable inventions pertaining to the piano were patented by him. In 1854 he produced a high development of the "circular scale" in two scales. About the same time he accomplished over-stringing in an upright piano. He was animated by an intense love for musical art, and this furnished the incentive for all of his exertions. The results of his endeavors are seen in the numerous letter-patents granted to Chickering & Sons during the last quarter of a century. These include an improvement in square pianos; means of applying the circular scale to upright pianos, patented in 1871; the famous Chickering upright action, patented in 1872; an improvement for insuring the grand piano frame against string tension, patented in 1876; various improvements in piano acoustics and in relation to metallic string frames, patented in 1877; a skeleton metal frame, patented October, 1881, and the improvement in stringing and plate bracing conditions, patented in 1886. The above are but a few of the evidences

which might be given of Mr. Chickering's genius. The tone and musical character of the piano owes, indeed, much to the patient labors of this enthusiastic lover of music and art, whose death on the 23d of March, 1891, was a severe loss to the musical world. "He maintained," says one writer, "almost to the last, his energy and clearness of intellect, and might be found in Chickering Hall, New York, compasses in hand, bending over a drawing board, brain and fingers busy in the effort to approach a little nearer to the great ideal of his life—the evolution of a scale that should be as nearly perfect as human intellect could make it. Near by was an old-fashioned piano-maker's work-bench, the bench at which his eminent father had stood more than half a century before, and on which the latter constructed the models of some of his most important improvements in piano manufacture."

George H. Chickering, the only surviving son of Jonas Chickering, was born in Boston in 1830. Like his brothers, he was thoroughly trained in all departments of practical piano-making. He and his father for many years fashioned every piano hammer and voiced every grand piano themselves. In more recent years the hammers in grand pianos, used by Gottschalk, Thalberg, Herz, Von Bulow, Joseffy, Dr. Pachman, and many other distinguished artists, were made by the hands of George H. Chickering. During a period of nearly half a century he has conducted the great Chickering factory in Boston. He has a positive genius for organization, and every detail of this large establishment receives his close personal attention. Like his deceased brothers, he has always evinced a keen interest in all matters pertaining to art. For thirty-four years he has been connected with the Handel and Haydn Society of Boston, as president, vice-president, librarian, and director, having held the vice-presidency for twenty-nine years. He was also for many years an active member of the Apollo Club of Boston, and is still vice-president of that organization. He possesses, like his honored father and brothers, in a marked degree, a genius for piano mechanics, united to great executive ability, such as is required to manage a vast commercial establishment. He is in the forefront of every movement to advance the interest of true art, and is a worthy representative of a family which has done so much to extend around the world the name and fame of American skill and genius.

The superiority of the instruments made by Chickering & Sons has been attested on both sides of the Atlantic. Of their earlier triumphs the crowning one was achieved in 1867 at the International Exhibition



Edw. H. Jenness

at Paris, where they were awarded a gold medal, and in addition were the recipients from the Emperor of the French Cross of the Legion of Honor, the only American piano manufacturers who have received this distinguished decoration. Since that date medals and diplomas have been showered upon them in rigid tests of comparative merit in competition with the best instruments made in Europe and America, such as have established beyond question their reputation as masters of pianoforte mechanics. Their achievements in this direction, however, are not the sole reason for their renown. Their liberal and generous patronage of art and of musicians is well known. By their enterprise Americans have been favored with exhibitions of the splendid powers of many of the most distinguished artists of the world. In the laudable exercise of their ambition in this direction, they have been faithful devotees of art, thus adding to the pleasure and edification of the music loving public.

Timothy Gilbert, one of the earliest piano makers of Boston, was born in the town of Enfield, Mass., in 1797. His father was a farmer, and the boy worked on a farm until he was twenty-one. He then came to Boston, and served an apprenticeship first to a cabinet-maker, and then to a pianoforte-maker. By nature he was of a mechanical disposition, and readily acquired the details of these trades. He entered into partnership with E. R. Currier, and commenced the manufacture of pianos, in which business he achieved great success financially and mechanically. His desire to produce an instrument capable of uttering a "concord of sweet sounds" led him to invent the "Æolian attachment," which has become known the world over. It was, however, in the field of morals that he gave the best of his time and ability. He was an ardent Christian and a zealous abolitionist. He died in 1865.

Lemuel Gilbert was also one of the earlier piano manufacturers of Boston. He was born in Enfield, Mass., in 1804. In 1832, as one of the firm of T. Gilbert & Co., he commenced the manufacture of pianofortes, the factory being situated on the east side of Washington street, near Beach street. He was afterwards of the firm of Lord, Gilbert & Cumston, corner of Washington street and Hayward Place. In 1839 he commenced on his own account, occupying the old Brewer mansion, on Washington street, between Kneeland and Beach streets. His business increased, and he enlarged his factory until he had absorbed seven adjoining buildings. He was the originator of many improvements in the piano, including an action which greatly increased the

delicacy of touch. Other changes were introduced, among which was that of using three strings in the middle and upper notes, greatly increasing the volume of tone. He constructed the aeolichord piano, having an extra set of strings placed above the usual set, and tuned an octave lower, by which the harmony was increased and prolonged. He brought from Europe the "boudoir," or upright, piano. Our climate, however, necessitated many changes in construction, all of which he successfully accomplished, and established what has since become the popular form of the instrument. A large number of gold and silver medals were awarded him during his career by many of the best known associations in the country. He died suddenly in Memphis, Tenn., February 27, 1864. In 1853 he was succeeded in business by Andrew M. McPhail, who was the founder of the present A. M. McPhail Piano Company, which was incorporated in 1891. Of this corporation Mr. McPhail is president; William Barry Owen, treasurer; John C. Warren, secretary, and B. F. Dunbar and G. Frank Blake are among the directors. The factory is located at 520 Harrison avenue. About 15,000 McPhail pianos are now in use throughout the United States. Mr. McPhail is a native of Massachusetts, but is not now actively engaged in the company's business.

In 1833 Russell Hallett and William Cumston established the piano manufactory of Hallett & Cumston, both of whom are dead. James S. Cumston, son of William Cumston, is now proprietor of the business. The factory is located on Leland Place. William Cumston was born in Saco, Me., in 1813, and was engaged in piano making for nearly forty years. In business he achieved a wide reputation, and amassed a fortune. He was a man of strong patriotic sentiments, and during the war of the Rebellion was very liberal with his large means in promoting the comfort of our soldiers. He was a director of the Metropolitan Railroad, the Five Cent Savings Bank, and served in the Board of Aldermen, and was conspicuous in the highest bodies of Masonry. He died at the age of fifty-eight years.

The piano manufactory of Hallett & Davis Company was established in 1839, and largely owes its inception to the personal zeal of George H. Davis,¹ who continued in the active conduct of the business until his death in 1879, when the present corporation was formed. The present officers of the company are: George Cook, president; E. N.

¹Mr. Davis was born in New Hampshire in 1811. He took an active part in the "Peace Jubilee," and was largely interested in matters of public concern.

Kimball and C. F. Howes, vice-presidents; Wilbur D. Cook, treasurer, and E. W. Davis, superintendent. The original factory, on the site now occupied by the Conservatory of Music, was burned in 1864, and the present establishment, on Harrison avenue, was erected thereafter, where employment is now furnished to 250 skilled workmen. Their pianos are of high grade and have a well recognized position among the best.

The Woodward & Brown Piano Company was founded in 1843, and the present corporation was organized in 1894. George T. McLaughlin is treasurer and manager. The factory is located on Warren street.

William P. Emerson¹ began the manufacture of pianos in Boston in 1819. He carried on the business successfully until his death in 1871. For a time thereafter it was conducted by his executor, and later by William Moore. In December, 1878, the factory was destroyed by fire. Business, however, was resumed within a few months in new premises. In May, 1879, the business was purchased by its present proprietors, P. H. Powers, Orrin A. Kimball and Joseph Grainer, who constitute the members of the Emerson Piano Company. During the year 1891 the company erected a new factory, corner of Harrison avenue and Waltham street, which covers a space of 23,000 square feet, is six and seven stories high, and has a capacity of 125 to 150 pianos per week. Under the management of the present proprietors the business has been carried on with a high degree of success.

Elias Hook acquired his first knowledge of organ building of William M. Goodrich, of Boston, and in 1827 with his brother, George G. Hook, started in business at Salem. They finally removed their establishment to Boston, and for some time were located on Friend street, and afterwards on the corner of Leverett and Brighton streets. In the early fifties they built the factory on Tremont street. The Hook brothers admitted F. H. Hastings as a partner several years ago, and the name of the house was then changed from E. & G. G. Hook to Hook & Hastings. George G. Hook died in 1880, and Elias Hook in 1881, since which Mr. Hastings has been the sole proprietor. This house has mainly been engaged in the manufacture of organs for churches and large public buildings. Some of the largest instruments made in this country have been produced by this concern, notable examples of the high qualities and perfections of its productions are furnished by the

¹ William P. Emerson was born in Boston in 1820. He died at the age of fifty-one years.

great organs in Tremont Temple, Boston Music Hall, and St. Francis Xavier Church, New York.

James Whiting Vose, who began the manufacture of pianos in Boston, in 1851, was born October 18, 1818, at Milton, a suburb of Boston, where lived Benjamin Crehore, generally believed to be the maker, about 1798 or 1800, of the first piano constructed in America. After receiving a liberal education he was apprenticed, in 1831, to a cabinet-maker. Five years later he received a position in a Boston piano factory, and in 1846 started on his own account to manufacture piano and organ keys. In 1851 he added to his key business the manufacture of pianos, continuing the double concern until 1855, when he sold out the key business and has since solely devoted his energy to the manufacture of pianos. In 1855 two pianos per week was the average output of the Vose factory. In 1890 the business had increased to an average of more than sixty per week, while in some weeks of that year one hundred pianos per week were made. During all the years from 1851 Mr. Vose has been the active presiding spirit of the house. His three sons, Irving B., Willard A. and Julian W. Vose, are associated with him in business, under the firm name of Vose & Sons. The three sons named were born in Boston, and as soon as each had received a liberal education he entered his father's factory and became thorough master of every detail of piano manufacturing. The factory of Vose & Sons is situated on the corner of Waltham and Washington streets, and has a capacity for seventy-five instruments per week.

In 1852 S. D. and H. W. Smith began the manufacture of organs in Boston. They were among the first to make reed organs in New England. In 1870 an act of incorporation was secured, and the business has since been carried on under the name of the Smith-American Organ Company. The company has two factories, one on Tremont street, opposite Waltham street, and another at the corner of Albany and Brookline streets. More than one hundred and twenty-five thousand of the instruments of this company are now in use, and they have received the highest endorsement of competent musical critics. The officers of the company are: S. D. Smith, president; H. W. Smith, vice-president; and E. W. Smith, secretary and treasurer.

In 1854 Henry Mason and Emmons Hamlin formed a partnership for the manufacture of melodeons in Boston. They began with a small imperfect instrument which they have continued to improve till, in its present perfected state, it commands the endorsement of the first artists

of the world. In 1861 a new form was given to the melodeon by the introduction of a cabinet organ. A stock company was formed in 1868, and in 1882 the present company was organized under the title of the Mason & Hamlin Organ and Piano Company, with branch houses in New York and Chicago. The manufacture was commenced in Cambridge street, Boston, in a small way, and as the business increased a new and substantial factory was erected; but it was not long before the manufacturing facilities were found to be inadequate, and land was bought and the present extensive factory on the corner of Broadway and Brewery street, in Cambridgeport, erected. As organ builders Mason & Hamlin have become famous all over the world, having received the highest honors at important international exhibitions where their instruments were in competition during the last ten years. In 1882 the company added to their extensive organ business the manufacture of pianos on a new and improved method, and in this direction the success attained has been in every way highly gratifying. The officers of the company are: Edward P. Mason, president and treasurer; Edward P. Mason, James Hollyer, and John P. Richardson, directors; Henry Basford, secretary.

In 1863 Henry F. Miller, sr., established a piano manufactory in Boston. He started with comparatively little capital, but possessed of rare mechanical and inventive qualities, his instrument rapidly found favor with the musical critics and brought him deserved business success. In 1884 Mr. Miller died, and the business was organized into a Massachusetts corporation, under the name of the Henry F. Miller & Sons Piano Company. Mr. Miller's five sons, Henry F., Walter H., James C., Edwin C. and William T. Miller, trained to the piano-forte business from their boyhood, are all connected with the company, and together with Joseph H. Gibson, who has been associated with the enterprise from its inception, are successfully conducting the business. This factory is located in Wakefield, a suburb of Boston. On the visit to the recent Paris Exposition of the American mechanics of all branches of industry, the workman to represent the entire piano manufacturing of America was chosen from this establishment.

In 1873 A. F. and J. A. Norris established a piano factory in Boston. Charles Fletcher subsequently joined A. F. Norris in the business, and they now constitute the firm of Norris & Fletcher. Their factory and warehouses are at 225½ Washington street.

In 1877 C. C. Briggs began the manufacture of pianos in Boston. Four years later his son, C. C. Briggs, jr., was admitted as partner under the firm name of C. C. Briggs & Co. Their factory is on Appleton street.

The Ivers & Pond Piano Company was incorporated in 1880 by W. H. Ivers, H. Pond, G. A. Gibson and J. N. Thompson. Several years prior to the incorporation, however, W. H. Ivers had been manufacturing pianos, and the present company was the outgrowth of his enterprise. The factory is on the corner of Maine and Albany streets, Cambridge.

The first piano made by the New England Piano Company was completed on June 6, 1881. Its manufacturer, Thomas F. Scanlan, had started in a very modest way with facilities for making two or three pianos a week. About a year and a half later he secured his present location on George street with greatly increased manufacturing capacity. From this time forward the growth of Mr. Scanlan's business has been very rapid. Additions to his manufacturing plant have been made from time to time until the present structure is numbered among the largest and best equipped establishments of its kind in America. The main edifice fronts on three streets, and is seven stories in height, the total floor space utilized being more than six acres. Mr. Scanlan is sole proprietor of this concern, which his activity, push and enterprise have brought to such large proportions within a comparatively brief period.

Samuel G. Chickering has been engaged in the manufacture of pianos in Boston since 1884. The business is now conducted under the firm name of S. G. Chickering & Co., Charles P. Cummings being a member of the firm. Their factory is located on Hampden street.

In March, 1826, the New England Society for the Promotion of Manufactures and Mechanic Arts was organized by citizens of Boston who were desirous of promoting American industry and talent. It was empowered to hold public exhibitions of the product of American industry and to award premiums for new and useful inventions, and for the best specimens of the skill and ingenuity of manufacturers and mechanics. Public sale of manufactured products were held twice a year, the Common Council granting the use of the hall over the Faneuil Hall Market, free of expense. The first public sale was held in September, 1826, when the amount received was nearly two million dollars. This society exerted a most favorable influence upon the progress of

the useful arts in this vicinity. The year following its organization the Boston Mechanics' Institute was incorporated. A course of lectures was commenced three weeks after its organization; among its early lecturers were George B. Emerson, Professors Farrar and Webster, Daniel Treadwell, Edward Everett, Dr. John Ware, and Dr. Bigelow.

The new industries started in Boston during the years between 1825 and 1835 were in connection with watch crystals, saws, sugar, rubber and silk. According to Bishop, there was a watch crystal factory in Boston as early as 1829.

At the tariff convention held in New York city in 1831, the committee on glass reported that there were twenty-one furnaces in the United States, six of which were in Boston or its vicinity. The total product of flint glass was \$1,300,000, of which \$400,000 was made in two of the largest at Boston, much of the latter consisting of cut glass. But one factory of black glass bottles was known to exist, and that was near Boston, with a capital of \$50,000, and employing sixty-five men and boys. Its product was six thousand gross annually. The New England Crown Glass Company, near Boston, with a capital of \$450,000, made crown window glass to the value of \$100,000, and was the only factory of its kind, except one in New York. There were also at this time (1831) three sugar refineries in Boston, while the Messrs. Montague had an establishment on Washington street, which had been for three or four years in operation, where were employed two hundred looms in weaving Tuscan braid. Silk formed the warp, and the filling was of imported Tuscan straw, with occasional admixtures of Manilla grass, or fine strips of whalebone. From eight hundred to twelve hundred bonnets were made weekly at this factory. Another industry at South Boston at this time, of considerable magnitude, was the American Flint Glass Works of P. F. Shane. Mr. Shane had commenced work in the glass house of the South Boston Glass Company, and gradually enlarging and extending his operations, he had attained a high position, and won an enviable reputation for the excellence of his productions, when his entire works were destroyed by fire in 1852. He rebuilt, but soon after beginning operations another fire destroyed his plant. He, however, again rebuilt, and in 1858 employed two hundred men, and was doing a prosperous business. The Phoenix Glass Works, started in 1811, as previously mentioned, were also at this time in operation, being conducted by Thomas Cains and his son. The Mount Washington Glass Works, for many years under the super-

intendence of Luther Russell, were now being conducted by Jarves & Cormerais.

The evolution of the printing press owes much to the inventive genius of Boston men. In 1826 Daniel Treadwell, of Boston, was granted a patent for a power printing press, which about this time was in operation in the office of the *National Intelligencer*. It was said to be at this time the only press on the cylindrical principle adapted to book printing, which it executed in a most satisfactory manner. In 1830 the *Daily Advertiser* and several other papers in Boston were printed on Treadwell power presses, which were moved by steam and capable of making six hundred impressions per hour. In 1830 and 1836 Isaac Adams, of Boston, patented the press which has always been called by his name, and which has not yet been superseded in value for book work and fine printing. Important improvements were also made at a later date in the printing press by Stephen P. Ruggles, Seth and Josiah Adams, of Boston.

Seth Adams was born in Rochester, N. H., in 1806, and learned the machinist trade with a brother. He was a member of a firm engaged in the manufacture of printing presses at South Boston, his brother Isaac and George H. Everson being his partners. They were the inventors of the famous Adams and Hoe presses, and eventually sold out the business to Messrs. R. Hoe & Co., of New York city. He then turned his attention to the business of refining sugar, in which he accomplished phenomenal success, building the extensive works now known as the Standard Sugar Refinery at South Boston. He died in 1873, and by his will provided for the establishment of the now celebrated Adams Nervine Asylum at Jamaica Plain. He also made liberal bequests to other charitable organizations.

The Boston Type Foundry was founded in 1817, and is the oldest in its line in New England, and one of the oldest in the United States. The business was originated in Charlestown, where it was continued until 1822, when it was removed to Harvard Place, opposite the Old South Church. In the following year it was transferred to Salem street, where a disastrous fire nearly destroyed the whole plant in 1825. Subsequent to this event the firm increased its facilities by the introduction of the first practical casting machine, invented by Edwin Starr, and in 1813 it developed and perfected the more successful one invented by David Bruce. In 1829 the foundry was removed to Spring Lane, to Water street in 1865, and to Kilby street in 1870, whence the

firm was expelled by the great fire of 1872. In 1874 the foundry was established at its present quarters on Milk street. The reputation of this foundry for perfection in type is widely established. Four to five thousand styles of type are made. David Watson is president of the company.

Michael Dalton was one of the pioneer type founders of Boston, the establishment which he founded being still in successful operation. He was born in Boston in 1800. At the age of fourteen he was apprenticed to Aaron Breed, the mathematical instrument maker. Through failure of Mr. Breed he did not complete his trade, but engaged in the type founding business, which he pursued for nearly sixty consecutive years. In 1845 he formed a partnership with Sewall Phelps under the firm name of Phelps & Dalton, and the business is still carried on by their successors under the same firm name. Thorough practical knowledge of the business in every detail and unremitting toil assured success, and Mr. Dalton lived to see the foundry grow from small beginnings to be one of the leading concerns of the country. He died in 1879, and at the time of his death was one of the oldest type founders in the country.

One of the oldest and most interesting industrial enterprises carried on in Boston at the present time is the cocoa and chocolate manufacturing establishment of Walter Baker & Co., which is not only the oldest but the largest of its kind on this continent. The business was first started in a small mill on the Neponset River as early as 1765. It was connected with a saw-mill, operated by water-power, and was regarded as a somewhat doubtful experiment. The initiation of the enterprise was due to John Hannan, an Irish emigrant, who had learned the art of chocolate-making in England. The new industry prospered in a small way, and on the death of Mr. Hannan, in 1780, the plant came into the possession of Dr. James Baker, who was succeeded later by Walter Baker, his grandson, in whose name the business has since been conducted. Hon. Henry L. Pierce has been at the head of this establishment since 1854, and under his management it has been highly prosperous. The establishment now comprises five large mills thoroughly equipped with the latest and best machinery for the manufacture of cocoa and chocolate. Over twenty medals have been awarded to their products at the great International and other exhibitions, including the Centennial Exhibition at Philadelphia in 1876, the Paris Expositions in 1867 and 1878, the Vienna Exposition in 1873, and the most important

expositions held at various points in this country during the last forty years.

Boston has been the field where the most important development of color printing has been accomplished. Here, in 1827, William S. Pendleton founded the first lithographic establishment in the United States, which was immediately successful. In 1856 Louis Prang, whose name has become so well known in connection with art publications, formed a partnership with a lithographic printer, and in July of that year the new firm opened an office in a small room on Doane street, Boston, under the title of Prang & Meyer. Their specialty was to be color work, and their first production executed in four colors for a magazine. This color print is of interest to lithographers as the result of the first crayon transfer ever made.

The business at 17 Doane street grew slowly but steadily. A removal of headquarters to the corner of Doane and Kilby streets in time ensued; from thence to Merchants' Row, and again to 159 Washington street, every removal representing a step forward and upward in the volume of transactions. While occupying the Merchants' Row quarters, Mr. Prang bought out his partner, and founded the new concern of L. Prang & Co., long since become familiarly known in every civilized country. About this time the Civil War began, and the business so laboriously builded up came near a disastrous ending in consequence of that event. Nothing but the prompt and enterprising publication of war maps, portraits of generals, etc., of which the sales were immense, prevented such result. The development of the business kept pace with the growth of the country, and the publication of beautiful album cards—wild flowers, autumn leaves, birds and butterflies, bits of sea-view and landscape—took place; these were soon universally admired and sought for.

In all the thought and experiment which he had thus far lavished on his art, Mr. Prang had carried in his mind a definite ideal, towards the realization of which he had worked from the first. This was the production of chromolithographs, equal in execution to anything of the kind that the highest development of the art in Europe had ever brought forth. In 1864 he returned to Europe and looked over the whole lithographic field. The latest processes were examined, and a staff of artists, selected with special reference to their skill, was engaged. The next year two landscapes by Bricher, and a group of chickens by Tait, appeared, and were soon followed by others equally good, including the

famous "Barefoot Boy," after Eastman Johnson. These faithful and beautiful copies of oil-paintings soon became famous throughout this country and Europe as Prang's American chromos. This trade designation, adopted by Mr. Prang for his finest class of reproductions, created the word "chromo," now applied to nearly all color-prints. Prang's chromos made speedily the tour of the world, and the newly-coined word found a recognized place in every language.

In 1867 the business had grown to such dimensions that an establishment, designed especially for the requirements of chromolithography, became a necessity, and a large building was erected in the Roxbury district of Boston, at 286 Roxbury street. This building was partly destroyed by fire in September, 1877, entailing a loss of over \$100,000; but with characteristic energy new quarters were fitted up in an old abandoned brewery, and in a week the works were running day and night to meet all previous engagements for the holiday season just opening. The damaged building was repaired and enlarged, and occupied anew in March, 1878; but was soon found inadequate to the rapidly increasing business of the firm, and in the spring of 1881 additions were made to the workshops and machinery, which nearly doubled their space, facilities and effectiveness.

The earlier productions of Mr. Prang were presented through the mediumship of a hand press, involving slow and tiresome processes, but steam printing presses are now exclusively used. During the past ten years this firm has paid out to artists who have originated the subjects of his works, upwards of \$500,000 in cash. The artistic productions, thought and teachings of the world have been brought to bear in the development of his schemes, and the highest practical inducements to originality and invention among artists everywhere have been set forth. In the department of mechanical appliances, the same general course has been pursued, and by the introduction of the steam press to his business, the thousands of his productions at once became millions, and almost numberless new designs and varieties of art work were added to his catalogue.

In 1874 the Prang firm took up the publication of a series of drawing-books for public schools, prepared by the late Prof. Walter Smith, then State director of Art Education in Massachusetts. These books were soon introduced into the leading schools of the country, and became the basis of an educational business of a very important character. In 1882 this educational business was separated from the business of the firm of

L. Prang & Co., and a new concern, The Prang Educational Company, was formed for the prosecution of this special business. Of this company Mr. Prang is president.

Another large and important concern for the production of lithographic and color work was established in Boston, in 1875, under the name of the Forbes Lithograph Manufacturing Company, which has a capital of \$175,000. The large manufacturing premises of the company are located at Chelsea, where four hundred and fifty persons are employed in the execution of every description of lithographic work. The business of the company extends to every part of the United States, branch offices being maintained in New York, Chicago and San Francisco.

Previous to 1830 this country was almost entirely dependent upon foreign manufacturers for a supply of saws. At that time there was not, probably, more than three saw manufactories in the United States, and the value of the saws made by them did not exceed, it was estimated, three thousand dollars per annum. In that year Charles Griffith, who had been engaged in the manufacture in Great Britain, came to the United States and determined to establish himself in Boston, though the attempt to make, in this country, circular saws was pronounced visionary, and his failure predicted. Within a short time he was joined by William Welch, establishing what became the well-known firm of Welch & Griffith. For a long time the obstacles in the way of success were numerous, as there was a strong prejudice existing in the mind of many against American saws, which it was difficult to combat, but the unrivaled skill of Welch & Griffith in manufacturing a superior grade of saws, such as required for cutting lumber and ship timber, circular, mill, pit and cross-cut saws, overcame all obstacles, and the enterprise was speedily established on a firm basis. For many years the original proprietors conducted the business which is now carried on by Albert Griffith, a son of Charles Griffith, under the old firm name of Welch & Griffith.

The manufacture of India rubber goods began to receive attention in Massachusetts soon after 1825. In 1828 the Roxbury Rubber Company, with E. M. Chaffee and others as proprietors, was incorporated. The Boston & Lynn, the Boston, the New England, the South Boston, and the Suffolk companies were all incorporated in 1834. At this time, however, little was known of the practical uses to which the gum of the India rubber tree could be put. It was prior to the great discoveries

of Charles Goodyear and Nathaniel Hayward, and only pure rubber was used, in which form it was liable to rapid deterioration. It became rigid in winter and soft and inert in summer. The tribulations that befell the pioneer manufacturers of this valuable but intractable material were, indeed, very great. They could not master the substance; the public acquired a distaste for its use, and all of the first factories started in or near Boston failed in business.

The Roxbury Rubber Company, after undergoing various vicissitudes, changed its name in 1845 to the Goodyear Rubber Company, and in 1847 to its present title, the Boston Belting Company. This company made the first rubber belting in the United States. To-day the belting, steam packing, engine hose and other articles in vulcanized India rubber, made by this company, for mechanical and manufacturing purposes, are sold in nearly all parts of the civilized world. The company operates under a capital of \$1,000,000. Its factory occupies an entire block in Roxbury, and employment is furnished to 500 hands. W. S. Eaton is president of the company; James Bennett Forsyth, manufacturing agent and general manager; J. H. D. Smith, treasurer. The board of directors embrace W. S. Eaton, James Bennett Forsyth, I. P. T. Edmonds, G. A. Miner, James Pierce, J. H. D. Smith, and George Whitney.

The Boston Rubber Shoe Company was incorporated in 1853; has a capitalization of \$3,000,000, and controls two extensive factories, one at Malden and the other at Melrose. The production consists exclusively of rubber boots and shoes, the output amounting to 45,000 pairs daily, employment being furnished to 3,000 persons. The officers of the company are J. W. Converse, president; E. S. Converse, treasurer and general manager; C. S. Converse, assistant treasurer; and H. E. Converse, secretary.

The Davidson Rubber Company was founded more than a quarter of a century ago by Hamilton Davidson. It is now operated by Rhodes Lockwood and Philip C. Lockwood. The factory is located in Charlestown, where employment is given to 150 hands. The goods manufactured consist of all kinds of druggists', surgeons', and fine rubber specialties.

The Boston Rubber Company was incorporated in 1878 by George H. Hood. Two factories are operated by the company, one at Chelsea and the other at Franklin, Mass. At the latter rubber footwear is manufactured and at the former clothing and diverse articles.

Employment is furnished to 700 operators. George H. Hood is president and treasurer of the company, and Fred C. Hood, secretary.

The Revere Rubber Company, with extensive factories at Chelsea, the American Rubber Company, and several other minor establishments, with those previously mentioned, make the volume of rubber goods manufactured in Boston reach the sum of fully \$15,000,000, of which rubber footwear probably amounts to \$7,200,000, and rubber clothing \$2,000,000. Large capital is invested in the manufacture of rubber hose, belting, packing, and mechanical specialties. The annual output of goods of this kind amounts to nearly \$5,000,000.

In 1834 John Brown, who had lately visited England to enquire into the process of sugar refining, returned to Boston, and was largely instrumental in organizing the East Boston Sugar Refinery Company, which was incorporated March 25, 1834, with a capital of \$250,000. Two years after beginning operations eighty workmen were employed, and twenty-five thousand boxes of sugar were annually produced. During the financial panic of 1837 the company was forced for a time to suspend, but has since had a prosperous career.

In 1858 the Adams Sugar Refinery at South Boston was erected. This, one of the largest in the country, succeeded one burned in that year, the property of Seth Adams, who had embarked in the business in 1849, having previously been connected with his brother in the manufacture of printing presses.

Among the prominent ropemakers of Boston in the first half of the present century was John Webber. He was born in Marblehead in 1793, and when a lad was apprenticed to Josiah Dunham, of South Boston, and learned the trade of ropemaking. After acquiring his trade he erected a small factory in Roxbury, which later on was enlarged and finally grew to large proportions. By the laying out of Harrison avenue his works were cut in two. He then built two rope-walks, each about 700 feet long and two stories high. These were burned in 1836. He built again, and introduced new and improved machinery. This factory was also burned, when he built what at that time was the largest cordage factory in this country. The New England Cordage Company was afterwards formed, with a capital of \$400,000, and Mr. Webber as president. This was successful, employing nearly 200 men, and manufacturing upwards of 3,000 tons of cordage per annum. Mr. Webber finally withdrew from this company and built an establishment on Norfolk avenue, known as the Suffolk Cordage Company. Afterwards

he disposed of the Suffolk Company, and commenced the experiment of making rope in a square room, dispensing with the long rope walk. For this purpose he built a stone mill at the corner of Harrison avenue and Hunneman street. The new method proved a success, and the mill was conducted for several years. Mr. Webber retired from business in 1856, after having been actively engaged in the manufacture of cordage for nearly fifty years. He died in West Roxbury, May 12, 1863.

The name of Thomas Blanchard deserves a prominent place among the inventors of useful mechanical contrivances such as have made Boston famous. He was born in Sutton, Mass., in 1788, and at the age of eighteen was employed by an elder brother, who was operating a tack factory in an adjoining town. Young Blanchard's employment consisted in heading tacks with a hammer, each tack being separately held in a vise for that purpose. The process was necessarily slow, and the tacks themselves comparatively uneven and rough. But this experience served as the proper incentive to the development of the latent powers of the young man. Before many months he had invented and built a machine which would both cut and head the tacks with great rapidity, making besides a much better article than could be made by hand. This first machine made by this stripling was so perfectly designed and made that it was used without material alteration for many years. In the same town was a small gun factory. Here the round section of the barrel was readily turned, but the octagonal part was finished by filing and grinding. To turn the whole, Blanchard designed a lathe which accomplished the object. He then invented a much more difficult lathe, which successfully turned a gun-stock, a device which revolutionized gun making. Soon after the completion of the latter device he was engaged by the government to superintend the stocking of guns at the Springfield armory. The machine was still further perfected until it would make a gunstock complete in every particular, including the cavity for the lock, the whole being finished in a manner superior to anything made at that time by hand by the most skillful workmen. The principle of this machine was at once applied to lathes for making tackle blocks, spokes, lasts, yokes and other irregular forms. Like many other inventors, Blanchard did not at first make any financial success commensurate with the magnitude of his labors. He applied to Congress to extend his patent, and to illustrate the possibilities of his invention, he erected a lathe in the

rotunda of the capitol at Washington, and turned marble busts of members of Congress from plaster models. The bill to extend the patent was introduced by Daniel Webster, then senator from Massachusetts; and his colleague, Rufus Choate, wittily remarked that a Yankee inventor was turning the heads of congressmen. He invented a machine for bending ship timber to the required shape while retaining its original strength. He made wheel felloes in one piece, and also the frames for scholars' slates. His lathe was exhibited in the great Exposition at Paris in 1857, and created a profound sensation. He turned a marble bust of the Empress Eugenie in the presence of the Emperor, who was greatly impressed with the value of the invention.

During Mr. Blanchard's career he took out twenty-four patents. The principle of the rotary cutter, as applied in a machine for planing lumber, it is said, originated with him, although he received no pecuniary benefit from it. While at Springfield he gave considerable attention to the best method of propulsion for stern-wheel steamboats plying in rapid currents. After protracted and expensive litigation he succeeded in obtaining judgment in the Supreme Court in his favor and thus fully established the validity of his claims for his gun-stock lathe. In rendering a final decision Judge Story remarked: "That after much trouble, care and anxiety he will be able to enjoy the fruits unmolested of his inventive genius, of which he had a high opinion, and that it afforded him much pleasure in thus being able publicly to express it." It was a singular coincidence that in after years Mr. Blanchard bought and occupied the house on Tremont street, in Boston, formerly the property of Judge Story.

When the reports of the success of Mr. Blanchard's gun-stocking machine reached England they were received with incredulity, and a commissioner was sent to this country with samples of the hardest English oak, manifestly for the purpose of testing to the utmost the virtues of the Yankee machine. Thinking, perhaps, that if the truth was known, Mr. Blanchard would shrink from so severe a task, they visited his works in the guise of his own countrymen, curious to have some gun-stocks made from their own timber, and were greatly astonished to find that the peculiar hard nature of the wood brought from across the ocean contributed to produce a more perfect stock than could be made from a softer variety of wood. The result was a large order for machines from the British government, which subsequently fully recognized Blanchard's great merit as an inventor.

Mr. Blanchard died at the age of seventy-six years at his home in Boston. Visitors to Mount Auburn may find on Spruce avenue a marble monument, which was erected to his memory, surmounted by a bust, which is a faithful representation of the great inventor. The sides of the monument bear four bas-reliefs, representing four of his most important inventions.

One of the oldest iron concerns in Boston is that of Smith & Lovett. The business was established, in 1813, by Daniel Safford, who several years thereafter admitted a partner, and the firm became Safford & Lowe. Albert W. Smith was afterwards admitted, and the name was changed to D. Safford & Co. In 1840 Joseph Lovett became a member of the firm. In 1845 Mr. Safford died, and Mr. Lovett and Mr. Smith succeeded to the business, under the firm of Smith & Lovett. In 1855 Mr. Smith retired, and his nephew, Ammi Smith, was admitted to partnership. Ammi Smith died in 1876, and Mr. Lovett has continued under the old firm name of Smith & Lovett to the present time. The manufacture of iron work for buildings is the exclusive business of this establishment, having furnished the iron for such buildings as the Quincy Market, the South Market street blocks, the old State House, the Charlestown State Prison, the Taunton Prison, the Winthrop Square building, before the fire of 1872, and many after the fire in the burnt district. The works were formerly on Devonshire street, between Milk and Water streets; but when the post-office building was begun they were removed to the present location on Albany street. Mr. Lovett has been connected with the works since 1827, and is still actively interested in its management.

One of the oldest and largest of the manufacturing concerns of the city is the Boston Lead Company, which was organized in 1829, and has since been in successful operation. A reorganization was effected in 1879, when the present name was adopted. While lead and zinc, dry and ground in oil, red lead and litharge, lead pipe and sheet lead are manufactured and sold in every part of the United States. The factory, corner of Swett and Hampden streets, Boston Highlands, is one of the largest of its kind in this country. Samuel Little is president of the company and William J. Bride treasurer.

The manufacture of masts and spars has long been quite an important industry in East Boston. In 1830 Henry Pigeon began the business, and in 1868 admitted his two sons, Henry Pigeon, jr., and Abram Pigeon. Business is now conducted under the firm name of H. Pigeon

& Sons. In 1851 Joseph Caldwell embarked in the business, and was the first in Boston to handle Oregon timber for mast purposes. Mr. Caldwell's enterprise was the nucleus of the present Boston Spar Company, which was formed in 1887, of which Frank W. Bentley is president, and William E. Bailey is vice-president and superintendent of the manufacturing yards, and Joseph Caldwell, the founder of the business, is secretary and treasurer.

In 1829 Harvey Redding began the manufacture of artistic stained glass in Boston, and for the last ten years his son, Walter S. Redding, with John C. Baird, has carried on the same business under the firm name of Redding, Baird & Co. The resources of this firm include imported rolled cathedral glass, and a great variety of ornamental glass-work for public halls, theatres, and private residences. A special feature is made of church and memorial windows. In 1887 Horace J. Phipps embarked in the same business, and later was joined by William Sloeum, under the firm name of Phipps, Sloeum & Co. They confine themselves to the modern American school of strictly mosaic opalescent glass-work, and among many pieces of this work are the memorial windows in St. Matthew's German Lutheran Church, Philadelphia; First Parish Church, Northampton, Mass.; "Old North" Church, Portsmouth, N.H.; Church of the Messiah, Boston; First Congregational Church, Chelsea, and St. Luke's Church, Norfolk, Va.

Brass musical instruments were manufactured in Boston as early as 1835 by a Mr. Bailey, who carries on a small business in that line. At a later date Richardson & Bailey made valve instruments of a high grade of excellence; their cornets being celebrated for their brilliancy and purity of tone.

The first industrial census for Massachusetts was made in 1837. It exhibited the cities and towns constituting Boston of to-day as producing goods to the amount of more than \$12,250,000. The industries, in which half a million and over were annually produced, were ship-building, book publishing, manufacture of clothing, copper and brass works, and sugar refineries. The production of pianos had grown to ten hundred and eighty-three, valued at about \$300,000; leather at \$228,000; hats, \$191,672; iron castings, \$372,000; cabinet ware, \$148,100; straw bonnets, \$182,450; brushes, \$93,000; carriages and harnesses, \$128,805; trunks and whips, \$177,000; machinery, \$326,000; looking-glasses, \$147,500; stereotype work, \$157,000. Besides these the following statistics are taken from this census:



Gen. Curtis

	No. Emp	Capital	Value Product	No. Est
Boots and shoes.....	350	—	1,034,411	—
Furnaces.....	289	695,000	(72,000)	5
Axes.....	2	2,000	7,500	1
Glass.....	77	47,000	48,000	1
Chairs and cabinet work.....	164	—	149,100	—
Combs.....	41	151,000	41,000	1
Tinware.....	110	—	112,000	17
Distilleries.....	—	—	927,350	—
Ship-building.....	89	—	622,000	—
Axletrees.....	6	6,000	10,000	1
Brewing.....	8	30,000	1,000	1
Soap and candles.....	20	125,000	230,000	—
Whale oil refining.....	10	100,000	135,000	—
Copper and brass foundries.....	200	310,300	750,754	13
Pianos and organs.....	220	163,500	1,270,000	—
Gold and silver leaf.....	3	11,200	43,000	—
Sugar refining.....	67	393,653	970,454	1
Jewelry.....	30	91,000	60,000	—
Chain cables.....	20	75,000	60,000	1
Silverware.....	52	20,000	195,100	—
Umbrellas.....	03	36,500	65,000	0
Granite, marble and stones.....	400	195,500	330,000	17
Blank books and stationery.....	50	49,000	70,000	—
Gas.....	40	375,000	1,000,000	1
Lasts.....	20	18,000	40,000	2
Neckties and suspenders.....	150	58,200	122,000	—
Books.....	000	550,000	9,500,000	4
Clothing.....	2,040	710,804	1,765,066	17

To South Boston, early famous for its extensive manufactures, was added an important industry by the establishment, in 1836, of the Fulton Iron Foundry, which had its origin in the efforts of George C. and Thomas Thacher and William G. Billings. George C. Thacher had formerly been connected with Cyrus Alger in the foundry business, but in 1835, having severed business relations with Mr. Alger, he organized the Fulton Iron Foundry Company, which was incorporated one year later. Despite fears to the contrary, great success attended this company, and within a few years it was found necessary to greatly enlarge the works. The castings for the engines of the United States steam frigate *Saranac* were cast at this foundry. George C. Thacher, who was a pioneer in the iron industry in the United States, died in 1856. At South Boston, about contemporary with the establishment of the Fulton Iron Company, existed the Adams Printing Press and Machine shop, where were manufactured by Seth Adams not only the famous printing presses, invented by his brother Isaac, but sugar mills, steam engines and general machinery. Jabez Coney's foundry for the manufacture of iron steamships and machinery was also in operation at this time. In East Boston the Boyden Malleable Iron and Steel Com-

pan] began operations in 1835. At one time three hundred men were employed, but speculative methods finally caused a suspension of the works.

Henry N. Hooper was for many years a prominent figure in industrial affairs in Boston. He was born in Manchester, Mass., in 1799. When a boy he was apprenticed to Gedney King, and learned the trade of mathematical and nautical instrument maker, which he followed after attaining his majority until he became agent of the Boston Copper Company. This business he afterwards acquired in company with William Blake and Thomas Richardson, the firm name being Henry N. Hooper & Co. This firm won wide reputation for the excellence of their manufactures, one leading specialty being the casting of church bells. The bellfries of many church edifices all over the country still bear melodious evidence of the superiority of their work. Mr. Hooper served in the city government, was a director of the Bunker Hill Monument Association, and interested in many business enterprises. He died in 1865. William Blake, for many years associated in partnership with Mr. Hooper, was born in Boston, in 1796, and learned the trade of copersmith with Paul Revere.

Herbert H. Stimpson was the first to manufacture a sheet-iron air-tight stove in Boston, and the Stimpson cooking range was, in its day, a standard in its line. He was a native of Portland, Me., where he was born in 1802. When quite young his father removed to Boston, and the boy was educated in the public schools of this city. He early manifested an aptitude for mechanical employments, and was apprenticed to learn the business of sheet-iron worker. As an apprentice he invented several articles of considerable merit, from which he realized pecuniary benefit. So enterprising was he that before his majority he purchased his time, and opened a shop on State street, where he succeeded so well that he took into the concern his brother Frederick H. The firm of H. H. & F. H. Stimpson, manufacturers of furnaces and ranges, was one of the best known in this city many years ago, and their establishment, at the corner of Congress and Water streets, will be remembered by most of our older readers. Mr. Stimpson retired from business many years since on account of failing health. In 1845 he removed to Cambridge, where he took an active part in public affairs, being one of the projectors of the Cambridge horse railroad, and its first president. He was also interested in the manufacture of

an improved rifle, and visited several of the European governments on business connected with it. In the early days of railroading the flanges of the wheels were put on the outside, and were changed to the inside at the suggestion of Mr. Stimpson. This improvement, now regarded as indispensable, is evidence of his remarkable mechanical common sense, but was of no pecuniary benefit to him. Mr. Stimpson died in Lancaster, Mass., January 20, 1887. Frederick H. Stimpson, the younger of the two brothers, died in Boston in 1873. He served for seven years on the School Committee and in the City Council.

Gardner Chilson was for a long series of years known in Boston as a very successful manufacturer of stoves, ranges and furnaces. His establishment in Blackstone street was known and patronized by a great number of people for more than a generation. He introduced many new and excellent designs, and greatly improved the quality of his work, and was financially and mechanically successful. He was born in the State of Connecticut in 1803, and died in Boston in 1877.

The name of Hiram Tucker, of Boston, is connected with many important inventions. His first invention made public was for mirror marble mantelpieces, in 1848, and soon after he went into partnership with Bowers & Pratt, iron founders, for the manufacture of these mantels under his patent. In 1851, during his connection with this firm, he went to England. It is a singular coincidence that his brother-in-law, Elias Howe, jr., the inventor of the Howe sewing machine, was employed by him as assistant superintendent, and personally assisted in putting up the first mantel, Mr. Howe, at that time, using his spare time on his sewing machine experiments. After leaving this firm, in 1851, Mr. Tucker commenced the manufacture of fancy iron castings, and in 1852 he invented what was known as a process of marbling slate for the manufacture of mantels, table tops, etc. In 1858 he invented the Tucker spring bed; in 1862 the undulating spring bed bottom, which was largely used in the government hospitals during the civil war; in 1864 a bronze finish for cast-iron, and later a process for coring irregular iron work. His latest invention was a horse car switch. He was born in Haverhill, N. H., November 15, 1822, and died in Boston, October 21, 1882.

The following are the census statistics of the principal manufactures of the county of Suffolk for the year ending June 1, 1860:

Manufactures.	No. of Establish'ts.	No. Hands Employed	Capital.	Value of Products
Bel springs	4		4,600	4,500
Billiard Tables.....	4	1	1,000	15,000
Blank books and book binding	1	440	74,000	418,500
Boots and shoes.....	4	10	100,200	70,000
Boxes, paper.....	3	11	25,000	12,000
Bread, crackers, etc.....	1	178	7,400	16,100
Brass founding.....	10	12	155,700	17,000
Brass cocks and gauges.....	7	17	150,500	27,445
Camphene.....	6	22	83,000	729,000
Caps.....	5	57	72,500	51,000
Carriages.....	10	11	54,500	28,100
Casks and barrels.....	7	7	31,000	164
Chemicals.....	10	0	150,000	45,100
Cigars.....	11	47	18,700	6,500
Cloaks and mantillas.....	10	180	7,300	47,100
Clothing.....	61	4,017	1,700,000	4,177,740
Coffee mills.....	4	27	30,000	27,800
Confectionery.....	11	17	8,100	37,500
Copper smelting.....	1	51	32,000	7,000
Copper smithing.....	12	201	273,100	427,000
Cutlery.....	2	10	13,700	20,000
Drugs and medicines.....	11	70	90,000	20,000
Flour.....	2	1	25,000	120,000
Furniture ¹	20	386	10,200	737,450
Furniture, school.....	5	177	51,000	161,000
Furs.....	6	55	40,000	200,000
Gas.....	4	232	1,203,000	6,071,000
Glassware.....	3	347	81,000	372,500
Hats.....	7	108	45,000	183,500
Horseshoes.....	3	10	900	13,000
Iron work, building.....	1	40	8,000	40,000
Iron founding.....	5	322	261,000	60,000
Iron railing.....	6	32	23,500	83,700
Iron, rolled.....	2	400	470,000	1,400,000
Iron safes.....	6	115	142,000	200,000
Iron shafting.....	1	40	20,000	86,500
Iron steamships.....	1	300	190,000	914,700
Iron work, ornamental.....	1	60	10,000	75,000
Instruments, mathematical.....	2	9	13,000	14,500
Instruments, surgical.....	1	5	15,000	10,000
Instruments, telegraphic.....	1	15	20,000	20,000
Japanned ware.....	2	22	8,000	19,500
Jewelry.....	9	32	14,000	43,800
Lasts.....	5	44	14,000	53,300
Leather.....	7	143	103,000	573,250
Leather belting.....	1	9	0,500	37,000
Liquors, distilled.....	5	34	200,000	760,000
Liquors, malt.....	6	65	118,500	26,604
Locomotives, etc.....	1	80	25,000	80,000
Lumber, planed.....	6	81	74,000	807,250
Machinery, steam engines, etc.....	28	680	646,100	72,050
Marble.....	22	454	42,200	501,800
Masts.....	3	29	50,000	03,000

¹The figures for this industry are much too small. The manufacture of furniture in Boston at this time was a very prominent and extensive business.

Manufactures.	No. of Establishm'ts.	No. Hands Employed.	Capital	Value of Products.
Matches	1	68	4,000	15,000
Military caps.	1	18	4,000	30,000
Millinery.....	18	167	14,500	5,400
Mineral water.....	5	52	47,000	1,774
Musical instruments, miscellaneous ¹	4	111	58,200	144,100
Musical instruments, pianoforte.....	16	730	23,000	401,500
Oil, linseed.....	3	101	490,000	157,500
Oil, lard.....	7	13	12,000	140,850
Oil, water.....	1	3	6,000	20,000
Oil, kerosene.....	4	166	590,000	83,500
Oil, whale.....	2	11	55,000	128,110
Oil, carriers'.....	1	2	40,000	8,500
Paper hanging.....	2	32	21,500	45,500
Picture frames.....	15	107	64,700	183,600
Preserved pickles and fruit.....	7	87	70,000	177,250
Printing, book and job.....	23	362	285,200	650,500
Printing, newspapers.....	77	503	1,176,500	7,132,000
Printing presses.....	1	100	200,000	103,500
Pumps and blocks.....	6	31	23,700	40,300
Rigging.....	2	28	20,600	46,000
Roofing, composition.....	5	34	14,100	66,000
Roofing, slate.....	1	20	12,000	70,000
Sails.....	13	41	20,200	92,280
Saddlery and harness.....	23	178	74,000	216,310
Salt, ground.....	3	26	60,000	75,000
Saltpetre.....	1	2	3,000	23,500
Sash, doors and blinds.....	4	25	10,900	27,800
Sewing machines.....	5	456	236,000	1,045,000

The G. W. & F. Smith Iron Company was founded, in 1836, by G. W. Smith and a Mr. Nutting, the firm then being Nutting & Smith. After the retirement of Mr. Nutting, Mr. Smith conducted the business alone for a while, and then admitted Mr. Felton into partnership. Franklin Smith, a nephew of G. W. Smith, was admitted to the firm in 1853, when Mr. Felton retired, and the style of the firm became G. W. & F. Smith. In 1880 the corporation of the G. W. & F. Smith Iron Company was formed and succeeded to the business. Franklin Smith is the president, and his son, Elmer F. Smith, secretary of the corporation, which for a number of years has been one of the largest manufacturers of building and architectural iron work in New England. The

¹ The manufacture of musical instruments, exclusive of pianos, was much greater than the census returns indicate. Mason & Hamlin's manufactory of cabinet organs at this time was the largest of their kind in the United States. They had a capacity of making a hundred a week, or five thousand per year. E. & G. Hook employed at this time in their organ factory at Roxbury, fifty hands, and for the three preceding years averaged twenty-two church organs annually, some of them very large. W. B. D. Simmons also had an extensive church organ factory on Charles street. Besides these, a directory of this year (1860) gives the names of S. D. & H. W. Smith, William Stevens, Walter Crosby, George Freemantle, Graves & Co., Charles W. Lawrence, Benjamin F. Richardson, Charles Stumcka, the White Musical Instrument Company, White Brothers, and James H. White as manufacturers of musical instruments, exclusive of pianos.

wrought iron works are located on Federal street, and the foundry on Farnham street, Roxbury; in the two establishments two hundred and fifty workmen are employed. From these works have been furnished the iron for many of the fine buildings in Boston, among them the City Hall, the State House, and the Post Office dome, while throughout New England many of the largest and finest buildings have been supplied with structural work from this company. George W. Smith, the founder of this corporation, was born in Gloucester, Rhode Island, in 1812. He came to Boston when a boy and learned the blacksmith's trade. Beginning in a small way, by his skill, industry, and fidelity, he worked his way up to be the head of one of the most successful and extensive works of its kind in New England. He was the oldest member of Columbus Lodge F. & A. M., a member of St. Andrew's Chapter, Royal Arch Masons, and a knight templar of Boston Commandery, and also held membership in several social, musical and business organizations. He died at his home in Dorchester, January 10, 1886.

The first locomotive built in Boston was made, in 1840, by Holmes Hinekley. Mr. Hinekley was for many years one of the most important figures in the industrial history of Boston. The son of very poor parents, he was very early inured to hardships. He first learned the trade of a carpenter. Subsequently he was employed as a pattern maker of machinery for factories, and here acquired a sufficient knowledge of mechanical principles to venture upon the construction of machinery. In 1826 he rented an old building on Lenox street, Boston Neck, and began his career as a machinist. Among his early attempts at machine making was the construction of a stationary steam engine, which, when finished, was the third one built in the State of Massachusetts. Previous to 1840 he had constructed a larger number than any other machinist in New England.

In 1840 he undertook to build a locomotive on a different plan from any then in use. Although friends sought to discourage him from the undertaking, he worked on, cheered by his own faith in his ultimate success. When he had finished his engine it was not an easy matter to find a purchaser; but finally the Eastern Railroad bought it and placed it on the Portland end of the line. He proceeded at once to build four more, and before they were completed the success of his first locomotive was so well assured that all of them were ordered, and, in two years, ten more were contracted for and delivered. From that time until 1848 Mr. Hinekley, in connection with Mr. Freeny, made the build-

ing of locomotives his principal business. During this period the Hinckley engine attained a reputation second to none in the country. In 1848 a company was organized and incorporated under the title of the Boston Locomotive Works, with Mr. Hinckley as president and superintendent. The buildings were greatly enlarged, and the business so rapidly prospered that in 1857 the property of the company was valued at upwards of half a million dollars. At this time Mr. Hinckley resigned the superintendency of the details of the business into the hands of younger men, who unfortunately were not equal to the task of carrying the concern through the general financial difficulties of that period, and a disastrous failure overtook the enterprise. At this critical period Mr. Hinckley again took the helm, and by his masterful management soon established the business on a sound basis. In 1861 Jarvis Williams, who had come to Boston and established himself in the same line of business, was induced to unite with Mr. Hinckley in the purchase of a part of the premises formerly owned by the Boston Locomotive Works, when a co-partnership was formed, consisting of Holmes Hinckley, Jarvis Williams, Daniel F. Child, and Adam Ayer, under the firm name of Hinckley, Williams & Co. The War of the Rebellion beginning soon after the co-partnership was formed, the firm accepted a contract from the naval department for two thousand shells. Additional buildings were afterwards erected and furnaces put up to supply ordnance and projectiles as they might be needed. During the existence of the war the firm supplied upwards of fifty thousand shot and shell, and more than 100 guns of ten and eleven inch calibre.

After the war closed the firm again turned its attention to the manufacture of locomotives. In 1864 the company was incorporated as The Hinckley & Williams Locomotive Works, and from that date until 1889 the managers of the works confined their operations to the manufacture of locomotives, boilers and railroad machinery. Mr. Hinckley was chosen president of the new company, and held that position until his death on February 8, 1866. In 1889 the machinery of the company was sold, and the land and buildings transferred to the West End Street Railway Company, and on the site of the old works is now located one of the electric power houses of the street railway company.

Jarvis Williams, who was long associated with Mr. Hinckley in business, was born in Augusta, Me., in 1823, and died in Boston, in 1870. He was a man of cultivation, possessed a comprehensive intellect, fine tastes and wide information.

In 1857 a severe blow was inflicted upon the industries of Boston, but the war quickly obliterated the signs of depression and stimulated them to an abnormal and somewhat dangerous activity. The close of the war found Boston with an annual industrial production which had nearly doubled in ten years. The following statistics from the State census of 1865 for Suffolk county shows a highly gratifying progress in the leading industries over the returns made in 1860.

Kind of Manufacture.	No. Est.	No. Em.	Capita Invested.	Value of Product
Cotton batting	1	20	30,000	45,000
Calico	1	15	20,000	14,000
Horse blankets	1	1	1,000	1,000
Knit hoods, shawls, etc.	4	1	25,000	112,000
Worsted goods	1	10	2,000	4,500
Men collars and cuffs	1	50	4,000	47,000
Feathers and artificial flowers	1	15	1,000	1,000
Braids and elastic cords	1	10	50,000	10,000
Bonnet ribbons	1	10	25,000	10,000
Dress trimmings	1	75	10,000	42,000
Rolling, slitting and nail mills	1	600	1,000,000	1,000,000
Forges	1	8	25,000	10,000
Hollow ware and castings	4	114	185,000	703,000
Cotton and woolen machinery	18	721	485,000	1,803,750
Locomotives, steam engines and boilers	13	1,402	710,000	1,414,000
Axes, hatchets and edged tools	2	6	4,000	7,000
Files	1	20	1,000	1,000
Mechanics' tools	1	107	207,500	434,805
Cutlery	1	10	2,000	5,000
Locks	1	1	25	1,200
Gas, water and steam pipes	2	100	225,000	50,000
Iron railing and safes	1	81	62,800	120,500
Copper	1	100	1,000	32,800
Brass foundries	12	143	157,400	399,500
Gas and oil fixtures and lamps	4	18	75,000	88,140
Briannia ware	1	14	1,000	2,000
Corsets	4	184	24,000	100,000
Hoop skirts	1	10	25,100	257,700
Glass	1	10	2,200,000	711,000
Chemicals	2	10	52,500	1,200
Paper hangings	1	10	5,000	15,000
Paper collars	4	37	15,500	17,000
Organs, melodeons and harmoniums	1	205	33,000	50,000
Pianos	1	10	50,000	1,034,074
Printing	1	1,417	74,445	7,000
Book binding	1	307	170,000	407,550
Type and stereotype foundries	1	180	102,500	1,000
Sewing machines	1	145	23,000	760,400
Looking glass and picture frames	1	100	1,000,000	10,700
Chronometers, watches, gold and silver ware	1	10	2,500	30,000
Mattresses	1	142	80,000	320,000
Brushes	1	100	115,000	210,000
Saddles, harnesses and trunks	1	204	152,000	242,500
Military goods	1	10	2,000	7,000
Upholstery	1	100	100,000	47,350

Kind of Manufacture	No. Est.	No. Emp.	Capital Invested	Value of Product
Hats and caps	31	350	151,000	525,117
Gloves, mittens and fur goods.....	16	1,171	317,500	140,875
Cordage.....	7	5	150	54,500
Ship building.....	1	915	42,000	6,765,000
Boats.....	1	15	3,700	60,000
Masts and spars.....	5	111	77,000	857,000
Sails.....	30	147	122,050	2,577.7
Salt.....	1	8	1,000	50,000
Railroad cars, wagons and sleighs.....	28	275	132,700	20,177
Sugar refining.....	2	275	280,000	4,100,000
Confectionery.....	21	105	70,000	49,575
Umbrellas and parasols.....	4	50	47,000	117,000
Clothing.....	232	10,654	2,705,370	1,800,000
Coffee mills.....	0	02	70,250	100,000
Marble and stone works.....	20	450	254,050	740,000
Soap.....	—	15	1,050	73,800
Kerosene.....	4	125	310,000	1,100,000
Ammunition.....	—	455	50,775	1,000,000
Blacksmith shops.....	78	60	7,750	120,501
Chairs.....	0	102	35,000	110,500
Cabinetware.....	40	518	417,900	1,157,000
Tinware.....	51	257	170,350	500,050
White lead.....	1	40	40,000	150,000
Drugs and dyestuff.....	40	171	137,300	2,33,300
Varnish.....	2	0	25,000	60,000
Currying.....	21	177	125,200	700,724
Belting.....	4	16	82,000	220,000
Boots and shoes.....	—	070	212,37	703,408
Bonnets and hats (straw).....	2	0	32,000	90,000
Bricks.....	1	15	100,000	55,114
Philosophical and mathematical instruments.....	10	70	79,200	1,000
Blacking.....	3	10	30,100	60,878
Snuff, tobacco and cigars.....	—	05	120,575	27,070
Blocks and pumps.....	2	31	29,500	100,000
Gold leaf.....	5	01	28,800	100,000
Casks.....	7	43	20,000	1,75,500
Stone and earthenware.....	0	25	50,000	100,000
Coffins.....	7	1	15,400	70,000
Sashes, doors and blinds.....	0	10	10,000	50,000
Boxes.....	05	7	42,150	170,000
Matches.....	1	50	30,000	100,000
India rubber goods.....	1	00	10,000	50,000
Gas.....	3	06	1,498,625	1,947,615
Bakeries.....	54	04	54,550	735,930
Distilleries.....	1	00	100,000	235,000
Breweries.....	0	136	315,000	734,575
Artificial limbs.....	1	20	70,000	40,000
Bags.....	2	10	10,000	205,000
Paper bags.....	1	7	7,000	4,500
Billiard tables.....	1	01	20,000	48,750
Wood mouldings.....	1	00	73,200	200,000
Millinery establishments.....	57	40	156,850	681,740
Nets and seines.....	1	11	100,000	201,000
Steam gauges.....	1	43	102,500	152,000
Sugar from molasses.....	2	00	225,000	605,000
Wood saws.....	2	5	5,500	11,000

The introduction of steam heating apparatus for warming buildings, now so widely used, had its origin in Boston through the agency of James J. Walworth and Joseph Nason. The history of this undertaking, which began in 1811, is told in the sketch of J. J. Walworth, which appears elsewhere in this volume. For eight years Mr. Walworth and Mr. Nason were associated together under the firm name of Walworth & Nason, when they dissolved, Mr. Walworth, with his brother, C. C. Walworth, continuing the business alone in Boston for some time and Mr. Nason removing to New York. Some years later Mr. Walworth, associating with himself as partner his brother, C. C. Walworth, and Marshall S. Scudder, formed the firm of J. J. Walworth & Co. In 1872 the corporation of the Walworth Manufacturing Company was formed with a capital of \$100,000, of which J. J. Walworth, the founder of the business, remained president until about two years ago, since which C. C. Walworth has been president. The factory of the company was originally at 18 Devonshire street. In 1852 it was moved to Blake Court. Several years ago the works were moved to Cambridgeport, where they remained until the completion of their extensive plant in South Boston in 1882, where 800 hands are employed. Many important inventions and contrivances necessary to the development of their business originated with this concern, among them being the introduction of the fan system of ventilation, the establishment of a scale of sizes and weights of valves and fittings, a machine for tapping six fittings at once, the introduction of the present die-plate design, the Stanwood pipe cutter, the Stillson wrench, the Walworth bench vice, the Walworth pipe taps and reamers, and the Hall tapping machine, all of which are labor-saving devices of well recognized merit. Of late years the construction of gas machines, manufacture of supplies for steam, gas and water users, iron and steel poles for the purpose of supporting and carrying the trolley wires for street railways have formed an important part of the business of the Walworth Manufacturing Company. The value of their production now reaches the sum of \$2,000,000 annually. The advance made by the company during the past fifty years can be best illustrated by the fact that while in 1842 a small stock of pipe, at the utmost, 5,000 feet, was bought with considerable hesitation, and was considered a large transaction at that time, in 1892 between four and five million feet of pipe was handled by this company.

The American Net and Twine Company has had an existence since 1842. During the half century of its existence it has introduced many new features in the manufacture of nets, seines, lines, and twine, and has done much to extend this branch of enterprise. The company, which has a capital of \$350,000, has an extensive netting factory in Boston, and a gilling factory at East Haddam, Conn. The excellence of their wares has been often attested by numerous highest awards wherever exhibited. I. W. Adams is president of the company, and Edward L. Grenby, treasurer.

Joseph Milner Wightman deserves prominent mention in any chronicle of the industrial progress of Boston. His interest in scientific subjects date from his early boyhood, and his interest and participation in public affairs covered a period of about forty years. He was born in Eliot street, Boston, in 1812, his parents being of English descent. At fourteen he became apprenticed to a machinist, and four years later, when the Mechanics' Lyceum was formed, he was made secretary. In the following year he delivered a scientific lecture before this body, illustrated by apparatus of his own construction. The year following he, with others, established the *Boston Mechanics' Magazine*, of which he was associate editor. At the close of his apprenticeship he commenced the manufacture of philosophical instruments, giving much attention to the work of simplifying their construction and bringing their cost within the means of those who could not afford the expensive instruments made in Europe. This work he followed for many years with great success, having a part of the time as a partner Timothy Claxton, an Englishman of ability in this specialty. During this period he furnished the schools and colleges of the country a large amount of scientific apparatus, and so perfect were his instruments, and so correct was his judgment in regard to the needs of the students, that the managers of educational institutions came to regard him as an authority. Previous to the war of the Rebellion his business was one of the largest of its kind in this country, but owing to the disturbances of that period, the demand was greatly lessened, and his attention being now engrossed by public affairs, he relinquished this business, which he had followed for nearly a generation. For five years he had lectured occasionally on scientific subjects in this and other cities of New England, and in 1841-43 assisted Professor Silliman, of Harvard College, in his celebrated lectures before the Lowell Institute. When the Morse telegraph was brought before the public, Mr. Wightman delivered an illustrated

lecture in explanation of its principles and working, which, by request, was repeated in other places. In 1845 he was elected a member of the School Committee, on which he served for ten years. The Franklin and City medals were designed by him. From the first agitation of the question of the introduction of pure water in Boston, Mr. Wightman was one of the foremost advocates, and to him the citizens of Boston are largely indebted for his services in that important work. He was one of the earliest and most efficient advocates of the introduction of the telegraphic fire alarm and the steam fire engine into Boston. He served as a member of the State Legislature, and for three years was a member of the Board of Aldermen, and one year its chairman. He was active in his advocacy of the bill relating to the Back Bay and the Public Garden, for which service he was presented by his fellow citizens with a bronze statue of Daniel Webster, and which he, at his death, bequeathed to the Public Library. In 1860 he was elected mayor of Boston, and served two years. It was during his administration that he laid the corner stone of the present city hall. He died in 1885; and the latter years of his life was engaged in the practice of the law, having been admitted to the bar in 1871.

The first machine shop in Roxbury was established by J. C. Pratt, who, in 1847, was succeeded by the firm of Chubbuck & Campbell, by whom the first tubular boiler made in the vicinity of Boston was constructed. Charles Whittier learned the machinist trade with Chubbuck & Campbell. In 1859 he was admitted to partnership, when Mr. Chubbuck retired, and the name of the firm was changed to Campbell, Whittier & Co. In 1874 this firm was succeeded by the Whittier Machine Company, which was incorporated under the laws of Massachusetts, with a capital of \$300,000. The works for many years were in Roxbury, but are now on first and Granite streets, South Boston. This company is largely engaged in the manufacture of steam, hydraulic and electric elevators for freight and passengers. Their electric elevators represent the highest development thus far attained by electrical science and mechanical art. A large number of improvements, increasing the safety, speed and comfort realized in the use of elevators, have been introduced by this company. These improvements are protected by numerous patents, many of which are of Mr. Whittier's own invention. Their elevators are in use in many of the principal buildings of Boston, New York and other large cities in every part of the United States.

The United States census of 1870 contains the following report relative to the industries of Suffolk county, and while perhaps the product of that year is undervalued, it is the most reliable census return up to that date:

Kind of Manufactures	No. of Establishments	Hands Employed.	Capital.	Value of Products
Awnings and tents.....	4	24	7,000	39,000
Bags.....	1	4	100,000	12,000
Baking Powder.....	1	24	13,500	154,954
Banners, flags and regalia.....	2	13	4,000	22,779
Bells.....	1	11	7,000	70,000
Belting and hose (leather).....	3	15	18,000	135,000
Billiard and bagatelle tables, etc.....	3	14	77,200	130,000
Blacking.....	4	10	28,000	100,806
Bleaching and Dyeing.....	19	150	35,700	265,200
Blueing.....	1	11	10,000	40,000
Bookbinding.....	39	681	202,800	700,300
Boot and shoe findings.....	19	161	70,700	337,500
Boots and shoes.....	34	1,317	597,100	1,479,110
Bottling.....	1	4	5,000	15,000
Boxes, packing.....	1	4	5,000	15,000
Boxes, paper.....	5	30	10,500	77,500
Brass founding and finishing.....	12	103	51,800	115,080
Bread and other bakery products.....	49	341	225,750	888,704
Brick.....	7	725	641,900	573,688
Bridge building.....	1	34	32,000	50,000
Bronze castings.....	1	9	15,000	35,000
Brooms and wisp brushes.....	2	6	3,300	15,900
Brushes.....	5	292	50,000	372,000
Cards.....	3	30	75,500	182,500
Carpets, other than rag.....	2	491	620,000	1,028,300
Carriages and sleds, children's.....	2	44	43,000	90,000
Wagons.....	29	30	265,500	671,075
Cars, freight and passenger.....	2	225	850,000	362,535
Chocolate.....	3	135	250,000	681,250
Chromos and lithographs.....	5	147	117,800	286,000
Clocks.....	7	19	35,000	90,000
Clothing, men's.....	227	7,590	7,438,090	17,578,057
Clothing, women's.....	62	672	139,005	1,268,214
Coal oil, rectified.....	4	122	315,000	1,141,888
Coffee and spices, ground.....	10	69	360,500	549,142
Coffins.....	8	30	30,800	82,235
Collars and cuffs, paper.....	4	102	390,000	552,000
Confectionery.....	31	311	153,000	1,025,600
Cooperage.....	13	111	47,700	186,851
Copper smithing.....	6	80	80,000	225,000
Cordage and twine.....	1	70	28,000	101,000
Cordials and syrups.....	7	29	193,000	279,000
Cork cutting.....	1	17	12,000	43,500
Cosmetics.....	5	12	19,200	41,000
Croquet sets.....	2	23	18,000	61,500
Cutlery.....	1	12	10,000	25,000
Cutlery and edge tools.....	4	27	13,800	39,37
Drugs and chemicals.....	6	93	345,300	800,170
Dye extracts.....	2	41	35,000	110,000
Engraving.....	18	97	8,035	85,500

Kind of Manufactures.	No. of Establishments.	Hands Employed.	Capital	Value of Products.
Engraving and stencil cutting	10	40	25,575	71,500
Fertilizers	1	5	1,300	29,500
Files	5	90	41,000	132,500
Fire-arms, small arms	2	14	7,000	10,000
Flouring mill products	1	8	5,000	313,000
Frames, mirrors and pictures	34	322	28,100	995,888
Furniture (not specified)	80	1,498	1,569,700	3,744,008
Furniture, chairs	2	35	28,000	41,500
Furniture, refrigerators	2	27	23,000	99,400
Furs, dressed	12	146	155,000	376,710
Gas	6	647	742,000	2,004,905
Gas and lamp fixtures	4	218	153,000	462,580
Gas and retorts	1	12	3,000	7,000
Gilding	7	35	37	59,715
Glass, cut	8	14	1,500	171,000
Glassware	5	153	112,000	146,200
Gold leaf and foil	7	112	29,100	163,560
Hair work	20	114	18,800	197,600
Hardware	28	203	199,100	616,850
Hardware, saddlery	1	13	1,000	13,500
Hats and caps	26	447	251,000	782,400
Hat and cap materials	1	6	2,500	14,000
Heating apparatus	95	95	8,000	225,000
Hoop skirts and corsets	4	47	155,000	467,000
Hosiery	1	4	2,000	13,500
Hubs and wagon materials	4	47	36,000	111,000
India rubber and elastic goods	3	27	115,000	610,377
Ink, printing	1	9	12,000	25,000
Ink, writing	2	4	110,000	75,000
Instruments (professional)	7	85	550,500	152,000
Iron bolts, nuts, washers, etc	1	5	10,000	3,000
Iron castings (not specified)	9	471	687,000	931,207
Iron stoves, heaters, etc	2	255	190,000	578,000
Iron nails and spikes, cut, etc	2	235	575,000	466,600
Iron, forged and rolled	5	674	735,000	2,643,200
Iron pipe, wrought	2	178	100,000	1,000,000
Japanned ware	4	15	9,700	10,000
Jewelry	21	285	127,700	338,100
Kindling wood	2	25	5,200	24,000
Lamps and lanterns	2	20	21,000	42,000
Lasts	2	27	11,500	26,000
Lead pipe	1	14	310,000	616,650
Leather, tanned	1	11	70,000	420,000
Leather, curried	25	451	678,000	2,093,084
Leather, patent and enameled	4	100	1,000,000	800,000
Liquor, distilled	1	10	50,000	80,000
Liquor, malt	19	132	883,000	1,394,500
Looking-glasses	1	52	25,000	100,000
Lumber, planed	21	737	1071,500	3,917,350
Lumber, staves, shooks, etc	1	18	20,000	50,000
Machinery (not specified)	52	172	1,162,000	2,032,200
Machinery, cotton and woolen	1	16	270,000	30,000
Machinery, railroad repairing	1	137	160,000	720,000
Machinery, engines and boilers	12	659	1,013,800	1,462,202
Marble and stone work (not specific)	52	372	745,500	1,351,280
Marble, tombstones	6	32	164,500	310,200

Kind of Manufactures.	No. of Establishments.	Hands Employed.	Capital.	Value of Products
Masonry, brick and stone.....	11	200	21,000	257,500
Matches.....	1	49	40,000	500,000
Meat, cured and packed (not specified).....	1	127	100,000	400,000
Meat, packed, pork.....	2	20	65,000	700,000
Meters.....	1	17	15,000	100,000
Millinery.....	40	350	145,000	1,000,000
Millstones.....	1	42	50,000	1,000,000
Mineral and soda waters.....	11	134	95,500	34,000
Molasses and sugars, refined.....	3	380	1,700,000	4,144,270
Mucilage and paste.....	1	3	8,000	200,000
Musical instruments (not specified).....	4	30	37,000	97,000
Musical instruments, organs.....	6	360	350,000	979,114
Musical instruments, pianos.....	15	611	1,004,711	2,360,505
Needles.....	1	12	3,000	15,000
Nets, fish and seine.....	1	11	15,000	23,000
Oil, animal.....	2	6	10,000	38,000
Oil, fish.....	2	12	102,500	744,000
Oil, vegetable, linseed.....	2	60	200,000	1,000,000
Oil (not specified).....	4	21	61,500	140,076
Paints (not specified).....	2	7	3,500	30,000
Paints, lead and zinc.....	5	130	375,000	1,147,500
Patent medicines.....	15	38	220,150	508,000
Patterns and models.....	12	50	30,300	1,000,000
Platedware.....	10	142	34,150	181,500
Pocket books.....	2	12	7,500	41,000
Preserves and sauces.....	3	123	150,000	345,000
Printing, cotton goods.....	1	15	7,000	75,000
Printing and publishing (not specified).....	7	118	335,300	1,072,000
Printing, books.....	1	56	18,000	55,000
Printing, newspapers.....	31	783	2,192,000	3,452,700
Printing, job.....	62	875	1,438,800	1,153,400
Pumps.....	4	40	28,800	83,400
Putty.....	2	16	20,000	68,350
Roofing materials.....	12	131	252,500	408,208
Saddlery and harness.....	42	294	344,700	501,603
Safes, doors, vaults (fire proof).....	3	151	188,000	350,000
Sails.....	15	87	49,200	203,805
Salt, ground.....	3	33	95,000	123,500
Sash, doors and blinds.....	20	357	286,800	923,790
Scales and balances.....	2	17	10,000	15,500
Sewing machine fixtures.....	2	20	18,200	61,000
Sewing machines.....	2	386	2,004,000	977,000
Shipbuilding, repairing, etc.....	39	665	926,200	1,363,047
Show cases.....	4	67	32,000	250,000
Silk goods.....	1	12	4,000	15,000
Silverware.....	6	67	01,000	154,533
Soap and candles.....	6	50	39,500	137,250
Soap stone goods.....	5	20	2,500	140,000
Soda water apparatus.....	5	72	140,000	389,575
Starch.....	2	11	50,000	152,000
Stationery.....	1	8	1,000	10,000
Steel springs.....	3	5	2,000	11,500
Stereotyping and electrotyping.....	6	80	27,800	141,919
Stone and earthen ware.....	3	37	128,000	51,000
Tin, copper and sheet iron ware.....	67	503	425,375	665,404
Tobacco (not cigars) and snuff.....	3	54	46,500	92,573

Kind of Manufactures.	No. of Establisments.	Hands Employed	Capital	Value of Products.
Panels, cigars	2	192	14,400	276,981
Trunks, valises and satchels	12	130	132,200	381,000
Brushes, bandages, supporters	4	52	42,000	142,000
Type founding	4	14	115,000	252,000
Umbrellas and canes	5	46	26,000	75,000
Upholstery	7	25	205,150	2,251,070
Varnish	7	5	94,500	497,687
Veneering	1	14	150,000	125,000
Ventilators, crystal	1	1	2,500	14,000
Washing machines, etc.	4	17	54,300	169,250
Watch cases		35	6,000	69,080
Watches	1	12	3,000	49,000
Whalebone and rattan, prepared		31	2,500	152,000
Wire work	7	61	44,100	139,500
Wood brackets, moulding, etc.		50	1,000	75,000
Wood, turned and carved	4	15	47,700	50,000
Wood work, miscellaneous		2	51,000	89,000
Wool carding and cloth dressing	2	1	1,800	29,000
Woolen goods		34	85,000	21,000
Worsted goods	2	31	1,05,000	510,000
	2,546	43,550	\$47,311,000	\$111,380,840

The making of brushes has for many years been quite an industry in Boston. Harvey A. and Ezra Burton began the business in 1811, which is now conducted by A. & E. Burton & Co. The firm of John L. Whiting & Co. was established in 1861, and is now one of the leading firms in this line in the United States, having an extensive factory near Rowe Wharf. The business of Charles A. Austin & Co. was inaugurated, in 1865, by Worcester & Austin. In 1848 Francis McLaughlin embarked in the business, and in 1869 was succeeded by the present firm of Murphy, Leavins & Co. J. C. Pushee & Sons have been engaged in the business in Boston since 1880.

The Globe Works, for many years an important industrial enterprise in Boston, were founded by John Souther, who commenced business as a locomotive builder near the site of the old works on Foundry street in 1816. For a short time he was associated with J. Lyman, whose interest he afterward purchased. Mr. Souther had previously been employed at the Boston Locomotive Works, and had made all or a greater part of their first models and patterns. In June, 1854, the Globe Works Company was incorporated, with John Souther as president, and D. A. Pickering, treasurer. For several years the building of locomotives was a prominent feature of their business, from twenty to thirty having been made annually. Since 1860, however, when the works were destroyed by fire, the building of locomotives has not constituted an important branch of their manufacture. This company quite early be-

came well known for the excellent work accomplished by their steam shovel or excavator, which was used in the construction of most of the railroads in this country and Europe. During the late war this company was largely engaged upon work for the United States government. They constructed the United States steamship *Housatonic*, the hull and machinery for one of the monitors, and also the machinery for a sloop-of-war and two side-wheel war steamers.

The earlier efforts in the development of the modern sewing machine were made in Boston. Elias Howe, jr., was a resident of Cambridge when, in 1846, he brought out the first sewing machine. It was far from perfect, and other inventors aided in remedying its defects. Among his collaborators was John Batchelder, of Boston, who, in 1849, invented an automatic feeding device. During the same year Blodgett & Lerow, also of Boston, invented a rotary shuttle for use in making the lock stitch. In 1851 Grover & Baker, of Boston, invented a sewing machine, which for several years was the most successful machine in use. A new principle was embodied in its construction, a double lock stitch being made by means of a rotary needle. For a time I. M. Singer, who invented a sewing machine in 1850, had a manufactory in Harvard Place, but finally moved to New York.

The City Point Works of Boston has attained a national reputation. The founder of these works, Harrison Loring, was born in Duxbury, Mass., and served an apprenticeship with Jabez Coney, of Boston. He commenced business for himself in 1847. For several years thereafter his business was principally confined to the building of stationary and marine engines and boilers. He was among the first to foresee the great demand which was eventually to come for iron sea-going steamships. He began to lay his plans to carry on this branch of industry, in 1854, by the purchase from the city of Boston of the House of Industry estate then unoccupied. On this property, consisting of seven acres of upland and a million feet of flats, he erected such new buildings as the business required. This was the first iron shipbuilding establishment which had been permanently located in New England, and the enterprise was looked upon with considerable distrust. Mr. Loring, with all the energy and steadfastness of purpose which have characterized his career, began building steamers for foreign markets. Even in the years 1857 and 1858, when almost all kinds of industry were suspended, he kept his establishment in full operation on vessels ordered from India. His first work of importance for an American company was

the building of two vessels of 1,150 tons each, the *South Carolina* and the *Massachusetts*, for the Boston and Southern Steamship Company. They were afterwards sold to the United States government, and proved among the most successful vessels in the blockading squadron on the southern coast. He afterwards built for the Union Steamship Company of Boston two iron screw steamships, the *Mississippi* and the *Merrimack* of 2,000 tons each. After the manifest success of the *Monitor* over the rebel iron clad *Merrimac*, Mr. Loring was called by the government to build as many monitors as could be completed within a short time, and he immediately commenced on one named the *Nahant*, which was the first monitor ever built in New England. He afterward built the *Canonicus*, a vessel embodying all the improvements of the *Nahant*, but with double her propelling power, and more able to resist the projectiles then in use.

After the war the building of vessels in and around Boston practically ceased. It was revived at the City Point Works by the building of the cruiser *Marblehead*, which was launched in August, 1892.

The first German brewery established in Boston was, doubtless, that of Michael Ludwig, who began to brew small or table beer in a small wooden building on the corner of Washington and Plymouth (now Henneman) streets in 1816. One year later he sold out to Matthias Kramer and Charles Roessle, father of John Roessle, one of the leading brewers of Boston at the present time. After a short continuance in the old place, Kramer & Roessle removed to Lowell (now Pyncheon) street, fitting up an old building on an island, in what was known as Smith's Pond, a small body of water fed by Stony Brook. Here they continued making small beer until January, 1848. Shortly thereafter they engaged the services of Gottlieb F. Burkhardt, an experienced brewer, who had lately arrived from Germany. Burkhardt made the first lager beer ever brewed in this vicinity. In 1849 Roessle bought out Kramer, and about the same time Burkhardt started in business on his own account on Northampton street, near Harrison avenue, where he continued brewing small beer until 1853, when he began to brew lager beer. In 1856 Burkhardt, who had in the mean time built a brewery on the corner of Parker and Steuben streets, Roxbury, sold out his place in Northampton street to William Baker. In the mean time, Charles Roessle had begun brewing lager beer on the island in Smith Pond in 1851, and Joseph Hechenger had started a small brewery on what is now Texas Place, off Tremont street, where, subsequent to



William Brewster



Samuel Chapin

1853, he had also begun to brew lager beer. H. & J. Pfaff began business in 1858 on Pynchon street, near Cedar street, which has been continued up to the present time. These were the pioneer lager beer breweries of Boston, whose number has increased until now a large area of the country in the Roxbury district is covered with their solid brick buildings, yards and vaults.

In 1847 Bowers & Pratt established a foundry for the manufacture of stoves. They continued it until 1862, when the firm became Pratt & Wentworth, who conducted the business until 1876, when the Highland Foundry Company was organized to take charge of the business. The company's foundries are located on Pynchon street, Boston Highlands, where stoves, ranges, and furnaces are manufactured, and which have become widely known for their excellence. The officers of the company are W. J. Towne, president, and George W. Elliott, treasurer.

According to the State census of 1875 there were 5,649 manufacturing establishments in Boston, in which was invested a capital of \$55,201,960. The value of goods manufactured was \$121,367,414. Chelsea had 169 establishments, representing an invested capital of \$2,391,442, and value of goods made \$4,308,261. Revere had five establishments, in which was invested a capital of \$10,800, and which produced a product valued at \$10,625, while the town of Winthrop had six establishments, in which was invested a capital of \$12,500, and which produced \$36,786 worth of manufactured product.

Among the principal industries reported for Boston in this census may be enumerated the following:

	No. of Est.	Capital Invested.	Value of Goods made.
Alcohol.....	1	\$250,000	\$600,000
Billiard tables	4	155,000	207,000
Boots and shoes.....	72	422,168	1,730,811
Boxes, paper.....	11	90,000	278,311
Bakeries.....	110	313,593	1,646,471
Building materials, fire-proof.....	5	44,000	105,175
Carpets.....	6	700,000	1,800,000
Carriages, wagons, coaches.....	39	466,755	515,784
Chromos and lithographs.....	10	373,500	616,000
Clothing.....	334	4,470,174	15,831,509
Confectionery	37	370,910	1,411,408
Dyes, paints and chemicals.....	7	580,000	1,028,000
Fertilizers, glue and tallow.....	3	179,000	308,000
Flour.....	1	250,000	510,000
Fur goods.....	16	238,200	430,700
Furniture.....	99	1,567,345	3,394,289
Gas.....	4	4,040,000	2,180,094
Horse shoe nails.....	1	350,000	350,000
Iron castings.....	9	435,000	723,875

	No. of Est.	Capital Invested.	Value of Goods made.
Iron steamships, marine and stationary engines.....	1	4,000,000	160,000
Jewelry	2	160,650	308,350
Kerosene and lubricating oils	2	230,000	750,000
Lead.....	1	5,000,000	250,000
Leather.....	13	7,000,000	2,110,378
Linseed oil and cake	1	1,000,000	665,000
Linseed oil and cotton bagging.....	1	6,000,000	360,000
Machines and machinery	4	2,310,000	5,660,409
Malt and malt liquors.....	16	1,184,000	2,832,924
Organs, church and cabinet.....	7	442,000	9,200,000
Paper and wood hangings	5	82,000	352,000
Pianos.....	10	2,000,000	2,146,000
Rope	2	175,000	45,000
Rubber goods.....	1	1,000,000	11,718,000
Ruin.....	3	45,000	1,208,000
Sails and awnings	30	90,000	364,000
Sewing machines	1	210,000	80,000
Soap and candles	0	0	2,727
Stoves, furnaces and ranges.....	16	183,000	325,000
Sugar and syrup, refining	5	2,075,000	14,000,000
Tin, sheet iron, copper and zinc ware.....	19	23,000	26,324
Trunks, valises and bags.....	16	174,000	70,000
Twine, cordage, nets, etc.....	10	772,000	1,055,476
Vessels	1	185,000	1,774,000

The successful manufacturing of watches by machinery was first accomplished through the enterprise and skill of Edward Howard and Aaron L. Dennison. In 1850 Mr. Howard, of the firm of Howard & Davis, pupils of the celebrated Williards, manufacturers of fine clocks and gold standard balances, determined to test the practicability of making watches by machinery. Associating with himself David P. Davis, Aaron L. Dennison and Samuel Curtis, under the style of the Warren Manufacturing Company, he built a factory at Roxbury, where the first complete American watches were made. This enterprise in its infancy encountered many difficulties, not only for want of suitable tools and workmen, but through the prejudice of dealers and opposition of importers. The name of the Warren Manufacturing Company was adopted with the view of concealing the kind of business the company was intending to do until the business had so far advanced as to be able to show some of its productions. As soon as watches were put into the market, the name of the company was changed to the Boston Watch Company. In 1854 this company erected a large factory at Waltham, but by incurring an outlay, in so doing, greater than their capital would warrant, it was overcome by pecuniary embarrassments, and in 1857 the property passed into the hands of Appleton, Tracy & Co., who carried on the business for some two years or more, when it

was finally incorporated under the name of the American Watch Company.

Mr. Howard, after the failure of the Waltham enterprise, returned to the original factory in Roxbury, and, abandoning the manufacture of the cheaper kind of watches and clocks, devoted himself exclusively to the higher grades. Although beset by many difficulties at first, he persevered until he achieved a high degree of success, the Howard watch gaining a reputation, ever since maintained, as among the best made. Mr. Howard for many years was the controlling spirit in the concern. In 1881 the company was incorporated under the style of the E. Howard Watch and Clock Company, with a capital of \$250,000, which was increased in 1892 to \$500,000. The company in 1873 erected another factory on Eustis street, Roxbury. The manufacture of watches is carried on in the old factory, while the new factory is devoted exclusively to the manufacture of clocks, which include, besides clocks for residences, town clocks of superior construction, astronomical clocks, and fine regulators for watchmakers. Several hundred skilled workmen are employed. Samuel Little is president of the company, Arthur M. Little, treasurer, and Rufus B. Carr, general manager.

Boston capital started the watch industry at Waltham, where it is still largely employed in what has since grown to be a very important industry.

The American Tube Works, with an extensive plant at Somerville, where 600 operatives are employed, was established in 1851. Seamless drawn brass and copper tubes for locomotives, marine and stationary boilers are the principal product. This company, after repeated trials, succeeded in producing seamless copper tubes identical, with exception of the metal, with their seamless brass tubes (the latter being protected by English patent), and now own the only patents under which a tube is drawn from a cylindrical casting of pure copper. E. S. Buckingham is president of the company, and William C. Cotton treasurer.

The leading marine industry at East Boston is that conducted by the Atlantic Works, which were incorporated in 1853. Up to the present time marine work has been the sole business, but in 1892 the Robinson Boiler Works was consolidated with the Atlantic Works, and preparations are now in progress for the manufacture of all kinds of plate iron work, including stationary boilers and tanks. Since the war the Atlantic Works have fitted about 100 vessels with engines and boilers,

including the steamer *Enterprise*, steamer *William Latona*, five lake steamers for freight traffic, the sloops of war *Adams* and *Essa*, the revenue cutters *Richard Rush* and *Samuel Dexter*, a number of ferry, tug and fire boats, coal, lighter and wrecking steamers, and steam yachts. The present officers of the Atlantic Works are: I. N. Lothrop, president, and Alfred E. Cox, treasurer and general manager. Oliver Edwards, for many years president of the works, was born in Buxton, Me., in 1808. When a boy he came to Boston and learned the machinist trade. Soon after attaining his majority, he commenced business in company with a Mr. Thayer, and later was one of the firm of Edwards, Holman & Fernald, manufacturers of fire-proof safes. After the retirement of Mr. Holman, the firm was Edwards, Fernald & Kershaw, and their establishment on Green street will be remembered by those familiar with that section more than forty years ago. In 1853 he was one of the originators of the Atlantic Works, and was president of that corporation from its organization until his death in 1876. When a young journeyman he made the first safe which was manufactured in the shop which later was celebrated for its manufactures in that line.

Gilman Joslin, also for several years president of the Atlantic Works, was born in Stoddard, N. H., in 1804. When a lad of thirteen he came to Massachusetts. After acquiring a fair education, he turned his attention to mechanical appliances, in which he afterwards excelled to a wonderful degree. When of age he went to Nashua, and for two years worked in a cotton factory; after which he returned to Boston and engaged as a wood turner and maker of looking-glasses and picture frames. In this calling he was brought into contact with artists and men of some scientific attainments, who were impressed by his ability and fine workmanship. Among these was Josiah Loring, a bookbinder by trade, whose business in part was the selling of school globes imported from England. About the year 1830, being satisfied that young Joslin could make equally good globes, he set him to work, and his expectations being realized, their manufacture was continued for several years, until the business was purchased by Mr. Joslin and continued by him for a number of years, until given up to his sons. His inventive faculty was constantly at work on some new idea. When the first account was published that Daguerre, in France, had discovered a process of making pictures by sunlight, young Joslin, although possessed of little practical knowledge of chemistry, did not wait to see a specimen of the process worked out by another, but applied himself at once,

and actually produced the first daguerreotype ever made in Boston. In 1853 he was one of the organizers of the Atlantic Works of East Boston; became one of the directors, and from that time until his death was unremitting in his labors to perfect the work turned out at that famous establishment. During the late civil war a number of the iron monitors, and many of the most important and difficult works required for our war vessels, were built at this establishment. In all these operations the intuitive knowledge, genius, and strong common sense of Mr. Joslin were conspicuous. Besides the presidency of these works, he was also president of the Coffey Dam Company, which he had assisted in organizing for the purpose of affording the facilities to repair large ocean steamers without the necessity of going into a dry dock. Perhaps the crowning work of his life in this direction was the designing and erection of the immense iron shears, now standing on the wharf at the works in East Boston, which are conceded to be the finest apparatus of the kind in the world, being one hundred and thirty feet in height, and capable of handling with celerity the largest masses of iron work now manufactured. He died in Boston, April 28, 1886.

The Cunningham Iron Works Company was founded in 1852 by Thomas Cunningham. In 1871 his two sons, J. H. and T. Cunningham, were admitted as partners, the business at that time being conducted under the firm style of Thomas Cunningham & Sons. The father dying in 1881, the sons succeeded to the entire control of the business, when they adopted the title of the Cunningham Iron Works. In 1885 the business was incorporated under its present title with a capital of \$100,000. This company have works at Charlestown and East Boston. Steam boilers, iron pipes and fittings are the main articles of manufacture, in which some two hundred men are employed.

In 1852 Solomon A. Woods and Solomon S. Gray, under the firm name of Gray & Woods, began in Boston the manufacture of wood-planing machines, originally invented by Mr. Gray, but greatly improved and rendered more practical by Mr. Woods's inventions. This copartnership lasted for five years, during which period valuable improvements were patented. In 1865 Mr. Woods added to his business the manufacture of the Woodworth planes, with the Woodbury patented improvements, of which he was the sole licensee. To meet the demands of this extensive business he commenced the erection of manufacturing works at South Boston, and established branch houses at New York and Chicago. In 1873 a corporation was formed, with a

capital of \$300,000, under the name of the S. A. Woods Machine Company, of which Mr. Woods became president, which position he still holds. To the successive firms of Gray & Woods, S. A. Woods and the S. A. Woods Machine Company, have been issued more than fifty patents for devices and improvements in machines for planing wood and making mouldings. They have received nearly one hundred gold, silver and bronze medals from the Massachusetts Charitable Mechanics' Association and numerous other similar institutions. Mr. Woods was the organizer and leader in the successful defence of the manufacturers of wood-working machines in the celebrated suit brought, in 1875, by the Woodbury Patent Planing Machine Company against the users of planing and moulding machines, the expense of the litigation on both sides aggregating nearly one hundred thousand dollars.

The modern passenger elevator, now so generally used in all large buildings, was originally invented by Otis Tufts, of Boston. Not only in this connection but in many other directions, Mr. Tufts's inventive genius was exercised with beneficent results. His ideas were in advance of the mechanical practices of the time, and he was constantly devising new ways to accomplish familiar processes, or inventing some devices to supersede them. He was born in Cambridge in 1804. He became a machinist, and first devoted his energies to the perfection and manufacture of printing presses. The "Tufts Press" was a familiar object in many printing offices more than half a century ago. In 1837 he perfected the first steam power printing press ever run in this country. He originated that style of steam engine which embraces the entire mechanism and boiler on a single bed. In 1845 he engaged in the enterprise of constructing iron steamships, and was the first to introduce the feature of making them with double hulls, braced and trussed together. He built and launched, in East Boston, the first vessel constructed wholly of *iron*, ever built in the United States. This was the tow-boat *R. B. Forbes*, the plans for the vessel and machinery being drawn by John Eriesson, afterward so famous as the designer of the celebrated *Monitor*. He also built the first steam pile-driver. The circumstances leading to this invention are these: Mr. Tufts was passing the site of the Boston Custom House when they were laboriously driving the piles for the foundation with a pile-driver operated by hand, and he suggested to the foreman that at that rate the building would be finished about the year 2000. The foreman knew Mr. Tufts, and alluding to the reputation of his printing press, asked if he thought he

could build a custom house as well. Mr. Tufts said he would tell him the next day. True to his word he called and showed the foreman the draft of a steam pile-driver which he had meanwhile thought out and put on paper. A machine was built at once, according to the design, and was soon in successful operation. Mr. Tufts took no steps toward securing a patent on his invention, which superseded the old fashioned hand machine everywhere. He also first applied steam to the cutting of marble. His invention, however, which has commanded the widest attention, was the steam elevator. The first one was actuated by a screw, and was called a "vertical railway," being placed in the Fifth Avenue Hotel in New York in 1859. This elevator excited widespread attention and universal admiration. He was also the inventor of the practice now universal of providing elevators with lifting ropes so arranged by levers as to equalize the strain, and also of adding others as extras to carry the load in case of breakage. The first one of this kind was put into the American House in Boston in 1868. His mind turned toward mathematics and mechanical sciences. His engines were considered perfect specimens of American mechanical and scientific skill, and were used not only by our government, but were also in demand abroad. He was an estimable citizen, a man of strict integrity, devoted to his business, always bent on making some needed improvement. He possessed great constructive ability, was genial, social and affable, and a great favorite among his acquaintances. Like many other inventors and benefactors, he planted the seed while others have gathered the harvest. He died at the age of sixty-five years, leaving two daughters and a son, Otis Tufts, jr., who succeeded his father in business. The latter died September 29, 1885. Like his father, he possessed rare inventive and mechanical ability.

Moore & Wyman succeeded to the business established by Otis Tufts. In 1884 the Moore & Wyman Elevator and Machine Works were incorporated. The plant of the company is located at the corner of Granite and Richards streets, where are manufactured steam, hydraulic, electric and belt elevators for passenger and freight service. The officers of the company are C. E. Moore, president; C. E. Wyman, treasurer.

In 1851 Richard F. Bond, of Dorchester, was awarded the "Grand Council Medal" at the World's Fair held in London for his invention for recording astronomical observations. He was born in Dorchester, in 1827, and was a son of the celebrated watch and chronometer maker, William Cranch Bond, from whom he learned the same business. At

the age of twenty-one he was taken into the firm, and afterwards became sole proprietor by purchasing the interest of his father and brother. He died in 1866.

William Lincoln, of Boston, was the second man in the United States to engage in the manufacture of coal oil in this country. Soon after the discovery of petroleum, he, with William D. Philbrook, built a refinery in East Boston. Later a refinery was built in East Cambridge. Here the business was conducted on a large scale, requiring the equipment of a line of schooners to ply between Philadelphia and Boston for the transportation of the petroleum. The factory was destroyed by fire in 1872, after which the business was not resumed.

In Chelsea are located the extensive foundry and workshops of the Magee Furnace Company, which were established in 1856, and incorporated under present title in 1867. The product of these works includes stoves, ranges, furnaces and heating apparatus of many descriptions, in the manufacture of which 400 workmen are employed. Their goods are not only largely used in this country, but in considerable quantities are exported to foreign countries. John Magee, president of the company, is the inventor of the Magee stoves and furnaces.

In 1858 Benjamin F. Sturtevant, elsewhere referred to in connection with inventions relating to shoe machinery, turned his attention to other inventions, and developed the blower or exhaust fan, which he extensively manufactured at Jamaica Plain until his death. In July, 1890, the B. F. Sturtevant Company was incorporated with a capital of \$500,000. The factory at Jamaica Plain consists of several brick buildings, constituting the largest exclusive blower and exhaust fan works in the world, and where 500 workmen are employed. The adoption of the Sturtevant blower for producing increased draught in marine boilers has revolutionized the ocean traffic and made possible the record-breaking trips of our transatlantic liners. Such vessels as the *City of Paris*, *City of New York*, and *City of Berlin*, have numbers of these fans on board, forcing the air through the boiler furnaces. On the *City of Paris* alone there are blowers delivering in the aggregate a volume of not less than 18,000,000 cubic feet per hour, almost doubling the steaming capacities of the boilers over what could be obtained without the use of the blowers. The United States navy early realized the immense advantages of forced draught, and all the vessels of the "new navy" have, with scarcely an exception, been fitted out with large numbers of the Sturtevant fans.

Mr. Sturtevant, the founder of this company, was born in Maine, in 1833, and early became well known through his invention for pegging boots and shoes. Besides the blower or exhaust fan he was the inventor of a projectile which was used by the government during the War of the Rebellion. He was a liberal patron of religious institutions, and built Sturtevant Hall at the Newton Theological Institution, and gave freely to many others. He died at his home in Jamaica Plain, April 17, 1890.

Among the industrial enterprises in Boston which have been conspicuously successful is that represented by the Boston Button Company, which was inaugurated on a small scale, in 1868, by Metcalf & McCleery. The business rapidly expanded, and now gives employment to 500 workmen. The present factory on A street, near the Congress street bridge, was erected in 1890. It is a spacious modern seven story building, and entirely utilized for manufacturing purposes. The productions consist of all kinds of covered buttons, covered tacks and nails, which find a ready market all over the United States, Canada, and in foreign countries. Branch offices and warerooms are maintained in New York, Chicago, San Francisco, Cincinnati, Montreal and Toronto. The original founders of the business are still sole proprietors.

At Cambridgeport is located the manufacturing plant of The Damon Safe and Iron Works Company, which succeeded to the business established by George L. Damon in 1874, the present company being incorporated in 1885. George L. Damon, the president and treasurer of the company, has been granted several valuable patents relating to safes, the most important relating to gravity automatic bolt work. This system is in use in the United States treasury vault at Washington, where the sum of \$90,000,000 in silver coin was stored in 1891. This great vault, which was built under Mr. Damon's direction in 1886, measures 55 by 35 feet and is 10 feet high. The great vault of the sub-treasury in New York, built in 1876, 48 by 28 by 12 feet, and the sub-treasuries at Boston, Philadelphia, Chicago, Baltimore, Cincinnati, St. Louis, New Orleans and San Francisco are all the work of this company, also the vaults in use in the mints at Philadelphia, San Francisco and New Orleans. During the last fifteen years this company has furnished to banking institutions in Philadelphia work exceeding in value half a million dollars, and in Boston and Massachusetts they have furnished work for the Boston Safe Deposit and Trust Company, Springfield Safe Deposit and Trust Company, American Loan and Trust Company, New

England Trust Company, Bay State Deposit and Trust Company, Old Colony Trust Company, Massachusetts Hospital Life Insurance and Trust Company, First National Bank, Worcester Safe Deposit and Trust Company, and the State Street Safe Deposit Vault, built in 1891 at a cost of \$150,000, the largest and most expensive iron vault in the United States, its capacity being 18,000 boxes.

Of late years Boston capital has been largely invested in the manufacture of clothing. Among the representative manufacturers in this line more than a half a century ago were Simeon Palmer, Carney & Sleeper, and Gove & Locke. John Simmons, of Quincy Market Hall, and George W. Simmons, of Oak Hall, advanced the character and respectability of ready-made clothing up to a mercantile standard. They were followed by Milton & Slocumb, and others, until at the present time the manufacture of clothing has become the largest single industry of the city. In 1880 there were 311 clothing manufactories giving employment to 12,661 hands, who earned \$1,206,768. In the department of men's clothing the product was valued at more than \$16,000,000, while the total product reached the sum almost of \$20,000,000.

In the manufacture of furniture Boston has long held the leading position among eastern cities. Within the city limits there are one hundred factories employing from fifteen to one hundred workmen. The capital invested in this industry, according to recent statistics, amounts to \$3,581,000; wages paid \$1,405,258; value of materials used \$1,981,674; value of product \$4,193,000; hands employed 2,249.

The industrial condition of Suffolk county according to the United States census for 1880 was as follows:

Kind of Industries.	No. Est.	Average No. hands emp.	Capital.	Value of Product.
Artificial flowers	4	178	20,000	124,000
Awning and tents	4	52	16,000	77,150
Baking and yeast powder.....	4	46	254,000	305,230
Belting and hose, leather	3	28	40,000	204,000
Billiard table and materials.....	4	43	47,000	88,300
Blacking	6	82	63,500	324,400
Blacksmithing.....	154	569	188,275	657,285
Bookbinding.....	46	1,019	410,000	986,416
Boot and shoe cut stock.....	13	266	62,500	352,200
Boot and shoe findings.....	11	175	117,700	389,883
Boots and shoes.....	83	1,321	348,775	1,028,740
Boxes, fancy and paper.....	18	522	139,900	380,062
Boxes, wooden, packing.....	5	46	18,500	80,900
Brass castings	26	246	222,400	410,553
Bread, crackers, and other bakery products.....	113	612	292,950	1,471,582
Bridges	9	138	53,000	325,500
Brooms and brushes.....	16	413	290,300	828,290

Kind of Industries.	No. Est.	Average No. hands emp.	Capital	Value of Product.
Carpentering	315	2,410	818,605	3,748,358
Carriage and wagon materials.....	3	23	52,000	1,003,358
Carriages and wagons.....	23	420	275,000	682,085
Clothing, men's	222	9,270	4,209,193	16,157,802
Clothing, women's	24	1,976	310,000	180,820
Coffee and spices, roasted and ground.....	12	121	280,000	1,418,860
Coffins and burial cases, and undertakers' goods ..	0	32	27,000	52,050
Confectionery.....	33	525	251,475	1,090,214
Cooperage.....	21	110	70,407	38,560
Coppersmithing.....	8	141	107,200	249,100
Cordage and twine	7	407	706,550	1,124,400
Cork cutting.....	4	56	32,434	106,125
Corsets.....	5	271	45,000	220,000
Cotton goods	5	289	243,000	500,000
Cutlery and edge tools.....	11	42	34,000	58,500
Drugs and chemicals.....	11	117	200,500	450,000
Dyeing and cleaning.....	20	215	41,300	135,371
Electrical apparatus and supplies	0	88	192,500	110,289
Electroplating.....	19	97	113,450	147,550
Engraving and die-sinking.....	22	174	53,150	224,031
Engraving, steel.....	5	116	7,600	18,700
Engraving, wood.....	11	64	20,135	83,97
Fancy articles	0	55	17,500	48,200
Fertilizers.....	5	254	508,000	1,231,170
Files.....	7	68	57,200	57,133
Flavoring extract.....	0	54	95,500	260,500
Flouring and grist mill products	8	69	510,000	1,101,000
Fruits and vegetables canned and preserved..	8	316	242,700	681,188
Furnishing goods, men's.....	15	182	600,000	377,925
Furniture.....	123	2,365	1,388,875	3,867,917
Furniture, chairs.....	7	104	70,000	257,238
Furs, dressed	13	117	94,547	203,250
Glass, cut, stained and ornamented.....	10	92	55,050	114,349
Gold and silver leaf and foil	5	52	19,300	69,175
Grease and tallow	4	100	392,000	594,868
Hair work.....	13	74	28,600	73,400
Hand stamps.....	5	12	0,500	20,350
Hardware	11	51	111,850	79,900
Hardware, saddlery	3	42	26,000	36,300
Hats and caps.....	27	402	106,200	441,276
House furnishing goods.....	5	39	20,700	46,200
Hosiery and knit goods.....	9	1,417	156,800	484,183
Instruments, professional and scientific.....	12	103	81,000	123,540
Iron and steel.....	5	1,120	1,624,498	2,189,687
Iron bolts, nuts, washers and rivets	3	39	30,000	51,000
Iron castings.....	20	650	589,000	894,500
Iron forgings.....	3	240	420,000	502,970
Japanning.....	0	29	4,600	25,000
Jewelry	20	403	208,100	516,722
Kindling wood.....	3	58	19,000	58,687
Labels and tags.....	5	132	288,000	450,325
Lapidary work.....	4	39	39,000	102,200
Lasts	3	14	10,500	18,100
Leather, curried.....	20	542	420,800	2,520,792
Leather, dressed.....	8	202	315,500	579,350
Lithographing.....	0	680	487,550	989,020

Kind of Industries.	No. Est.	Average No. hands emp.	Capital.	Value of Product.
Lock and gun smithing	2	51	29,000	67,560
Looking-glass and picture frames	41	208	123,700	533,007
Lumber, planed	10	172	282,500	160,810
Machinery	114	3,195	4,235,833	5,340,266
Marble and stone work	4	1,633	636,600	1,442,861
Masonry, brick and stone work	85	1,697	270,925	1,299,551
Mattresses and spring beds	10	314	181,597	777,792
Meat packing	21	211	018,000	7,006,777
Millinery and lace goods	4	144	38,500	317,000
Mineral and soda water	8	91	74,000	239,644
Models and patterns	22	37	24,850	88,455
Musical instruments and materials (not specified)	1	4	28,200	36,000
Musical instruments, organs and materials	8	52	445,366	9,4732
Musical instruments, pianos and materials	3	121	1,673,000	2,100,066
Oils, illuminating	1	11	9,000	345,000
Painting and paper hanging	220	1,090	248,828	1,193,791
Paints	1	75	41,500	39,000
Patent medicines and compounds	21	125	179,650	771,631
Perfumery and cosmetics	7	4	21,500	126,000
Photographing	41	186	1,309,000	231,935
Pickles, preserves and sauces	4	1	12,500	75,000
Plastering	17	8	13,800	92,680
Plumbing and gas fitting	117	50	232,550	973,588
Pocket books	3	7	24,000	7,000
Printing and publishing	145	2,806	2,496,535	5,469,518
Printing materials	4	15	15,300	28,000
Refrigerators	5	64	52,350	67,700
Roofing and roofing materials	41	238	173,625	475,567
Rubber and elastic goods	1	921	1,005,000	2,095,460
Saddlery and harness	60	413	723,300	570,000
Sash, doors and blinds	12	93	73,800	195,000
Scales and balances	5	44	49,000	51,613
Sewing machines and materials	3	41	243,000	102,700
Skirts	7	109	69,300	329,800
Show cases	5	18	10,800	23,080
Silk and silk goods	9	58	132,800	443,420
Silversmithing	5	13	4,250	16,230
Soap and candles	11	73	161,400	208,633
Soda water apparatus	3	200	95,000	487,306
Spectacles and eye-glasses	7	21	8,200	25,730
Sporting goods	4	71	58,000	133,800
Springs, steel, car and carriage	1	13	4,400	18,500
Stationery goods	1	87	48,800	27,000
Steam fitting and heating apparatus	9	203	269,500	398,780
Stencil and brands	12	55	28,500	53,200
Stereotyping and electrotyping	5	68	38,000	115,630
Stone and earthen ware	1	2	58,000	37,900
Straw goods	113	41,000	41,000	22,295
Sugar and molasses, refined	4	395	1,620,500	10,518,760
Surgical appliances	5	51	31,500	100,000
Taxidermy	1	9	1,800	14,000
Tin, copper and sheet iron ware	24	53	322,280	1,055,472
Tobacco, cigars	21	44	135,556	524,283
Trunks and valises	1	164	1,450,000	4,007,000
Type founding	1	136	72,200	162,000
Umbrellas and canes	3	22	17,600	59,640

Kind of Industries.	No. Est.	Average No. hands emp.	Capital.	Value of Product.
Upholstering.....	41	227	122,757	39,694
Varnish.....	3	16	65,000	235,000
Watch and clock repairing.....	6	42	6,700	12,000
Watch cases.....	5	122	65,000	427,371
Whalebone.....	4	54	24,500	69,417
Wheelwrighting.....	56	218	97,225	232,095
Window blinds and shades.....	12	57	19,250	76,345
Wire work.....	15	134	69,490	214,597
Wooden ware.....	3	21	6,000	35,500
Wood, turned and carved.....	44	450	327,060	791,355
*Miscellaneous industries.....	117	3,585	4,239,030	7,944,542
Totals.....	2421	39,813	42,759,134	12,366,137

The State census of 1885 gives the number of manufacturing establishments in Suffolk county as 5,472, in which was invested a capital of \$32,315,974, and the value of the manufactured product as \$149,281,727. Boots, shoes and slippers made represented a value of \$2,774,146; building, building material and stone work, \$14,160,065; clothing and straw goods, \$24,275,235; findings and trimmings, \$265,175; food preparations, \$39,959,785; iron goods, \$1,209,539; other metallic goods, \$7,789,726; leather, \$1,680,733; paints, colors, oil and chemicals, \$1,890,970; paper and paper goods, \$1,328,181; printing and publishing, \$11,244,422; textiles, \$4,000,065; wood and metal goods, \$6,413,435. Employment was furnished to 45,579 persons, of whom all but 1,913 were males.

At the present time Suffolk county presents a more diversified variety of manufactured products than any other county in the Commonwealth, and gives employment to more persons. In 1870 the manufactures of Suffolk county exceeded any other county by more than \$40,000,000.

The 117 establishments classed as miscellaneous industries are grouped in order that the business of individual establishments may not be disclosed to the public. In this group are embraced agricultural implements; artificial limbs; bags, other than paper; bags, paper; basket, rattan, and willow ware; belting and hose, linen; boot and shoe uppers; boxes, cigar; brick and tile; building materials; buttons; carpets, rag; carpets, wood; carriages and sleds, children's; cars, railroad, street, and repairs; cement; cheese and butter; chocolate; cleaning and polishing preparations; clocks, cloth finishing; collars and cuffs, paper; cordials and syrups; cotton ties; drain and sewer pipe; dye woods, stuffs and extracts; engraving materials; explosives and fireworks; fire arms; food preparations; foundry supplies; gas and lamp fixtures; gas machines and meters; glass; glue; graphite; grindstones; hat and cap materials; hones and whetstones; ink; iron, doors and shutters; iron, nails and spikes, cut and wrought; iron work, architectural and ornamental; jewelry and instrument cases; lamps and reflectors; lard, refined; lead, pipe, sheet and shot; leather goods; lime; lumber, sawed; malt; matches; metal refining; millstones; mirrors; needles and pins; oilcloth, floor; oleomargarine; pens, gold; photographic apparatus; plated and britannia ware; regalias and society banners and emblems; rules, ivory and wood; safes, doors and vaults, fire-proof; saws; shoddy; silverware; starch; telegraph and telephone apparatus; terra cotta ware; tobacco, chewing, smoking and snuff; toys and games; tools; veneering; vinegar; washing machines and clothes wringers; watches; and woolen goods.

In 1875 there were employed 16,977 persons in manufacturing in Boston, and in 1880 the number was 59,213. In 1890, 90,198 persons were employed. The earnings of the help employed in Boston have been conspicuously greater than in any other sections of the State. In 1880 the average in Boston was \$120.93, and in 1890 \$605.62. In 1870 the manufactured products of Boston amounted to \$106,000,000, in 1880 \$130,531,993, and in 1890 \$208,104,683.

The final statistics of manufactures for Boston for the year 1890 have not yet been issued. From preliminary reports from the census departments the following facts are obtained, which, however, may be subject to modification in final reports.

Number of industries reported	252
Number of establishments	7,915
Hands employed	90,198
Wages paid	\$51,636,695
Cost of materials used	\$104,631,879
Value of product	\$208,104,683

Detailed statement by important industries:

	No estab- ments.	Capital employed.	Value of product.	Wages paid.	No. hands employed.
Clothing	191	\$15,792,768	\$19,672,414	\$3,311,837	6,528
Coffee and spices, roasting and grinding	15	1,724,425	3,345,498	171,355	228
Confectionery	85	2,741,029	3,555,831	621,085	1,519
Cordage and twine	7	3,488,419	5,295,335	616,498	1,755
Foundry and machine shop pro- ducts	179	9,660,211	8,530,272	3,315,247	4,723
Furniture	66	3,602,009	4,193,391	1,495,258	2,249
Musical instruments	20	3,581,714	3,947,048	1,470,337	1,979
Printing and publishing	387	12,663,647	13,531,118	4,135,175	5,891
Rubber and elastic goods	15	1,473,085	1,784,781	331,057	980
Steam heating and heating ap- paratus	15	1,139,799	1,955,765	114,522	789

BOSTON'S RELATION TO THE TEXTILE INDUSTRY.

FROM the very beginning of the present factory system, as understood in its application to the textile industry, Boston men have been inseparably connected with every stage of its evolution, and from their capital, energy and brains its greatest benefits have been derived. Indeed, to eliminate the part Boston has thus played in the development of this industry, would be to leave out a vital element in its successful progress for fully three-quarters of a century. It has been the seat from which has radiated an influence far reaching in its effects upon the manufacturing interest of New England, and no record of the industrial progress of the city would be complete without giving prominence to this well recognized fact. Outside of its various twine and cordage manufactures, this city has, it is true, no mills of great importance within its borders, but as a distributing center and in the furnishing of capital it leads every city in New England.

The location which the settlers of Boston chose for the site of a city was almost entirely devoid of water power. To be sure, that portion of the Charles River flats which was separated from the rest by the mill dam furnished power for three tide mills, but this power was inadequate for any great manufactures. So as the city grew, and the demands of the people for clothing materials outgrew the facilities of supply by means of the hand looms and spinning wheels, in the use of which every housewife was proficient, some other source of supply became imperative. In another portion of this work is recounted the story of how the ladies of Boston used to hold spinning bees on the Common, "vying with one another in their dexterity in the use of the spinning wheel." But this soon became a thing of the past.

It was in 1803 that the manufacturers of the city first took the step from which has grown the present system of textile manufacturing in

the large towns and cities in the interior of the State. The nearest bountiful supply of water power to Boston was at Watertown, where the Charles makes its last rapid run to the level of the sea. It was at this point that, in the year mentioned, the first weaving mill was built. It was by Boston money and by Boston ability entirely that this was done, so that this enterprise must fairly be classed as a Boston undertaking.

As the city grew and the population of the State increased, more textile mills became a necessity, and in later years Boston capital and Boston men were to be found pushing out into the rest of the then large territory in search of streams and falls under which they might set their wheels. From these small beginnings on the banks of Massachusetts rivers have grown large and thrifty towns and cities, the offsprings of Boston as truly as though they had been settled by men from Boston entirely. Here the mill population, which the suburbs of Boston could never have economically supported from the natural increase in the cost of living in a large city, has made comfortable homes for itself. And almost all these are tributary to the parent city.

Before recounting more specifically the important part performed by Boston men in successfully laying the foundation of the textile industries of Massachusetts, it may be proper to give a brief account of the rise of the cotton mills of New England. The beginning of the modern cotton factory may be said to date from the successful experiments of Samuel Slater at Pawtucket, R. I., in 1790. Previous to this date, however, cotton spinning, further than the hand card, and one thread wheel, was carried on at Beverly, Mass., where in 1787 the Beverly Company was formed, and built a small brick factory on Bass River. John Cabot and Joshua Fisher were the founders of the enterprise.

General Washington, in his diary of his trip through New England in 1789, thus writes of his visit to this factory:

In this manufactory they have the new invented spinning and carding machines. One of the first supplies the warp, and four of the latter, one of which spins eighty-four threads at a time by one person. The cotton is prepared for these machines by being first (lightly) drawn to a thread on the common wheel. There is also another machine for doubling and twisting the threads for particular cloths; this also does many at a time. For winding the cotton from the spindles and preparing it for the warp there is a reel which expedites the work greatly. A number of looms (fifteen or sixteen) were at work with spring shuttles, which do more than double work. In short, the whole seemed perfect and the cotton stuffs which they turn out excellent of their kind; warp and filling both cotton.

The enterprise at Beverly, however, was not a financial success. The expense attending the operation of the factory was far greater than was warranted by the small price obtained for the coarse fabric produced by the rude machinery. In 1787, and again in 1790, the managers appealed to the Legislature for aid. A grant of £1,000 was made, but the Beverly Company failed to make a success of this enterprise. The imperfect machinery employed failed to turn out goods of the finish and beauty which the English factories could show, because of superior workmen and improved machinery.

“Such,” says George Rich in his history of the cotton industry in New England, published in the *New England Magazine*, 1890, “was the situation when Samuel Slater arrived in this country at the close of 1789. Slater was fresh from the center of the industry in England. Born in Derbyshire in 1768, he was early apprenticed to Jedediah Strutt, a Milford cotton manufacturer, and a partner of Sir Richard Arkwright, in the spinning business. The latter circumstance was a most important one. It gave young Slater every opportunity to master the details of the construction of the best cotton machinery then in use. During the last years of his apprenticeship he was a general overseer, not only in making machinery, but in the manufacturing department of Strutt’s factory. But Slater was a pushing, energetic young fellow, and was not content with the position even of overseer. He chanced upon a copy of an American newspaper and there learned of the general interest that was being taken by this country in cotton manufacturing, and the generous bounties promised those who should build satisfactory machinery. This determined him to emigrate hither. But he knew he could carry with him neither models nor drawings. He was blessed with a mathematical mind and a retentive memory. These, fortified by his long experience, gave him an equipment that no custom officials could seize. He landed in New York in November, 1789, and after some delay in that city pushed on to Providence, R. I. There Almy & Brown were trying to operate the card jennies which they had brought from the old ‘home spun cloth’ company. Slater looked them over and pronounced the whole lot utterly worthless. Moses Brown, the head of the firm, a worthy Friend, was rather astonished at the wholesale condemnation of his plant. He recovered, however, sufficiently to reply: ‘But thee hast said thee canst make the Arkwright machines; why not do it?’ The result was that the young mechanic there contracted with Almy & Brown to produce a ‘perpetual

card and spinning system' for them. . . . One can hardly appreciate the difficulties of the task. All the plans had to be made from memory. Skilled machinists and modern tools for working wood and iron were wanting. Secrecy, furthermore, was necessary, lest some rival should get hold of and anticipate the plans. Sylvanus Brown was hired to do the wood work, and David Wilkinson the metallic. These, with Slater and an old colored man, constituted the force. Behind closed doors and barred windows this quartette worked for nearly a year before any of the machinery was ready for trial. On December 20, however, three cards, drawing and roving, together with seventy-two spindles, were complete. These were then taken to an old fulling-mill and a test of them made."

The experiment was in every way satisfactory and justifies the claim made for Slater as "the founder of American textile machinery." His machines were all constructed on the Arkwright principle, a fact of peculiar significance, which Edward Atkinson thus emphasizes:

In the whole treatment of cotton, as it is now practiced in the finest factories of modern kind, there is but one original invention, all else is but a change or modification of prehistoric methods. That invention was one which Sir Richard Arkwright borrowed from a previous inventor and put in use about a century ago; namely, the extension of the strand prior to the twisting of the spindles. This was accomplished by the use of several pairs of rollers, one placed in front of the other, and those in front working at a higher speed than those behind.

At this time nothing but spinning was done. The yarn was sent out among the farmers to be woven into cloth. "The spinning system," says Mr. Rich, "once established, its extension was rapid. At the close of the Revolution there sprang up all over the country societies for the promotion of various objects, such as agricultural, the arts and trades. It was the fashion for gentlemen of leisure to take an active part in some such movement. The result was that a knowledge of the new inventions and improvements was quickly and widely spread. American cotton was then of a very poor quality. The picker was a thing of the future, and the staple had to be sent into the country to be whipped and cleaned. The work was of necessity imperfectly done. Slater declined to use the home cotton when he began his operations, insisting on that imported from the West Indies. Finally the war of 1812 shut off the stream of importation from Great Britain and forced the people of this country to depend upon themselves. Commerce was unnaturally checked. Thousands who had been employed in ship-



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building or the fisheries had then to turn to the various manufacturing industries. Factories and mills sprang up throughout New England. The whirr of the spinning jenny became a common sound. The men who had received their training under Slater took this chance to branch out for themselves." Factories were started at Pitchburg and Watertown in 1807, and at Amoskeag Falls, N. H., in 1810. In the same year the first Maine (then a province of Massachusetts) factory was started at Brunswick.

By the close of 1810 factories were distributed throughout New England. The census reports of 1810 show that Massachusetts had 54 mills, New Hampshire 12, Vermont 1, Rhode Island 28, and Connecticut 14. In New York there were 26 factories, in New Jersey 4, in Delaware 3, in Maryland 11, Kentucky 15, Tennessee 4, Ohio 2, and Pennsylvania 64. Under the impetus given the manufacture by the war, the capital invested in it, in 1815, was estimated at \$40,000,000, and the operators numbered 34,000 men and 66,000 women.

But the greatest revolution in the industry was yet to come. This was wrought by the introduction of the power loom. Francis C. Lowell, of Boston, was the principal agent in this change, and from this time can be dated the beginning of the important part performed by Boston men in the development of this great industry.

In 1811 Mr. Lowell made a visit to England for the purpose of inspecting its factories, and inspired by the patriotic idea of securing for his own country the inestimable advantage of being the manufacturer of its own fabrics. While abroad he conceived the idea that the cotton manufacture, then almost monopolized by Great Britain, might be advantageously prosecuted here. The use of machinery was daily superseding the former manual operations, and it was known that power looms had recently been introduced, though the mode of constructing them had been kept secret. The cheapness of labor and abundance of capital were advantages in favor of the English manufacturer. On the other hand they were burdened with the taxes of a prolonged war. We could obtain the raw material cheaper, and had a great superiority in the abundant water power, then practically unemployed in every part of New England. It was also the belief of Mr. Lowell that the character of our population, educated, moral and enterprising as it was, could not fail to secure success, when brought into competition with their European rivals. It was while in Edinburgh that Mr. Lowell met Hon. Nathan Appleton, of Boston, who, even at that day, was a man of large

means. To Mr. Appleton he communicated his plans and purposes, and from the meeting of these two men may be dated the identification of Boston with the development of the cotton manufacture in America. Mr. Appleton in his "Introduction of the Power Loom" thus refers to this incident: "My identification with the cotton manufacture takes date from the year 1811, when I met my friend, Mr. Francis C. Lowell, at Edinburgh, where he had been passing some time with his family. We had frequent conversations on the subject of cotton manufacture, and he informed me that he had determined before his return to America, to visit Manchester for the purpose of obtaining all possible information on the subject, with a view to the introduction of the improved manufacture in the United States. I urged him to do so, and promised him my co-operation."

In 1813 Mr. Lowell returned to this country, bringing, without doubt, a better knowledge of the manufacturing operations of Great Britain than possessed by any other person in the United States. He at once entered enthusiastically upon the work of doing in America what he had seen accomplished in the Old World in cotton manufacturing. So confident was he in his calculations that he thought he could in no way so effectually assist the fortunes of his brother-in-law, Patrick T. Jackson, of Boston, whose mercantile business had been seriously affected by the war, than by offering him a share in the enterprise. No more fortunate selection of associate could have been made. Mr. Jackson's was not a spirit to be appalled by obstacles. He entered at once into the project, and from that time until his death, many years later, no one did more than he in the development of the ideas first suggested by Mr. Lowell.

Great were the difficulties that beset the new undertaking. The state of war prevented any communication with England. Not even books and designs, much less models, could be procured. The structure of the machinery, the materials to be used in the construction, the very tools of the machine shop, the arrangement of the mill, the size of its various departments—all these were to be as it were, reinvented. The first object to be accomplished was to procure a power loom, not one having yet been used in America. To obtain one from England was impracticable; and although there were many patents for such machines in the United States patent office, not one had yet exhibited sufficient merit to be adopted into use. Under these circumstances but one resource remained—to invent one themselves; and this these earnest men at once set about. Unacquainted as they were with machinery,

in practice, they dared nevertheless to attempt the solution of a problem that had baffled the most ingenious machinists. The experiments were begun in a store on Broad street, Boston. It was found necessary to procure the assistance of a practical mechanic, and they were fortunate to secure the services of Paul Moody, of whom Edward Everett has said: "To the efforts of his self-taught mind, the early prosperity of the great manufacturing establishments at Waltham and Lowell in no small degree is due." Mr. Lowell, with a frame already wasted by disease, was the inspiring spirit of his associates; fertile in suggesting expedients, and sublimely confident of a successful result, he devoted all of his time and energies to the task, regardless of his strength or health. After months of experimenting their first loom was ready for trial, and with what satisfaction its successful operation was regarded, can be gained from Mr. Appleton's account of his first examination of the machine. Mr. Lowell had told his friend, Mr. Appleton, that he did not wish him to see the machine until it was completed, of which he would give him notice. "At length," says Mr. Appleton, "the time arrived. He invited me to go out with him and see the loom operate. I well recollect the state of admiration and satisfaction with which we sat by the hour watching the beautiful movement of this new and wonderful machine, destined as it evidently was to change the character of all textile industry. This was in the autumn of 1814."

Previous to this, however, Mr. Lowell and Mr. Jackson had secured the incorporation of the Boston Manufacturing Company; had purchased a water power in Waltham (Bemis's Paper Mill), and built a factory. The capital authorized by the charter was \$400,000, but it was agreed to raise only \$100,000 until the experiment should be fairly tried. Of this sum Mr. Lowell and Mr. Jackson and his brother subscribed the greater part, and Nathan Appleton \$5,000. It was not until after the building at Waltham was completed and other machinery was running that the first loom was ready for trial. Mr. Lowell's loom was different in several particulars from the English loom, which was afterwards made public. The principal movement was by a cam, revolving with an eccentric motion, which later gave place to the crank motion. As might naturally be expected, many defects were found in this first model loom, but these were gradually remedied.

The project heretofore had been exclusively for a weaving mill, to do by power what had before been done by hand looms. But it was

ascertained that it would be more economical to spin the twist rather than to buy it, and so some 17,000 spindles were introduced in the mill, thus comprising within one establishment all the processes necessary to convert raw cotton into cloth. This made the Waltham mill without doubt the first complete factory in the world. The former mills in this country—Slater's, for example, in Rhode Island—were spinning mills only; and in England, though the power loom had been introduced, it was used in separate establishments by persons who bought, as the hand weavers had always done, their twist of the spinners. Spinning on throstle spindles and the spinning of filling directly on the cops without the process of winding was also introduced. Of this latter improvement a pleasant anecdote is told. It is given in Nathan Appleton's language: "Mr. Shepard, of Taunton, had a patent for a winding machine which was considered the best extant. Mr. Lowell was chaffing with him about purchasing the right of using them on a large scale at some discount from the price asked. Mr. Shepard refused, saying, 'You must have them; you cannot do without them, as you know, Mr. Moody.' Mr. Moody replied: 'I am just thinking I can spin the cops direct from the bobbin.' 'You be hanged!' said Mr. Shepard; 'well, I accept your offer.' 'No,' said Mr. Lowell, 'it is too late.' A new born thought had sprung forth from Mr. Moody's inventive mind, and he had no more use for Mr. Shepard's winding machine."

Great difficulty was at first experienced at Waltham for the want of a proper preparation (sizing) of the warp. The Waltham proprietors procured from England a drawing of Horrocks's dressing machine, which, with some essential improvements, they adopted. No method was, however, indicated in this drawing for winding the threads from the bobbin on to the beam; and to supply this deficiency, Mr. Moody invented an ingenious machine called the warper. Having obtained these, there was no further difficulty in weaving by power looms. A deficiency, however, remained in the preparation for spinning. A description was obtained from England of what was then called a bobbin and fly, or jack-frame, for spinning roving. From this Mr. Moody and Lowell produced a machine called a double speeder. The motion of the machine was very complicated, and required nice mathematical calculations. Without them, Mr. Moody's ingenuity, great as it was, would have been at fault. These were supplied by Mr. Lowell. Many years after the death of Mr. Lowell, when the patent for the speeder

had been infringed, Dr. Nathaniel Bowditch was requested to examine them that he might appear as a witness at the trial. He afterward expressed his admiration of the mathematical power they evinced, adding that there were some corrections introduced that he had not supposed any man in America familiar with but himself.

It will be seen how much there was at this early period to be done by the projectors of the Waltham mill, and how well it was accomplished. The machines first introduced there are practically those still in use in New England, brought, of course, to greater perfection in detail, and attaining a much higher rate of speed.

Mr. Lowell died in 1817, at the early age of forty-two, satisfied that he had succeeded in his object, and that the extension of the cotton manufacture would form a permanent basis of the prosperity of New England. He had been mainly instrumental in procuring from Congress, in 1816, the establishment of the minimum duty on cotton cloth, an idea which originated with him, and one of great value, not only as offering a certain and easily collected revenue, but as preventing the exaction of a higher and higher duty, just as the advance in the cost abroad rendered it more difficult for the consumer to procure his necessary supplies.

Although the first suggestions and many of the early plans for the new business had been furnished by Mr. Lowell, Mr. Jackson devoted the most time and labor in conducting it. He spent much of his time in the early years at Waltham, separated from his family. It gradually engrossed his whole thoughts, and abandoning his mercantile business, in 1815, he gave himself up to that of the company.

At the erection of each successive mill, many prudent men, even among the proprietors, had feared that the business would be overdone—that no demand would be found for such increased quantities of the same fabric. Mr. Jackson, with the spirit and sagacity that so eminently distinguished him, took a different view of the matter. He not only maintained that cotton cloth was so much cheaper than any other material that it must gradually establish itself in universal consumption at home, but entertained the bolder idea that the time would come when the improvements in machinery, and the increase of skill and capital, would enable us successfully to compete with Great Britain in the supply of foreign markets. Whether he ever anticipated the rapidity and extent of the developments which he lived to witness, may, perhaps, be doubted. It is certain, however, that his expectations

were, at that time, thought visionary by many of the most sagacious of his friends.

The perfect working of the power-loom at Waltham set at rest all doubtful conjectures, and became an agency by which was ultimately averted in large measure the injurious effect of the fierce competition American manufacturers were subjected to by the peace of 1815. During the war of 1812, when British manufacturers were excluded from our market, the manufacture of cotton had greatly increased, especially in Rhode Island, but in a very imperfect manner. The manufacturers of this State were clamorous for a high tariff after the peace of 1815 was declared, claiming that British importation would ruin their industries. Mr. Lowell, however, realizing what could be done by the power-loom, had more moderate views on the tariff, and in 1816, when a new tariff was to be made, went to Washington, and through his efforts induced Mr. Lowndes and Mr. Calhoun to support the minimum tariff of 6 $\frac{1}{4}$ cents on the square yard, which was carried. For a time the cotton manufacturers were disposed to look upon this low tariff as ruinous to their business, and many suspended operations. By degrees, however, they woke up to the fact that the power-loom was an instrument that changed the whole character of the manufacture, and that by its adoption the tariff was sufficiently protective. Little did they think, however, that the same goods of cotton cloth which was then sold for thirty cents a yard could be sold in 1843 at a profit for six cents; but such was the revolution in this industry caused by the power-loom.

The success of the Boston Manufacturing Company at Waltham made its proprietors anxious to extend their interest in the same direction. Nathan Appleton, in his *Introduction of the Power-Loom and the Origin of Lowell*, published in 1858, thus gives an account of the rise of the great industrial enterprises of Lowell, in which Boston men and capital so largely figure:

I was of opinion that the time had arrived when the manufacture and printing of calicoes might be successfully introduced in this country. In this opinion, Mr. Jackson coincided; and we set about discovering a water-power. At the suggestion of Mr. Charles H. Atherton, of Amherst, New Hampshire, we met him at a fall of the Souhegan River, about six miles from its entrance into the Merrimack, but the power was insufficient for our purpose. This was in the summer of 1821. In returning, we passed the Nashua River, without being aware of the existence of the fall which has since been made the source of so much power by the Nashua Company. We saw a small grist-mill standing in the meadow near the road, with a dam of some six or seven feet. Soon after our return, I was at Waltham one day; when I was informed

that Mr. Moody had lately been at Salisbury, where Mr. Worthen, his old partner, said to him: "I hear Messrs. Jackson and Appleton are looking out for water-power—why don't they buy up the Pawtucket Canal? That would give them the whole power of the Merrimack, with a fall of thirty feet." On the strength of this, Mr. Moody had returned that way, and was satisfied with the extent of the power, and that Mr. Jackson was making inquiries on the subject. Mr. Jackson soon after called on me, and informed me that he had had a correspondence with Mr. Clark, of Newburyport, the agent of the Pawtucket Company, and had ascertained that the stock of that company, and the lands necessary for using the water-power, could be purchased; and asked me what I thought of taking hold of it. He stated that his engagements at Waltham would not permit him to take the management of a new concern, but he mentioned Mr. Kirk Boott as having expressed a wish to take the management of an active manufacturing establishment, and that he had confidence in his possessing the proper talent for it. After a discussion it was agreed that he should consult Mr. Boott; and that, if he should join us, we would go on with it. He went at once to see Mr. Boott, and soon returned to inform me that Mr. Boott entered heartily into the project; and we set about making the purchases without delay. Until these were made it was necessary to confine all knowledge of the project to our own three bosoms. Mr. Clark was employed to purchase the necessary lands, and such shares in the canal as were within his reach; whilst Mr. Henry Andrews was employed in purchasing up the shares owned in Boston. I recollect the first interview with Mr. Clark, at which he exhibited a rough sketch of the canal and adjoining lands, with prices which he had ascertained they could be purchased for; and he was directed to go on and complete the purchases, taking the deeds in his own name, in order to prevent the project taking wind prematurely. The purchases were made accordingly for our equal joint account; each of us furnishing funds as required to Mr. Boott, who kept the accounts. Formal articles of association were then drawn up. They bear date December 1, 1821; and are recorded in the records of the Merrimack Manufacturing Company, of which they form the germ. The six hundred shares were thus described

Kirk Boott and J. W. Boott.....	180
N. Appleton.....	180
P. T. Jackson.....	180
Paul Moody.....	no
	600

The Act of Incorporation of the Merrimack Manufacturing Company bears date 5th of February, 1822; reorganizing the original association as the basis of the company. Our first visit to the spot was in the month of November, 1821, when a slight snow covered the ground. The party consisted of P. T. Jackson, Kirk Boott, Warren Dutton, Paul Moody, John W. Boott, and myself. We perambulated the grounds, and scanned the capabilities of the place; and the remark was made, that some of us might live to see the place contain twenty thousand inhabitants.

On our first organization, we allowed Mr. Moody to be interested to the extent of ten per cent., or sixty out of six hundred shares. We soon after made an arrangement with the Waltham Company making a mutual interest between the two companies. The canal was a work of great labor. The first water-wheel of the Mer-

rimack Manufacturing Company was set in motion on the 1st of September, 1823. The business of printing calicoes was wholly new in this country. It is true that, after it was known that this concern was going into operation for that purpose, two other companies were got up, one at Dover, New Hampshire, the other at Taunton, in both of which goods were probably printed before they were by the Merrimack Company.

The bringing the business of printing to any degree of perfection was a matter of difficulty and time. Mr. Allen Pollock thought himself competent to manage it, and was employed for some time. Through the good offices of Mr. Timothy Wiggan, Mr. Prince, of Manchester, was induced to come out, with his family; and has remained at the head of the establishment up to the present period (1855).

The engraving of cylinders was a most important part of the process; and Mr. Boott made one voyage to England solely for the purpose of engaging engravers. It was then kept a very close mystery. Mr. Dana was employed as chemist. Through the superior skill and talent of Messrs. Boott, Prince, and Dana, the company was brought to the highest degree of success. In the mean time, Mr. Moody was transferred from Waltham to this place, having charge of the manufacture of machinery. Mr. Worthen had been employed at an early day. He was a man of superior mechanical genius, and his death was deeply regretted. The capital of the Merrimack Company was gradually increased, a division of the property betwixt that company and the Proprietors of the Locks and Canals was made, new companies were established, until the new creation became a city, by the name of Lowell. I may, perhaps, claim having given it the name. Several names had been suggested, but nothing fixed on. On meeting Mr. Boott one day, he said to me that the committee were ready to report the bill (in the Legislature). It only remained to fill the blank with the name. He said he considered it narrowed down to two,—Lowell or Derby. I said to him "Then Lowell, by all means;" and Lowell it was.

There was a particular propriety in giving it that name, not only from Mr. Francis C. Lowell, who established the system which gave birth to the place, but also from the interest taken by the family. His son of the same name was for some time treasurer of the Merrimack Company. Mr. John A. Lowell, his nephew, succeeded Mr. Jackson as treasurer of the Waltham Company, and was for many years treasurer of the Boott and Massachusetts mills; was largely interested and a director in several other companies. There is no man whose beneficial influence in establishing salutary regulations in relation to this manufacture was exceeded by that of Mr. John A. Lowell. The name Derby was suggested by Mr. Boott, probably from his family associations with that place, it being also in the immediate vicinity of one of the earliest seats of the cotton manufacturers.

Such was the beginning of Lowell, a city which these enterprising Boston capitalists lived to see completed. If all honor is to be paid to the enterprise and sagacity of men who in later days, with the advantage of great capital and longer experience, bid a new city spring up from the forest on the border of the same stream, accomplishing almost in a day what in the course of nature is the slow growth of centuries, what shall we say of the forecast and energy of the founders of Lowell,

who could contemplate and execute the same gigantic task at that early period?

A very cursory glance at the history of these men will suffice to show that they were eminently qualified for the task they had undertaken of founding a new town.

Francis Cabot Lowell is said to have been a descendant of one of two brothers, Richard and Percival Lowell, who came to Newbury, Mass., from Bristol, England, in 1639. His grandfather was Rev. John Lowell, who in the first half of the preceding century was for forty-two years pastor of the First Church in Newburyport. His father was John Lowell, LL.D., judge of the United States Court of Massachusetts. He was born in Newburyport, April 7, 1775, and graduated from Harvard College in 1793. He became a merchant, but was driven from his business by the embargo, the non-intercourse and the war. He went to Europe for his health in 1810, and his sojourn there of three years was pregnant with results of the highest importance to the manufacturing interests of our country. He died August 10, 1817, at the age of forty-two years. It was his son, John Lowell, who gave \$240,000 to found the Lowell Institute at Boston.

Nathan Appleton, in his "Origin of Lowell," bears the following testimony to the part performed by Mr. Lowell in the introduction of the power loom in America:

Mr. Lowell adopted an entirely new arrangement in order to save labor, in passing from one process to another, and he is unquestionably entitled to the credit of being the first person who arranged all the processes for the conversion of cotton into cloth within the walls of the same building. It is remarkable how few changes have been made from the arrangements established by him in the first mill built at Waltham. It is also remarkable how accurate were his calculations as to the expense at which goods could be made. He used to say that the only circumstance which made him distrust his own calculation was that he could bring them to no other result but one which was too favorable to be credible. His calculations, however, did not lead him so far as to imagine that the same goods which were then selling at thirty cents a yard would ever be sold at six cents, and without a loss to the manufacturer, as has since been done in 1843, when cotton was about five or six cents per pound. His care was especially devoted to the arrangements for the moral character of the operatives employed. He died in 1817, at the early age of 42, beloved and respected by all who knew him. He is entitled to the credit of having introduced the new system in the cotton manufacture, under which it has grown up so rapidly. For, although Messrs. Jackson and Moody were men of unsurpassed talent and energy in their way, it was Mr. Lowell who was the informing soul which gave direction and form to the whole proceeding.

Nathan Appleton was born in New Ipswich, N. H., October 6, 1779, and was a son of Isaac Appleton. He entered Dartmouth College in 1791, but soon after left to engage in business in Boston with his brother Samuel. When he became of age he was admitted into partnership, and the firm was known as S. & N. Appleton. This was at a time when the commerce of the United States, under the genial influence of the Federal Constitution, began to revive from the paralysis caused by the old confederation. Several years of great prosperity followed, during which Mr. Appleton laid the foundation of his fortune. The restrictive system which commenced in 1807 crippled the trade of the country and gradually forced the thoughts of enterprising men toward manufactures. How Mr. Appleton was led to embark into cotton manufacture, and the great success which attended the venture has been told. He was elected to the State Legislature in 1815, and was re-elected one of the Boston representatives in 1816, 1821, 1823, 1824 and 1827. In 1830 he was elected a member of the House of Representatives of the United States, after one of the most exciting and closely contested political struggles which Boston has ever witnessed. Declining a re-election in 1832, he was induced to resume the Boston seat in Congress for a few months in 1842. During his congressional career he took an active part in shaping the tariff legislation, delivering three speeches on the subject. His attention was also largely devoted to the banking system of Massachusetts, and to the currency of the United States, publishing several essays on currency and banking which attracted wide attention. "There was, I suppose," said Edward Everett, in a speech at a meeting of the merchants of Boston, held shortly after the death of Mr. Appleton, "no person in the community who understood the subjects of banking and currency better than Mr. Appleton; few as well. Mr. Webster once, in a conversation with me, after mentioning other distinguished financiers, added, 'But Mr. Appleton, on these subjects, is our most astute and profound thinker.' Sooner than most men he discovered the false system and dangerous principles on which the Bank of the United States was proceeding, and foretold the crash which afterwards took place." During the last years of his life, Mr. Appleton had been withdrawn from active participation in business, beyond what was necessary for the care of his large property, of which he made a liberal use as a patron of every meritorious charity and public spirited enterprise. His death occurred July 14, 1861.

In the Memoir of Nathan Appleton, prepared by Robert C. Winthrop, his character is thus admirably portrayed:

Neither the employment of his time, his faculties, nor his fortune had been that of a mere maker or hoarder or lover of money; and no such character could ever have been attached to him by the community in which he lived. The very investment of so large a part of his property in domestic manufactures had many of the best elements of charity; and the satisfaction which he derived from the success by which he was himself enriched, was not a little enhanced by the consideration that he had been the means of affording employment to so great a number of operatives of both sexes, who might otherwise have failed to obtain work and wages. But his mind was one of the last which could have contented itself with merely poring over his own day-book and ledger, much as he may have prized the virtues of the trial balance. He was a person of large reading, diligent study, careful reflection, varied acquisition, whose published writings would alone be sufficient to show how little of his time and thought could have been taken up with any private pecuniary ends of his own. Harvard University recognized his claim to the distinction of literature by the honorary degree of Master of Arts in 1844, and of Doctor of Laws in 1855. The American Academy of Arts and Sciences, the American Antiquarian Society, and other kindred associations enrolled him among their domestic members; and the Archaeological Institute of Suffolk county, in Old England, placed his name on its foreign honorary list. He had, indeed, accumulated a great estate, but it had brought with it no canker of pride or avarice. He was a liberal, public spirited gentleman, whose charity began at home, but did not end there; who made handsome provision for a hospitable household and a numerous family, without limiting his benevolence within the range of domestic obligations or personal ties. He was not ostentatious of his bounty, either in life or death; nor did he seek celebrity for his name by any single and signal endowment; but he never looked with indifference on the humane and philanthropic enterprises of the day, nor declined to unite in sustaining those institutions of education and science which are the glory of his time. . . . His own name will be cherished among those which have most adorned our rolls [Massachusetts Historical Society], and will henceforth have a conspicuous place in that list of illustrious merchants whose enterprise, integrity and public spirit have made up so large a part of the best history of Boston.

The name of Patrick Tracy Jackson is associated in the minds of all acquainted with the history of Boston with public enterprise, purity of purpose, vigor of resolution and kindliness of feeling. He was born at Newburyport on the 14th of August, 1780, and was the youngest son of Jonathan Jackson, a member of the Continental Congress in 1782, marshal of the District of Massachusetts under Washington, first inspector and afterwards supervisor of the internal revenue, treasurer of the Commonwealth for five years, and at the time of his death treasurer of Harvard College; a man distinguished among the old fashioned gentlemen of that day for the dignity and grace of his deportment, but

much more so for his intelligence, and the tearless, almost Roman inflexibility of his principles. His maternal grandfather, from whom he derived his name, was Patrick Tracy, an opulent merchant of Newburyport—an Irishman by birth, who, coming to this country at an early age, poor and friendless, had raised himself, by his own exertions, to a position which his character enabled him adequately to sustain.

Young Jackson received his education at the public schools of his native town, and afterwards at Dunmore Academy. When about fifteen years old he was apprenticed to William Bartlett, then the most enterprising and richest merchant of Newburyport, and well known for his munificent endowment of the institution at Andover. He soon secured the esteem and confidence of Mr. Bartlett, who entrusted to him, when under twenty years of age, a cargo of merchandise for St. Thomas, with authority to take the command of the vessel from the captain, if he should see occasion.

It was during the opening years of the present century when Mr. Jackson commenced his career in the business world on his own account. He had previously made many voyages in merchant ships, and had acquired a thorough knowledge of navigation and of seamanship. He had taken charge of a ship and cargo on four successive voyages to India, when, in 1808, having established his reputation and acquired some capital, he relinquished the sea and entered into commercial pursuits in Boston. His acquaintance with the India trade eminently fitted him for that branch of business, and he had the support and invaluable counsels of his brother-in-law, Francis C. Lowell. He entered largely into this business both as an importer and speculator. The same remarkable union of boldness and sound judgment, which characterized him in later days, contributed to his success, and his credit soon became unbounded. In 1811, at a moment when his engagements were very large, and when the state of the country was such, in its foreign relations, as to call for the greatest circumspection, a sudden check was given to his credit, by the failure of a house in the same branch of business with which he was known to be extensively connected. His creditors became alarmed, but Mr. Jackson acted under this emergency with his usual promptness and resolution. Calling upon some of his principal creditors, he made a lucid statement of his affairs, and so completely did he show himself to be master of his business, that he was allowed to go on unmolested, and the event justified the confidence reposed in him. In the end he gained reputation and public confidence by the



George W. Filshie, 1871

circumstances that had threatened to destroy him. Within a year all the embarrassments that had menaced him had passed away, and he continued largely engaged in the India and Havana trade till the breaking out of the war of 1812. At this period circumstances led him into cotton manufacture with results already stated.

After succeeding in establishing the cotton manufacture on a permanent basis, and possessed of a fortune quite adequate to his wants, Mr. Jackson determined to retire from the labor and responsibility of business. With this end in view, he resigned the agency of the factory at Waltham, still remaining a director both in that company and the new one at Lowell, and personally consulted on every occasion of doubt or difficulty. This life of comparative leisure was not of long duration. His spirit was too active to allow him to be happy in retirement, and he soon plunged once more into the cares and perplexities of business. Mr. Moody had recently introduced some important improvements in machinery, and was satisfied that great saving might be made, and a higher rate of speed advantageously adopted. Mr. Jackson proposed to establish a company at Lowell, to be called the Appleton Company, and adopt the new machinery. The stock was soon subscribed, and Mr. Jackson appointed the treasurer and agent. Two large mills were built and conducted by him for several years, till success had fully justified his anticipations. Meanwhile his presence at Lowell was of great advantage to the new city. All men there, as among the stockholders of Boston, looked up to him as the founder and guardian genius of the place, and were ready to receive from him advice or rebuke, and to refer to him all questions of doubt or controversy. As new companies were formed, and claims became conflicting, the advantages became more apparent of having a man of such sound judgment, impartial integrity, and nice discrimination to appeal to, and who occupied a historical position to which no one else could pretend.

In 1830 the interests of Lowell induced Mr. Jackson to enter a business, new to himself and others. This was the building of the Boston and Lowell Railroad. For some years the practicability of constructing roads, in which the friction should be materially lessened by laying down iron bars or trams, had engaged the attention of practical engineers in England. At first it was contemplated that the service of such roads should be performed by horses; and it was not until the brilliant experiments of Mr. Stephenson, on the Liverpool and Manchester Railroad, that the possibility of using locomotive engines was

fully established. The necessity of a better communication between Boston and Lowell had been the subject of frequent conversations between Mr. Boott and Mr. Jackson. Estimates had been made and a line surveyed for a macadamized road. The travel between the two places was rapidly increasing, and the transportation of merchandise, slowly performed in summer by the Middlesex Canal, was done at great cost, and over bad roads in winter by wagons.

At this moment the success of Mr. Stephenson's experiments decided Mr. Jackson. He saw at once the prodigious revolution that the introduction of steam would make in the business of internal communication. Men were, as yet, incredulous. The cost and danger attending the use of the new machines were exaggerated, and even if feasible in England, with a city of one hundred and fifty thousand souls at each of the termini, such a project, it was argued, was Quixotical here, with our more limited means and sparser population. Mr. Jackson took a different view of the matter, and, when after much delay and difficulty, the stock of the road was subscribed for, he undertook to superintend its construction with the especial object that it might be in every way adapted to the use of steam power, and to that increase of travel and transportation which others like him had the sagacity to anticipate. Full of confidence in his own energy he entered on the task, so new to every one in this country, with the same boldness that he had evinced twenty years before in the erection of the first weaving mill. He was not accustomed to waste time in any of his undertakings. But there were, however, many points to be attended to, and many preliminary steps were to be taken. A charter was to be obtained, and, as yet, no charter for a railroad had been granted in New England. With respect to the road itself, nearly everything was to be learned. Mr. Jackson established a correspondence with the most distinguished engineers of this country and of Europe; and it was not until he had deliberately and satisfactorily solved all the doubts that arose in his own mind, or were suggested by others, that he would allow any steps to be decided on. In this way, although more time was consumed than on other roads, a more satisfactory result was obtained. The road was graded for a double track; the grades reduced to a level of ten feet to the mile; all curves, but those of very large radius, avoided; and every part constructed with a degree of strength nowhere else, at that time, considered necessary. A distinguished engineer, Mr. Charles Chevalier, spoke of the completed

work as truly "Cyclopean." Every measure adopted showed conclusively how clearly Mr. Jackson foresaw the extension and capabilities of the railroad.

It required no small degree of moral firmness to conceive and carry out these plans. Few persons realized the difficulties of the undertaking, or the magnitude of the results. The shareholders were restless under increased assessments and delayed income. It is not too much to say that no one but Mr. Jackson could, at that time, have commanded the confidence necessary to enable him to pursue his work so deliberately and so thoroughly.

The road was opened for travel in 1835, and experience soon justified the wisdom of his anticipation. Its completion and successful operation was a great relief to Mr. Jackson. For several years it had engrossed his time and attention, and at times deprived him of sleep. He felt it to be a public trust, the responsibility of which was of a nature quite different from that which had attended his previous enterprises.

One difficulty that he had encountered in the prosecution of this work led him into a new undertaking, the completion of which occupied him a year or two longer. He felt the great advantage of making the terminus of the road in Boston, and not, as was done in other instances, on the other side of the river. The obstacles appeared at first sight insurmountable. No land was to be procured in that populated part of the city, except at very high prices; and it was not then the public policy to allow the passage of trains through the streets. A mere site for a passenger depot could, indeed, be obtained; and this seemed to most persons all that was essential. Such narrow policy did not suit Mr. Jackson's ideas. It occurred to him that by an extensive purchase of flats, then unoccupied, a site could be obtained. The excavations made by the railroad at Winter Hill, and elsewhere, within a few miles of Boston, much exceeded the embankments, and would supply the gravel to fill up these flats. Such a speculation not being within the powers of the corporation, a new company was created for the purpose. The land was made, to the extent of about ten acres; and what was not needed for depots, was sold at advantageous prices. It was found, a few years later, that even the large provision made by Mr. Jackson was inadequate to the daily increasing business of the railroad.

Mr. Jackson was now fifty-seven years of age. Released once more from his engagements, in which he would be followed by the respect of the community, and the gratitude of many families that owed their wel-

fare to his exertions. But a cloud had come over his private fortunes. While laboring for others he had allowed himself to be involved in some speculations, to which he had not leisure to devote his personal attention. The unfortunate issue of these deprived him of a large portion of his property.

Uniformly prosperous hitherto, the touchstone of adversity was wanting to elicit, perhaps even create, some of the most admirable traits in his character. He had long been affluent, and with his generous and hospitable nature, had adopted a style of living fully commensurate with his position. The cheerful dignity with which he met his reverses; the promptness with which he accommodated his expenses to his altered circumstances; and the almost youthful alacrity with which he once more put on the harness, were themes of daily comment to his friends, and afforded to the world an example of the truest philosophy. He had always been highly respected; the respect was now blended with love and admiration.

The death of his friend, Mr. Boott, in the spring of 1837, had proved a severe blow to the prosperity of Lowell. At the head of the Locks and Canals Company, which controlled the land and water power, and manufactured all the machinery used in the mills, the position he had occupied led him into daily intercourse with the managers of the several companies. The supervision he had exercised, and the influence of his example, had been felt in all the ramifications of the complicated business of the place. The Locks and Canals Company being under his immediate charge, was, of course, the first to suffer. This property rapidly declined both intrinsically and in public estimation. The shares, which for many years had been worth \$1,000 each, were sold for \$700 and even less. No one appeared so able to apply the remedy as Mr. Jackson. Familiar, from the first, with the history of the company, of which he had always been a director, and the confidential adviser of Mr. Boott, he alone, perhaps, was fully capable of supplying that gentleman's place. He was solicited to accept the office, and tempted by the offer of a higher salary than had, perhaps, up to that time ever been offered in this country, he assumed the trust. During the seven years of his management the proprietors had every reason to congratulate themselves upon the wisdom of their choice. The property was brought into the best condition, extensive and lucrative contracts were made and executed; the annual dividends were large; and when at last it was

thought expedient to close the affairs of the corporation, the stockholders received of capital nearly \$1,600 a share.

The brilliant issue of this business enhanced Mr. Jackson's reputation. He was constantly solicited to aid, by advice, by service and counsel, wherever doubt or intricacy existed. No public enterprises were brought forward till they had received the sanction of his opinion.

During the last years of his life he was the treasurer and agent of the Great Falls Manufacturing Company at Somersworth, a corporation that had been doing an unprofitable business at a great expense of capital. He made radical changes in management, and practically rebuilt and reconstructed the entire property. The results from his management were highly satisfactory, and the company became very prosperous. His fortune had, in the mean time, been restored to a point that relieved him from anxiety, and he was not ambitious of increasing it.

For some time after he assumed the duties of the agency at Somersworth, the labor and responsibility attending it were very severe, yet he seemed to his friends to have all the vigor and elasticity of middle age. It may be, however, that the exertion was beyond his physical strength; certainly after a year or two he began to exhibit symptoms of gradual prostration, and when attacked by illness, in the summer of 1847, his constitution had no longer the power of resistance, and he sank rapidly until his death occurred in the following September, at his sea-side residence at Beverly. It had not been generally known in Boston that he was unwell. The news of his death was received as a public calamity. The expressions that spontaneously burst forth from every mouth were a most touching testimonial to his virtues as much as to his ability.

Paul Moody was born in Newbury, Mass., May 23, 1779. His father was a man of much influence in the town, and was known as Captain Paul Moody. He early showed himself to be the possessor of remarkable talent in the direction of mechanical invention. By degrees his talents became so well known that his aid was sought in positions of high responsibility. In such positions he had been employed in the Wool and Cotton Manufacturing Company in Amesbury, previous to his connection with the Boston Manufacturing Company at Waltham. He gained a distinguished name as the inventor of machinery for the manufacture of cotton. He invented the winding-frame, a new dressing machine, the substitution of soapstone rollers for iron rollers, the

method of spinning yarn for filling directly on the bobbin for the shuttle, the filling frame, the double speeder, a new governor, the use of the dead spindle, and various other devices which gave speed and completeness to the work of manufacturing cotton. His inventive genius was the animating spirit of the cotton mill. He died in July, 1831, at the age of fifty-two years. Of this event, Dr. Edson, in the funeral sermon delivered at Lowell, July 10, 1831, says: "His death produced a greater sensation than any event that has transpired in this town. He died in full strength of body, in the very vigor of age and constitution."

Kirk Boott was born in Boston, October 20, 1790. His father, Kirk Boott, came to Boston in 1783, and became a wholesale dry goods merchant. He was the builder of the Revere House. The son received his early education in Boston. Subsequently he studied at the Rugby School in England, and entered the class of 1809 in Harvard College. Having a taste for military life, he left the college before completing his course, and went to England, where he qualified himself to enter the English army as a civil engineer. At the age of twenty-one years he received a commission in the English army, and was subsequently made lieutenant in the Eighty-fifth Light Infantry, and with this regiment took part in the peninsular campaign under Wellington, landing in Spain in August, 1813. At the close of the wars of Napoleon, the Eighty-fifth Regiment was ordered to America to take part in the war of 1812, but Mr. Boott, being by birth an American, refused to bear arms against his native land. He then came home, but later on returned to England and completed his engineering studies at the Military Academy at Sandhurst, before finally resigning his commission. After his marriage to an English lady he returned to Boston and engaged with his two brothers in mercantile pursuits. In 1822 he accepted the position of agent of the Merrimack Mills. In this position he found a field congenial to his great executive abilities. "Up to this time," says one biographer of his life, "manufactures in America had been carried on in small, detached establishments, managed by the owners of the property; but now the great experiment was to be tried of so managing the affairs of great stock companies, so as to yield to the owners a satisfactory profit. To do this demanded a man of original commanding intellect, of indomitable courage and iron will. Such a man was Mr. Boott. For such a position his natural ability and his military experience had admirably qualified him. He entered upon his

task with resolute courage and conscientious devotion to duty. His pen and pencil were busy upon drawings and plans for new structures. He was arbiter in a thousand transactions." So intense was his application to his tasks that his health became affected, and to his over exertion can be mainly attributed his death, April 11, 1837, in the forty-seventh year of his age, and after fifteen years of most valuable service, during the most critical period of the Merrimack Mills.

It was at Lowell that many of the most important improvements in the manufacture of textile fabrics were inaugurated. There the printing of calico was first profitably introduced. The bringing of the business, however, to any degree of perfection proved a work of difficulty and time; many of the auxiliary arts, such as that of engraving the printing cylinders, being then kept profoundly secret in England, while all exportation of machinery from that country was prohibited. Even under the stimulus afforded by the protective duties, the manufacture was hardly successful before 1825. The highest success was finally attained, with gradually reduced prices to consumers for many succeeding years, decreasing in price from 23.07 cents per yard in 1825 to 9.15 cents per yard in 1855.

It was during the protective period, extending from 1821 to 1834, that the most material changes in the texture of American cotton fabrics were made—changes so marked as to have become of national importance. The Hamilton brown drillings, of a twilled texture, were first made in Lowell in 1827. Before, this fabric and that of jeans was first made here by power, no cotton cloth, except of a perfectly plain texture, were made by power in England, although similar fabrics had been made on hand looms. When the drillings were first introduced, the question was generally asked: "What can be done with them?" But this fabric being stronger, thicker, more serviceable, and at the same time cheaper, than anything that could be imported, supplied a universal want of consumers of cotton, and in a few years many of the mills began its manufacture, and to-day it is one of the staples of American manufacture. During the same year (1827) was commenced at the Hamilton Mills the manufacture of a twilled article, blue and white, since known as shirting stripe, which was found to be more serviceable and suitable for the hard service of sailors than the thinner and lighter article they had been accustomed to wear, known as the blue and white check, which was mostly imported from England.

Soon this fabric came into general use among the sailors and there was great demand for export.

The early founders of Lowell—all Boston men—not only of large means, but of great enterprise, energy and intelligence, soon put the business of the Merrimack Manufacturing Company on a firm and profitable basis. Capital was speedily attracted to this new and promising field. New corporations were organized, new factories were built. So rapid was the growth of the town that, in 1836, it was incorporated as a city. To-day it is one of the leading cities of Massachusetts, with a population of fully 80,000, while the assessors' books for 1890 place the city's valuation at more than \$62,000,000.

The capital of the Merrimack Company has been several times increased, until now it is \$2,200,000. Howard Stockton, of Boston, is treasurer of the company. With 158,976 spindles, 4,183 looms and twenty-one printing machines, this company is able to produce 1,000,000 yards of dyed and printed cloth per week. Following the Merrimack, the Hamilton Manufacturing Company, incorporated in 1825, was the next concern to begin operations on a large scale at Lowell. In the organization of this company, as in the Merrimack, Boston men and capital figured. It now has a capital of \$1,800,000. With 111,064 spindles and 3,131 looms the weekly capacity of the mills is 720,000 yards, the productions consisting of prints, ticks, stripes, drills and cotton flannels. The Appleton Company was incorporated in 1828, and has a capital of \$600,000. With 45,564 spindles and 1,221 looms, its productive capacity is 350,000 yards per week, consisting of drillings, sheetings and shirtings. The Lawrence Manufacturing Company began operations in 1833, with a capital of \$1,200,000, which has since been increased to \$1,500,000. L. M. Sargent is treasurer and John Kilburn agent. With about 150,000 spindles, the weekly capacity is 700,000 yards, consisting of hosiery, shirting, sheeting, denims and cotton flannels. The Boott Cotton Mills commenced operations in 1836, and has a capital of \$1,200,000. With 151,292 spindles and 4,215 looms, 775,000 yards of drillings, sheetings and shorthings are produced weekly. Elliot C. Clark is treasurer, and A. G. Cummack agent. The Suffolk Manufacturing Company was incorporated in 1831, with a capital of \$600,000, and the Tremont Mill during the same year with a like capital. These two companies were consolidated in 1871, under the name of the Tremont and Suffolk Mills. The capital is \$1,500,000. With 120,000 spindles and 1,000 looms, the weekly producing capacity is

about 600,000 yards of sheeting, shirtings, drills, cotton flannels and colored goods. A. S. Covell is treasurer, and E. W. Thomas agent. The Massachusetts Cotton Mills began operations in 1840. The capital is \$1,800,000. With 125,000 spindles and 4,061 looms, 90,000 yards of sheetings, shirtings, drillings and cotton flannels are produced weekly. Chas. L. Lovering is treasurer, and S. Southworth agent. These seven cotton mills of Lowell, with a combined capital of \$10,600,000, have their main offices in Boston, where resides a large proportion of the stockholders and officers of the various companies.

The Lowell Manufacturing Company, which is one of the oldest carpet mills in the country, was largely a Boston enterprise. It was incorporated in 1828, with a capital of \$900,000, which has since been increased to \$2,000,000. Among its incorporators were Frederic Cabot, William Whitney and Richard C. Cabot. This company was the first to use for weaving carpets the power looms invented by E. B. Bigelow,¹ an invention so wonderful that it seems almost endowed with intellect. The company originally commenced operations with a single mill four stories in height and about 200 feet in length, with a few necessary buildings for storing raw materials and manufactured goods, sorting wool and dyeing. About two-thirds of this space was occupied for the manufacture of coarse cotton cloth, called Osnaburgs, or Negro cloth, which was largely sold in the South for plantation wear. The remaining space was utilized for the production of carpeting on hand looms, the weaving being done in the fourth story. It was in one corner of this weave room, partitioned off for the purpose, that the Bigelow power loom, which was destined to work such a revolution in carpet weaving, was built and perfected in 1842, or about that time. In 1848, when it was evident that Bigelow's invention could be profitably employed, a mill of one story in height and covering nearly an acre of

¹ Erastus B. Bigelow was born in West Boylston, Mass., in 1814. At an early age he began inventing various machines, the first being for making piping cord, followed by looms for weaving suspender webbing, knitting counterpanes, weaving coach lace, ginghams, and finally carpets, which with various appliances to the machinery, made the number of patents taken out by him about fifty. He saw the carpet industry of the world revolutionized by his processes, and had the satisfaction of having his carpet looms rights for Great Britain bought by the great house of Crossly & Sons, of England, who, until then, had led the world in that manufacture. He was the author of many publications on topics connected with the manufacturing industries. He was one of the incorporators of the Massachusetts Institute of Technology, was a trustee of the Museum of Fine Arts, a member of the American Academy of Arts and Sciences, of the Massachusetts Historical Society, and of the London Society for the Encouragement of Arts, Manufacture, and Commerce. The town of Clinton was founded by the industries based on his inventions. He was president of the Bigelow Carpet Company and the Clinton Wire Cloth Company. He died in 1879.

ground, was erected, and furnished with 260 of these looms for the manufacture of carpets. About 1883 another spacious mill, three stories high, was erected for the manufacture of Brussels carpets, and furnished with a Hartford automatic engine of 500 horse power. The works of this company now occupy about ten acres of ground. Ingrain, Brussels and Milton carpets are manufactured. The treasurers of the company in order of service have been as follows: Frederic Cabot, George W. Lyman, Nathaniel W. Appleton, William C. Appleton, J. Thomas Stevenson, Israel Whitney, Charles L. Harding, David B. Jewell, Samuel Fay, George C. Richardson and Arthur T. Lyman. George F. Richardson is president of the company, and Alvin S. Lynn agent.

The Middlesex Company, which manufactures beavers, yacht cloths, coatings, cassimeres and shawls is another Lowell enterprise which owes its origin to Boston men and capital. It was incorporated in 1830 with a capital of \$500,000, which has since been increased to \$750,000. Among its incorporators were Samuel Lawrence and William W. Stone. This company has suffered far more than any other in Lowell from the mismanagement of the men whom it had entrusted with office. In 1858, the entire capital having been lost by its officers, the company was reorganized with new managers and new subscriptions to stock. Since the reorganization it has had very gratifying success. This company has been a pioneer in the successful manufacture in America of goods which had heretofore been imported from Europe. Samuel Lawrence, for several years treasurer of the company, upon this point says:

When the Middlesex Company started, in 1836, most of the woolen goods consumed here were from England, imported by men from Yorkshire, who for many years evaded paying the full amount of duties by undervaluation One of the difficulties in the early production of woollens here was a defect in dyeing. This company was most fortunate in early discovering that this evil arose from the simplest cause—the imperfect cleansing of the wool. Mr. Compton, of Taunton, Mass., became employed by the Middlesex Company to adopt his principle to their looms to produce a fabric like the Sedan, and was entirely successful. Thus commenced in this country the manufacture of fancy cassimeres. The shawl manufacture by the Middlesex Company was commenced in 1847. Up to that time the fringes were twisted by hand, and the success depended upon its being done by machinery. At that time Mr. Milton D. Whipple was in the employment of the company perfecting a teltig machine, and he was employed to produce a twisting machine for fringes, in which he succeeded perfectly, and thus gave this branch of industry to this country.

During recent years this company has enjoyed a high degree of prosperity. G. Z. Silsbee is president, and O. H. Perry, agent.

The city of Lawrence, which belongs to a much later period than Lowell, but, like the latter city, its establishment was almost wholly due to Boston men and capital. It owes its rise to the organization of the Essex Manufacturing Company and its name to Abbott and Samuel Lawrence.

In his valuable *Memoir of Abbott Lawrence*, published a few years ago, Hamilton A. Hill gives the following interesting account of the rise of Lawrence and the founding of the Pacific Mills:

The rapid waters of the Merrimack, Whittier's "mountain-born" river, already made to serve the purposes of human industry at many a point in their course towards the ocean, were to be arrested yet once again for further service before they should reach the sea. The precise spot had been determined on, and a large purchase of land had been made provisionally by the Merrimack Water Power Association, of which a younger brother of the Lawrence family, Mr. Samuel Lawrence, afterwards the first president of the Boston Board of Trade, was president and treasurer. In the winter of 1844-45, an act was asked for, and obtained, from the Massachusetts Legislature, incorporating the Essex Company. On the morning after the final passage of the bill, the gentlemen named in it as corporators and their associates assembled at the State House in Boston, and were present when Governor Briggs attached his signature to it and made it a law. The same hour they started on an excursion to the site of the future city, proceeding by rail to North Andover, and thence by carriages to the Falls. This company of business men, upon whose decision and action such vast interests depended, consisted of Messrs. Abbott Lawrence, William Lawrence, Samuel Lawrence, Francis C. Lowell, John A. Lowell, George W. Lyman, Theodore Lyman, Nathan Appleton, Patrick T. Jackson, William Sturgis, John Nesmith, Jonathan Tyler, James B. Francis, and Charles S. Storrow. An account of the day's proceedings is given in the *History of Essex County*, recently published, which says:

"After a careful examination of the neighborhood, and the discussion of various plans upon the spot, the party drove to Lowell, and sat down to a late dinner at the Merrimack House. Lord Stowell used to say: 'A dinner lubricates business,' and in the instance before us we have a memorable illustration of the fact." We quote again from the *History of Essex County*:

"In that after-dinner hour was taken the first decisive step leading to permanent organization and effective work. Mr. Abbott Lawrence and Mr. John A. Lowell retired for a few minutes for consultation, and, returning, offered the Water Power Association, as a fair equivalent for all its acquired rights and interests, the sum of \$30,000, in addition to the reimbursements of all expenses previously incurred; assuming also to carry out all agreements made by the associates for the purchase of lands and flowage rights already secured by bond, and to lead off in the organization of the Essex Company by large subscription to its stock. * * * A proposition so definite, promising immediate organization of a powerful company, and commence-

ment of active operations with efficient leaders, was promptly accepted. Thus on the day the act was signed, before set of sun, steps had been taken by parties who harbored no fear of failure and took no backward course, which resulted in immediate operation, as vigorous and unremitting as the inception was energetic and novel. The excursionists returned home, hardly realizing that a city had been born which would force products upon the world's markets, call laborers from all civilized northern races, and work materials supplied from every quarter of the globe.

All this happened on the 20th of March, 1845. Two years later the subscription paper of the Essex Company was drawn up. Mr. Lawrence was the first and largest subscriber, taking one thousand shares at one hundred dollars each. This investment of one hundred thousand dollars he never disturbed, and the shares, we believe, are still held in the family. He took the presidency of the company, and under his direction contracts were at once made, and in the month of June following, work was commenced. The new town of Lawrence—there could be no question as to what its name should be—was incorporated April 17, 1847; the dam was completed September 19, 1848, and the first cotton arrived January 12, 1849, consigned to the Atlantic Cotton Mills, of which Mr. Lawrence was also president and one of the large stockholders. The town became a city, by charter granted March 21, 1853. It now has a population of about forty thousand, and a taxable valuation of twenty-five million dollars. Most justly has it been said: "The broad, comprehensive, unwavering faith, and large capacity of Abbott Lawrence, should never be forgotten by dwellers in the city that bears his name." In 1853 the Pacific Mills were incorporated with a capital of two million dollars, and with Mr. Lawrence for president.

Amos and Abbott Lawrence, who figure so prominently in the founding and subsequent history of Lawrence, were Boston men of especial prominence. A lengthy biography of Abbott Lawrence appears in the preceding volume of this work. Amos Lawrence was born in Groton, Mass., April 22, 1786. He began his business career as a clerk in Dunstable, Mass. In 1807 he came to Boston and began business on his own account as a dry goods merchant. In 1811 he entered into partnership with his brother, Abbott Lawrence, under the firm name of A. & A. Lawrence, which continued until his death. They were highly successful in business, and both had accumulated large fortunes, when, in 1830, they became identified with cotton manufacturing at Lowell. After a serious illness in 1831, Amos retired from active business and devoted the remainder of his life to acts of benevolence. He expended over \$600,000 for charitable purposes. Among the institutions he generously assisted were Williams College, the academy at Groton, the title of which in recognition of his beneficence being changed in 1813 to Lawrence Academy; Wabash College; Kenyon College; the Theological Seminary at Bangor, Me., and several others. The Childs Infirmary at Boston, and Bunker Hill monument were also

objects of his beneficence, while his private benefactions were innumerable. He died at Boston, December 31, 1852.

John Amory Lowell, another Boston man who figured prominently in the founding of Lawrence, was a son of John Lowell, and grandson of Judge Lowell, of the United States Circuit Court. He graduated from Harvard College in 1815, at the age of sixteen, and commenced his business career with the house of Kirk Boott & Sons, to whose business he subsequently succeeded. In 1827 he was treasurer of the Boston Manufacturing Company at Waltham, succeeding Patrick T. Jackson, and held that position until 1844. In 1835 he built the Boott Mill at Lowell, and was treasurer of that company for thirteen years, and afterwards president and director until his death. In 1839 he built the Massachusetts Mills, of which he was also treasurer till 1848, and a director through life. He was also director in the Lake Company and the Lowell Machine shop. With Abbott Lawrence and others he was associated in the creation of the Essex Company at Lawrence, and a director of the Pacific Mills until age compelled him to relinquish some of his cares. For fifty-nine years he was a director of the Suffolk Bank of Boston, and one of the originators of the system of redemption of country bank notes, serving on the committee of foreign money for many years. He was also one of the fellows of Harvard College for forty years, and for a longer period a trustee of the Lowell Institute. He was an accomplished classical scholar, an eminent mathematician, an able botanist and a rare linguist. Generous in his impulses, he delighted in giving aid to younger men, and was always ready to contribute to any cause which appealed to his generosity. Such a union of business capacity, literary and scientific attainments, unsullied integrity and unostentatious generosity, formed a rare combination, and enabled him in a long life of untiring industry to do much for the advancement of his generation, and to add a lustre to the honored name he bore. Born November 11, 1788, he died October 31, 1881.—From "Records of Old Residents' Association," Lowell.

The Pacific Mills are the largest in Lawrence. They commenced operation in 1852. They contain 180,000 spindles and 4,078 looms. The productions consist of prints and fancy cotton. The capital is \$2,500,000. The Atlantic Mills, started at an earlier date, 1846, are next in importance with a capital of \$1,000,000. Sheetings and shirtings are their specialty. The Everett and the Pemberton are the other large corporations. The latter has a capital of \$450,000. The fall of

the Pemberton Mills in January, 1860, was the saddest calamity in the factory life of Lawrence. One hundred and fourteen persons were killed and more than 100 injured. The Arlington Mills and the Washington Mills are woolen mills. The former was established in 1865, and the latter in 1886. The capital of each is \$2,000,000.

The textile industries of Lowell and Lawrence by no means include all the localities in which Boston capital is largely interested. They are merely the two centers where Boston men have been conspicuous factors in the development of the textile industry. In many other localities in Massachusetts, New Hampshire, and other New England States, Boston men and capital are largely interested. There are in Boston today no less than 145 offices of textile manufacturers, 100 of which represent firms in this State. The remainder are proportioned among New England and other States.

Boston is the distributing center of the raw material as well as the manufactured product of the textile mills of New England. The wool and cotton trade of Boston during late years has grown to immense proportions, in the former of which it is the first in the United States. Probably in no branch of commercial activity has Boston assumed a higher place than in that connected with the handling of foreign and domestic wool. It is not alone in New England that Boston wool is shipped, but also south to many of the large textile manufacturing districts of Pennsylvania. So great is the volume of the wool business in Boston that the sales in this market are excelled only by those of the English market in London. The chief markets of this country rank as follows in respect to sales:

	Domestic.	Foreign.	Total.
Boston	\$115,827,159	\$42,328,300	\$158,155,459
New York	20,770,300	27,760,000	47,081,200
Philadelphia	35,962,326	19,343,300	55,305,626
St. Louis	18,000,000		18,000,000
Chicago	19,000,000		19,000,000

It will be seen that Boston sells three times as much domestic wool as her nearest competitor, and more than the four other markets of prominence combined. The supremacy as a foreign wool market was wrested from New York in 1890.

MASSACHUSETTS CHARITABLE MECHANIC ASSOCIATION

THE Massachusetts Charitable Mechanic Association has had a most wholesome effect in stimulating and advancing the industrial arts, not only in this State, but throughout New England. It has had a continuous existence since the year 1795. It is composed of master mechanics, manufacturers, and persons practiced in the arts, who, at the time of their admission, were residents of this State, and engaged in business on their own account. But few existing organizations have so remote an origin. The first meeting of the tradesmen, mechanics and manufacturers, which resulted in the formation of the association, was held at the Green Dragon Tavern (on southerly side of Union, west of and near Hanover street), in Boston, the first Tuesday in January, 1795. The notice of this meeting was prepared for publication, without signature, by Henry Plunkett, a cooper by trade, and one of the most respectable of the citizens of the town. Col. Paul Revere was elected to preside on this occasion, and acted as chairman at all subsequent preliminary meetings. He was chosen president of the association at the first election of officers, April 16, 1795. The object of the meeting was stated to be to consult on measures for petitioning the General Court to revise and amend the law respecting apprentices; but before the full organization of the association, some nobler purposes were considered, viz.: "To create and sustain a friendly feeling among its associates; to extend the circle of individual usefulness; to encourage industry, and promote inventions and improvements in the mechanic arts; to provide for the instruction of apprentices, and assist young mechanics with loans of money; to help the aged and unfortunate of the associates, and the widows of deceased members in poverty and suffering; and to provide for the burial of its deceased members by gifts deemed sufficient to defray the expenses of an unostentatious

ceremony.¹⁰ These were among the considerations which led to the formation of the association, and have tended to its long continued existence. It will be found by those who may study the full history of the society that the promises of its early day of usefulness, benevolence and influence in our community have been sensibly realized, and that the views of its founders were not altogether visionary. The association began its career during the infancy of our republic, in the "day of small things," when extensive manufacturing establishments did not exist, and the use of machinery to lighten labor and increase production was little known; when industry, prudence, and the kindred homely virtues, were requisite and the only reliable means to win success in life. The influence of mechanics has often been relied on to assist in moulding public sentiment and forwarding enterprises deemed essential to the general welfare, and no portion of our people have more often been selected to fill places of responsibility and trust, to enact laws and grant privileges than they.

The first constitution, adopted in March, 1795, gives the title of the society as the Associated Mechanics and Manufacturers of the Commonwealth of Massachusetts. The first engraved certificate of membership, and also the first certificate prepared to be presented to apprentices who had fulfilled their engagements to the satisfaction of their employers, give the title Massachusetts Mechanics Association. At the first annual meeting, held December 10, 1795, it was voted to alter the appellation of the society, and instead of its former name that it be styled the Association of Mechanics of the Commonwealth of Massachusetts. The earliest written record is headed with the words: Boston Mechanic Association. But this name did not appear to have ever been formally adopted; probably the recording officer did not deem it requisite that the whole intent of the organization need be stated while the constitution and by-laws supplied the information. When the act of incorporation was granted by the General Court, in 1806, the word "Charitable" was added to the title, and from that time the association has been known by its corporate name—Massachusetts Charitable Mechanic Association.

Formerly the association on all public occasions wore a badge of green ribbon, and carried a banner made of green silk. There is no record when or why this particular color was adopted as the badge of the society. At one of the triennial festivals, held some years ago, a guest, and an honorary member, who had worn the emblematic ribbon

for the day, and seemed honored by being permitted to do so, explained that it was the middle ray of the prismatic colors, and typified the social position of the mechanic—neither the highest or lowest. Of late years, however, the association has not appeared as much in public procession as formerly, and the green badge has been but little worn.

It was for many years the custom of the Board of Government to hold monthly meetings, and after the transaction of business a supper usually succeeded, and many gentlemen, prominent at the time, and friends of the association were often present as guests. It is interesting to recall the various places at which the association met till it established a home of its own in 1860. These are some of them: Concert Hall, Latin School-house, Green Dragon Tavern, Mareau's Hall, Old State House, Faneuil Hall, Court House, Association Hall, Central School-house, Exchange Coffee House, Forsters's Hotel, Marlboro's Hotel, Library Room, Julian Hall, Athenæum Hall, Tremont House, Supreme Court Room, Masonic Temple, Swedenborgian Chapel, Tremont Temple, Quincy Hall, Boott Mansion, Hall of the Provident Institution for Savings, and the hall in Ballard's Building in Bromfield street.

Beneficence was one of the objects in view in the formation of the association, and though it was never expected a full support would be furnished to any family or member in need, yet aid in sickness and a timely relief when calamity or old age overtook a brother, or those dependent upon him, has always been as liberally bestowed as the resources of the society would permit. From the year 1813 there has annually been chosen a Committee of Relief, whose duty it is to seek out and relieve such indigent members, or their families, as may be objects of charity, and to receive and act on all petitions for relief. This committee reports quarterly to the Board of Government and annually to the association. Before the organization of the Committee of Relief, occasional donations were made from the funds, and from voluntary collections, in aid of unfortunate members. The books of the Committee of Relief show a total of nearly two hundred thousand dollars distributed up to the present time. For several years the annual appropriation has been five thousand dollars, which has been expended upon about fifty recipients, principally the widows of deceased members. In the course of a series of years a number of these recipients have been paid sums varying from one to two thousand dollars. The long continued and systematic work of charity carried on

by the association has given it an excellent reputation in the community and has contributed materially to its influence and success.

The social element seems to have been a prominent feature in the early days of the association, and the good fellowship, which the organization was intended to promote, was often encouraged by festive gatherings. The first constitution required a public festival at the time of the annual meeting in December, and for seven consecutive years these celebrations were held—generally in Faneuil Hall. The first, in 1798, was at the Green Dragon Tavern. "At two o'clock p.m., with twenty-nine members present, the society sat down to a well provided table, and fared sumptuously, the toasts which were read being so completely adapted to the occasion, they were received with *alacrité* and interspersed with songs." These festivals were important occasions in the infancy of the society, and large committees were appointed to make full arrangements for the regular anniversary feasts, at which were entertained many eminent men of the time. They had their value, also, in bringing the association before the public, in enabling the body to extend courtesies to the prominent men of the day, and in uniting the members in a feeling of brotherhood. Since the year 1809 the festivals have been held once in three years; the later constitution made it imperative to hold triennial festivals, on which occasions an address must be delivered by a member. It was the usual custom for the members of the association and invited guests to meet at some convenient place in the morning of the day selected, form a procession, and move to some church or hall, where an address, with other exercises, would occupy about two hours; from thence proceed to Faneuil Hall to partake of a dinner, followed by sentiment, addresses, and music. The addresses delivered at these festivals were mostly of a high order of merit. They were published in pamphlet form, and now form a feature of the association library well worth the careful attention and perusal of its members. At the celebrations for some years wines and liquors were served, but in time a change in the sentiment of members resulted in excluding all intoxicating beverages from the table. In 1848 the ladies were invited for the first time to participate, and thereafter added essentially to the pleasures of the occasion.

The interest felt in scientific subjects by the members induced the inquiry as early as 1819, whether it was not possible for the association to inaugurate courses of lecture for the benefit of the members and the

good of the community. The subject was discussed, but no appropriation seems to have been made until 1828, when the sum of \$200 was appropriated, and a course of twelve lectures was given. They proved to be very interesting and popular, and the practice was continued in succeeding years, the number of lectures and the expense varying according to circumstances. Men especially qualified for the task were engaged for this service; the courses consisted generally of twelve lectures, and were frequently illustrated. In 1829, long before railroads were understood and hardly adopted in either hemisphere, William Jackson delivered a lecture powerfully advocating the railway system as it is known to-day. Such was its effect that he was invited to repeat it to the Legislature and other influential persons. This he did, and it had much to do with the formation of the course of proceedings in regard to these great works of inter-state communication in our country. In 1855, under the auspices of the association, Mr. Latta, of Cincinnati, was invited to deliver a lecture on the application of steam to machinery, which he accepted, illustrating his theme by the steam fire engine, which led to the introduction of the Miles Greenwood engine of that year, soon to be superseded by the more efficient engines from the Hunneman and Amoskeag shops, and which have revolutionized our whole system of fire suppression. As the practice grew of having lectures delivered elsewhere under the auspices of other societies and associations, the interest in these lectures decreased, and they were not continued after 1856.

The association is in possession of a library of miscellaneous books, probably numbering about three thousand, many of which were presented by members, the largest donor being C. C. Nichols, who gave a valuable collection of books, which formed the nucleus of the library. The Public Library of the city, however, with its wealth of literature and daily attention to the wants of readers, has, however, made the maintenance of an association library comparatively unnecessary, and for many years it has been little used and no attempt to add to it. In 1820 a communication was received from William Wood, a retired merchant of Boston, in which he expressed a wish to give five hundred books as a nucleus of a library for the use of the apprentices who were members of the association, and asking the association to accept them for that purpose. To these were added contributions from other citizens, and a library was started containing fifteen hundred volumes, the custody of which was intrusted to a committee of the society. The

time and labor involved in the care and direction of the library, however, was so great that after a few years the entire management was given into the hands of the apprentices themselves, who for that purpose formed the Mechanics' Library Association, having full control of the library, subject only to the supervision of the Massachusetts Mechanic Association. It is claimed that this was the first library ever organized in the world exclusively for benefit of apprentices.

The subject of the establishment of a scheme in which apprentices could pursue studies especially adapted to their needs, was early considered, and in 1828 an appropriation of \$200 was made for that purpose. The school opened with nearly a hundred pupils, and the success attained was very gratifying. Annual appropriations for the support of schools were made, gradually increasing in amount. In 1833 the visiting committee, in their report to the association, say: "The disposition of a considerable portion of our income within the last few years to purposes of improvement in intellectual and scientific pursuits by means of lectures and a school for apprentices, has given to the association a degree of popularity, and demanded of the public a consideration and respect for the individuals of which it is composed, which would not, probably, have ever been derived from its operations as a charitable institution only. In 1846 a drawing school was opened at an annual cost of about \$600. This is believed to have been the first school opened in Boston for the instruction of beginners in drawing from objects. In time, however, the number of scholars decreased, and it was considered advisable to pay for the tuition of apprentices in other schools. In 1859 the association expended nearly \$1,000 for the purpose. The gradual decline of the apprenticeship system, the improved methods adopted in the public schools, and the establishment of the Lowell School of Design, led to the final abandonment of this work. The last donation in this direction was made in 1876, when \$4,000 was given to assist the Massachusetts Institute of Technology, the institute agreeing in consideration of the gift to admit two pupils, free of expense, recommended by the association. In 1889 the corporation of the Massachusetts Institute of Technology discontinued the School of Mechanic Arts and returned to the association the \$4,000 advanced, and since that time the society has considered the expediency of establishing trades schools, but as yet has agreed upon no definite plans.

This venerable association has often been a participant in patriotic demonstrations, and public attention has always been directed toward



C. Dunce.

it on occasions necessitating the prompt co-operation of the people in carrying out movements designed to interest and benefit the community. In 1800 the selectmen of Boston requested the association to join in celebrating the funeral obsequies of George Washington, who had died December 14, 1799. The officers of the association at once extended an invitation to all the mechanics in the town to join in the procession. The response was general, and forty-five delegations, representing as many different trades and occupations, took part in the imposing ceremonies, which occurred on the 9th of January. A similar observance took place February 22, 1800, the president of the United States having issued a proclamation recommending the day to be observed as a day of "mourning and humiliation" in memory of Washington. The procession was formed in State street, and escorted a large body of prominent officials to the South Church, where appropriate services were held, including an oration by Rev. Joseph Tuckerman, a son of the first vice-president of the association. The entire services were of a high order of merit, and were extensively and favorably noticed in the newspapers of that day. In 1818 the association took part in the ceremonies attending the laying of the corner-stone of the Massachusetts General Hospital. In June, 1825, they gave a public dinner, in honor of General Lafayette, at the Marlboro' Hotel, while on his last visit to this country. It was an occasion of great public interest. Among the invited guests were most of the prominent personages in the Commonwealth, including the governor, members of Congress, Daniel Webster, an honorary member of the association, among the number, the secretary of war, and many other distinguished officials. The president of the association, Samuel Perkins, welcomed Lafayette to the city in well chosen words, to which the illustrious guest made an appropriate response. Toasts were given, to which responses were made by the eminent men present. Ex-President John Adams, being detained at home by ill health, sent a letter expressing regret at his enforced absence, and enclosing the sentiment: "The Massachusetts Charitable Mechanic Association: 'Tis theirs to teach an art beyond the rules of art—charity." It was the last illness of this eminent statesman, and he died fourteen days later. In 1827 the citizens of Boston rebuilt the monument, erected by Benjamin Franklin, over the graves of his parents in the Granary burial ground, which had become dilapidated by time. The corner-stone was laid by Hon. Charles Wells, president of the association, in the presence of the gov-

error, and city, State and national officials. The address was delivered by Gen. H. A. S. Dearborn. In 1832 the association assisted in celebrating the centennial of Washington's birthday. In 1834 they conducted the ceremonial observances of Lafayette. In 1848 they attended the public funeral observances of John Quincy Adams, and in 1852 those of Daniel Webster.

The connection of the association with the erection of the commemorative monument on Bunker Hill furnishes additional evidence of the patriotic sentiment which exists among the members. The monument was commenced in 1825 by a body of patriotic and public spirited citizens. The work was carried on until 1828, when the original funds, created by subscriptions, became exhausted, and the work was necessarily suspended. The structure had been raised about thirty-five feet above the massive foundations. In the month of May, 1833, Amos Lawrence, by letter, proposed that the association should endeavor to procure by subscription a sum of money sufficient to complete the monument. This the association undertook, and by the expenditure of much time and efforts, they were so successful that in conjunction with the amount realized from a fair held in Quincy Hall under the auspices of the ladies of the Commonwealth, the monument was completed. At the ceremonies in honor of its completion, which took place June 17, 1843, the association attended in a body, forming a conspicuous feature in the grand procession. The oration on this occasion was delivered by Daniel Webster. In acknowledgment of the efficient service rendered in this undertaking, the Monument Association constituted the society's president, at the time their first vice-president, and ex-President Frederic W. Lincoln has been a trustee continuously since 1854, and president since 1890.

The Franklin statue, which for more than a generation has been a conspicuous object in front of the City Hall on School street, was really one of the offsprings of the association. The first suggestion came from an honorary member, Hon. Robert C. Winthrop, in a lecture delivered before the association in November, 1853. The society took up the subject, and with the co-operation of a committee of the citizens of Boston, raised the necessary funds and carried the work to a successful conclusion. On the 17th of September, 1856, the anniversary of the settlement of Boston, the statue was inaugurated with elaborate ceremonies, the Hon. Robert C. Winthrop delivering the inaugural address, President Frederic W. Lincoln, of the association, delivering an appropriate and elegant presentation address.

During the War of the Rebellion the association fervently sustained the Union cause. On April 17, 1861, it was voted to raise the national flag on the Mechanic building at once. With cheers by the people assembled and a short speech by Vice-President Stimpson, the flag was raised to the breeze from the roof. The association joined in a public parade and patriotic meeting of the citizens on Boston Common on the afternoon of Wednesday, August 27, 1862; and also in a procession on the 29th to welcome Brig.-Gen. Michael Corcoran, of the volunteer army, and other distinguished citizens of New York. About two hundred and fifty of the members were in line. On the 27th of October, 1862, it was voted to tender an escort to Col. Thomas E. Chickering and the Forty-first Regiment on the occasion of their departure for the seat of war. On the 6th of November following, the association, under the leadership of Nathaniel J. Bradlee, assembled and formed a procession for this duty. The National Lancers and the Roxbury Reserve Guards were also participants in the ceremonies.

It is in connection with exhibitions of industry, skill and art that the association is, perhaps, most widely known. The idea of holding exhibitions, however, does not seem to have been entertained until many years after the organization of the association, and even then the subject was brought to the attention of the members incidentally. In June, 1818, the president received an anonymous letter, enclosing the sum of \$35, with the request that the same be given under the auspices of the association in prizes to coopers' apprentices for the best casks to be made by their own hands. The trust was accepted, due notice given, the exhibition took place, and the prizes were awarded on Boston Common on the following Fourth of July. Ten casks were exhibited, and the money was given in three prizes: \$20 to the best cask, \$10 to the second best, and \$5 to the third. The remaining seven casks were sold at auction on the spot, and brought good prices. The experiment was a complete success, and was repeated the following year, when \$80—given by the former patron, who proved to be William Wood, a well-known Boston merchant of that period—was awarded in prizes for casks and hats. As before, the articles exhibited were disposed of at auction. In 1820 a much more elaborate display was made, this time at the Washington Gardens, when \$60 in money and three silver medals were awarded for eleven exhibits, consisting of harnesses, doors, wheels, ships' blocks, boots and barrels. The year following a larger sum of money was raised by subscription, and the time changed to October,

the exhibition, like its predecessors, being a success. No further exhibitions of this kind were held, but the subject of holding them annually on a much larger scale was advocated. Several years passed, however, without any action being taken, and in 1832 the subject was referred to a committee, but nothing was accomplished until the close of 1836, when a committee reported strongly recommending immediate action. This was at once carried into execution, the association at the meeting in January, 1837, making an appropriation for that purpose. The Board of Government and twelve members of the association were constituted an Executive Committee, of which Stephen Fairbanks, the president, was chairman, under whose direction arrangements were perfected, and the exhibition successfully inaugurated. It was held in the second stories of Faneuil Hall and Quincy Market, which for the purpose were connected by a temporary bridge, and which in various forms was repeated at subsequent exhibitions. The opening was celebrated by an address by Edward Everett, then governor of the Commonwealth. The exhibition proved in all respects a gratifying success. "The city and country poured forth their populations," says one chronicler, "to see the wonderful display. People were surprised at every step with some new contrivance, and puzzled and bewildered in contemplation of the whole, but manifested unqualified pleasure and exaltation." The experiment was so successful that the managers recommended an early preparation for a similar exhibition the next year. All doubts of the usefulness of these exhibitions in bringing to public notice the latest mechanical inventions and improvements, their power to educate the public taste, and stimulate to further triumphs in changing rude materials into forms of beauty and utility were dispelled. Those who coldly received the first advances of the enthusiasts in favor of the experiment were compelled to join in the general expression of satisfaction with the splendid result. The second exhibition was held in the autumn of the year 1839, with results quite as satisfactory to all, as the first had been. William Washburn was superintendent. In number, variety and quality the exhibits were remarkable, the Executive Committee awarding twenty-four gold and thirty-three silver medals, and 254 diplomas. From this time periodical exhibitions seem to have been fully accepted as an established enterprise of the society, permitted by its charter, in keeping with the character of its organization, and promising from their pecuniary results to aid in forwarding the other objects embraced in the charter of the association. The third

exhibition occurred in 1841, the fourth in 1841, at which the association made a net gain of more than \$7,000. The fifth took place in 1847, Joseph M. Wightman being superintendent. The sixth was held in 1850, the seventh in 1853. These were all financially successful. The eighth occurred in 1856, the ninth in 1860, the tenth in 1865, the eleventh in 1869, and the twelfth in 1874. These had all been held in Fanenil Hall and Quincy Market. The thirteenth, which occurred in 1878, however, was held in a building especially constructed for the purpose on Columbus avenue, Park Square and Pleasant street, with an art gallery on Columbus avenue, connected by a short bridge over Church street. The location was a favorable one for the convenience of exhibitors and visitors, and the whole enterprise was an abundant success. The fourteenth exhibition was held in 1881, the fifteenth in 1884, the sixteenth in 1886, the seventeenth in 1890, and the last one, the eighteenth, in 1892. The last five exhibitions have been held in the association's building on Huntington avenue. The gain in numbers and quality of exhibits has been fairly uniform from the beginning. These latter exhibitions have been open to the goods and competition of the whole country, and the awards have been widely distributed among the skillful and industrious people of all the States of the Union.

The desire to own a building themselves, that the association might have a permanent home and a suitable place for meetings, seems to have been entertained by the leading members almost from the start, and as early as 1798 a committee was appointed to make inquiries in regard to a location. In 1802 another committee submitted plans for a building, and recommended the purchase of a vacant lot on Bowdoin Square. Their funds, however, necessarily small, did not warrant the undertaking, and the subject was postponed. But the idea was by no means abandoned. Frequently in the following years it was made the subject of investigations and reports by committees, and with the gratifying increase in the funds of the association the desire to possess a hall correspondingly increased. In 1843 negotiations were commenced which finally resulted in the purchase of the Boott estate in Bowdoin Square, and singularly enough was the identical lot that had been recommended for purchase nearly fifty years before. It contained nearly seventeen thousand feet of land, on which stood a mansion house and stable. At the time of purchase it was expected that building operations would be begun without delay. The mayor of the city and

prominent citizens interested themselves in the movement, anticipating that an imposing structure, creditable alike to the association and city, would be erected. But on making a closer estimate on the cost of such a building it was found that a heavy mortgage would be inevitable, and the conservative management hesitated to proceed. Meanwhile overtures were made by responsible parties to lease the property for hotel purposes, at a rental which would make it a profitable investment for the association, if the building then standing was enlarged and properly arranged for the purpose. This was finally done, in conjunction with owners of the adjoining property, and the whole, when completed, was named the Revere House, in honor of Paul Revere, the first president of the association. It was opened to the public May 1, 1847. From the beginning it was a success, and the income derived from the property was large and permanent. The first landlord was Paran Stevens, who kept it many years, and made it one of the most popular houses in the country. As the ownership was divided, however, causing some difficulty in the financial management, after considerable negotiation, the entire property was transferred to a joint stock company, the association receiving shares to represent the proportional interest. This amounted to \$121,000, represented by 1,210 shares. The board of directors of the hotel company consisted of five persons, of whom four were members of the association. The stock returned the association good dividends. But this movement, successful as it was in one direction, did not fulfill the desire of the members for a building of their own, and the subject was not allowed to slumber. In 1856, under the administration of President Frederic W. Lincoln, a lot of land at the corner of Bedford and Chauncey streets, the garden of Judge Charles Jackson, was purchased at a cost of \$31,000. Upon this lot was erected a building designed by Hammatt Billings, and formally dedicated March 27, 1860. It cost over \$85,000. The completion of this hall, so long contemplated and so long delayed, was a cause of sincere gratification. In 1869 an annex to the building, on the corner of Avon and Chauncey streets, was built by the association at a cost for land and building of about \$88,000. With the impetus given to the business of the city by the Civil War, but more particularly by the great fire of 1872, which required new localities for traffic, while the burnt district was being reconstructed, the board of government in December, 1872, was once again forced to consider the problem of suitable and central apartments. The necessity of having a building of sufficient capac-

ity to accommodate the triennial exhibitions had also been felt for years. The twelfth exhibition, the last held in Faneuil and Quincy halls in 1874, showed plainly that if the association was to hold its position in regard to these displays, it must secure proper accommodation. Much discussion of the subject followed. In February, 1879, a committee, composed of Charles W. Slack, Nathaniel J. Bradley, J. F. Paul, Nathaniel Adams, Charles Whittier, Edward Atkinson and Nathaniel Cummings, was appointed to which was referred the matters of providing for a permanent exhibition building. This committee gave much time to the consideration of the subject, and in March, 1880, reported in the favor of purchasing the plot of land fronting on Huntington avenue and West Newton street. This was concurred in by the association, and the land was purchased at a cost of \$113,510. In December, 1880, work was begun on the building, the corner-stone of which was laid in March, 1881, and in the fall of 1882 the fourteenth exhibition was held in the building, but it was not fully completed until January, 1884, at which time nearly \$378,000 had been expended upon it. For some years after its construction the association had something of a struggle for existence. The second exhibition held within its walls failed to meet expenses. The establishment of a rival organization was a most unfortunate occurrence. But the association, having the advantage of a long and favorable record, the unquestioned favor of the public and a large fund, was able to weather the storm which wrecked its competitor. During late years it has enjoyed a high degree of prosperity.

The officers of the association from its organization have been as follows:

PRESIDENTS.

Paul Revere.....	1795-1798	James Clark.....	1843-1844
Jonathan Hunnewell.....	1798-1807	George G. Smith.....	1845-1847
Benjamin Russell.....	1809-1821	Henry N. Hooper.....	1848-1850
John Cotton.....	1822-1824	Jonas Chickering.....	1851-1853
Samuel Perkins.....	1825-1826	Frederic W. Lincoln.....	1854-1856
Charles Wells.....	1827	Joseph M. Wightman.....	1857-1859
Samuel T. Armstrong.....	1828-1829	Pelham Bonney.....	1860-1861
Daniel Messenger.....	1830-1831	Frederick H. Stimpson.....	1862-1863
Joseph T. Buckingham.....	1832-1834	Joseph T. Bailey.....	1864-1866
Stephen Fairbanks.....	1835-1837	Jonas Fitch.....	1867-1869
George Darracott.....	1838-1839	Albert J. Wright.....	1870-1872
Joseph Lewis.....	1840-1842	Nathaniel Adams.....	1873-1875

SUFFOLK COUNTY

Joseph F. Paul	1876-1878	Newton Talbot	1885-1887
Charles W. Slack	1879-1881	James G. Haynes	1888-1890
Nathaniel J. Bradlee	1882-1883	Oliver M. Wentworth	1881-1892
Charles R. McLean	(part) 1881	E. Noyes Whitecomb.	1892
Thomas J. Widden	(part) 1881		

VICE-PRESIDENTS.

Edward Tuckerman	1795-1798	William C. Bond	1851-1852
Benjamin Russell	1799-1807	Frederic W. Lincoln, jr.	1853
Daniel Messenger	1808-1812	Joseph M. Wightman	1854-1856
John Cotton	1813-1821	L. Miles Standish	1857-1859
John Doggett	1822	Frederick H. Simpson	1860-1861
Thomas W. Sumner	1823	Thacher Beal	1862-1863
Samuel Perkins	1824	Jonas Fitch	1864-1866
Joseph Jenkins	1825-1826	Albert J. Wright.	1867-1869
David Francis	1827	Nathaniel Adams	1870-1872
George W. Otis	1828-1829	Charles E. Jenkins	1873-1875
Joseph T. Buckingham	1830-1831	Joseph F. Paul	(9 months) 1875
Ezra Dyer	1832-1834	Charles W. Slack	1876-1878
John Rayner	1835-1837	Nathaniel J. Bradlee	1879-1881
Joseph Lewis	1838-1839	Charles R. McLean	1882-1883
Charles Leighton	1840-1841	Thomas J. Whidden.	(part) 1884
Charles A. Wells	1842	Thomas Gogin	(part) 1884
Jonas Chickering	1843	James G. Haynes	1886-1887
William Eaton	1844-1846	Oliver M. Wentworth	1888-1890
Henry N. Hooper	1847	E. Noyes Whitecomb	1891-1892
Billings Briggs	1848-1850	Horace H. Watson	1892

TREASURERS.

Samuel Gore.	1795-1798	Uriel Crocker	1833-1841
David West	1799-1800	Osymn Brewster	1842-1880
Francis Wright	1801-1807	Frederic W. Lincoln	1880-1887
Joseph Lovering	1808-1827	Newton Talbot	1888-
John Cotton	1827-1832		

SECRETARIES.

John W. Folsom	1795-1799	Charles C. Nichols	1827
James Phillips	1800-1801	Joseph Lewis	1828-1836
John Cotton	1802	John G. Rogers	1837-1839
William Adwrs	1803	H. W. Dutton	1840-1844
John B. Hammett	1804	John G. Rogers	1845-1846
Samuel Gilbert	1805	John Kuhn	1847-1850
Thomas Wells	1806-1811	Frederick H. Stimpson	1851-1853
Edward Renouf	1812	Joseph L. Bates	1854-1884
Joseph T. Buckingham	1813-1816	Alfred Bicknel	1885-
David Francis	1817-1826		

TRUSTEES.

Edwin Adams	1878-1880	John Bray	1799
Isaac Adams	1858-1859	Billings Briggs	1843-1845
Nathaniel Adams	1858-1860	Albert G. Browne	1853-1855
Samuel Adams	1850-1851	Jos. T. Buckingham	1827-1829
William Adams	1835-1837	Theophilus Burr, sr	1856-1858
William Alexander	1804-1806	Theophilus Burr, jr	1867-1869
Jacob Amee	1833-1835	George L. Burt	1888-1890
Frank M. Ames	1886-1888	Abraham Call	1828-1830
John Andrews	1818-1820	Benjamin Callender	1795-1796
Samuel T. Armstrong	1823-1824	Cyrus Carpenter	1872-1874
Samuel Aspinwall	1834-1836	Geo. O. Carpenter	1885-1887
Isaiiah Atkins	1814-1816	Wiliam Carpenter	1881-1883
Chas. F. Austin	1867-1869	Alpheus Cary	1828
Jno. F. Bacon	1880-1882	Isaac Cary	1847-1849
Robert Bacon	1831-1833	David Chamberlin	1869-1871
Erastus B. Badger	1889-1891	Simeon G. Cheever	1856-1858
Joseph T. Bailey	1859-1861	Jonas Chickering	1838-1840
George Baird	1866-1868	Geo. H. Chickering	1867
David Baker	1819-1821	Thos. E. Chickering	1859-1861
Ruel Baker	1842-1844	Alfred A. Childs	1865-1867
Jonathan Balch	1800-1801	William W. Clapp	1863-1865
Samuel Bangs	1795	Benjamin Clark	1811-1813
James Barry	1806-1808	Cyrus T. Clark	1876-1878
Jonas S. Bass	1801-1803	Edward D. Clark	1829-1830
Jos. L. Bates	1847-1849	Humphrey Clark	1798-1800
Martin Bates	1830-1832	James Clark	1834-1836
Samuel D. Bates	1856-1858	Charles Clement	1805-1807
Benjamin Beal	1839-1841	Thomas Clement	1795-1797
Thacher Beal	1856-1858	George A. Clough	1885-1888
Ivory Bean	1867-1869	David Cobb	1805-1807
Richard Becching	1886-1888	Benjamin Comey	1818-1820
Asher Benjamin	1808-1810	John Cotton	1801 and 1806-1808
Matthew Binney	1850-1852	John Cowdin	1851-1853
John S. Blair	1874-1876	Leonard F. Creesy	1880-1882
William Blake	1852-1854	Uriel Crocker	1830-1832
John Bolles	1844-1846	Jno. Cummings, jr	1875-1877
Charles Bond	1846-1848	Nathaniel Cummings	1877-1879
Pelham Bonney	1853-1855	William Cumston	1865-1867
John Borrowscale	1861-1863	Samuel Curtis	1809-1811
Hiram Bosworth	1850-1852	Samuel Curtis (2d)	1833-1835
Alexander Boyd	1876-1878	Roland Cushing	1842-1844
Benjamin Bradley	1855-1857	Geo. L. Damon	1892 *
J. Putnam Bradlee	1868-1870	Benjamin Darling	1820-1822
Nathaniel J. Bradlee	1859-1861	Geo. Darracott	1821-1823

Daniel Davies	1852-1855	Henry K. Hancock	1842-1844
Geo. H. Davis	1863-1865	Ephraim Harrington	1825-1827
Isaac Davis	1831-1833	Jonathan Harrington	1812-1814
James Davis	1833-1834	Isaac Harris	1815-1817
James Dawson	1801-1806	William Harris	1811-1816
Thomas Dean	1808-1810	Edmund Hart	1795-1797
Sylvanus A. Denio	1861-1866	Caleb Hartsborn	1817-1819
Henry B. Dennison	1888	Calvin W. Haven	1853-1855
Benjamin F. Dewing	1888-1890	Thomas Haviland	1840-1842
Oliver Ditson	1862-1864	Ezra Hawkes	1866
John Doggett, ...	1813-1815	Charles J. Hayden	1887-1888
George Domett	1823-1825	James G. Haynes	1886-1882
Joseph L. Drew	1862-1864	Isaac H. Hazelton	1855-1857
Henry D. Dupee	1892 *	Leopold Herman	1847-1849
Henry W. Dutton	1838-1839	Francis C. Hersey	1886-1888
Ezra Dyer	1827-1829	Ira G. Hersey	1892 *
William Eaton	1839-1841	Samuel Hichborn	1812-1814
Moses Eayres	1799-1800	Samuel D. Hicks	1869-1871
Thomas Edmands	1834-1836	Samuel F. Hicks	1892 *
Samuel Emmons	1796-1799	Zachariah Hicks	1798-1800
James Eunson	1797-1798	Joseph W. Hill	1880-1882
Gerry Fairbanks	1812-1814	Holmes Himekley	1855-1857
Stephen Fairbanks	1820-1821	Enoch Hobart	... 1825
Nathaniel Faxon	1821-1823	James L. Homer	1836-1838
Richard Faxon	1795-1797	Henry N. Hooper	1811-1813
William N. Fisher	1838-1840	J. Day Howard	1806-1807
Jonas Fitch	1859-1861	Thomas Howe	1809
Alonzo W. Folsom	1881-1883	John C. Hubbard	1860-1862
Charles J. Fox	1866-1868	Thomas Hughes	1820-1822
David Francis	1811-1816	Jonathan Hunnewell	1795-1798
Nathaniel Francis	1848-1850	Joab Hunt	1817-1819
James H. Freeland	1886-1888	Henry C. Hunt	1873-1875
Walter Frost	1837-1838	Moses Hunt	1856-1858
Jeremiah Gardner	1808-1810	Alfred A. Hunting	1892 *
Lemuel Gardner	1803-1805	Lynde A. Huntington	1869
Kimball Gibson	1841-1843	Henry Hutchinson	1810-1811
Elias W. Goddard	1851-1853	Henry Hutchinson (2d)	1851-1856
Thomas Gogin	1883-1884	Francis Jackson	1822-1823
Mark Googins	1871-1873	William Jackson	1819-1821
Stephen Gore	1795-1797	David H. Jacobs	1870-1872
Edward Gray	1816-1818	Horace Jenkins	1863-1865
John Green, jr	1845-1847	Joseph Jenkins	1822-1823
Gardner Greenleaf	1836-1837	Ebenezer Johnson	1850-1861
Lemuel M. Ham	1881-1883	Oliver Johnnot	1801-1803
Nathaniel Hammond	1835	Edward C. Jones	1889-1891

* Now in office.

Ezekiel R. Jones	1890-1892	Granville Mears	1850-1852
Joseph Jones	1815-1817	Daniel Messinger	1801-1804
Peter C. Jones	1849-1850	Joseph Milner	1816-1818
Jonathan Kilham	1807-1809	Edmund Monroe	1832-1834
Jonathan Kilton	1801-1802	Andrew J. Morse	1868-1870
Charles G. King	1851-1853	Alfred J. Neal	1892 *
Gedney King	1811-1813	Samuel Neal	1862-1864
Elias Kingsley	1838-1889	Samuel H. Newman	1857-1859
James R. Knott	1884-1886	Charles C. Nichols	1819-1821
John Kuhn	1829-1831	Cushing Nichols	1826-1828
Frederick Lane	1826-1828	Edward T. Nichols	1891-1892
John M. Lane	1802-1803	George Nowell	1877-1879
Ebenezer Larkin	1799-1800	John P. Ober	1848-1850
Henry L. Leach	1876-1878	Peter Osgood	1807-1809
Thomas Leavitt	1879-1881	George W. Otis	1825-1827
William Leavitt	1869-1871	John S. Paine	1889-1891
Charles Leighton	1833-1835	Charles S. Parker	1871-1873
Joseph Lewis	1837	Charles W. Parker	1882-1884
Winslow Lewis	1815-1817	Thomas Patten	1798
Frederic W. Lincoln, jr	1850-1852	Joseph F. Paul	1862-1865
Ebenezer H. Little	1852-1854	William H. Pearson	1883-1885
Benjamin Loring	1828-1829	Samuel Perkins	1803-1805
Jonathan Loring	1810-1812	Samuel S. Perkins	1872-1874
Jonathan Loring (2d)	1838	James Phillips	1802-1804
Samuel H. Loring	1866-1868	John Pierce	1809-1811
Ansel Lothrop	1860-1862	Jonathan Pierce	1857-1859
Augustus Lothrop	1891 *	Albert A. Pope	1892 *
Loyal Lovejoy	1846-1848	George W. Pope	1878-1880
Joseph Lovering	1801-1802	Jonathan Preston	1844-1845
Nathaniel M. Lowe	1883-1885	Henry Purkitt	1800
Henry A. Lyford	1868-1870	George C. Rand	1861-1863
Thomas Lyford	1857-1859	John Rayner	1825-1827
John E. Lynch	1892 *	Joseph S. Read	1824-1826
John Mack	1877-1879	Giles Richards	1795-1797
William Mackenzie	1884-1886	J. Avery Richards	1874-1876
William Marble	1864-1866	Enos Ricker	1882-1884
Ephraim Marsh	1821-1823	John G. Roberts	1841-1843
Robert Marsh	1849-1851	J. Milton Roberts	1873-1875
James B. Marston	1813-1815	John A. Robertson	1870-1872
Theophilus R. Marvin	1850-1852	William Robinson	1889-1891
Jesse Mayo	1811-1813	Horace T. Rockwell	1879 and 1883-1885
James McAllaster	1829-1830	John Gorham Rogers	1840-1842
Charles R. McLean	1874-1876	George Ross	1868-1870
John J. McNutt	1870-1872	William M. Rumery	1879
Elijah Mears	1816-1818	Benjamin Russell	1795-98 and 1822-1824

* Now in office.

Amos C. Sanborn	1858-1860	Everett Torrey	1877-1879
Henry N. Sawyer	1884-1887	Isaac N. Tucker	1891
William Sayward	1877-1879	James C. Tucker	1879-1881
William H. Sayward	1887	John Tuckerman	1813-1815
Thomas J. Shelton	1837-1839	Otis Tufts	1855-1857
George S. Shepard	1881-1883	Henry A. Turner	1880-1882
Seth Simmons	1815-1817	Job Turner	1843-1845
John K. Simpson	1832-1834	Job A. Turner	1865-1867
Charles W. Slack	1873-1875	Daniel Tuttle	1804-1806
Albert W. Smith	1862-1864	Samuel Tuttle	1810-1812
Charles A. Smith	1871-1873	Turrell Tuttle, jr.	1824-1827
Christopher Smith	1808-1809	Edmund B. Vannevar	1884-1886
Franklin Smith	1872-1874	John Wade	1839-1840
George W. Smith	1868-1870	George W. Walker	1886
Stephen Smith	1862-1864	Paul D. Wallis	1876-1878
Enoch H. Snelling	1840-1842	Theodore Washburn	1839-1841
Josiah Snelling	1803-1805	Horace H. Watson	1889-1891
George K. Snow	1884-1885	John H. Webster	1886-1888
Francis Southac	1823-1825	Benjamin T. Wells	1817-1819
Gershom Spear	1801-1802	Charles Wells	1826
James Spear	1831	Charles Allen Wells	1831-1833
James Standish	1871-1873	John B. Wells	1827
L. Miles Standish	1854-1856	James Wentworth	1845-1847
William Stearns	1844-1846	Oliver M. Wentworth	1887
Sidney A. Stetson	1883-1885	David M. Weston	1889-1890
George W. Stevens	1891 *	Joel Wheeler	1849-1851
Frederick H. Stimpson, 1848-50 and 1854		William W. Wheildon	1858-1860
William P. Stone, jr.	1892 *	Thomas J. Whidden	1873-1875
Caleb Stowell	1861-1863	Benjamin D. Whitecomb	1878-1880
Ezekiel B. Studley	1880-1882	E. Noyes Whitecomb	1890
Samuel F. Summers	1874-1873	Lyman White	1870-1872
Thomas W. Sumner	1802-1804	John L. Whiting	1883-1887
Seth Thaxter	1827-1829	Thomas Whitmarsh	1830-1832
Ephraim Thayer	1807-1808	Jonathan Whitney	1810-1812
Chauncey Thomas	1889	Charles Whittier	1875-1877
John Thompson	1874-1876	Joseph M. Wightman	1850-1853
John H. Thorndike	1853-1855	Simon Wilkinson	1824-1826
John P. Thorndike	1824-1825	Levi L. Willeutt	1875-1877
Joseph Tilden	1837	Charles Williams, jr.	1889
David Tillson	1846-1848	Samuel S. Williams	1830-1831
Jacob Todd	1828-1830	William Williams	1798-1800
Samuel Todd	1805-1807	Henry W. Wilson	1866-1868
William Todd	1800-1801	John B. Wilson	1874-1876
James Tolman	1860-1864	James I. Wingate	1883-1885
Samuel P. Tolman	1865-1867	John Winship	1825-1826
Charles Torrey	1864-1866	Francis B. Winter	1854-1856

* Now in office.

Charles Woodbury	1860-1862	George Wendell	1852-1854
Albert J. Wright	1865-1866	William N. Young	1889-1891
Albert J. Wright (2d)	1888-1890		

COMMITTEE OF RELIEF.

Erastus B. Badger	1874-1876, 1882-1884	Perez Cushing	1867-1869
Amasa W. Bailey	1885-1887	Roland Cushing	1850-1853
Job F. Bailey	1866-1868	George Darracott	1830-1833
George Baird	1861-1863	Jonathan Davis	1840-1842
Ruel Baker	1838-1840	Louis Dennis	1837-1839
Henry H. Barton	1831-1834	John N. Devereaux, 1873-75 and 1877-79	
Charles Bates	1844-1845	Benjamin F. Dewing	1881-1883
Levi Bates	1850-1856	William Dillaway	1834-1837
Nathaniel N. Bates	1850-1854	Peter E. Dolliver	1885
Benjamin Beal	1834-1836	George Domett	1825-1828
Thacher Beal	1855	Job Drew	1814-1818
Ivory Bean	1883-1884	Charles Dupee	1843-1845
James Berry	1830-1832	William Dutemple	1883-1885
Abraham O. Bigelow	1855-1856	Henry W. Dutton	1837
Matthew Binney	1869-1871	Ezra Dyer	1831
Levi Bolles	1839-1841 and 1857	Isaac Easterbrook	1875-1877
John Borrowscale	1856-1858	William J. Ellis	1883-1885
Thomas A. Branigan	1875-1877	Gerry Fairbanks	1813-1814
Samuel R. Britnall	1876-1879	Jonas Fitch	1858-1860
James Brown	1829-1830	Alonzo W. Folsom	1878-1880
Walter Bryant	1846-1848	David Francis	1829-1830
Lewis Burkes	1833-1835	Walter Frost	1835-1836
Gershom T. Burnham	1877-1879	Kimball Gibson	1839-1840
Theophilus Burr	1860-1862	E. W. Goddard, 1861-62, '64-66, '68-70, 72-71, '77-78	
Randall G. Burrell	1884-1886	Thomas Gogin	1879-1881
William R. Carnes	1846-1848	Enoch Goodwin	1865-1867
Alpheus Cary	1827	Isaiah Goodwin	1879-1881-1883
Isaac Cary	1841-1843	Wilham F. Goodwin	1856-1858
Edmund D. Cassell	1859-1860	Mark Gogins	1867-1869
Simon G. Cheever	1851-1854	John Green, jr	1833-1836
William F. Chester	1874-1876	Henry Guild	1892 *
Alfred A. Childs	1880-1882	Josiah M. Harding	1840-1842
Benjamin Clapp	1890	Ivory Harmon	1875-1877
John C. Clapp	1891 *	Jonathan Harrington	1820-1825
Benjamin Clark	1816-1828	Isaac Harris	1819-1829
James Clark	1832-1833	John Hatchman	1870-1872
John Cotton	1813-1822	Calvin W. Haven	1844-1846
Nathaniel Cotton	1857-1859	Willard Hawes	1849
C. W. Cummings	1845-1847	James G. Haynes	1872-1874
H. B. Crooker	1847-1849		

* Now in office.

Leopold Herman	1842-1844	George Nowell	1880-1882
Ira G. Hersey	1891 *	Charles E. Noyes	1859-1861
Samuel D. Hicks	1871	William B. Oliver	1848-1850
Samuel F. Hicks	1890 *	George W. Otis	1827-1830
E. H. Hitchings, 1857-1859 and	1878-1880	Charles S. Parker	1867-1869
Peter Hobart, jr.	1861-1863	Wm. S. Pendleton	1834-1837
Albert Homer	1868-1870	James D. Percival	1892 *
John C. Hubbard	1856-1859	Lorin Peterson	1878-1880
John Hunt	1841-1843	John H. Pitman	1845-1847
Henry Hutchinson	1850-1853	Caleb S. Pratt	1840-1850
Francis Jackson	1824	John Rayner	1830-1832
J. Arthur Jacobs	1887-1889	Joseph S. Read	1833-1835
David H. Jacobs	1868-1870	Stephen Rhoades	1843-1845
Oliver Johnnot	1816-1827	George L. Richardson	1869-1871
Edward C. Jones	1886-1888	Thomas Richardson	1850-1851
Gilman Joslin	1884	Robert Ripley	1850-1855
Richard F. Keough	1849-1850	John A. Robertson	1861-1863
Charles G. King	1840-1850	William Robinson	1883-1885
Gedney King	1813-1815	Henry A. Root	1891 *
Elias Kingsley	1847-1849	Horace C. Rose	1873
James R. Knott	1876-1879	George Ross	1866-1868
Frederick Lane	1829-1831	Zephaniah Sampson	1823-1828
William Leavitt	1865-1867	G. C. Sanborn	1846-1849
Charles Leighton	1832-1833	Stephen Shelton	1851-1854
Edwin P. Longley	1889-1891	Thomas J. Shelton	1832-1835
Abner B. Loring	1871-1873	John Sikes	1841-1846
James Loring	1865-1866	Robert Slade	1870-1872
Samuel H. Loring	1864-1866	Amasa G. Smith	1836-1838
Ansel Lothrop	1859-1861	Christopher Smith	1814-1817
Loyal Lovejoy	1842-1844	George S. Smith	1838
Nathaniel M. Lowe	1880-1882	William B. Smith	1888-1891
Slade Luther	1842-1844	Zenas E. Smith	1885-1886
Thomas Lyford	1854-1856	Enoch H. Snelling	1836-1838
John E. Lynch	1886-1888	James Standish	1859-1861
Thomas J. Lyons	1890 *	George M. Starbird	1876-1879
William Marble	1863-1865	William Stearns	1839-1841
A. M. McPhail, jr.	1882	George W. Stevens	1885-1887
Daniel Messinger	1819-1820	Charles Stimpson	1837-1839
George N. Miller	1888-1890	William P. Stone, jr.	1889-1891
William Mitchell	1846-1848	Samuel P. Summers 1874-75,	1880-1882
Thos. D. Morris	1871-1874	Asa Swallow	1837-1839
Thomas Moulton	1843-1845	James S. Sweet	1854-1858
Samuel Neal	1859-1860	William A. Swift	1862-1864
S. H. Newman	1863-1865	Job Taber	1841-1843
Chas. C. Nichols	1831-1833	Fred'k H. Tarbox	1888-1890
Edward T. Nichols	1887-1890	Dolphin D. Taylor	1874-1876

* Now in office.

Adam W. Thaxter (3d)	1863	Oliver S. Wells	1871-1873
Ephraim Thayer	1818	James Wentworth	1840-1842
James Tolman	1852-1855	Robert Wharton	1865-1867
Samuel P. Tolman	1862-1864	Benjamin D. Whitecomb	1883-1884
John Tuckerman	1815	Lyman White	1867-1869
Job Turner	1834-1836	Ebed Whiton	1856-1858
Job A. Turner	1865-1866	Abel C. Whittier	1886-1888
John Turner	1886-1887	Simon Wilkinson	1826-1829
Nathaniel W. Turner	1873-1875	John B. Wilson	1871-1873
Ottomar Wallburg	1892 *	Swain Winkley	1855-1858
Paul D. Wallis	1880-1882	Charles Woodbury	1863-1865
Jeremiah Washburn	1839-1841	Solomon A. Woods	1888-1890
Theo. Washburn	1836-1838	Albert J. Wright	1862-1864
William Waters, jr.	1892 *	Albert J. Wright (2d)	1883-1885
Aaron D. Webber	1845-1847	George Yendell	1850-1851
Charles Wells	1829-1831	William N. Young	1886-1888
John B. Wells	1829-1832		

HONORARY MEMBERS.

	Elected.		Elected.
John Adams	1820	James T. Austin	1839
John Brooks	1820	Thomas H. Perkins	1839
William Gray	1820	Joseph Story	1839
Christopher Gore	1820	James Tallmadge	1839
William Phillips	1820	George N. Briggs	1844
John Coffin Jones	1822	Marshall P. Wilder	1852
James Lloyd	1822	William Appleton	1854
James Perkins	1822	George R. Russell	1854
John Phillips	1822	George S. Hillard	1855
Marquis de Lafayette	1824	John A. Andrew	1864
Benjamin Dearborn	1827	Alexander H. Bullock	1865
Levi Lincoln	1827	Charles Summer	1865
Harrison Gray Otis	1827	Samuel H. Walley	1865
Josiah Quincy	1827	Emory Washburn	1865
Charles Sprague	1827	Henry Wilson	1865
Thomas L. Winthrop	1827	Louis Agassiz	1866
Nathaniel Bowditch	1828	William B. Rogers	1866
William H. Eliot	1829	William Perkins	1868
Edward Everett	1830	Robert B. Forbes	1870
William Sturgis	1830	Peter Cooper	1872
William Sullivan	1830	Henry P. Kidder	1878
Daniel Webster	1833	Amos A. Lawrence	1881
John Davis	1835	George C. Richardson	1881
Theodore Lyman	1835	Charles Devens	1889
Abbott Lawrence	1836		

The above deceased prior to January 1, 1892.

* Now in office.

	Elected		Elected.
Robert C. Winthrop	1850	George D. Robinson	1884
Nathaniel P. Banks	1858	Augustus P. Martin	1884
Alexander H. Rice	1861	John D. Runkle	1884
Henry L. Pierce	1878	Theodore Lyman	1885
Frederick O. Prince	1882	Carroll D. Wright	1886
John D. Long	1882	George F. Hoar	1889
Francis A. Walker	1883	Benjamin A. Gould	1889
Augustus Lowell	1883	Charles W. Eliot	1889



Noah Curtis

BIOGRAPHIES.

THE CURTIS FAMILY

THE Curtis family of Quincy, Mass., occupies a unique place among the shoe manufacturers of New England. The history of this family in this industry began more than one hundred years ago, and furnishes the rare business phenomenon of a continued business enterprise involving the successful participation in it of four generations of men. The founder of the business, Noah Curtis, was born in Quincy in 1772. In June, 1790, then but eighteen years of age, he opened a shop for shoemaking on Penn's Hill. For three years previous to this he had served an apprenticeship to an Englishman named Ripley. The shop was a small one in which Noah Curtis essayed to make a name and a living on his own account, but skill and industry, and an ambition to excel in doing good work, soon brought him so much custom that he had to enlarge, and in a few years he had an establishment which was not only capable of supplying the local demand, but of turning out a considerable surplus for those days. Here the Yankee enterprise of young Curtis began to manifest itself. Taking a large number of men's footwear he started out with a two-horse team to dispose of them to farmers or men living in the seaboard towns and cities southwest of Boston. His first peddling expedition proving successful, he gradually extended his trips beyond the James and Roanoke Rivers in Virginia, and early in the present century he made his first trip across the lower section of the Carolinas and into Georgia as far as Savannah. In Charleston and Savannah, especially, Mr. Curtis established a good trade. He there, as elsewhere south, found the planters and merchants demanding a certain style of shoe, known as the turned pump, with high heels, fancy shank, and with uppers made of the finest and best calf skin that could be obtained. For many years—in fact up to about 1825—Mr. Curtis made regular trips to the southern country, starting

from Quincy with a two-horse covered wagon filled with from 800 to 1,000 pairs of pumps, and never turning back until he had reached his southern destination and had disposed of his entire stock on the way, or when he reached there. The character of his work was so excellent that he became so favorably known at the South that the rich planters there gave him their measure and ordered shoes ahead; that is, for delivery on his next semi annual visit. In this way he established a very large and prosperous business, as can be inferred from the circumstance that the shoes he made were wholesaled by him to dealers for twelve dollars per pair—a large price for those days. After disposing of his shoes Mr. Curtis made his return trip, also one of profit, by laying in a stock of hardware and other manufactured articles imported by the merchants of Charleston, which he disposed of at a good profit on his way homeward. Thus we see the earlier manufacturers of Massachusetts had not only to make their leather, thread, wax, and shoes, but they had to find a market for them as well, doing a wholesale and retail business from a moving store on four wheels.

The peddling expeditions of Mr. Curtis must have been rich in adventure, though we have but few records of what they were. It is stated that Daniel Webster, at a time when his fame was becoming national, availed himself of Mr. Curtis's conveyance as far as Washington rather than take the stage-coach lines. In this connection it may be said that Noah Curtis, in his day, among the people north and south with whom he became acquainted, was like Webster himself, an almost national character. With his blue coat and brass buttons, and his well known face and figure, he was to be found frequently at Wilde's Hotel, on Elm street, in Boston, and was, in fact, to be found among the latest of his contemporaries who made that hotel their stopping place in this city.

After giving up his trips to the South, Mr. Curtis continued in business up to 1810, when he retired with a competence. Previous to 1833, or for a period of forty-three years, the style of the firm was Noah Curtis. At this time, being sixty-one years of age, he took into partnership his son Benjamin, who had learned the trade and been associated with him in business for some years. Before this time the sign had read "Noah Curtis, Boot Manufacturer," but when the son became a partner the sign was changed by adding a line underneath, and "Ben, too," which illustrated the quaint humor which existed in the elder Curtis, and used to cause many a broad smile on the faces of

strangers, whose amusement was probably much enjoyed by the senior proprietor. When Benjamin Curtis & Co. took the business in 1840, this sign came down and a new and conventional one succeeded it. At this time Benjamin Curtis was thirty years of age, and he conducted the business alone until 1859, when he admitted his two sons, Benjamin F. Curtis and Noah Curtis 2d, and his brother, Thomas Curtis, into partnership.

The new firm was organized to do a wholesale and retail business in Boston, as well as the manufacturing business in Quincy. The former branch of the business was established at 108 Hanover street, by buying out C. T. P. Appleton, a well known retailer of boots and shoes, whose store was reputed to be the finest of any in the country at that time. The two sons, Benjamin F. Curtis and Noah Curtis, managed this store, and the father, Benjamin Curtis, and his brother Thomas, conducted the Quincy shop.

Business increased in both branches, and a new and larger factory was built at the corner of Summer and Gay streets, Quincy. About 1865 the Boston wholesale business assumed such proportions that it was deemed best to sell the retail business at 108 Hanover street and remove the wholesale branch to more commodious quarters, which were secured at 62 Milk street. The trade of the Boston store at this time was principally with New England retailers, although there were a good many customers scattered through the western and southern sections of the country. The present Noah Curtis was the traveler of the house, and was remarkably successful as a salesman.

In 1872 the Boston branch of the firm was burned out by the great fire of that year which swept so many millions of dollars out of Boston's accumulated wealth and ruined so many firms. The house of Curtis & Co. was not seriously crippled by this disaster, however, and soon renewed the wholesale business at 117 Federal street, where it prospered under the same management and firm name until 1876, when Noah Curtis, the head of the present house of N. Curtis & Co., bought the entire business, and his father, Benjamin Curtis, retired at the age of sixty-six years. Benjamin F. Curtis, the other son, also withdrew to engage in the lumber business, and Thomas Curtis, uncle of the purchasing partner, started a shop in Quincy to manufacture boots and shoes on his own account. The business of manufacturing at Quincy and the wholesaling branch in Boston, were now under the sole charge of Noah Curtis, grandson of the founder of the business. Mr. Curtis

continued the business alone from 1876 up to 1884, when Walter B. Curtis, his son, was admitted as partner, and the firm name became N. Curtis & Co., thus completing the succession of that somewhat rare experience in business in this country of four generations engaged in the same firm and same line of industry, and what is more remarkable still, is that the experience of this Massachusetts firm covers in itself the entire history of shoemaking in this country from its crudest and smallest beginnings to its present advanced condition of development through improved labor saving machinery, which represents to-day in Massachusetts alone an annual value of over \$100,000,000.

The Boston house of N. Curtis & Co. is now located at 171 Congress street, where it was removed in 1887, having a few years previously occupied the premises 74 Federal street, which proved inadequate, and were relinquished for the present quarters. The record of the business of this house is remarkable, not only for its having been for more than one hundred years handed down from father to son, but equally noteworthy in the fact that never since the grandfather of the present Noah Curtis began business has there been a business obligation unfulfilled, or a single smirch upon the integrity of those who have managed its affairs. Its history has been one of industry, enterprise, ability and honesty. It is not therefore strange that the business has prospered under such management, or that the name of Curtis in the shoe trade is a synonym of the best in boots and shoes.

The following additional facts concerning the personal history of the men who have been prominently identified with the business during the last one hundred years will not be without interest to the general reader.

Noah Curtis, the founder of the house, died in Quincy, Dec. 2, 1856. He was twice married and had eleven children, eight sons and three daughters. He was for many years a selectman of Quincy. Besides his son Benjamin, who was his partner in the business, he had five other sons in the shoe manufacturing business. Adam and Samuel, under the name of Adam Curtis & Co., were among the most prominent manufacturers of shoes of their time. Charles and Lewis were also prominent shoe manufacturers, and Thomas was of the firm of Benjamin Curtis & Co., of Quincy, and T. Curtis & Co., shoe jobbers in Boston.

Benjamin Curtis, the father of the present senior member of the firm of N. Curtis & Co., died at Quincy, July 18, 1889. The *Boston Post* shortly after his death paid the following tribute to his memory: "In



Wm. Curtis

the death of Mr. Benjamin Curtis, which took place on Thursday, the city of Quincy is deprived of one of its best known citizens—a native and continuous resident—a shoe manufacturer for nearly half a century, and a business man whose word was never questioned, and who leaves a record for honesty and integrity that is beyond price. Mr. Curtis in early life identified himself with the Democratic party, and for many years served as town treasurer. He was one of the earliest patrons of the *Post*, and enjoyed the personal friendship of Colonel Greene, its founder, for many years. He retired from active business in 1876, being succeeded by his son, Noah Curtis. He leaves a widow and two sons. His age was seventy-nine years and three months."

Noah Curtis, the senior of the present firm, was born in Quincy, in 1839. He was the first of his family to go into business outside of Quincy, and relates with relish the fact that when his father proposed sending him to Boston with his brother to take charge of the Boston store, he overheard one of his uncles remonstrating with his father upon such a course as being exceedingly foolish and prophesying that the end would be disastrous to the boys and to the business. The result has hardly justified the prophecy. As a business man Mr. Curtis has been highly successful, and possesses the qualities essential to the management of large and diversified interests. While closely watching the details of his business and intelligently directing its operations, he does not forget to cultivate his social side as well as his commercial faculties. He is naturally of a genial, social nature, and easily makes and holds his friends. His fiftieth birthday was celebrated by a reception at the Suffolk Club, one of Boston's oldest and most select clubs, of which he has long been a popular member. Mr. Curtis has always been prominently and actively identified with sports and out-of-door life. He is a member of several yacht clubs, was one of the organizers of the Menkey Island Sporting Club of North Carolina, and is one of the most active members of the Castle Harmony Club of Harmony, Me., in the Moosehead Lake region. This is a fishing club, and its premises are said to be the best equipped of any in the country. He is also a member of several social clubs of Boston. Mr. Curtis lived in Quincy, his native town, until 1874, since which he has resided in Boston. He was married in 1862 to Miss M. Annie Bailey, of Scituate.

Walter B. Curtis, the junior partner of N. Curtis & Co., and only son of Noah Curtis, was born in Quincy, May 8, 1863, and is a graduate of Rice School, Boston. After leaving school he entered the employ of a

well known retail shoe dealer of Boston. At the age of sixteen he became a partner with his father, and is now actively in charge of the sale department of the business. He has had a careful training in the business and can be safely trusted to perpetuate the good name and prosperity of the house which his great-grandfather founded more than one hundred years ago.

GEORGE A. MANSFIELD.

GEORGE A. MANSFIELD was born in Warren, Mass., December 24, 1824. He was the son of Jacob Mansfield, a lawyer, and his mother was a daughter of Major General Cutler of Revolutionary fame. He was also a nephew of the late Chief Justice Pliny Merick and Judge Moir. A cousin of his sat on the bench of the Supreme Court of the United States.

His father dying when he was quite young, the boys were forced to earn all they could, farming and doing odd chores. Suffering from an injured arm, at fourteen years of age, he started for Boston to get better surgical aid, and to satisfy his growing ambition. For some time he met with little success, but finally found an opening in a wholesale boot and shoe store on Blackstone street. Subsequently he bought out a similar concern on Faneuil Hall Square, and commenced business for himself. Like many other Boston merchants, he began at the foot of the ladder and climbed to the top by industry, uprightness and genuine ability. Steadily expanding and increasing his business, he found it advisable to take in as partners two young and active business men, Joseph B. Lincoln and E. E. Batchelder. The firm of Geo. A. Mansfield & Co. was then formed.

At the age of forty-five poor health drove him from his business, and he sold out to his partners, the business ever since having been continued under the well known name of Batchelder & Lincoln.

Mr. Mansfield was married in 1853 to Ellen A. White, daughter of Josiah G. White, a wealthy and much beloved citizen of Methuen, Mass. He had five children, three sons and two daughters. Mr. Mansfield was a resident of Melrose, Mass., for over thirty years, and during this time was held in the highest esteem by his fellow citizens, who repeatedly charged him with important public trusts. He served the town as selectman, and was on the School Board when the present

High School was built. He was one of the committee appointed by the town to superintend the building of the magnificent Town Hall.

He was the original mover in establishing the Melrose Savings Bank. He was the first treasurer, and held the position for several succeeding years.

Mr. Mansfield was a self-made man in every sense of the word. No one appreciated more thoroughly than he the real worth in man. He admired energy, pluck and honesty. One ambition influenced him, as he saw his family growing up about him, and that was that they should be educated and equipped for the work of life as thoroughly as he could make them; and it was his good fortune to live long enough to see this ambition fulfilled in a large way.

Among the originators of religious work Mr. Mansfield was prominent, and although for many years a member of the orthodox church at the Centre, he was for the few years preceding his death connected with the church at the Highlands. So long as his strength permitted, he attended the meetings constantly, and many felt indebted to him for his thoughtful and hopeful words. His mind was of a rather high order, and the spiritual side of Christianity found in him a sympathetic believer.

E. E. BATCHELDER.

EDWARD EVERETT BATCHELDER was born in Wenham, Mass., October 7, 1835, and was a son of Captain Edmund and Lydia (Kimball) Batchelder. His early education was received in the schools of his native town, and completed at Atkinson. In 1855 he came to Boston and became a clerk in the boot and shoe store of James Perkins, with whom he remained until 1866, when he became associated in business with George A. Mansfield, of Faneuil Hall Square, with whom, in connection with Joseph B. Lincoln, was formed the partnership of George A. Mansfield & Co., which continued until 1869. He then, with Joseph B. Lincoln, formed the firm of Batchelder & Lincoln, with which he was identified until his death, and to his great industry, energy and excellent business capacity, the prominent position which this house early gained was largely due. He was not only a man of great executive ability and keen business foresight, but possessed that rare quality of make-up which inspires confidence and is inseparable from the

highest personal success. Although he died in comparative early manhood, he had already achieved notable business success which gave promise of a career of great usefulness. Although absorbed in business, he took a deep interest in city and national affairs. He was a Republican in political faith, and was a member of the Common Council for the years 1867, 1868 and 1869, serving on important committees, where his advice was much sought and prized. He early became a member of Revere Lodge of Masons, and was also a member of St. Andrew's Chapter.

About a year and a half preceding his death Mr. Batchelder's health began to fail, and he spent the summer of 1877 in Europe, hoping to restore it. On his return, finding himself unimproved, he went South in January, whence he returned home four days before his death, which occurred May 4, 1878. He was buried in the old cemetery of his native town, where his ancestors have been buried for nearly two hundred and fifty years. He died when seemingly his life's work had been but fairly begun, but the results of his labors were far reaching, and testify most strongly to the native ability and strong character of the man. No one had more loyal or devoted friends. He was social in nature, intelligent, warm-hearted and generous, incapable of meanness, and of the strictest integrity. In all the relations of life he was true to every duty, and his memory will be cherished by all who ever came within the radius of his vigorous personality.

Mr. Batchelder was married in 1869 to Miss Hattie L., daughter of Mr. S. C. Whiteher, of Concord, N. H., who still survives her husband.

JOSEPH B. LINCOLN.

JOSEPH BATES LINCOLN, sole proprietor of the widely known shoe jobbing house of Batchelder & Lincoln, was born in North Cohasset, Mass., July 3, 1836, and is a son of Ephraim and Betsey (Bates) Lincoln. His father was a farmer, and the youth of our subject was spent on a farm, his life during this period being similar in experience with that of the average New England farmer's sons. At the age of seventeen he graduated at the Cohasset High School, and for three months thereafter attended Comer's Commercial College in Boston. In June, 1854, he came to Boston to seek his fortune. Here he began his busi-



W. B. Lincoln

ness career as a clerk in the retail boot and shoe store of D. F. Carleton. Later on he entered the employ of J. A. Esterbrook, who was engaged in a similar line of trade on Merchants' Row. In 1859, with George C. Richards, he succeeded Mr. Esterbrook, under the firm name of Richards & Lincoln. During the same year he was married to Miss Anne Preston, of Boston. About three years later Mr. Lincoln purchased his partner's interest and conducted the business alone until July, 1866, when, with George A. Mansfield, E. E. Batchelder and himself as equal partners, was formed the shoe jobbing house of George A. Mansfield & Co. In 1869 Mr. Mansfield retired from the firm, when Mr. Lincoln and Mr. Batchelder became proprietors, under the firm name of Batchelder & Lincoln. Mr. Batchelder, whose sketch appears elsewhere, died in May, 1878, after which Mr. Lincoln purchased his deceased partner's interest, and from that time to the present has been sole proprietor, but has continued to retain the name of Batchelder & Lincoln, which to-day represents a house unexcelled in the extent of its business transactions by any concern in its line in the United States, and probably in the world. Indeed, the history of the progress of the shoe jobbing trade of this country shows no more substantial growth than that of Batchelder & Lincoln. Beginning with limited capital and against well organized and strong competition, a constantly increasing business has been done during every year of its existence, but it is during the years that Mr. Lincoln has been sole proprietor and manager that the most remarkable strides have been made, the extent of its business operations for 1892 reaching the large sum of over \$4,500,000, a record unequalled by any similar business concern. Such an achievement in any line of legitimate trade of necessity must be based on sound business principles, and represents not only vigorous and untiring personal efforts, but rare business judgment and sagacity.

It is a fact generally known, throughout the trade, at least, that there is probably no business of equal magnitude in New England that so thoroughly represents the work of one man as does this concern reflect the individual exertions of Mr. Lincoln. What it is to-day, he has made it. The methods which have largely been responsible for its success have originated and been carried through by him. One of the distinctive features of the house has been strict adherence to certain conditions of trade, well known among shoe jobbers as the New England method, and several years ago only confined to the territory of New England. The West and other portions of the country for a

long time refused to be governed by the conditions required in this part of the country. Many New England jobbers, induced by hopes of greater profits, but incurring thereby greater risks, were led to relax the rules here in force in catering to outside trade in the West and other parts of the country, which eventually, in many cases, brought about great losses, if not failures. Mr. Lincoln, however, preferred to do business according to sound business principles, such as prevailed in New England, and his house became what it has since continued to be, a distinctive New England house. Close adherence to this principle has resulted in building up a trade secure and firm, and which has constantly increased the confidence in which this house is held. To-day the methods for which he has unswervingly contended have been adopted throughout the country, and so firmly is he entrenched in his own field that at least two-thirds of his immense business comes from New England, although in every part of the United States his trade is constantly growing, this being especially true of New York, Pennsylvania, Ohio and Maryland.

Mr. Lincoln began his present line of business at 36 Faneuil Hall Square, his house being among the few jobbing concerns not destroyed in the great fire of 1872. The constantly increasing magnitude of the business after this memorable event demanded larger quarters, and in 1874 a removal was made to the present quarters, Nos. 94, 96 and 98 Federal street. Here six floors are occupied, and two floors of the adjoining building, giving a floor space of 50,000 square feet, every portion of which is required for the carrying of their immense stock, averaging a value of \$500,000, and for the transaction of business. These quarters during business hours are a very bee-hive of industry. The various departments are under the most rigid system, and the whole business, necessitating the employment of one hundred and thirty-eight persons, moves with clock-like regularity. So systematic are the arrangements, and such is the discipline maintained, that even in the extreme rush of business everything is done with regularity and precision, making comparatively easy the handling—as has been done in one day—of nine hundred cases and two hundred bundles. Mr. Lincoln, by his liberality of treatment, has surrounded himself with a corps of assistants not only especially reliable and of marked ability in their special departments, but who are in lively sympathy with the head of the house, and thoroughly devoted to his interests. Some of his most valued assistants have been for years in his employ. Mr.

Lincoln is quick to perceive the strong points of those in his employ and in a substantial way to show a proper appreciation of their services. He knows how to handle a large force of employees, and by just and considerate treatment creates feelings of mutual interest and regard.

The personality of a man who during the last few years has developed a business of such magnitude as Mr. Lincoln's, must be of a strong and vigorous type. It is needless to say that he has been a hard worker; such results as have crowned his efforts do not come by chance. He has the happy faculty of being popular without the sacrifice of independence or the possession of pleasing but negative qualities. No man is more firm when, after due and careful deliberation, he determines upon a course of action, or is less apt to be influenced by doings of others. He maintains the most careful supervision over all the details of his business, few concerns of equal importance reflecting so thoroughly the purposes and plans of its chief. He is liberal in his treatment of customers, is eminently fair in all of his transactions with them, and retains their trade despite strong competition, and even under conditions which others believed would loosen his hold upon the trade, it on the contrary steadily increased year by year, a result surprising even to his friends. While strict in his requirements of those in his employ, he is so fair in his treatment of them that the strongest bond of sympathy and good-will exists between them. Naturally a man of generous impulses, his sympathies are easily aroused and never appealed to without ready response, every year devoting large sums to charitable and philanthropic objects. He is social in nature, and finds his chief enjoyment in intercourse with congenial friends, among whom he is always a welcome guest.

Mainly through Mr. Lincoln's efforts was inaugurated in 1888 the Boot and Shoe Club, which has had a very successful career, and has had a highly beneficial effect upon the interest it represents. Mr. Lincoln is often referred to as the father of the club, and upon its organization was strongly urged to accept the position of president. He refused this honor, however, but accepted the position of first chairman of the executive committee, and has always borne an active part in the management of the club. He has been president of the Narragansett Boot and Shoe Club, and is now its vice-president. He is also one of the executive board of the New England Shoe and Leather Association, and was a member of the World's Fair Committee.

Politically, Mr. Lincoln has always been a Democrat, but never sought or desired political position, the demands of his business being such as to preclude active participation in political affairs, even had he inclination in that direction. Two years ago, however, upon the urgent solicitation of his friends, he accepted the Democratic nomination for representative to the Legislature of Massachusetts in the Fourth Plymouth District, a strongly Republican district, and, although defeated, received a most flattering vote. In 1892 he was again a candidate, and was elected, being the first Democrat ever elected in the district. Upon the organization of the House, he was placed on the Mercantile Committee, a very complimentary appointment for a new member, and the only position he desired or felt he could give the time to properly attend to. Outside of the time and attention his great business interests demand, Mr. Lincoln has found but little opportunity to devote to other enterprises. Although often urged to go upon the directory of large enterprises, he has refused to do so, not wishing to accept a position for the mere honor it would bestow if he could not render the service it would demand. He has, however, been a director, since its organization, of the Dennison Land and Investment Company. He has been quite an extensive traveler, and, chiefly for needed recreation, has made four trips to Europe. Socially, Mr. Lincoln is very popular, and his character for integrity is above reproach.

ELISHA S. CONVERSE.

ELISHA STAFF CONVERSE was born in Needham, Mass., July 28, 1820, and is the youngest child of Elisha and Betsey (Wheaton) Converse. He is of the eighth generation removed from Deacon Edward Convers, who, with his wife, came to America in 1630 and settled in Charlestown. This American progenitor of the family was a man of considerable influence, of great strength and energy of character, and a rigid Puritan. He figures largely in the colonial records of Charlestown and Woburn. In 1631 he established the first ferry between Charlestown and Boston. As early as 1634 he was chosen selectman of Charlestown and annually re-elected until 1640. In the latter year, with a small company, he founded the town of Woburn, and was intimately connected with its early religious and material progress.

He erected the first dwelling-house in Woburn and was one of the first Board of Selectmen, being annually elected until his death in 1663. A record of the descendants of Edward Converse has been carefully compiled by William G. Hill, of Malden, and it forms an interesting addition to the genealogical history of New England. The conspicuous traits of this family have been strong religious convictions, unflinching integrity, and clear-headed business sagacity.

Four years after the birth of our subject his parents removed to Woodstock, Conn., where he remained until he was twelve years of age, when he came to Boston, where for a short time he lived with an elder brother, James W. Converse, and attended the McLean School. He subsequently entered the employ of Aaron Butler, who was carrying on a general store business in dry goods and boots and shoes, attending school at the same time. He remained with Mr. Butler for nearly three years, when he returned to his parents in Woodstock, Conn., where he attended school and worked on a farm until he was seventeen. He then went to Thompson and engaged with Albert G. Whipple to learn the clothier's trade. Before he had served his time, at the age of nineteen he became a partner with Mr. Whipple. They continued to conduct the business together until Mr. Converse was twenty-two years of age, when he purchased Mr. Whipple's interest and continued the business on his own account. In September, 1844, he again removed to Boston and engaged in the wholesale shoe and leather business with Benjamin Poland under the firm name of Poland & Converse. In 1847 he removed his place of residence to Stoneham, Mass., at a point then known as "Red Mills," near where he and his partner had a branch business of grinding and preparing drugs, spices, dye-stuffs, etc. Two years later the partnership was dissolved and Mr. Converse formed a new copartnership with John Robson under the firm name of Converse & Robson. In 1850 Mr. Converse removed his residence to Malden, Mass., which has ever since been his home. The following year the Malden Bank was organized, when he became one of its directors. In 1856 he was elected president of this bank, to which office he has been annually re-elected to the present time. During the year 1853 he was elected treasurer of the Boston Rubber Shoe Company, and with this extensive corporation, elsewhere fully described in this volume, as its treasurer and general manager, he has been most actively and successfully engaged ever since. Besides his important position in the management of this great business, Mr. Converse is a director of the

National Exchange Bank of Boston; president of the Rubber Manufacturers' Mutual Insurance Company, and one of the trustees of the Boston Five Cents Savings Bank. He is also a trustee of Wellesley College. Early selecting Malden as his place of residence, Mr. Converse has ever since been a most prominent factor in its religious, social and material development. In 1878 and 1879 he represented Malden and Everett in the lower branch of the State Legislature, and in 1880 and 1881 he was elected as their representative in the Senate. In 1882, when Malden had been incorporated a city, Mr. Converse was elected, by an almost unanimous vote, as its first mayor, the honor being conferred upon him in recognition of his untiring efforts to increase the attractiveness and promote the prosperity of the town.

Mr. Converse was married, September 4, 1843, to Mary Diana Edmonds. Four children have been born to them, Frank E., Mary Ida, Harry E., and Francis Eugene Converse. Their eldest son, Frank E., who died December 15, 1863, was at the time assistant cashier of the Malden Bank, and was murdered by E. W. Green, postmaster of Malden, Green's motive being robbery of the bank. In memory of this son, Mr. and Mrs. Converse built and presented to the city of Malden, in 1885, a large building of great architectural beauty and finish, to be known as the Converse Memorial, to be devoted to uses of a free public library and works of art. Their second son, Harry Elisha, fills an important position in his father's business, where he is a valuable assistant.

At the age of twelve years Mr. Converse united with the Baptist church and ever since has been a consistent member of this denomination, and for many years held the office of deacon in the Malden Baptist Church. Mr. Converse has long been a force for good in the community where most of the years of his life have been passed. His influence has always been on the side of progress and prosperity. Of unquestioned integrity and superior business qualifications great success has attended him in every direction. Generous and public spirited, he has been a useful citizen in promoting every cause which appealed to him as being worthy of support.

Mr. Converse is now seventy-two years of age, and has been actively engaged in business for more than fifty-three years.

CHARLES NEWTON PROUTY

CHARLES NEWTON PROUTY, born in Spencer, Mass., October 6, 1842, comes from a family for many years prominent in New England, and for nearly three quarters of a century identified with the boot and shoe industry. The first of the family in America was Richard Prouty, who lived in Scituate, Mass., in 1667, and from whom Charles N. is removed five generations. His father, Isaac Prouty, was born December 9, 1798, and was the founder of the great boot and shoe industry of Isaac Prouty & Co., with the later development of which the son has been so closely identified. It therefore seems appropriate, in order to impart a true idea of the growth and progress of this industrial enterprise, to give a brief sketch of its founder.

Isaac Prouty began the occupation of making boots to order from measure in a small room in his own dwelling-house in North Spencer, in 1820. His work increased to such an extent that he found it necessary to employ help to meet the demands for his goods, and was soon forced to build a small one and a half story building in which he could extend his facilities for manufacturing. This building, together with a barn and other store houses, served his purpose until 1855. This year he purchased the homestead of Rev. Levi Packard in the center of the town and built a factory on the westerly part of the lot. In 1856 he moved his business into the new building and made the dwelling his residence. For those days such a factory was a large one, being thirty by sixty feet, with three stories and a basement. The system and management was now thoroughly reorganized and a partnership formed with two of his sons, Lewis W. and George P., under the firm name of Isaac Prouty & Co. The machinery, which they now introduced, enabled them advantageously to do away with much hand labor. This was really the first aggressive step taken by Mr. Prouty, looking towards an extension of business, and the success which in the following six years attended the undertaking proved its wisdom. His aim was to build up and develop a large manufacturing enterprise, and in this effort he was heartily seconded by Lewis W., who, under his father's direction, had become superintendent and business manager.

In 1862 the increased business required a larger manufacturing capacity. To meet this demand they purchased the "Mason Property" and erected a building forty-two by one hundred and four feet, four stories high, adding at the same time an engine and boiler to furnish power and

heat. This new factory was first occupied in January, 1864. By these improvements and with the addition of valuable room and machinery adapted to power, they made a radical change both in mode and facility of doing business. The firm early became convinced that machinery was eventually to be an important factor not only in cheapening the cost of manufactured goods, but also in enabling the manufacturer to produce a greater quantity in a given time, and they were foremost to introduce such machines as promised good work and quick results. The father lived to see the enterprise outgrow these accommodations and to plan for further enlargement of the factory. But while in the midst of these improvements he was taken sick with pneumonia, and died after an illness of seven days. Five days later his son, Lewis W., died also of the same disease.

Isaac Prouty was rated as a careful and shrewd business man. He gave to his entire business his individual attention, watching closely every detail, and scanning as closely the economy of the various departments. He believed in the old maxim "economy is wealth," and his practice of it was one of the important distinguishing features of his life, as well as the corner-stone of the business which he planned with such care. His customs and habits were those of the New Englander of an earlier date, and although he clung tenaciously to the social and domestic habits formed in early life, in his business he was decidedly modern and progressive. He died at the age of seventy-three years, but remained vigorous and attentive to the demands of business up to the beginning of his last illness.

By the death of his father and brother Charles N. Prouty was suddenly confronted by great business responsibilities. He had, however, been carefully trained for the work, and was well prepared successfully to carry it forward. During his boyhood he lived at home attending the public schools and working about home and in the factory. At the age of seventeen he was employed for a year as a clerk in the country store of Grout, Prouty & Co., and the experience he gained by the contact with people and matters pertaining to business he has always regarded as a favorable one. From eighteen to twenty years of age he attended school at Wesleyan Academy, Wilbraham, Mass. At the close of his last school year, 1862, he returned home, and in January, 1864, was made a partner in the firm of Isaac Prouty & Co. For four years previous to the death of his father and brother, which occurred early in 1872, he acted as superintendent of the labor department of the factory,

employing the help and having the general charge of the manufacturing interests. The death of these two members of the firm following so closely upon each other, were events of extraordinary importance to the surviving partners, and how to meet the situation and overcome it was their first care and thought. It is true that each had ably filled a position in the prosecution of the business thus far, but to the knowledge of the markets for buying and selling, the financial management, and relationship between manufacturer and customer, they were strangers, as these duties had been exclusively under the attention of the father and older brother.

A new partnership, composed of George P., Charles N. and Jason W., a younger brother, was at once formed, retaining, however, the old firm name of Isaac Prouty & Co. Each entered upon his duties full of confidence and hope, and each took a position in the management of the business where he thought he could best promote the interest of the firm. Many of the important details were assumed by George P. and Jason W., while, by common consent, the general management fell to the lot of Charles N. Under the circumstances this was a difficult task for him to perform, but as time passed on, and he became more familiar with the new duties, he gave evidence by his management that he was abundantly able to assume the trust so suddenly imposed upon him.

The business received a fresh impetus under the new order, and in a short time it became necessary to increase the facilities by additions and extensions, both in buildings and motive power. These have been made from time to time, until at present the building containing the boot and shoe departments measures 615 feet in length by 42 feet in width, and is six stories high. There are also two large brick storehouses for leather and other materials and for manufactured goods, and still another one, of brick, used for the manufacture of boot and shoe boxes, paper cartons, lasts, etc. The main building is divided into four fire-proof sections, and the whole establishment is provided with the latest improvements for protection against fire, by being thoroughly fitted with automatic sprinklers and two good supplies of water, also a one thousand gallon underwriters' steam fire pump, run by a quick steaming boiler of one hundred and fifty horse-power. These are required by the Mutual Insurance Company, who demand that the buildings shall be self-protecting from fire. The factory is lighted by incandescent electric lights, and the motive power for the whole establishment

is supplied by a three hundred horse-power engine and four one hundred horse-power boilers. In 1872 the firm manufactured 20,000 cases of boots, valued at \$500,000; in 1886 the combined value of the boots and shoes was more than \$2,000,000; while in 1892 the product amounted to 125,000 cases, or 1,500,000 pairs of boots and shoes, valued at \$2,250,000.

Mr. Prouty married, May 25, 1864, Jennie A., daughter of Selby Richardson, of Spencer. They have three sons and two daughters. The sons are being educated with the idea in view of aiding in maintaining this vast industry, which fully sustains the claim of being the largest and most complete boot and shoe industry in the world.

W. H. WHITE.

AMONG the manufacturers of leather, William Henry White holds a unique place. His personal efforts in this important industry have been largely along original lines, and the success he has achieved has given him deserved prominence. He was born in Woburn, Mass., October 26, 1829, and is a son of the late Col. Samuel B. White, of that town. His ancestry on both sides was of the pure New England type, and possessed in a marked degree the energy, courage and inflexible principles that characterized the earlier settlers of this country. His father was the first treasurer of the town of Winchester, and also took a prominent part in establishing a public library in that town. He was the first commander of the Woburn Mechanics' Phalanx, a military organization of prominence for the past sixty years. He was a man of strong character, and from him our subject inherited many of the traits which have made his life a success.

Mr. White was educated in the public schools and the Academy of Woburn. Upon leaving school, at the age of sixteen, he entered the employ of Joel Whitney, and served an apprenticeship of four years at the machinist trade. After thoroughly mastering his trade he secured a position in the locomotive shops of the Boston and Lowell Railroad at East Cambridge, and was soon after promoted to engineer, running an engine between Boston and Lowell. Later on he was made overseer of the locomotive repair shops of the Western Division of the New York and Erie Railroad at Hornellsville, N. Y. At the age of twenty-



W. H. White

two he was appointed to the responsible position of assistant master mechanic of the same road at Dunkirk, N. Y. While in this position he was induced to return to Woburn (now Winchester) to engage in the manufacture of mahogany and other fancy woods, which was then a thriving and profitable business in that town. He accepted a partnership in an established concern, and for three years did a profitable trade, at the end of which time his mill was destroyed by fire, entailing a heavy loss.

In 1855 Mr. White turned his attention to the work of tanning and manufacturing of leather. He built a tannery at Winchester, but had barely gotten his enterprise under successful way when the financial crisis of 1857 forced him to suspend operations. The following year he went to Montreal, Canada, where he planned and constructed large leather works for a Boston firm, and for some years served as principal manager of this enterprise. Preferring, however, to reside and educate his family in New England, he gave up his position and returned to Lowell in 1863. He was at this period of his busy life still a young man, full of resources and with a valuable experience in the line in which he was later on to achieve such a high degree of success. For several years he had made the manufacture of glove leather a careful study, and upon his return to Lowell he embarked in this line of work, and speedily gained an enviable reputation for the quality of his production. He later on increased his business by manufacturing gloves from leather prepared by himself. Up to this time Mr. White had conducted the business alone, but in 1867 his brother became associated with him as partner, and later on a Mr. Kilburn joined the firm, which then became known as the White Bros. & Kilburn. The gloves manufactured were of the highest quality, and coming into the market at a time when, in a measure, imported goods of this character had been cut off by the civil war, a large business was established. The quality of their product not only took the highest rank with the best New England trade, but was considered the best grade of goods manufactured in the country. After eight years of successful operation in manufacturing gloves this line of work was relinquished and the manufacture of fancy leather was undertaken, at which time the firm was reconstructed as White Brothers & Sons. This style continued until 1887, when the firm was again reorganized, this time under the name of White Brothers & Co., which included the senior partner and his three sons, Edward L., Henry Kirke, and William T. White. Edward

L., the eldest son, had already been a partner in the old concern. He, as well as the other sons, has had practical experience in every part of the business, and all three not only understand every detail of the business, but are men of superior business qualifications and ably supplement their father in carrying on the business. The goods they manufacture are of extraordinary delicacy of finish, and are made in various grades and colors under a process known only to their house. They have introduced several specialties which originated with themselves which have opened a wide field for the use of leather in directions never before applied. They have established agencies in the leading centers of Europe, viz.: London, Northampton, Paris, Frankfurt, Vienna, and in Sydney and Melbourne, Australia. At home their productions are in demand, not only for boots and shoes, but for pocket-books, piano and organ manufacturers, upholsterers, decorators, and are adapted to many of the art industries. This firm was the largest producers in this country of alligator and lizard skins at the time when these skins were popular, and among their latest novelties has been their ooze leather, produced in various colors and finish, much resembling silk plush or velvet. The success which has been attained with their various productions has been remarkable. It can, however, be easily accounted for. From the start only the best has been made, quality, not quantity, has been the motto of the house, and to-day their productions are unsurpassed by any concern of its kind in the world. They have two factories in Lowell, the old factory, known as the Bellevue Factory, and one recently completed, known as the Fort Hill Factory. The latter is, beyond a doubt, in appointments and construction, the most complete factory of its kind in the world. It is a brick structure, 400 by 125 in dimensions, and five and six stories in height. Large sums were expended in procuring an unrivaled supply of water of the best quality for the purposes required, and no expense was spared in every other direction to make it a model factory. In ventilation, in means for protection from fire, and in convenience for handling products and material, it is unsurpassed. The construction of this factory was largely carried out on plans outlined by Mr. White, and all the details of the work was closely supervised by him, a work for which he was admirably qualified, both by experience and natural mechanical abilities. Their two factories cover an area of eight acres, giving facilities for handling five thousand skins per day, the manufacture of which necessitating the employment of 600 hands. The sale of their

product extends all over the civilized world and is constantly increasing. That they are not only the largest producers in their special lines in the United States, but practically without rivals in the peculiar quality and high finish of their goods, is freely acknowledged. Mr. White, the creator and founder of this now extensive business, is still the vigorous head of the house. He has always enjoyed remarkable good health and has the appearance of a man much younger than his years. He has led a very busy life, but it has made but little inroad upon a naturally robust constitution, and he has every promise of many years of active usefulness. He possesses in a marked degree inventive genius and has decided tastes for work requiring constructive ability and original investigation. He is of a mechanical turn of mind, and the specialties of the firm were largely the result of his own inventions. He is of retiring, modest disposition, but a man of refined and cultured tastes and of generous and philanthropic spirit. He has little fondness for public life or for positions which would bring him prominently before the public, and outside of having served as a member of the Lowell city government, has held no political position. He commands and enjoys the good will and esteem of his townsmen, and finds his chief pleasures in the retirement of home and the felicities of domestic life.

Mr. White was married in 1855 to Miss Maria Theresa Towle, of Winchester, a woman of the highest graces of heart and mind, who died in 1883. She was the mother of Mr. White's three sons, already mentioned, and one daughter, Maria Theresa White. In 1888 Mr. White married Mrs. Maria C. Lyon, daughter of the late Judge Nathan Crosby, of Lowell. Their home, formerly owned and occupied by Judge Crosby, is located upon the hillside over-looking the city, and is one of the most delightful residences of Lowell.

WINCH BROTHERS.

THERE is probably no commercial concern in New England which for the last thirty years has been so uniformly successful as the boot and shoe jobbing house of Winch Brothers. Starting with limited capital against strong and active competition, its trade has steadily increased from year to year until, at the present time, its annual sales equal in volume that of any establishment in the same line in the

United States, if not in the world. It is truly a representative house of a business which has grown to large proportions in New England.

The founder of the house was Joseph R. Winch, who is still the senior member of the firm. He came to Boston in 1858, having previously served an apprenticeship in the making of boots and shoes, and had thus acquired an experience of great value in his later business career. Upon his arrival in Boston he entered the employ of Henry Damon, a boot and shoe jobber, with whom he remained until 1862, when, with George Hosmer, he started in business for himself, under the firm name of Hosmer & Winch. Of the two partners, Mr. Winch alone had practical knowledge of the business, and the real work of the firm devolved solely upon him, and to his efforts the early success of the enterprise was alone due. He earnestly applied himself to the task, and, practically without assistance did a business of \$192,000 during the first year, a result, under the circumstances, highly creditable for the new concern. The success of the enterprise thus auspiciously inaugurated has been continued with constantly increasing degree of success from that time to the present.

In 1868 the firm was strengthened by the addition of Mr. Winch's brother, John F. Winch, who had already achieved marked success in the same line, and was well equipped both by experience and great natural business qualifications to advance the interests of the firm. The firm name at this time was changed to Hosmer & Winch Brothers. The first year after the reorganization of the firm the sales amounted to \$865,000, an increase of nearly \$600,000 over the preceding year, and the largest up to that time ever done by a jobbing house in the same line in Boston. From this time on the growth of the business was substantial and rapid. In 1875 Mr. Hosmer retired, when the present firm name of Winch Brothers was adopted. The two brothers conducted the business alone until January, 1889, when George F. Winch and John H. Gibbs, both of whom had held important positions with the firm, were admitted as partners, the firm name, however, remaining as adopted in 1875.

The business was first located at No. 68 Milk street, where the post-office is now located. In 1866 it was removed to 47 Federal street, and two years later their quarters were enlarged by the addition of the store and basement 49 Federal street. Here they were located at the time of the great fire of 1872, which totally destroyed their store and its contents, incurring a heavy loss, as the greater part of their insur-

ance had been placed with Boston companies, which were so seriously affected by the fire that most of them were unable to meet their losses, and in consequence Winch Brothers received only one-third of their total insurance. Immediately after the fire they rented the old Boston Lancers' Armory, on Sudbury street, which was quickly converted into suitable quarters, and where they were ready for business and doing their usual trade on Thursday of the week following the fire. Here they remained until November, 1874, when they hired two stores, 130 and 134 Federal street. The rapid growth of their business soon required enlargement of their quarters, and in 1878 the adjoining store, 136 Federal street, was secured. From time to time, as business required, additional room was secured by renting the floors over these stores, until, in 1892, the entire six floors and basement were secured. Each floor contains 8,400 square feet, giving them a total floor space of more than an acre and a quarter, every portion of which is required for the storage of stock and transaction of their immense business.

The success of the firm has been sure and gradual from the first. The business has been pushed with tremendous energy and rare sagacity, every year showing a gratifying increase of business over the preceding year. The prosperity of the house has indeed been phenomenal; from a sale of \$192,000 in 1862, it has increased to more than \$4,000,000 in 1892. From a business force practically represented by Mr. Joseph R. Winch alone in 1862, the business now gives employment to ninety-five persons, and is represented by five traveling salesmen. The goods handled, consisting of all grades of boots and shoes and all the leading lines of rubbers, are sold in every part of the United States and Canada, and, in fact, shipments are made to nearly every portion of the civilized globe. It is a remarkable fact that since this house has been in existence it has witnessed the birth or death of every Boston contemporary, not one being now in business that has not failed that was in existence when it began. During the thirty years of successful effort, this firm has effected many changes in the methods of trade which have since been widely adopted. It was the first house to introduce the individual carton, which revolutionized the jobbing trade. What might be termed the boot and shoe mart of Boston was formerly on Pearl street. After the great fire of 1872 this firm was the first to again utilize the peculiar advantages of Federal street as a location for business, in which they have been followed by other firms, so that Federal street has now become the recognized centre of the jobbing

trade in boots and shoes. In this and in other directions this house has been a leader rather than a follower, and its present position as among the first houses in its line in the United States has thus been justly earned. Its affairs have been managed with marked administrative and executive ability. While it has gained a widespread and sound reputation as being aggressive and progressive, it at the same time is recognized as one of the most conservative and reliable houses in the trade. Its financial record is noteworthyly creditable; its name has never been questioned, through war and panics it has promptly met every obligation, and to-day, with resources of the strongest character, it is admirably equipped to maintain the high position it holds in the jobbing trade of the world.

Joseph R. Winch, the founder of the house, was born in Princeton, Mass., April 14, 1825, and is the second oldest child in a family of three sons and four daughters of John and Mary (Russell) Winch. The father was a farmer and the son's early years were passed under the thrifty and healthful influence of a New England farmer's home. His education was acquired in the district school. At the age of twenty-one he left home and went to Wayland, Mass., where he engaged in farming, and also served an apprenticeship in the boot and shoe making trade, securing thereby an experience of great benefit to him in his later business career. Possessing natural musical talent he largely devoted his time during this period of his life to teaching vocal music, following this avocation with success in different parts of Middlesex county, where there are still many residing who will recall with pleasure his work in this connection. His career in Boston has been related in the foregoing pages devoted to the history and progress of the great business interest with which he has been so prominently identified from the beginning. Such has been his devotion to its interest that he has had little to do with outside enterprises, his regular duties in connection with his own business affairs demanding all his time and attention. He has always, however, taken a deep interest in the prosperity of the city and has ever been ready to do his full share in contributing to the welfare of its citizens. During his residence in Boston he has always been active in church music, and his voice has been heard most acceptably in the choirs of the different churches. He was one of the charter members of the Apollo Club and has always been active in its behalf. He was married, September 13, 1846, to Miss Carver, of Wayland,

Mass. Their only child, Mary Ella, was married, September 13, 1870, to George Fred Winch.

John F. Winch was born in Acton, November 27, 1838, whence his father had removed in 1837. His early life was passed on a farm, but at the age of sixteen he commenced his business training in a general country store at Wayland, where work began early in the morning and continued until late at night. After a year spent in this way, not without its value, he returned home, and after another term at school he went to Concord, Mass., and for three years was employed in a dry goods store in that city. In 1863 he came to Boston and entered the employ of Henry Damon, the proprietor of the wholesale boot and shoe house, in which his brother had begun his Boston career. Young, vigorous and ambitious, and with a diversified commercial training, he soon manifested marked aptitude for the business, and in 1866, through personal worth, was admitted as partner with Mr. Damon, under the firm name of Henry Damon & Co. Two years later, in 1868, having been highly successful, he retired from the firm and joined his brother in business, and from that time to the present has been an important factor in achieving the high degree of success the firm has attained. He has had experience in every department of the business and is thoroughly conversant with all of its details. He is a man of great executive ability, and in the management of the financial affairs of the house, to which he has given special attention, he has been particularly successful. As a vocalist Mr. Winch is well known, not only in this part of the country, but in many parts of the United States, having, with marked success, taken part in concerts in many of the leading cities of the country. He has a remarkably rich baritone voice, and his services in church choirs and concerts have been in eager demand and always highly appreciated. For twenty-three years he sang in Dr. Hale's church, and during his connection with the choir it was acknowledged by musical experts to have had no superior in New England. Mr. Winch's ability as a vocalist has given him deserved prominence in musical circles, but his efforts have been mainly a pleasing diversion in an active business career; had he devoted himself solely to its cultivation he would have taken high rank. He was also a charter member of the Apollo Club and is still an active member of the society. He was married, June 7, 1869, to Miss Kate Rametti, and has one daughter, Miss Mabel Winch.

The two junior partners in the house of Winch Brothers, although their partnership interest has been of comparatively recent date, had been for several years in the employ of the firm. George Fred Winch, the son-in-law of Joseph R. Winch, entered into the service of the house in 1877. He had formerly been very successfully engaged in the grocery business, conducting at the time he relinquished the business to become connected with Winch Brothers, four stores in Boston. He is naturally a progressive, energetic man, and he soon became a valuable assistant in the business. Under his supervision many important changes have been made, in 1889 perfecting the present admirable arrangement of the stores, whereby the handling of their immense business has been greatly facilitated.

John H. Gibbs, the fourth of the quartette of partners, also entered the employ of the house in 1877, and by his ability and close application to business has since risen by degrees to his present position. He is thoroughly familiar with every department of the business, and a man of excellent business qualifications.

GENERAL ABIJAH THOMPSON.

Not many men have lived in Woburn more favorably known and respected in the world of honorable and successful enterprise than the man whose once familiar name is at the head of this sketch. Descended from the emigrant James Thompson, who, in 1630, came in Winthrop's choice company to the new world and settled, first in Charlestown, and, in 1642, became one of the first settlers and magistrates in the newly incorporated town of Woburn, General Abijah Thompson could trace his line of descent back through six generations of men, all of whom lived and died in that part of the town now known as North Woburn. His father was Major Abijah Thompson, in whose large home, formerly a public-house, but now owned and occupied by the heirs of the late Oliver Fisher, the subject of this sketch was born, May 20, 1793. In 1800 Major Abijah Thompson built a house a few rods north of the old homestead. In this new house, now owned and occupied by Henry Thompson, he reared his young family and had his home until his death in 1820. Besides his business as a mechanic he kept in a part of his house a country store. But though highly respect-

able and comfortable in circumstances he could afford to give his sons only the very limited opportunities, common at the time, for educational culture. The wide world was before them as they grew to manhood, and they had to find their way through it. At the very early age of seventeen Abijah, the eldest of the children, embarked, without experience and wholly unaided from without, upon the tumultuous, and to him unknown, sea of business life. In a loose paper, discovered after his death, was found, in his own handwriting, the following condensed account of what followed this first step in his career: "In 1810 I left home at the age of seventeen to become an apprentice in the business of tanning and currying leather, and served four years. At the age of twenty-one I commenced business for myself, buying leather in the rough and dressing it with my own hands in Medford. I began with two dollars capital, selling in small lots, from one to six sides, to shoemakers from adjoining towns, for one year. I then left and built a small tannery with sixteen vats in the west part of Woburn, grinding my bark with a horse and stone, and tanning what few hides I could find among the farmers, from one hundred to one hundred and fifty a year.

"I had two apprentices. Buying leather from the tanneries in the county, and dressing it, I then took my horse and went to Reading, Stoneham, Malden and adjoining towns, where I sold to shoemakers from four to five sides each about every other week. At the same time I picked up the hides among the farmers as they killed their animals in the fall of the year. Thus I increased my business, as capital increased, for about ten years. I then bought a tract of fifteen acres of land, with a small water privilege, near the center of the town. It was a very rough place, but I commenced clearing it up, built a dam, and erecting a building, put down twenty vats, enlarging by degrees my business as I gained in capital, and each year putting down more vats. In 1835, finding my water power not sufficient for the business, I put in steam power and other machinery, and, in 1836, I took in Stephen Dow as a partner."

This short account involves details which a stranger to the business would not even suspect. From these small beginnings General Thompson's business went on increasing in its extent and importance until he was one of the largest and most successful manufacturers of leather in the United States; and by all who knew him he was ever regarded as no less honorable than he was successful, and when, in 1866, he retired

from active participation in the business, though tanning and finishing leather at the rate of fifty thousand sides per annum, and having a large leather store in Boston, not one unpleasant word and not one suspicious look had ever occasioned a jar between him and his partner, or between him and any man with whom he was concerned. No suspicion of trick, or unworthy resort to any species of sham, ever rested upon him for a single day. He well knew what "the day of small things" meant; and he had his trials, sometimes numerous and severe, but whatever else he sacrificed, he never sacrificed a principle nor had a principle for sale.

Immense as his business finally became, and great as the burden of care and responsibility resting upon him, no man was ever further removed from bluster or noisy pretense than General Thompson. With wonderful equanimity, he always seemed calm, self-contained and unpretending. His speech never betrayed a loss of balance or self-respect. Seeing and deploring the evils of intemperance and low and profane talk around him, he, for years, made it a law of his establishment that no intoxicating liquors and no profane language should be used by men in his employ. Those who were addicted to either and unwilling to abandon the bad habits need not apply for employment. Yet the law was made and enforced so wisely and so kindly that there was never any "strike" and never any serious difficulty. To some of his workmen the measure was the means of permanent reformation and very manifest benefit.

Though General Thompson was one of those men who never sought and apparently never desired office, offices from all quarters sought him. He had an inherited fondness for military life and early joined a company of artillery in Lexington. From the office of sergeant in 1824 he rose, in 1826, to that of captain, in 1828 to that of major, and in 1835 to that of brigadier-general—the last mentioned commission being given by Governor Armstrong and the two former by Governor Lincoln. In the town he served for several years on the Board of Selectmen. He was for many years president of the Woburn Bank; one of the original directors of Faneuil Hall Bank of Boston; a director of a bank in Charlestown, and for many years one of the active managers of the Middlesex Insurance Company in Concord.

General Thompson was unquestionably one of the most public-spirited men ever resident in Woburn. No great and important enterprise failed to enlist his sympathy and aid. He was among the first, if not

the first, to move in the effort to secure the Woburn Branch Railroad, the Woburn Gas Company, and the bank of which he was long the president. In his relations to the parish and church of his choice, he was also ever ready to help on every good work. And always regretting his own early lack of educational advantages, he evinced a like interest in the schools, and especially the academy of his native town, of which he was a trustee and the treasurer, and to which he left, in his will, a considerable sum of money, as he did also to the First Congregational Church, of which from his early manhood he had been a member. Of his large fortune, accumulated by his own honest industry and enterprise, it is pleasant to know that a large number of worthy objects received a share.

In his domestic relations General Thompson was peculiarly happy. On the 29th of April, 1814, when he was not quite twenty-one years of age, he married Celinde, daughter of Captain William and Arethusa (Munroe) Fox, of Woburn. The mutual experiences of joy and sorrow, of adversity and prosperity, continued through more than fifty years of married life, proved that she was one of the best of wives and mothers, and he one of the best of husbands and fathers. Of their "golden wedding," observed April 29, 1864, the local papers gave a deeply interesting account. After various appropriate exercises, including music, addresses from Rev. Jonathan Edwards, a former pastor of the family, and Rev. Dr. J. C. Bodwell, the pastor at the time of the festival—the latter read a poem suited to the occasion and subsequently published.

General Thompson survived his wife nearly two years, she dying September 11, 1866, and he June 7, 1868.

They had four children: 1, Celinde, born February 13, 1816, married Stephen Dow, May 24, 1836, and had seven children; 2, Abijah, born June 13, 1818, died September 11, 1826; 3, Julia Ann, born September 16, 1827, married J. B. Doyle, June 1, 1854, and died in 1867, had two children; 4, Abijah Franklin, born September 17, 1829, married Mary E. Wyman, May 15, 1851, and died August 5, 1861, leaving one child, Arthur Abijah, now of Brooklyn, N. Y.

Of the business firm of which General Thompson was the founder, it is proper to add that it is still in existence, but since 1871 has been carried on under the firm name of Stephen Dow & Co., and is still vigorously prosecuting its appropriate enterprise, its later history being detailed in the biographical notice of Stephen Dow, published elsewhere in this volume.

TYLER BATCHELLER.

THE subject of this sketch, Tyler Batcheller, may be truly called the founder of the now large and flourishing village of North Brookfield, Mass.

He was born in the town of Sutton, December 20, 1793, and came from there to North Brookfield, with his father and family, in April, 1802; the town, however, being called at that time the North Parish or "Second Precinct in Brookfield."

At an early age, probably in his fifteenth year, he went to Grafton and learned the trade of shoemaking with Nathan Johnson. At the close of his apprenticeship there he returned to North Brookfield, and was employed in the establishment of Oliver Ward, who, in 1810, had commenced in the town the manufacture of "sale shoes," the first and only manufactory of the kind in the State west of Grafton.

In 1819 he commenced business on his own account. At first his entire business consisted only of the shoes he could make with his own hands. Soon, however, he took into his service one or two apprentices and his brother Ezra, who had already learned the trade of Mr. Ward.

The first shoes he made were chiefly of a low-priced quality, specially adapted to the Southern trade. These he packed in empty flour barrels and consigned to Enoch Train, who in those days ran a line of sailing packets between Boston and Havana. On these small consignments a large profit was realized.

In 1824, having previously taken into his service several additional employees, he built a small two-story shop, which is now a part of the immense structure known far and wide as the "Big Shop," into which, January 1, 1825, he removed his business, and at the same date took into partnership his brother Ezra, continuing the business, now somewhat enlarged, under the firm name of T. & E. Batcheller.

From this time forward the two brothers were associated as partners; through all the changes in the business, and in giving a history of it, their names cannot be dissociated. Tyler, the senior, attended to the purchase of stock and to all other business abroad; while Ezra was the efficient and popular superintendent, giving direction to all matters pertaining to the manufactory.

Harmonious in all their business relations, as well as in all measures devised for the public weal, the act of one was the act of both, and in

most matters their names were usually coupled, and they were familiarly spoken of as "The Deacon and Ezra."

They then added to their business the manufacture of "Batcheller's Retail Brogan," an article adapted to the New England trade; their main business, however, being the making of goods for the Southern and Western States.

January 1, 1830, by the admission of Freeman Walker, the firm name was changed to "T. & E. Batcheller & Walker." The factory was then enlarged to three times its original size.

In 1831 they introduced the manufacture of russet brogans specially for the trade of the Southern States—the first that were made in Massachusetts. They soon became a leading article in the shoe trade, and continued to be so for many years.

Mr. Walker retired from the firm in 1834, which resumed its former style of "T. & E. Batcheller." A large part of the work at this time was put out and done by workmen in their small shops in North Brookfield, and the towns in the vicinity, in some instances the stock being carried a distance of twenty to thirty miles.

On June 10, 1852, Charles Adams, jr., Alfred H. Batcheller, William C. King and Hervey J. Batcheller were admitted to the firm, and its style changed to T. & E. Batcheller & Co. All of these partners, with the exception of A. H. Batcheller, retired within a few years. Meanwhile a store had been opened in Boston for the sale of the goods, and Tyler Batcheller had removed his residence to that city the latter part of 1848.

In April, 1861, the Southern rebellion broke out, and the business of the firm being very largely in the Southern States, and their losses proportionately heavy, a suspension was inevitable. An arrangement was soon made, however, and they were enabled to pay their indebtedness, principal and interest; but Tyler Batcheller, the founder and efficient senior partner of the firm from its beginning, did not live to see that fortunate consummation; after a brief confinement to his house and bed, and without any clearly defined disease, he died October 8, 1862, nearly sixty-nine years of age, apparently of mere exhaustion of the vital powers, accelerated by care and anxiety. Thus ended a life distinguished for industry, energy, perseverance, integrity and usefulness.

He united with the First Congregational Church in North Brookfield June 8, 1817. In the spring of 1818 he assisted in organizing and

superintended the first Sabbath-school in town. September 15, 1820, he was elected a deacon, at the age of twenty-seven, and continued in that office until he removed his residence to Boston.

He was married April 6, 1819, to Miss Nancy Jenks, who died in 1828, leaving three daughters and one son. October 8, 1829, he married Miss Abigail Jones Lane, who died in Boston, March 10, 1877.

After his removal to Boston, Deacon Batcheller and his wife united with Park Street Church, November, 1850, and in September, 1857, he was elected a deacon of that church, of which he remained an active and devoted officer to the close of his life.

Mr. Batcheller was an original member of the Boston Board of Trade; was chosen a member of its Committee of Arbitration, and served on other important committees.

Ezra Batcheller, the junior member of the original firm, was, equally with his brother, an efficient and essential factor in the growth and prosperity of the manufacturing establishment and of the town. He was a large-hearted, public-spirited man, of earnest piety, and his memory is fragrant of good deeds and an honorable and useful life; he died in 1870, aged sixty-nine years.

Alfred H. Batcheller, the son of Ezra Batcheller, was admitted to the firm in 1852, and after the death of Tyler Batcheller, took his place as manager of the Boston part of the business, which included all that was done outside the factory in North Brookfield, his father continuing in charge of the latter, as he had always done.

In 1866 George E. Batcheller became a member of the firm, and continued to be so until his death, in November, 1876, aged thirty-eight years.

Alfred H. Batcheller remained for some years alone in the business until, in 1882, he admitted to the firm his son, Francis Batcheller.

In 1889 the firm of E. & A. H. Batcheller & Company became the E. & A. H. Batcheller Company.

Alfred H. Batcheller died in December, 1891, aged sixty-one years.

JAMES W. CONVERSE.

JAMES W. CONVERSE was born in Thompson, Conn., January 11, 1808, and is a descendant in the eighth generation of Edward Converse, who



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came to America from England in 1630. This progenitor of the family in America was a man of strong personality, and figures largely in the colonial history of New England. He first settled in Charlestown, where he established the first ferry between that point and Boston, and from 1634 until his removal to Woburn, in 1640, was one of the selectmen of Charlestown. He was one of the founders of Woburn, where he built the first dwelling-house, and took a prominent part in its religious and material advancement. At the time of the organization of the town government, he was chosen a selectman, and continued to serve in that capacity until his death, in 1663. He was a man of intense religious conviction, of restless energy, and a rigid Puritan.

Our subject is the first child of Elisha and Betsey (Wheaton) Converse. When he was six years old his parents removed from Thompson to Woodstock, Conn., and two years later to Dover, Mass., and thence to Needham. In 1824, while yet but a lad of thirteen years, he left his home to begin life's battles for himself, and at this early age was commenced a career which from that period to the present has been in every sense worthy of emulation. He came to Boston and obtained employment with his uncles, Joseph and Benjamin Converse. In 1828 his uncles assisted him to commence business in the Boylston Market. Four years later, on January 1, 1832, he formed a copartnership with William Hardwick, under the firm name of Hardwick & Converse, in the boot, shoe and leather business, at the corner of Milk and Broad streets. On January 1, 1833, he became associated as partner with Isaac Field, in the hide and leather business, under the firm name of Field & Converse. In 1838 Mr. Field retired from the firm, and his brother, John Field, took his place. The firm of Field & Converse became one of the leading concerns of its kind in New England, and enjoyed an extended trade not only in this but in foreign lands. During all the panics which occurred throughout its long existence, its credit was never shaken. On January 1, 1870, Mr. Converse retired from this firm and also from the business. Since that time Mr. Converse has been very busy looking after his railroad, banking, real estate and other interests. He was one of the organizers of the Old Mechanics' Bank of Boston in 1836, and was elected one of its first board of directors, and continued to act in that capacity for fifty years. In 1847 he was elected president of the bank, and continued in the same office for a number of years. He has also been president of the Boston Rubber Shoe Company for several years. This company has large factories at

Malden and Melrose, and the extent of its annual output is the largest of any similar concern in the world.

Mr. Converse has been an active force in religious work, not only in his immediate home but in many parts of the country. In October, 1821, he united with the Charles Street Baptist Church of Boston. He was one of the original members of the Federal Street Baptist Church, which was organized in 1827. In 1845, when he removed his residence to Jamaica Plain, he united with the Baptist Church at that place. For some years he was a member of the Tremont Temple Baptist Church, later uniting with the Shawmut Avenue Baptist Church, which is now known as the First Baptist Church of Boston. For more than fifty years Mr. Converse has served in various churches as deacon, being first elected in 1837, by the Federal Street Church. During all these years he has been an earnest church worker, and many churches, not only in the vicinity of his home, but in various parts of the country, have cause to remember him with gratitude.

Mr. Converse was married in Boston on September 5, 1833, to Emeline, daughter of Nathan and Nabby (Shepard) Coolidge. They have had three children: James W. Converse, jr., born January 9, 1844; Costello Coolidge Converse, born September 22, 1848; and Emma Maria Converse, born March 28, 1851. Their eldest son, James W. Converse, jr., served with distinguished credit during the war of the Rebellion. He was a man of excellent business ability, and had achieved a high degree of success at the time of his death, after a short illness, in May, 1876. Costello C. Converse is already distinguished for business and financial abilities, and is associated with his father and other gentlemen in enterprises of far-reaching importance. Mr. Converse's daughter was married in 1877 to Isaac W. Chick, of Boston.

The Rev. William Howe, D.D., for many years so well known in Boston through his earnest Christian work, in a very interesting account of his personal connection with Mr. Converse, bears the following testimony to the striking traits of his character: "His Christian character, early formed, and supplemented by correct business principles and enterprise, has led to a prosperous life and ultimate affluence. He has been content to patiently work his way to the goal. Without aspirations for civil, political or religious distinction, he has frequently been called to occupy positions of honor, trust and great responsibility, which he has ever filled to the satisfaction of his friends and great credit to himself. His influence, like the silent, unseen forces of

nature, has been wide-spread, beneficent, and rich in results; like an unseen hand, lifting the weak and fainting, and helping the perplexed in business crises over the dark chasm which seemed ready to engulf them. United with this private sympathy and aid are his charities, known only to himself and his Lord, and his public gifts, widely known and appreciated. He has been connected with several churches, and all have largely shared in his generous aid and support. Several church edifices have arisen wholly or in part by his munificence. . . . During nearly threescore years of commercial life, with all its pressing cares, perplexing responsibilities, and unforeseen disasters, I have not heard even a whisper of suspicion against his honor or integrity. In a life so long and useful, it is obvious that the service of God gives keen enjoyment and value to living."

JOHN S. FOGG.

JOHN S. FOGG, well known as a boot and shoe manufacturer, and also as a prominent banker in Boston, was born in Meredith, N. H., April 16, 1817. He was the son of Josiah and Mary (Roberts) Fogg. His ancestors came originally from the south of England, where large estates are now held by Sir Charles Fogg. Younger brothers of this family came to America about the middle of the seventeenth century, and were among the early settlers of Exeter, N. H. Their progeny went westward, and were pioneers in the settlement of the territory about Meredith. Mr. Fogg's parents removed to Stanstead, Canada, when he was a year and a half old. They were poor, and the only opportunities afforded him for an education were the very limited advantages of the public schools. The winters in that climate being long and severe, prevented a regular attendance during the winter months, and in summers the necessities of the family compelled him to be placed at labor as soon as he was old enough for his services to be of any value. The death of his mother when he was only nine years old added to the disadvantages under which he was placed, and this was followed, when in his fourteenth year, by the death of his father, leaving a family of five children, of whom John S. was the elder. The children were now compelled to separate and find homes in different families. Mr. Fogg remained in Canada until his nineteenth year, when he came to Mere-

dith, his native place, and attended school that and the following winter, working on a farm the intermediate summer.

On the first day of April, 1836, he started by stage-coach alone for the city of Boston to seek his fortune. At Lowell he saw his first railroad train, boarded it, and that (Monday) afternoon he stepped from the cars in the city of Boston, with scant means in his pocket, with not an acquaintance in the entire city, with no definite plan or object in view save that he was determined to do something to earn a living and if possible to win his way to fortune. He procured cheap lodgings and board, and proceeded during the following week to cast about for something to do. In this he was unsuccessful, and the following Saturday found him penniless and sadly discouraged. On the afternoon of that day, while standing at a place called the "loafer's stand,"¹ near the place where he boarded, ruminating as to what should be his next move, he was approached by Martin S. Stetson, of Stetson & Blake, East Abington, boot and shoe manufacturers, and offered a job "treeing" shoes. He continued with them a few months, until the business became slack, when he accepted a like position with Daniel Blanchard. Here he worked very hard for a year, when this firm likewise failed, and Mr. Fogg lost more than half his wages. In the mean time Stetson managed to get under way again, and Mr. Fogg returned to his employ, where he continued until 1840 treeing and crimping boots. In April of this year he began business for himself as a boot and shoe crimper at South Weymouth, Mass. About the first of the year 1841 he bought stock and made a few cases of best quality boots, brought them to Boston and sold them to retailers. With the funds thus acquired he replenished his stock, paid his hands, and thus embarked in the boot and shoe manufacturing business. He soon built up quite a trade, and in 1842 he built his first factory at Columbian Square, South Weymouth. In 1856 he built a large factory at the same place. This was the first large factory in that town; was heated by steam, and was looked upon by Mr. Fogg's more conservative neighbors as rather a risky and extravagant venture. After having met with some losses, through failures among his customers, he confined himself exclusively to the supplying of the wholesale houses. His first deal with a wholesale house was with Alexander Strong, one of Boston's leading dealers. Mr.

¹This was a place where men out of employment and who desired to obtain work were in the habit of congregating, and where employers used to come to seek help when they desired to increase their forces.

Fogg's goods were the best that could be made, and he experienced no trouble in finding customers among the best dealers, such as Atherton, Stetson & Co., Joseph Whitten & Co., and other prominent houses.

On January 1, 1850, he formed a copartnership with Wilman Burbank, who was also a partner with Alexander Strong, and they established a boot and shoe store on Central street, Boston. In July of the following year, 1851, Mr. Burbank died. Mr. Fogg then associated with himself William S. Houghton. They removed their store to Pearl street, and under the firm name of Fogg & Houghton did a large and rapidly-increasing business. About 1861 Albert L. Coolidge was admitted as a partner, and the firm became Fogg, Houghton & Coolidge. In the mean time, about 1859, they began to secure quite a trade in California; they manufactured a class of goods especially adapted to that trade, and their sales in this market continued to increase so rapidly that in 1866 they did a business of more than a million dollars, and were at that time quoted as the largest boot and shoe manufacturers in the United States. In 1878 Mr. Fogg withdrew from this firm, but still continued manufacturing at Weymouth. In the mean time, in 1867, his brother, Parker S. Fogg, returned from California with a cash capital of nearly a hundred thousand dollars, which he had amassed in the boot and shoe trade, and for which he sought investment. John S. placed an equal amount with him, and together they established themselves as bankers, at No. 20 Congress street, Boston, with Parker S. Fogg as active business manager. John S. continued to give personal attention to his manufacturing interests at Weymouth until June 1, 1871, when his brother died, and he then assumed the management of the bank, and to this interest he devoted his chief attention up to the time of his death. Upon the dissolution of the firm of Fogg, Houghton & Co., 1878, Mr. Fogg formed a copartnership with N. B. Thayer, who had been foreman of the Weymouth Factory and who had shown good business qualities, and under the firm name of N. B. Thayer & Co., the manufacturing at Weymouth was continued until March, 1882, when the firm of Fogg, Shaw, Thayer & Co. was formed, with factories at South Weymouth, Westboro', and Marblehead, Mass., and Farmington, N. H.¹ In their banking operations Messrs. Fogg Brothers & Co. made a specialty of dealing in western commercial

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paper, and in this connection one remarkable fact may be mentioned—during the last five years they handled over one hundred million dollars of western paper and never lost a dollar. In 1865 the First National Bank of South Weymouth was incorporated, and Mr. Fogg was chosen president, which position he held until his death. In this same year Mr. Fogg was elected president of the Agricultural Industrial Society. After acting in this capacity eleven years he resigned. In 1879 he was elected president of the Putnam Horseshoe Nail Corporation, in which concern he was a large shareholder, and held the position until his death. Mr. Fogg was a Republican in politics, but had never taken an active interest in political affairs and never was an aspirant for political honors. His business career had been a phenomenally successful one, and through all his various and multitudinous dealings and interests he always paid dollar for dollar, and never asked an extension. He was a man of fine personal appearance, splendid physique, and, when in perfect health, weighed something over two hundred pounds. His personal manners were easy, address and manner of speaking kindly and sympathetic. He was noted among a very wide circle of business and other acquaintances for his perfect self-control under even the most exasperating circumstances. Seldom angry, he was never known to exhibit other than the most composed external bearing. The habitual “ruling of his own spirit” always gave him great influence over his many employees, and preserved between him and them an unusual degree of harmony. He was candid and frank in his natural disposition, and had an especial sympathy for struggling young men of merit who were evidently trying to help themselves. More than one such received from him substantial tokens of his sympathy. His early advantages in the way of education were scanty, but by diligence and persistence he largely surmounted these difficulties. Mr. Fogg was highly esteemed in the community where he so long resided and was best known. He was a man of decided religious convictions and character, though never obtrusive, always quietly firm whenever occasion arose for a declaration of his principles in this regard. He was, besides a giver to many good causes, a generous supporter of the Union Congregational Church, of which he was for so many years a valued and influential member, and to which, by his will, he left a legacy of \$25,000. He also bequeathed \$50,000 to found a library in wards Four and Six of South Weymouth. His donations to other

charitable and religious objects were numerous, the full amount of his bequests by his will aggregating the large sum of \$200,000.

Mr. Fogg enjoyed remarkably good health all his life till within a few weeks of his decease. He died May 17, 1892, being seventy-five years and one month old. But a short time previous he had been attending to his usual business duties, and for only three days had been confined to his bed. It was literally true of him that he died "in the harness." To the last he was active, interested in passing events, and pursued the even tenor of his way with the same urbanity and geniality of nature so characteristic of him. The death of no citizen of Weymouth was more universally mourned, the entire community uniting to do honor to his memory, his funeral being attended by hundreds of citizens, who listened to a highly impressive funeral discourse by Rev. W. H. Bolster, who for several years officiated in the Union Congregational Church, of which Mr. Fogg had been a member since 1850.

Mr. Fogg was married on October 28, 1838, at Hanover, Mass., to Lydia Loring Bailey, daughter of Gad and Thankful (Loring) Bailey, descendants of the Pilgrims, and whose ancestors were prominent in the settlement of the colony of Massachusetts. Mrs. Fogg died in May, 1887. They had five children, three of whom died in infancy. Their only daughter, Jane L. Fogg, who married Edward E. Poole, died in Boston in 1888, leaving no children. John A. Fogg, the only son of John S. and Lydia (Bailey) Fogg, was married, March 28, 1871, to Ida Sprague, of Weymouth, daughter of Jesse and Nancy (Bates) Sprague. They have one son, named after his grandfather, John S. Fogg.

About two years after the death of his first wife, Mr. Fogg married Jane L. Bouton, of Concord, who still survives.

STEPHEN DOW.

For nearly forty years there were few men in New England better known in connection with the manufacture of leather than Stephen Dow. He was born in Weare, N. H., January 13, 1809. His grandfather, Jonathan Dow, settled in Weare about 1769. He was born November 27, 1739, and married Keziah Roberts, who was born January 27, 1739. He served as selectman and representative of Weare, and died September 30, 1813. His wife died November 27, 1826. They

had four children, one son and three daughters. Their only son, Stephen Dow, the father of our subject, was born in Weare, March 27, 1764. He married Lydia Grove and lived on the family homestead. He was one of the earliest tanners of Weare and carried on the tanning business and farm till about 1811, when he moved to Woburn, where he died the following year. His wife died in 1832. They had eleven children, six sons and five daughters, of whom our subject was the sixth child in order of birth. The latter's education was received in the district school of Weare. As soon as he reached the age to be of assistance to his father he entered the tannery and learned the trade of a tanner, and eventually succeeded his father in business. In 1835 he left his home, and for a short time thereafter engaged in the leather business with his brother Alfred in Portland, Me. In 1836 he settled in Woburn, Mass., and became associated as partner with his father-in-law, Gen. Abijah Thompson, in the business of tanning and currying, which General Thompson had established some years previously, and which at this early date had assumed considerable magnitude. With his practical experience in this line of industry, and possessed of excellent business judgment, Mr. Dow took hold of the work with characteristic energy and achieved deserved success. General Thompson had already become firmly established, and with Mr. Dow's assistance the business of the firm steadily increased in magnitude until it became one of the largest of its kind in the United States. In 1866 Mr. Dow purchased General Thompson's interest in the business and for a few years successfully conducted it alone. It is proper to state that during the thirty years he was associated with General Thompson their relations were characterized by perfect harmony and mutual good will and esteem, their business connection being especially noteworthy in this regard. After General Thompson's retirement from the business Mr. Dow carried on the business alone under the old firm name until 1871, when, on account of similarity of names with another leather concern, the firm style was changed to Stephen Dow & Co., and has so continued through the various changes in its composition until the present time. At the time of changing the firm name Alfred Abijah Dow, oldest son of Stephen Dow, and George C. Nichols were admitted to the firm as partners, the latter, however, retiring in 1875. During the last named year S. Henry Dow, another son of Stephen Dow, was admitted as partner. To his two sons Mr. Dow relinquished the business in 1876, and they continued to carry it on with success.

It was during Mr. Dow's management of the business that a leather store was opened in Boston, in the early forties, which has ever since been maintained. Here he built in 1869 a brick business block at Nos. 2 to 12, inclusive, on High street, adjoining the site of the old Webster homestead. It was one of the best business structures in this part of the city at the time, and after its destruction in the great fire of 1872, was replaced by the present building, which is still owned by members of the family.

Upon retiring from business, Mr. Dow divided his time largely between traveling and in the pursuit of horticulture, for which he had great love. He built upon his estate in Woburn several conservatories, upon which he lavished large sums, and where he loved to spend many hours of the day during the latter years of his life. He also gave a great deal of attention to the breeding of horses, contributing largely to maintaining and improving the well known Morgan strain. The direction and management of his large business interests during his active career gave him little opportunity to engage in outside enterprises or in public affairs. He was, however, a member of the Board of Selectmen for Woburn in 1857, and also served as a director in the Woburn Five Cents Savings Bank, the Woburn Gas Light Company, and the Faneuil Hall National Bank of Boston. He joined the Mechanic Charitable Association in 1845, and was a life member of this organization.

After a long life of conspicuous rectitude, Mr. Dow died very suddenly in Boston, January 4, 1887. His death was widely mourned, especially by his business associates and friends. His active business career had covered nearly half a century, and few were better known in his special line of industry or more sincerely respected for sterling integrity of character. He was a shrewd, successful business man, but the very soul of honor in all of his transactions. No one who ever knew him doubted for a moment the honesty or integrity of his motives. His word was unquestioned, and every action had the impress of sincerity. He lived and acted on a high plane, and his career commanded the respect and esteem of all, while, in addition, he possessed those admirable traits of mind and heart which in private life made him beloved by his family and all brought within the circle of his near and intimate associates.

Mr. Dow was married May 21, 1836, to Miss Celine Thompson, eldest daughter of Gen. Abijah Thompson. They had seven children,

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Mr. Dow was married May 24, 1836, to Miss Celinde Thompson, eldest daughter of Gen. Abijah Thompson. They had seven children,

in order of birth as follows: Ellen Thompson, born May 28, 1838; Alfred Abijah, born April 6, 1841; H. Josephine, born March 28, 1843; James H., born February 1, 1845; Julia Thompson, born May 2, 1847; S. Henry, born September 12, 1848; Edward A., born September 29, 1857.

The business with which Mr. Dow was for so many years connected was carried on by his sons Alfred A. and S. Henry Dow from 1876 to 1879, when the latter died, and the former continued it alone until 1885, when Edward A. Dow, the youngest son of Stephen Dow, was admitted as partner. No change occurred until 1891, when, upon the death of Alfred A. Dow, the firm was reorganized, Edward A. Dow, William A. Dow, oldest son of Alfred A., and Frank F. Dodge forming a partnership, under the old firm name, and so continued to-day. The business has ever since its foundation remained in the control of the family, and has always been managed by a representative of the family, Edward A. Dow, head of the present firm, being the representative of the third, and one of his partners, William A. Dow, of the fourth generation, in continuous business at the same location. All of the partners are residents of Woburn, Edward A. Dow living in the same house occupied by General Thompson for many years of his life.

JOHN FIELD.

JOHN FIELD, for many years at the head of the widely known hide and leather business of Field & Converse, was born in Peterborough, N. H., November 22, 1810. His grandfather, John Field, was born in Braintree (now Quincy), April 16, 1752, and went to Peterborough, in company with Christopher Thayer, May 8, 1786. He was a tanner by trade, and settled just north of the farm of William Smith, where some vats had been made and some tanning had been done by Robert Smith, father of William Smith. These vats are now in a perfect state of preservation, having been made not far from 1760. He married Ruth Thayer, November 11, 1775, who was born July 2, 1752. He died January 8, 1826, while his wife died August 7, 1816, at the advanced age of ninety-four years. They had eight children, five sons and three daughters, the eldest of whom, also named John, was the father of our subject. He was born in Braintree, October 27, 1777, and was nine



John F. Wood

years of age when his father moved to Peterborough. At the latter place, when he arrived at the proper age, he followed the occupation of his father, and for many years extensively carried on the business of tanning at the same place his father began. He was twice married. His first wife, Beulah Reed was a native of Lempster, and was the mother of his thirteen children. She died July 30, 1835, aged fifty-seven years. His second wife was Tabitha Colburn, whom he married April 5, 1838. She died October 7, 1848, aged fifty-two years.

Of the thirteen children of John Field, four sons and nine daughters, the subject of this sketch was the sixth child in order of birth. He came to Boston in 1831 and entered the employ of his brother, Isaac Field, who for some years had been engaged in the hide and leather business in this city, and who, in 1833, founded the firm of Field & Converse. Upon the retirement of Isaac Field from this firm in 1838 our subject succeeded him. This firm became widely known not only in New England but in foreign lands. During all the panics and financial disasters which occurred during its long existence its credit was never shaken. By his excellent business ability and industry Mr. Field became eminently successful, and acquired wealth sufficient to be able to retire practically from active pursuits in 1863. From that time until his death, July 31, 1876, his life was largely devoted to philanthropic and religious work. "In all of his business relations," says one writer, "he was an honorable and upright man, never yielding principle, in any instance, to expediency. He was a good citizen, a sincere Christian and a true man, and his life abounded with active benevolence, kind works and good deeds." He was a director in the State National Bank of Boston; also a director of the American Peace Society; a corporate member of the American Board of Foreign Missions, and for many years an officer in the Orthodox Congregational Church at Arlington. He was twice married. His first wife was Sarah E. Worcester, a granddaughter of the distinguished divine Noah Worcester, D.D., whom he married May 2, 1836. She died June 20, 1839, having borne two children, Henry M. and John Worcester Field. The former graduated from Harvard College in 1859; received a medical degree at the College of Physicians and Surgeons in New York city, and in 1871 was appointed professor of materia medica and therapeutics in the Dartmouth Medical College at Hanover. The second son, in 1862, entered upon a business career in the same line in which his father had gained conspicuous success. He was until lately the senior member of the leather

firm of Field, Bullivant & Field, and is now the head of the firm of John W. Field & Co.

Mr. Field's second wife was Sarah A. Baldwin, of Brighton, Mass., whom he married October 13, 1810. Five children were born to them, their names in order of birth being as follows: Sarah Ann B., William Evarts, Arthur D., George A., and Lilla Frances Field.

All the sons of this marriage identified themselves with the leather trade. The eldest, William Evarts Field, was a member of the firm of Allen, Field & Lawrence.

The sudden death of this gentleman while on his way to Europe in March, 1892, was a great sorrow to his associates in the trade. Modest and unassuming in manner, but able and efficient in business, his genial disposition and strict integrity won the love and respect of all who knew him.

At the time of his death he was treasurer of the New England Shoe and Leather Association, for which he felt a deep interest. His sudden death deprived the business with which he was connected of one of its brightest ornaments, and his friends of one whose memory will be cherished with the deepest affection.

GORDON MCKAY.

The method of boot and shoe making, practically universal in the United States and rapidly extending in foreign countries, is distinctively American and essentially the outgrowth of the last twenty-five or thirty years. The man who was first to broadly conceive it and to perfect, introduce and exercise the inventions which made it inevitable was Gordon McKay, now of Newport, R. I.

Mr. McKay was born in Pittsfield, Mass., in 1820. His father, Samuel M. McKay, was a cotton manufacturer, an amateur farmer, and a politician of prominence in the western part of the State. His mother was a daughter of Samuel Dexter, of Boston, an eminent lawyer, who, about the beginning of the century, was United States senator, secretary of war, and secretary of the treasury.

Samuel M. McKay was the son of Samuel, at one time captain in the English army, afterwards professor in Williams College. Samuel married the daughter of the Marquis de Lotbinière, a Canadian gentleman, who had, on the St. Lawrence, an estate still known by his name.

Gordon McKay, the only survivor of his father's family, being in youth in delicate health, studied engineering with a view to out-of-door occupation. At the age of sixteen he began field-work on the Boston and Albany Railroad, and was afterwards employed on the enlargement of the Erie Canal. In 1845 he built and successfully managed a machine shop in Pittsfield. In 1852 he became manager of the Lawrence Machine Shop at Lawrence, Mass., where he remained until 1857.

The next year he, with others, purchased of Lyman R. Blake the latter's patent for the crude mechanism and method which, perfected by years of laborious and costly experiment, and embodied in the famous McKay Sewing Machine, revolutionized the art of shoemaking, put better shoes upon the feet of the poor and millions of dollars into the pockets of the patent owners.

At the date of Blake's patent, the mechanisms that had appeared in the manufacture of shoes were mainly the simple contrivances that mark the infancy of an art, although the pegging machine had already reached an advanced stage of development. All shoes of the better grades were then made by hand—the large manufacturers cutting their stock and distributing it in small shops, or, during their off seasons, among farmers, fishermen and others, to be made into boots and shoes.

The process was slow, the product as variable as the skill of the workmen, and the general work unsatisfactory for want of expert supervision and control.

At this time McKay, in easy circumstances, an accomplished machinist, a man of exceptional executive ability and of great energy, saw the Blake machine, the situation and its possibilities, and promptly seized his opportunity.

Blake had invented: 1, A sewed shoe having the thread passed from the outside, through the outer sole, the upper and the inner sole, to the inside of the shoe; 2, a process of lasting a shoe and then withdrawing the last so as to admit of the operation of mechanism within the shoe; and 3, a stationary horn having a thread-carrying and looping device, and shaped to enter all parts of the shoe, combined with a sewing mechanism.

The inventions were fundamentally new and ingenious, and they held the germ of a great possibility, but they were crude, imperfect, and until improved, commercially unimportant. McKay, associating with himself Robert Mathies, a young mechanic of remarkable ability, re-

constructed the machine, supplied it with means to automatically adapt the stroke of the needle to the varying thickness of sole and to the mechanical movements involved in tightening the stitch—means for revolving the horn and for revolving the looping contrivance upon it, and means for progressively presenting or feeding the shoe by devices operating in the channel. The precise forms in which these various inventions and improvements found final expression in the perfected machine were mainly the contrivances of Mathies, who, with McKay, was compelled to undergo the pains and labor which usually attend the birth of great inventions. The work—long, weary and exacting—exhausted McKay's fortune and impaired his health, and it left Mathies so shattered that he ended his own life before reaping the fruits of his toil.

McKay first demonstrated the value of his machine in the manufacture of army shoes, adapting it, after the war, to the general use which has proved it, to both continents, a beneficent factor in the material growth and comfort of the last quarter of a century.

When the man who, by hand, could make but one or two pairs of shoes in a day, at an expense of seventy-five cents per pair, found that, with the McKay machine, he could make three hundred pairs, at a cost of three cents per pair, the factory was already conceived and had only to be reared and equipped. This fact, once discovered, an army of inventors undertook the work, which has gradually produced the model factory of to-day, with such admirable organization and arrangement of ingenious contrivances for shoe construction and embellishment as makes it one of the most interesting and important of the hives of human industry.

McKay's contribution to this result did not end with the construction of his machine. He early found that, with constant use in the hands of inexperienced operators, the machine got out of repair, did imperfect work, and required, at short intervals, the examination of skilled inspectors and the frequent renewal of worn and imperfect parts. He, therefore, devised a scheme for leasing his machine, at a small rental or royalty, prepared and kept constantly on hand a supply of accurately made duplicate parts, a catalogue of which, duly numbered and illustrated with cuts, he furnished to each lessee to enable him instantly to order by number, from any part of the country, a needed piece, and then placed upon the road a corps of trained men to set up the machines, to teach operators how to use them and to visit them often

enough to secure their uninterrupted working condition and the efficiency of the men employed upon them. In all this work he received efficient aid from Mr. Blake.

The invention of this system proved hardly less valuable than that of the machine itself, for without it the machine, in spite of its excellence, would have been a failure. With this provision for its needs, the McKay sewing machine became, at once, indispensable to manufacturers, and McKay's plan was immediately appropriated and employed by subsequent inventors in other departments of shoe machinery.

McKay's original success, his recognized business sagacity, and the prestige of his name, soon made his co-operation desirable, and many inventions were offered for his consideration. Among them were crude contrivances for preparing and assembling the lifts of shoe heels and for moulding them, punching them with nail holes, supplying them with nails, attaching them to shoes and trimming them to the desired shapes upon the shoes. The best of these he, in company with others, acquired and organized the McKay Heeling Machine Association for their development and introduction. In 1875 this association combined with another, and has since been known as the McKay & Bigelow Heeling Machine Association. McKay and his associates had the good fortune to secure at the outset, in connection with this machinery, the services of Charles W. Glidden, of Lynn, whose exceptional inventive skill brought their inventions into the high repute which secured them the place they still hold in all the leading factories of both hemispheres.

Before the expiration of the Blake and Mathies patents, there appeared machines for attaching soles to boots and shoes by metallic fastenings, the most notable of them being the celebrated "Standard Screw Machine," made by Louis Goddu, of Winchester, Mass., a man of the very first order of inventive ability. This machine, carrying a long coil of screw-threaded wire, screws the sole to the shoe, automatically adapting the length of the screws to the varying thickness of different soles and of different parts of the same sole, and working with nearly the rapidity of the sewing machine. This and other machines employing different forms of the fastenings used in the manufacture of shoes, were acquired by McKay and others, and the McKay Metallic Fastening Association was organized, upon the plan described, for their introduction and use. It is enough to say of the first-named machine that, in the shoe manufacture of this country alone, it already consumes yearly 1,250,000 lbs. of threaded wire.

Another prominent association of the same character in which McKay and others, during the same period, acquired ownership of the best inventions relating to the art of lasting boots and shoes, was formed under the name of the McKay Lasting Machine Association, and its machines, like the others, have gone into extensive and increasing use.

In all of these McKay became the leading spirit and the largest owner, and with them all he still retains connection.

He was not the inventor of any of the remarkable machines with which his name is associated, but he may fairly be regarded as the inventor of their success, and must be considered the foremost practical contributor to the shoemaking department of the industrial art of his time.

THE GOODYEAR MANUFACTURING COMPANY

CHARLES GOODYEAR, whose name is associated with the Goodyear system of shoe machinery, is the son of Charles Goodyear, the discoverer of the vulcanization of india rubber. He was born in Germantown, Penn., January 1, 1833, his father at that time being engaged in the manufacture of domestic hardware in Philadelphia, being a pioneer in this industry, most of the goods of this nature being then imported. His mother was a daughter of Daniel Beecher, of Naugatuck, Conn. During his early boyhood young Goodyear attended school in New Haven, but the exigencies of his father's business occasioned frequent interruptions. As he grew to manhood he was much engaged in assisting his father in his experiments with india rubber and in applying that material to many of the uses to which it has since become a matter of public necessity.

In 1857 or 1858 he became interested in the manufacture of shoe machinery, and at the beginning of the late Civil War was president of the American Shoe Tip Company, a very successful concern, which gave him an extensive acquaintance among shoe manufacturers and parties connected with the shoe business.

About the year 1864 Mr. Goodyear's attention was called to the invention of Auguste Destuoy, who in 1862 had secured United States patents on a machine for sewing boots and shoes. The object sought

by the inventor of this machine was to make boots and shoes of all descriptions as nearly as possible by the same process as had already been employed in sewing them by hand, but his machine was so crude and unsatisfactory that it presented only a suggestion of the idea of the possibility of a circular curved awl and needle working in a small radius, the details of which had subsequently to be worked out and developed. Although Destuoy had not produced in any sense a satisfactory machine, Mr. Goodyear thought he saw in it the elements of a practical invention, and bought an interest in the patent, little realizing at the time, however, the hard work required to bring it to a practical working condition. With that same patience and persistent spirit which so distinguished his father, he undertook the task. Later on, having bought Destuoy's entire interest in the patent, he sold a half interest to Frederick Renaud, Henry T. Close, and Francis Du Bois, of New York. Associating with himself men of practical mechanical ability, he continued his experiments, under many discouragements, until a machine was produced capable of sewing both welts and stitching on the outsoles of shoes. He then went to England for the purpose of introducing the invention there, and where he finally sold the foreign patent to a company organized there by an uncle of Mr. Goodyear. On his return to the United States in 1811, the Goodyear Shoe Sewing Machine Company was organized, at which time, besides his original associates, Mr. Renaud and Mr. Close, the following representative shoe manufacturers became associated with Mr. Goodyear in the enterprise: Charles D. Bigelow, Edwin C. Burt, H. S. Chase, and George Goodyear. Of this company Mr. Goodyear became president, and in which he subsequently invested all of his available means, finally becoming heavily encumbered in his struggle to achieve success.

Although the welt machine was from the first the chief object to be attained and perfected, it was deemed best to confine the efforts of the company to the perfection and introduction of the machine for sewing "turns," which required but one sewing machine, whereas the manufacture of welted shoes required both a welt sewing machine and an outsole stitcher. Before the turn machine was perfected a competing machine was put on the market. This machine had points of similarity to the Goodyear machine, and to avoid possible entanglements the Goodyear Company purchased the patents on the competing invention. It will, however, be unnecessary to go into details to make clear the many trials, discouragements and difficulties which beset the path of

the Goodyear Company in its earlier efforts. There were many unnecessary complications in the original machine which it took years of experiment with the best practical mechanical skill to overcome.

A history of this invention would not be complete without reference to a law suit which was brought against the Goodyear Company by the McKay Sewing Machine Association for alleged infringement by the Goodyear Shoe Sewing Machine Company in the year 1876. This suit was never brought to trial, overtures were made by disinterested parties which resulted in a compromise settlement of the legal questions, and a new organization was formed, called "The Goodyear and McKay Association," to which the McKay Association assigned all of its patents relating to "turned" shoes, and the Goodyear Company assigned all of its patents relating both to turned shoes and to welted shoes.

The stock in the new association was divided, giving one-third to the McKay Association and two-thirds to the original stockholders in the Goodyear Company. Eventually the McKay Association sold their interest to the present shareholders in the Goodyear Shoe Machinery Company, and the name of McKay ceased to be a part of the title of the company.

Throughout the long struggle to perfect and introduce the machines, Mr. Goodyear labored arduously, and he has had the satisfaction since, through and by the assistance of those interested with him, of seeing introduced to the world a series of the most practical and useful inventions known in shoe machinery.

In 1882, at a time when the Goodyear machines had just begun to be recognized as valuable, but as yet were little known and only a comparatively few were in use, S. V. A. Hunter became identified with the company, and from that time to the present has been an important factor in its success. The machines of the company had been proved an unqualified success, but to overcome the prejudice against machine sewed shoes and to secure their introduction among manufacturers, was a most difficult task. It required a high order of ability, a knowledge of men gained by long experience, quick perception, and rare business generalship. These qualities Mr. Hunter possessed, and, quickly comprehending what was required, he soon placed the company on the road to its present commanding position of success. He was born in New York city in 1831. At the age of seventeen he entered as clerk in the employ of the well known firm of Spofford, Tileston & Company, of that city, with whom he remained for the succeeding

twenty-eight years, advancing finally to be confidential clerk, salesman and general outside manager for all consignments received both from the South and from Cuba in the shape of cotton, sugar, hides, rice, and general southern products. This long experience with one of the largest commission houses in the United States, gave him an exceptionally fine general business education, which was taken advantage of by his friends in New York who were stockholders in the Goodyear Company, and when the old firm to which he had been attached for so many years went out of business, he was induced to come to Boston to take charge of the financial interests of the company, in the capacity of secretary and treasurer. In December, 1882, he was chosen general manager. Entering this new field, concerning which he had had but little previous knowledge, he brought to bear upon it the business experience gained in his former work. By personal solicitation he brought the various machines of the company to the attention of the manufacturers throughout the United States, and by his well directed efforts succeeded in overcoming the unjust prejudice that existed against them to such an extent that finally the machines were introduced in some of the largest factories of the country, where their successful operation set at rest all doubtful conjectures. He was also a very efficient factor in encouraging new inventions and improvements on the original machines, and in a general way so regulated the business of the company as to establish it financially on its present successful basis. When he came into the company it had about three hundred machines out on lease, and the net earnings were quite inconsiderable compared with its present condition, which is that of a company paying twelve per cent. on a capital of \$3,000,000. Mr. Hunter is a man of great energy, of strong will, and not easily discouraged in any task which he undertakes, however great the difficulties he may encounter. That he has been an invaluable factor in placing the company in its present strong position is freely acknowledged by all conversant with its history. His arduous labors and persistent efforts have been crowned with well merited success, and his ambition to make the Goodyear Company the largest shoe machinery company in the world has been fully realized.

Charles Goodyear continued as president of the company until 1888, when he was succeeded by Jonathan Munyan, who had become a stockholder in the year 1880, through helping Mr. Goodyear in the time of his greatest need on an appeal made to him by Mr. Goodyear for

financial aid to prevent his being sold out for money he had borrowed of his associate directors in the company. All his stock was hypothecated, with certain foreign patents he owned, and when the day for settlement came, the parties holding the collateral pressed him very hard and insisted upon settlement in full. The amount borrowed amounted to a large sum. Mr. Munyan foresaw the value of the invention, and, although a comparative stranger to Mr. Goodyear, he, with other friends of Mr. Goodyear, raised the money for him and saved his stock.

In the year 1881 these former directors referred to, who had been foiled in their effort to get possession of the company, made another attempt by crying down the stock and trying to buy it in from other parties, but failed in that also, as Mr. Goodyear and his friends succeeded in holding the controlling interest, whereupon these directors sold out their stock and retired from the company. Mr. Munyan continued an active director—later on becoming its president in all these years when the company was struggling for recognition among the manufacturers.

All of his life from early manhood Mr. Munyan has been connected with the leather and shoe business, and for many years was a director and stockholder in the Bay State Shoe and Leather Company of Worcester, Mass., and Brooklyn, N. Y., the factory at Worcester being under his personal supervision. This company was one of the first to adopt the Goodyear machines, and the first to make them a decided success, it being done almost solely through the earnest solicitation of Mr. Munyan, who had the foresight to see the great value of the system. Shortly after his election as president of the Goodyear Company he gave up his connection with the Bay State Company, and has since devoted all of his time and attention to the furtherance of the interests of the Goodyear Company. All of his valuable experience gained in his long connection with the important companies with which he had been connected was brought to bear in his new field of labor, and his safe advice, honesty and integrity, have been a bulwark upon which the directors have relied in all the struggles of the company. When the foreign company was established, Mr. Munyan was also made president of this corporation, and has taken an active interest in it, visiting the agencies in England and France each year, and rendering valuable assistance in the fight against the prejudice of manufacturers abroad in regard to using royalty-paying machines. Mr. Munyan was

born in Thompson, Conn., in 1823, and for over forty years has been prominently identified with the development and interested in the commercial importance of Boston.

At the present time the Goodyear Company has 2,200 machines leased to about 850 lessees, the royalty from which is sufficient to realize the income previously mentioned. The company has a large shop in Boston in which the machines are manufactured, where 200 men are employed. There are ten agencies located in different cities, conducted by men in the employ of the company, these cities being shoe centers of the districts in which they are located. Fifty men are constantly employed as operators, whose business it is to visit the different lessees, teach operators, keep the machines in repair, and in a general way to look after the interests of the company. A European company has been established, with offices in England and France, and in these countries a number of machines are in use, their successful operation opening a wide field for future work.

CHRISTIAN DANIEL.

No account of the now widely known Goodyear shoe machinery would be complete which failed to give prominent mention of the part performed in its development by Christian Daniel, whose practical mechanical ingenuity has been manifested in every stage of its growth. Mr. Daniel was born in Cassell, Germany, February 14, 1847. After studying mechanical engineering for three years and a half at the Polytechnic School in that place he came to New York in 1865 and worked as practical machinist in different machines shops in the United States. He finally connected himself with one Stein, who held a patent for a sewing machine, and for him he invented and built the first practical shoe sewing machine ever put on the market. This patent was afterwards bought by the Goodyear Shoe Sewing Machine Company, in the employ of which Mr. Daniel then entered, and by his improvements upon his own inventions and those of others he was enabled to bring out the first machines which were a practical success, and was engaged by the company, at once, as superintendent.

The machines thus far had been made simply for sewing turned shoes. He was then asked to turn his attention to making a machine with

which to sew on welts, and also to invent, if possible, a machine to stitch the out soles on shoes. He undertook to do this at once and altered over one of the machines then in use into a stitcher, of which the company made fifty, and sold them immediately to different manufacturers. He then took one of the same machines referred to, and by adding a welt guide, produced in 1874 a machine which would sew not only turns but welts. This machine was accepted by the company in 1875, patented by Mr. Dancel and assigned to it, and is in use at the present time with a few alterations.

By this time Mr. Dancel had become very proficient in the knowledge of shoe sewing machinery. His various improvements and patents were adopted by the company, his assistance becoming of the utmost value in defending it against the suits brought by other companies, and enabling it to establish itself on a firm foundation for future work.

In 1876 Mr. Dancel went into business for himself as machinist and inventor, and invented a number of small machines used in the finishing of shoes, very valuable to the trade. Soon after this he was called upon by the Goodyear Company to build another machine for it, which he did with great success, building and perfecting one machine after another until he produced the one which has given the greatest measure of success to the company. This machine is for stitching the outer sole to the upper with a curved needle and a lock-stitch while the shoe is on the last. This machine was delivered to the company in 1885. This was followed by building a straight-needle machine which would also stitch on the outer sole while the shoe is on the last, and this was finished and delivered in 1892. His last achievement for the company is to build a curved needle machine to sew welts upon the shoe with a lock-stitch while the shoe is on the last. In all these inventions Mr. Dancel takes a just pride, as being the inventor who has furnished to the companies working under the Goodyear name all their principal machines upon which they now rely, and with which they have become so highly successful.

MELLEN BRAY.

MELLEN BRAY, whose name is associated with several inventions of great practical utility and value, was born in the town of Turner, Androscoggin county, Me., January 12, 1829, and is a son of William B.



and Nancy (Bradford) Bray. On the paternal side he is a descendant in the seventh generation of one of four brothers who came from Normandy, France. The progenitor of the family in America settled at Falmouth, Mass. The grandfather and father of our subject were for many years engaged in mercantile and milling pursuits at Turner. They were both men of strong character, and in the community where they lived exerted marked influence. His father was born in 1800, and after many years of successful business life at Turner removed in 1858 to Oshkosh, Wis., where he purchased large tracts of timber land. Here he died in 1869. He was twice married, his first wife, Nancy Bradford, who died in 1834, being a descendant in the sixth generation of Governor William Bradford, one of the famous characters in the colonial period of New England. She was the mother of six children, of whom William, Mellen and Nancy (wife of A. M. Smith) are living; two died in infancy and Philip, the youngest, died in 1881. Mr. Bray's second wife was Ann Maria Sawtell, who died in 1875. Of the latter union four children were born, of whom two are living, Madison B. and Elizabeth Johnson Bray (wife of C. C. Paige).

The youth of Mellen Bray was passed at Turner, where he received the educational advantages of the public school. A more liberal education was at his disposal had he so desired, but early evincing a decided taste for business, and more especially a genuine fondness for machinery, he at the age of seventeen went to work in the carding mill conducted by his father, and later in the linseed oil mill also owned and operated by his father. In this service he was highly successful, it being a field in which his natural mechanical abilities found congenial employment. In 1849, with his older brother, William, he purchased the store at Turner with which his father had long been connected. The brothers conducted the business under the firm name of Mellen Bray & Co. until 1854, when they disposed of their interest. The varied business experience of these five years in a general country store, with a large volume of miscellaneous trade, was of great value, and did much to give him an insight into and knowledge of many branches of business. It was during his mercantile career at Turner that Mr. Bray's naturally enquiring mind was directed into an inventive channel. Among his customers were many shoe factory workmen, one of whom, a Mr. Wells, had conceived a crude idea of a machine for pegging boots and shoes. Mr. Wells easily interested Mr. Bray in the project, and for two years the young merchant was patiently engaged in the develop-

ment of an invention for that purpose. A series of mishaps attended his progress, but in no sense abated his ardor. He had fairly gotten his invention under way in one of his father's mills, when a fire compelled the removal of the machine to Saccareppa, Me. At this place a second fire caused the experiments to be continued at Lewiston. Again a similar accident drove Mr. Bray back to Turner, where the machine was finally perfected, and although it did not prove a practical success, it furnishes an example of that indomitable will and persistence in the face of adverse circumstances which later in his career led Mr. Bray to well merited success. The experiments with the pegging machine were also valuable in that they were the means of directing Mr. Bray's inventive genius toward boot and shoe machinery, at that time of the simplest nature, but later a field in which the most marvelous developments were to be attained. The pegging machine was followed by a rounding up shoe sole machine, upon which Mr. Bray obtained a patent in 1858.

In the fall of 1859 Mr. Bray introduced and obtained a patent in Canada on the copper toe plate for boots and shoes. He located at Montreal, where for some years he successfully engaged in the manufacture of boots and shoes provided with this device. In 1862 he sold his Canadian patent, and in January of the following year came to Boston. Up to this period of his career he had been more than ordinarily successful for a young man. He had accumulated a modest fortune from his business ventures, but full of ambition and courage, and possessed of vigorous health and strength, he was naturally, at his age, inclined to be aggressive and to lavish his full energies upon any enterprise in which he might embark.

Upon his arrival in Boston, Mr. Bray leased a general machine shop, and a few months later purchased the entire establishment. Engaged in a branch of industry in which he found abundant scope for his mechanical ingenuity, his mind naturally turned to practical inventions. In 1864 he secured by assignment the original patent on an augur for boring a square hole, which he perfected and finally sold. In 1865 he was granted a patent on a machine for punching and shaping metals. By the latter invention was produced the first seamless metal boxes. Mr. Bray invented the seamless headed blacking boxes, which speedily came into general use, millions of them being now used yearly. The importance of this invention can be fully realized from the fact that prior to the time when Mr. Bray gave this machine to the world, all

metal boxes, pail and can covers were made of two or more pieces, either soldered or locked. To produce them by a single operation Mr. Bray was compelled to make a most careful study of the drawing of metals, and was obliged to overcome many difficulties. The full value of this invention, however, was lost to Mr. Bray by a trivial omission in his application for a patent. Had his application contained the term, "a seamless, beaded box," he would have been enabled to have controlled the entire manufacture of boxes by this process. An immense fortune was thus lost by merely a slight oversight. This single invention would have been sufficient to have given Mr. Bray prominence among inventors, but his claims for recognition by no means rest on any one invention. The range of his inventive genius has been wide, the patent office reports showing that to him have been granted no less than one hundred and sixty patents. By no means have all of them been financially successful, nor all even of practical utility, but they bear evidence of the wide scope of his mind and how great a toiler he has been in the field of mechanical ingenuity.

Mr. Bray's most successful inventions have been in connection with appliances used principally in boot and shoe making. Soon after his location in Boston his attention was drawn to the desirability of a new method of lacing shoes. The old style of lacing through a common eyelet was slow and bothersome. Discovering the need or necessity for improvement, he was not content until he had devised a way to accomplish it. This was secured by an invention upon which he secured a patent under date of May 2, 1865. This was a shoe lacing with a loop riveted to either side of the upper through which the lacing passed. By a single draft on the lacing the front of the shoe was closed. This simple invention, which he subsequently sold, was in itself valuable, but more especially so from the ideas it suggested, which were successfully carried out by Mr. Bray. From the rivet used for attaching this lacing or loop came to him the idea of the tubular rivet, an invention which is now an important factor in the manufacture of boots, shoes, harness, trunks, saddles, and various other purposes. This was followed by the lacing stud, now so generally used in connection with shoes and gloves. One who looks upon these simple yet so eminently useful devices can scarcely realize the complicated and ingenious machinery required for making and applying them. The machines now employed in their production required years of experiment, and involved an expenditure of fully \$150,000. To one less courageous than

Mr. Bray, the attainment of the object he had in view, through all the discouragements he had to encounter, would hardly have been accomplished. To-day the manufacture of tubular rivets, lacing studs and hooks, in connection with the making of machines for applying them, has become an industry by itself which engages the attention of hundreds of workmen. The finely equipped manufacturing plant for this purpose is located at Wallaston, Mass., and in many respects forms one of the most interesting industrial enterprises in New England. Here, daily, six tons of metal are worked up into rivets and studs by automatic machinery of delicate and intricate construction which seem almost human in the precision and regularity of their operation. Here can be seen all the processes of manufacturing, from the plain wire or strips of metal to the finished product; the different stages of evolution, even to the japanning, being effected by automatic machinery, every portion of which represents the inventive genius of Mr. Bray. To conceive and bring to the requisite perfection these many mechanical devices, it is perhaps needless to say, has been the hard work of years, requiring an amount of patience and strength of purpose few men possess. Every step forward involved costly experiments, vexatious delays, and at times the way to a desired end seemed beset with most discouraging results. Even now, when it would seem that Mr. Bray had reached perfection in the machinery required for his purpose, he is constantly at work devising new improvements, so as to be able to meet the demands of the trade as well as to be fortified against possible competition.

After the completion of his inventions for producing the tubular rivet and lacing stud, their introduction and the creating of a demand for their use was a labor of no small magnitude, and called for a high order of business generalship. For some years Mr. Bray conducted a glove manufactory in France for the sole purpose of introducing gloves provided with his lacing stud, which is now so generally used for this purpose. In this, and other ways no less effective, he was forced to adopt means to introduce his products, but which to-day find a ready market in every part of the United States, while large quantities are exported to England, Germany, France, Austria and Mexico.

The manufacture of the tubular rivet and lacing stud was for several years successfully conducted by Mr. Bray under two separate organizations known as the Tubular Rivet Company and the Lacing Stud Company. These two companies were consolidated March 1, 1893, and

now form a new corporation known as the Tubular Rivet and Stud Company, of which Mr. Bray continues as manager and directing spirit. Mr. Bray possesses, what is rare among men of inventive genius, excellent business ability, and while he has devoted himself oftentimes beyond his strength in his labors upon his inventions, he has in no sense failed to admirably manage his business interests. The mental and physical tax upon his powers of endurance has indeed often been greater than he should have borne, and had it not been for an inherited constitution of great strength, he would have been unable to have stood the strain. Few have labored more industriously, and the high degree of success he has attained is in every way richly deserved.

Mr. Bray was married in 1850 to Persis Temple Gross, of Turner, Me. They have had four children, three of whom are living: Persis Davis, Mellen Newton, and William Claxton Bray. Both of the sons are associated with their father in his business enterprises, and upon them largely devolves the management of the manufacturing and business details. Mr. Bray's residence is at Newton Centre, where he has continuously resided since 1863.

GEORGE H. P. FLAGG.

DR. GEORGE H. P. FLAGG, who of late years has held a prominent place among the manufacturers of boot and shoe machinery, was born in Needham, now Wellesley, Mass., March 12, 1830, and is a son of Solomon and Eliza (Hall) Flagg. He is of English descent, the first of the family in America being Thomas Flagg, who came from England prior to 1643 and settled at Watertown. He was selectman of that town in 1671, 1674-78, and died in 1697. The great-grandfather of our subject, Solomon Flagg, was at the battle of Lexington and served at other points during the War of the Revolution. He held offices in the town of Needham.

Solomon Flagg, the father of our subject, was born in Boston, August 24, 1804, but his entire life was practically spent at Needham, whither his parents moved shortly after his birth. He was school teacher in Needham, Dover, Natick and Sherborn for thirty-eight years, and had an extended acquaintance throughout a wide territory. He had much to do in shaping the affairs of his town and village, and perhaps no man

in Norfolk county, and possibly in the State, held public office so many years in the aggregate — Mr. Flagg — He was selectman of the town of Needham in 1833, 1842, 1843, 1846-49, seven years in all; assessor of Needham, 1832, 1833, 1839, 1845, 1857-59, 1861-64, 1866-74, twenty years in all; member of school committee, 1831, 1845-51, 1857-61, 1864-67, 1870-80, twenty eight years in all — He was appointed town clerk August 19, 1850, and held the office till the incorporation of Wellesley (1881), over thirty years, and was elected town clerk of Wellesley upon the organization of the town and held it until 1887. — He was appointed treasurer of the town of Needham, May 11, 1859, and elected every year until the incorporation of Wellesley, twenty-one years. — He was elected as representative to the General Court in 1834 and again in 1861, when he assisted in patriotic preparation for resistance to rebellion. — He thus aggregated one hundred and fourteen years of service in public elective office; a record surely seldom equaled. — Mr. Flagg was a man of fixed opinions and beliefs, religious in his bearing and habits, yet very fond of fun and good cheer. — No citizen of Needham was more popular or better beloved for his sterling traits of character and natural kindness of heart. — He died in May, 1892, surviving his wife for several years, she having died in 1875.

The boyhood of our subject was passed with his parents at Needham, now Wellesley, where his preliminary education was received in the common school. — Later on he attended Day's Academy at Prentiss, Mass., and after completing the course at this institution he came to Boston, in his twentieth year, and began the study of dentistry in the office of Dr. W. T. G. Morton, the distinguished discoverer of the anæsthetic properties of ether. — He remained in Dr. Morton's office for about five years, when, in 1855, he formed a partnership with Dr. J. A. Cummings and began the practice of his profession. — Success attended him in his work and he soon secured a profitable practice. — In the fall of 1859 he purchased his partner's interest in the business, and for about two years conducted it alone. — He then formed a partnership with Dr. H. D. Osborn which continued until Dr. Flagg retired wholly from professional work. — During this period, representing more than a quarter of a century, Dr. Flagg held an enviable reputation in his profession and had a large and successful practice, accumulating a competency from his labors. — His achievement, however, in the development and manufacture of boot and shoe machinery have given him such deserved prominence in the industrial history of New England, as to have made his professional

career, creditable as it was, seem of secondary importance. His attention was first directed in the line of patents about 1862, when with Dr. Cummings he became interested in a process for preparing rubber plate for the insertion of artificial teeth, which eventually resulted in the formation of the Goodyear Dental Vulcanite Company. This proved a very valuable patent and a great financial success.

In 1873 he formed a partnership with C. H. Helms, the inventor of the Helms burnishing machine, under the style of C. H. Helms & Co. Shortly thereafter the Tapley Machine Company sued the new firm for infringement of their patents. The case was decided in favor of the defendants. The Tapley Company soon after purchased the entire interest of C. H. Helms & Co. The success of his undertaking in this line induced Dr. Flagg in 1875 to start a company to manufacture the Union edge setter, which is now entirely owned by him, the merits of which are widely known to the trade. It has been greatly improved since it was first introduced, a Twin setter being the latest production. Soon after the Globe buffer and the Globe heel scourer were added to the business, and the doctor opened an office on Tremont street, Boston, but still kept up the practice of dentistry. In connection with the Globe buffer the manufacture of molded sandpaper was undertaken, a branch of the business which has since grown to large proportions. Dr. Flagg, in 1887, laid the foundation for a six story brick building on Lincoln street, corner of Tufts street, and the following year this was completed. This building was destroyed by fire in 1893, since which a new building has been erected on its site. On the removal of the business to this location in 1888, the doctor sold out his interest in the dental establishment and has since applied his entire time and energies to the machinery business. He started with two machinists, and now over one hundred are constantly employed to meet the demand for his various patent appliances for the manufacture of boots and shoes. In 1889 Dr. Flagg became largely interested in the Boston lasting machine, and after a stubborn fight in the shoe factories of Lynn, obtained a footing in that city that has never been shaken. The sale of the machine has increased until over thirteen hundred are now in use, a striking example of success. Consecutively have been added to the business the Union cementer, the Rapid in seam trimmer, and the Webster leather cleaning machine, while the Union rounder and three other machines, patents for which have recently been taken out and are under way, will soon be introduced to the trade.

The growth and development of machinery for the manufacture of boots and shoes shows no example of more rapid rise than has been illustrated in the career of Dr. Flagg. The success he has attained against great odds and strong competition has been in many ways remarkable. He is a man of quick perception, and when once convinced of the practicability of an enterprise, possesses the courage to prosecute the undertaking to a conclusion. He naturally inherits mechanical ingenuity, and is quick to perceive the merits and possibilities of mechanical appliances. His unerring judgment in this regard, formed often against the advice of experts, has been proven on many occasions, and is best evidenced from the fact that he has not yet scored a failure. Naturally such a man inspires confidence, and to-day he is enabled to enlist men and capital in any enterprise which receives his endorsement.

WILLIAM D. BRACKETT.

WILLIAM D. BRACKETT, one of the successful boot and shoe manufacturers of New England and the founder of the well known firm of W. D. Brackett & Co., was born in Londonderry, N. H., June 9, 1840, and is a son of William D. and Almira (Brown) Brackett. His father for many years was a successful merchant of Swampscot, Mass., where the youth and early manhood of our subject was passed. His education was confined to the common school, and at the early age of twelve he began his business career in his father's store. He manifested a natural aptitude for business, and the multitudinous duties which fell to his lot in the conduct of a general country store resulted in a business experience of great value. The responsibilities of the entire management of the business was early shifted to his shoulders, and the young merchant proved in every way equal to the many requirements of the position. When he arrived at the age of twenty his father sold out the business to him and he undertook its management on his own account, assuming at the time quite heavy financial obligations, but with good judgment and business tact he met every obligation and was enabled to accumulate a fair surplus. The war of the Rebellion interrupted for a time his business plans. In August, 1862, he enlisted in Company E, Forty-fifth Massachusetts Volunteer Infantry and served



W^m D. Brac'hell.

for nine months, when his period of enlistment expired. During this time his father continued the business for him, but upon his return he again assumed its charge, prosecuting it with constantly increasing success until 1865. Up to this time Mr. Brackett had amassed, through careful and judicious management, quite a capital for a man of his years and comparatively brief business career. Believing he was equal to a wider field of operation, and naturally ambitious, he came to Boston, and with J. L. Goldthwait embarked in the boot and shoe business as retailers and jobbers under the firm name of Goldthwait, Brackett & Co., continuing, however, at the same time for a year thereafter his store at Swampscot, when he disposed of his business there to devote his entire time to his boot and shoe interest. Success attended his Boston venture, but two years and a half later Mr. Goldthwait died, and in the fall of 1867 Mr. Brackett formed the copartnership of Cressy, Brackett & Co., and commenced the manufacturing and wholesaling of boots and shoes, in which he has since continued with uniform and gratifying success up to the present time. In 1869 E. Mann was admitted as a partner, when the firm became Cressy, Mann & Brackett. In 1870 Mr. Cressy, on account of ill health, sold out his interest, and the business was thereafter continued until 1880 under the firm name of Mann & Brackett. At the latter date Mr. Brackett purchased Mr. Mann's interest, and from that time to the present the business has been conducted under the name of W. D. Brackett & Co. In 1889 Mr. Brackett's son, Forrest G. Brackett, and W. Hobart Emerson were admitted as partners.

During the existence of more than a quarter of a century of this firm Mr. Brackett has been unreservedly devoted to its interest and success. With especial capacity for detail, he has been particularly watchful of the manufacturing part of the business, and to his unremitting endeavors in this line the high standing the house has always enjoyed, has been largely due. He is a thorough-going, practical business man, taking pride and pleasure in his work and pursuing his plans with directness and singleness of purpose. He has always been a hard worker, is a strict disciplinarian, punctilious in all matters of business, and jealous of his commercial standing. The business has shown a healthy and substantial growth from year to year and now reaches the sum of over one million dollars annually. The firm now operates three factories: one at Stoneham, Mass.; another at Windsor, Vt., and a third factory at Nashua, N. H., where a large brick factory

building was erected in 1889, and is considered one of the best equipped and most substantial structures of its kind in New England. Since it began operation the firm, however, has operated factories at different times in various localities in Massachusetts, New Hampshire and Vermont.

Mr. Brackett was married in 1865 to Sarah A. Lee, of Lowell. They have two children, a son, Forrest G., already referred to as a partner in his father's business, and a daughter named Blanche. In 1872 Mr. Brackett removed his residence to Stoneham to be able to more carefully look after his manufacturing interest, where he has since continued to reside and has recently erected a fine home.

FRANCIS F. EMERY.

FRANCIS FAULKNER EMERY was born in Boston, March 26, 1830, and is a son of Francis Welch Roberts and Sophronia (Faulkner) Emery. He is a representative of sturdy English ancestry, a descendant of those stout hearted, independent men and women who in the fore part of the seventeenth century came to New England and here founded a community, the influence of which has been so strongly felt in the establishment and maintenance of our free institutions. The genealogy of the family both on the paternal and maternal side has been carefully and authentically traced for many generations, but it is only possible in a work such as this to allude but briefly to this interesting field of investigation.

The name of Emery figures quite prominently in English history. The name was originally spelled in various ways, as Amery, D'Amery, D'Amery and Namery. The first ancestor in England was Gilbert D'Amery, a Norman knight of Tours, who in 1066 fought at Hastings with William the Conqueror, from whom he received large landed estates. He owned Thackington, and held a dozen manors near Oxford, which were retained by his descendants until 1376, when the third Baron D'Amery died. Descendants of Gilbert D'Amery long dwelt at Berkwell Manor, ten miles from Oxford, where still stands the church they built.

The first of the family in America was John Emery, from whom our subject descended in the eighth generation. This progenitor of the

family in the New World was born in Romsey, in Hampshire (Hauts), England, in 1598. He with his wife, two children, and a younger brother named Anthony, arrived in Charlestown, Mass., June 3, 1635, having made the voyage from Southampton, England, in the ship *James*. Soon after their arrival they proceeded to Ipswich, and thence to Newbury, where John settled in the same month of his arrival in America. Three years later Anthony located in Portsmouth, R. I., afterwards in Dover, N. H., and again in Kittery, Me. He finally, however, returned to Portsmouth, where he died. (A large proportion of the Emerys at present found in Maine and New Hampshire are his descendants.)

John, upon settling at Newbury, secured a grant of land on the southerly side of the main road leading to the bridge over the river Parker (a short distance above the "lower green" in the old town). He was a carpenter by trade, representatives of which craft were at that time particularly welcome in the New World. His name appears frequently in connection with public enterprises in the earliest annals of Newbury, showing that he was a man of prominence and importance among his fellows. The second grist mill established in Newbury was built by him and Samuel Scullard. That he was a man of humane instincts and of independent nature and above the bigotry and prejudice of his day is evinced from the record found at the court-house in Salem, dated May 5, 1663, stating that he was fined £4 for entertaining Quakers. His offense consisted in granting food and lodging to two men and two women of this religious sect who were traveling through Newbury. At this period one can scarcely depict the commotion caused by such an incident, or appreciate the courage evinced by John Emery in thus rising above the popular prejudice and fanatical bigotry and intolerance then almost universally entertained toward the Quakers by the men and women of New England. John Emery also figured prominently in the celebrated ecclesiastical case at Newbury, relating to church discipline, which is mentioned in Johnson's "Wonder Working Providence," and which was finally settled by an appeal to the civil authority. Both John Emery and his son John were members of the Woodman party, led by Edward Woodman, which denied the right of the elders of the church assuming wholly to themselves the power of admitting members, or of imposing church censure, believing that the church in its corporate capacity alone had the right and was under sacred obligation to manage its own affairs. The contest was a bitter

one, becoming prior to 1650, and was finally settled by the court at Ipswich, May 29, 1677, which decided against the Woodman party, imposing a fine on most of them, among those thus fined being John Emery and his son. Most of the Woodman party afterwards relented, but Emery always remained firm and defended his position. He died November 3, 1684. He was twice married. The name of his first wife is not known. She died in April, 1645. His second wife was Mary (Spatswell) Webster, widow of John Webster, of Ipswich, whom he married October 29, 1650. She died August 28, 1691. There were three children by the first marriage, John, jr. (known as Sargent), Ann and Ebenezer. By the second marriage the issue was one son, Jonathan, born May 13, 1652, the progenitor in a direct line of our subject. Jonathan was engaged in the King Philip's Indian War, and was wounded at the celebrated Narragansett fight, December 19, 1675. His company was the renowned "Flower of Essex," a company of picked men, carefully selected from the most eligible young men of the different towns constituting Essex county. He was with this company at the sanguinary battle of Bloody Brook at South Deerfield, September 18, 1675, in which all of the company, with the exception of seven or eight men, were killed. He was married, November 29, 1676, to Mary Woodman, daughter of Edward Woodman, jr. They had nine children, seven sons and two daughters. His eldest son, also named Jonathan, was born February 2, 1679, and was twice married, first to Hannah Morse, March 1, 1705, who died October 1, 1732. His second wife was Rebecca Walker, whom he married in 1733. He had eight children, three sons and five daughters. Joshua, the eldest son, born March 21, 1708, was also twice married. He also had a son named Joshua. The latter's son, also named Joshua, was the grandfather of our subject. He was born September 16, 1744, at Atkinson, N. H. He was a house builder and contractor by profession and lived for several years at Newburyport, where he accumulated a competency which was swept away by the great fire in that city in 1811. He afterwards became the steward of Phillips' Antislavery Theological Seminary, having charge of the common and the farm belonging to the institution, a position he held most acceptably for nineteen years. He married Elizabeth Welch, of Plaston, N. H., February 1, 1801. She was a woman of remarkable activity, energy and ability. They had six sons, the second of whom, Francis Walter Roberts Emery, was the father of our subject. He was born at Newburyport, May 31, 1806, and came to Boston in 1824, where he

served an apprenticeship with Joby Wolcott, a builder and contractor. About 1832 he embarked in rubber manufacture in Roxbury, and later on conducted a woolen mill near Dudley street in Roxbury. The financial crash of 1836 swept away his means, and for a few years thereafter he lived on a farm in Bedford. In 1843 he returned to Boston and resumed his profession of a house builder and contractor, in which he soon took a leading position. Music Hall and many other prominent and costly public and private buildings, stores and blocks of dwellings were erected by him. He was a man of comprehensive mind, far seeing and sagacious, and of great executive ability. His judgment and advice were much sought and much respected. He was frank and candid in manner, scrupulously honest, careful of the rights of others, and of a sympathetic, generous and genial nature. He was thrice married, first to Sophronia Faulkner, July 2, 1829, who died December 21, 1837; second to Mary Baker Wolcott, March 26, 1839, who died September 6, 1847; and in May, 1848, to Susan Davenport Ward, who died in 1875. Mr. Emery died in Glasgow, Scotland, February 25, 1860.

On the maternal side our subject is a descendant in the ninth generation from Ezekiel Richardson, who came from England and settled in Charlestown in 1630, and is also of the seventh generation removed from Edward Faulkner, who settled in Andover in 1634. Ezekiel Richardson was a man of great respectability and worth, whose name often appears in the colonial records of Charlestown. He was one of the first Board of Selectmen, and was a deputy or representative of the town in the General Court, and in many ways was both a useful and influential citizen. The name of Edward Faulkner appears ninth in the list of the first settlers of Andover. He was one of ten persons, including the pastor, who founded in 1645 the church in Andover, it being the twenty-fourth church organized in Massachusetts. Both branches of the family on the maternal side were noted for strong, vigorous character, fervent piety and sturdy mental qualities.

Descended from such an ancestry it is not strange that the subject of this sketch should have developed those independent, forceful traits of character such as have been conspicuous in his career. His preliminary education was received in the Boston public schools. For six years he attended Phillips Academy at Andover, and subsequently graduated from the Boston High School in 1848. He then entered the employ of J. P. Thorndike, a leather merchant of Boston, as a clerk, with whom he remained one year. In September, 1849, he shipped as supercargo

of this type with the largest quantity of building material with the construction of houses in San Francisco. Upon his arrival, in February, 1850, he found some defect in the title to the land upon which the houses were to be built, and needed investigation. While this was progressing he went into the mines, where he remained until the middle of the following August. He then returned to San Francisco and superintended the erection of forty houses, in which he had one-third interest and from which he realized a profit of \$17,000. In 1851 he returned to Boston, and in the spring of 1852 entered the employ of Fred Jones, a successful shoe manufacturer of Andover, whose business was established in 1824, and whose father had previously been a tanner at the same place. The business, at the time Mr. Emery entered Mr. Jones's employ, had grown to considerable magnitude, being one of the largest in New England. As early as 1836 Mr. Jones opened a store in Boston for the sale of his goods, at which time his cousin became associated with him as partner, under the firm name of F. & N. Jones. Several years later they dissolved, and each continued the business on his own account. In 1853 Mr. Emery became a partner with Mr. Jones under the firm name of Fred Jones & Co., at which time the firm was doing a business of from \$100,000 to \$500,000 annually, which rapidly increased in volume after Mr. Emery's admission to the firm. In 1857 they had the first factory in New England, where the entire process of boot and shoe making was done by machinery. Before the war of the Rebellion they did a heavy business in the South and West, and their loss, in consequence of the war, was heavy. In anticipation of the war they began, in the winter of '60-'61, the manufacture of army shoes for soldiers, and upon the breaking out of hostilities they had several thousand pairs on hand. Unable, however, to dispose of them to the Massachusetts authorities, although offered on their own terms, they sold them to Pennsylvania troops. Being of superior quality, a great demand was created for their production in this line, and throughout the war they made immense quantities of army shoes, their output of these goods exceeding that of any concern in New England. Large orders were often filled on short notice by working their factory night and day, in one instance producing 5,000 pairs of boots for cavalry and delivering them at New York within three days, a remarkable feat, considering the general or comparatively crude machinery facilities. In 1867 the firm of Fred Jones & Co. was dissolved, and from that time until the discontinuance of the business in May, 1891, Mr. Emery

conducted it alone. During his career as a manufacturer, Mr. Emery operated factories at different times at Athol, Milford, Ashland, Dover, Alton, Southville, Plymouth, Farrington and Ayre. From 1872 till the closing out of the business, however, the principal factory was at Plymouth.

Outside of his private business career Mr. Emery has been a forceful factor in many avenues of affairs. A man of great energy and intensity of purpose, with strong convictions, quick to perceive and resent all forms of injustice, and with courage to combat whatever he believes wrong, without regard to consequences personal to himself, he has upon many occasions prominently figured in movements which have been far-reaching in their effect for good. When he returned from California in 1851 he was instrumental in organizing a committee of fifty or more members, made up from representatives of different churches of Boston, who being dissatisfied with the then condition of local political affairs, nominated Jacob Sleeper for mayor, making the third candidate for this office in the field. Mr. Sleeper received sufficient votes to defeat both of his opponents, and the election resulted in no choice, and a second election terminated the same way. At the third election J. V. C. Smith, the Whig candidate, was elected. The organization, composed chiefly of members of evangelical churches, was kept up after the election, and out of it grew, in 1852, the Young Men's Christian Association, the first society of its kind in the United States, and from a split among the same original committee was formed the Young Men's Christian Union, both of which are to-day strong and vigorous organizations. From this early participation in local political affairs to the present time Mr. Emery has had more or less to do with the city and ward politics, but never as a seeker after office or for personal aggrandizement. In the presidential campaign of 1860 he supported the Bell and Everett ticket, but has since been identified with the Republican party, although he has always been liberal in his views and independent as far as his political actions were concerned.

In the movement to repeal the internal revenue laws after the close of the war, Mr. Emery took a conspicuous and influential part. This system of taxation, made necessary by the exigencies of the government in carrying on a gigantic war, was continued with well nigh ruinous results to many manufacturing enterprises long after the war closed. Under it abuses of the most flagrant character were engendered, extortions were practiced by dishonest revenue collectors, and

It was almost a matter of course, upon the industrial forces of the country that were increasing rapidly, that enterprises were abandoned, and no incentive existed to warrant the establishment of new ones. Only a few at first were bold enough to advocate the repeal of this entire system of taxation, but their efforts were unavailing; so strongly entrenched was the system that its adherents, largely its beneficiaries, easily defeated all efforts to repeal the measure. Concerted action, even among those most directly injured, seemed difficult to secure. Mr. Richardson, of Detroit, was of the leading manufacturing manufacturers of the country, was of a fine moral, and fully aware in his advocacy of the repeal of this system of taxation.

Mr. Emery was among the first in New England to co-operate with Mr. Richardson in the work of arousing the people to a sense of the injustice of the system, and he took up the cause with characteristic energy. He called together the young men engaged in manufacturing, and through his efforts a public meeting was held and the matter thoroughly discussed. In opposition to many, resolutions were adopted demanding the repeal of the system. By appeals and discussions a strong public sentiment was aroused, and later, at the national convention of manufacturers, called to discuss the subject, a delegation was sent from New England, composed of representatives from thirty of our leading branches of manufacture. Throughout the long contest which preceded the final repeal of the internal revenue system, Mr. Emery was for most in the fight, and his intelligent and well directed efforts did much to bring about a result now universally conceded to have been a wise and first move. The import duty on hides was among the earliest and more directly affected New England than any other portion of the country, and was among the first after the war closed that the public asked to be relieved from. Such was the strong pressure brought upon Congress to revise and reduce import duties, that Daniel A. Wells was appointed by Congress to report upon the subject. At the suggestion of Mr. Wells, Mr. Emery prepared for him careful and authentic figures showing the evil effects resulting to the country from the duty imposed upon hides. The results of Mr. Emery's investigations were incorporated in Mr. Wells's report to Congress, and had a considerable influence in securing a removal of the duty, a timely result which certainly saved the heavy tanning industry of New England.

The equitable condition of freight rates from Boston of to-day is in great measure due to the forces set in motion by Mr. Emery. For a long time New England was practically at the mercy of the Vanderbilt system. So strongly was this state of facts supposed to exist that the managers of the Vanderbilt line in 1872 arbitrarily advanced the freight rates from Boston to St. Louis and Chicago from seventy-five and eighty cents per hundred to \$1.80 per hundred, a tariff practically in favor of the West as against New England. Mr. Emery at once set about inaugurating means to overcome this unjust discrimination. Mainly through his efforts was formed the National Despatch line, which, by the co-operation of the Vermont Central, Grand Trunk, Fitchburg, and a railroad through Canada and Michigan, gave New England a route to the West independent of the Vanderbilt system, and soon, through the loss of patronage, the rate of the latter was reduced to forty cents per hundred. Later the Vanderbilt people, by purchase of two hundred and fifty miles of the route used by the National Despatch line in Michigan, were again masters of the situation. Mr. Emery again proved equal to the emergency of promptly meeting a condition that would have again put New England at the mercy of a single line to the West. He conceived the idea of making the New York and New England Railroad, then unfinished, a through line to the West. A part of the road was then in the hands of a receiver, and to extricate it it was necessary to raise \$2,000,000. This Mr. Emery set about doing, and had practically accomplished the task when Vanderbilt heard of the movement and at once capitulated. From that time to the present there has been no attempt to largely discriminate against New England, and fair rates have prevailed.

In behalf of the boot and shoe industry, with which he was so long and prominently identified, Mr. Emery has in many ways been a helpful factor. His time and services have always been freely given to advance the general good of the industry. At the time of the expiration of the McKay sewing machine patent, a strong effort was made to secure its renewal, but Mr. Emery, believing that the interest of the manufacturers would be best subserved by a discontinuance of the system of royalties that had prevailed under the old patent, vigorously opposed the granting of a renewal of the patent. He appeared before the committee appointed by the Boston Board of Trade, and later before the Congressional Committee on Patents, and ably and thoroughly stated the reasons why the renewal should not be granted, and largely

by his convincing and reasonable arguments the movement was defeated. The Shoe and Leather Association, one of the best trade organizations, was also the outgrowth largely of Mr. Emery's efforts. At a dinner of boot and shoe manufacturers, held at the Revere House in 1871, at which Mr. Emery presided, he suggested the desirability of such an organization. The idea commended itself to others, and after some discussion, resulted in the appointment of a committee, of the head of which was Mr. Emery, with power to draw up a constitution and by laws and to give form and expression to the plans and purposes of the association. Organization was soon after perfected, and Mr. Emery was placed on the Bureau of Credits, where he did most effective work on lines from which have resulted the most valuable part of the association's work. This was the first trade association formed in Boston, and from its organization to the present its influence upon the industry it represents has been in every way most salutary. Mr. Emery has always been actively interested in the work of the association, and from his labors in its behalf much of its success can be largely ascribed.

The foregoing few incidents in a busy career form but an outline of the events themselves, and of necessity suggest rather than fully describe the part Mr. Emery has performed in them. Enough, however, it is hoped, has been given to make evident a strong and vigorous personality. Mr. Emery's leading characteristics can be easily accounted for. They were inherited from ancestors, who, whatever may have been their shortcomings viewed in the light of to day, were not deficient in qualities of sterling honesty, of great moral courage, and true independence of character, united to fervent piety, love of home, regard for religion and education and intense patriotism. Mr. Emery has often run counter to the popular view on important questions, but has never hesitated to stand alone when he believed he was right. He is a man of strict, calculating judgment, and always has full command of his resources. He is not easily discouraged in any enterprise in which he may embark, and possesses the ability to conceive and manage large undertakings. He has always been a great reader, and has managed to keep well informed on a wide range of topics. He excels as a conciliator, and is a clear and ready speaker upon any subject upon which he has given thought and study. Physically he is a man of large frame, and generally vigorous constitution which the exacting cares of large business transactions have made but little inroad upon. He is

a New Englander in all that the name implies, and while justly proud of his section and the men and women who laid the foundation of its greatness, no one is more ardently or broadly proud of his entire country.

Mr. Emery was married September 18, 1855, to Caroline Sweetser Jones, daughter of Frederick and Maria (Sweetser) Jones, who died in 1890. Their children are Maria Sweetser, Francis Faulkner, jr., and Edward Stanley Emery. Another son, Frederick Jones Emery, died in infancy. The two sons of Mr. Emery were associated with him in the manufacturing business until it was discontinued. They are now living in the new State of Washington.

GEORGE A. ALDEN.

GEORGE ADELBERT ALDEN was born in Hope, Me., April 7, 1830; is a son of Silas and Sarah (Lindley) Alden, and a descendant in the eighth generation of John Alden and Priscilla Molines, of the *Mayflower*. Silas Alden, his father, removed with his family to Bangor, Me., when our subject was four years of age, where for many years he was engaged in the drug business, and where he died January 23, 1891, at the advanced age of eighty-seven years. His wife, who died July 11, 1882, in her seventy-eighth year, was a near relative of John Lindley, the distinguished English botanist. They had ten children, of whom but three are now living, George A., Silas Augustus, and Sarah, the wife of Frank N. Lord, of Boston.

Our subject was educated in the excellent public schools of Bangor, and after graduating from the High School of that city for a short time assisted his father in the drug business. In November, 1848, he came to Boston and secured a position in the wholesale and retail drug store of William B. Little & Co., being placed in charge of the retail department. He remained with this firm until 1851, when he went to Philadelphia, where he remained about two years. Upon again returning to Boston his services were at once secured by the reorganized firm of George B. Little & Co. as manager, where he continued until August, 1855, when he severed his connection with this house, and began his commercial career. He was successful from the start, and for about two years continued business alone, when he admitted to part-

company was P. T. Edmonds, under the firm name of Alden & Edmonds. That firm ranked among the largest handlers of India rubber imported into the country. In 1871 the firm was dissolved, Mr. Alden continuing the India rubber interest, and Mr. Edmonds continuing the general part of the business. Mr. Alden conducted the business alone until 1878, when his son, Adelbert H. Alden, having become of age, was made a partner, under the present firm name of George A. Alden & Co. From that time to the present their dealings in rubber and gutta percha have been conducted on an extensive scale, their operations and interests in these lines exceeding that of any concern in the world. Since Mr. Alden's son has been a member of the firm the business has undergone many changes; new branches have been created, and their interests have been extended in various ways. In 1880 they took up the shellac business and, under the name of the New York Shellac Co., they now do nearly one-half of the entire business of that useful commodity in the United States. In 1881, for the purpose of more extensively carrying on the importation of rubber, they organized "The New York Commercial Co., Ltd.," with a capital of \$600,000, of which Mr. Alden was president, and his son was secretary and general manager. December 1, 1892, this company was changed to "The New York Commercial Co.," and capital increased to \$2,500,000; George A. Alden, president; A. H. Alden, vice-president and general manager. In 1887 the importation of cocoa was added to their various interests. Their operations in this direction have been constantly increasing, and at the present time they are ranked as the largest importers in the United States. About six years since they further extended their business interests by inaugurating the exportation of grain, petroleum, lumber, staves and rubber to Portugal, Spain, the Mediterranean ports generally, and various ports of Russia and Germany, and employ from two to three steamers per month for this purpose.

Boston has always been the financial center of operation of this firm, but the growth of the business during recent years has necessitated close and intimate relations with New York city, where business offices are maintained, and between their headquarters in that city (66 Broadway) Boston's private telegraph wire has been employed since 1880, and more recently the long distance private telephone connection has also been constructed. During the great Boston fire of 1872 the headquarters of the firm in this city, corner of Milk and Bath streets, were

destroyed, incurring a loss of about \$100,000. After the fire, quarters were established on Congress street, where they remained until about five years ago, since which the present location, 200 Devonshire street, has been occupied.

As a commission merchant Mr. Alden has long been the most prominent figure in his line in New England, and for many years has been at the head of the largest business of its kind in the United States. It seems unnecessary to expatiate upon the qualities required to accomplish the work he has performed, or to go into details in explaining his success. The best evidence of his business capacity lies in the unadorned statement of what he has accomplished. Against strong competition, to have maintained and constantly strengthened the position he has so long held in commercial circles; to have successfully met and been equal to the many changing conditions of trade, exhibit better than words of adulation, however merited, the strength of character and forceful nature of the man.

Mr. Alden was married in 1856 to Harriet J. Hadley, of Charlestown. They have had two sons, the elder of whom, Adelbert H. Alden, previously mentioned, was born in 1857. He early evinced a decided taste for a commercial career, and before he had attained his majority had exhibited unusual business tact and ability. Since becoming associated with his father as partner his connection with the business has been very close and intimate, and its general management and development during recent years has largely been the result of his superior business acumen. He was one of the leading organizers of the United States Rubber Company, and since 1890 has resided in New York city, the more adequately to look after and superintend the constantly increasing demands of the various interests with which he is prominently identified. He married Miss Mabel C., the daughter of Charles E. Thayer, of Boston, and has had two sons. Mr. Alden's younger son, George Edwin Alden, is also connected with the business interests of his father, and is president of one of their corporations.

Besides his connection with the various interests mentioned, Mr. Alden is president of the Seamless Rubber Co., of New Haven; a director of the National Revere Bank, Revere Rubber Co., Boston Rubber Co., and Boston Rubber Cement Co. He is an original member of the Merchants' Club and of the Boston Athletic Association, and is also a member of the Algonquin Club, Temple Club, Country Club, Pine Tree Club, Trade Club, Exchange Club, and a life member of St.

Among the Royal Army Chapter and De Molay Encampment Knights Templar.

For twenty-nine years Mr. Alden resided with his family in Cambridge. During the last four years the family has resided during the summer on the famous Baker estate in Wellesley, which comprises 800 acres of land, and in many respects is one of the finest farms in New England. During the winter Mr. Alden resides with his family at the Hotel Vendome in Boston.

HOWES NORRIS.

Howe Howland Norris was born at Vineyard Haven, Martha's Vineyard, Mass., November 2, 1844, and is the youngest of four children. He is the son of Capt. Howes and Elwina Manville (Smith) Norris. His ancestors on his father's side came to Martha's Vineyard from Bristol.

He is descended on female lines from many of the families whose names are well known on the island, the Mayhews, Nortons, Butlers, Smiths and others, and from others no longer to be found there, the Harlocks and Shaws; from the Collins and Starbucks of Nantucket, and from the Chipmans, Skiffs and Presburys of Sandwich. Through Hope Howland, wife of Elder John Chapman, he is descended from John Howland and Elizabeth Tilly, his wife, passengers in the *Mayflower* in 1620.

His father, Captain Howes Norris, was a ship captain, and was murdered in 1812, while on a voyage in the Pacific Ocean in the whaleship *Sword* of Fairhaven, his ship being attacked and captured by savage natives of one of the King Mills group of islands. His mother, Elwina Manville (Smith) Norris, the daughter of Nathan and Polly (Dunham) Smith, of Tisbury, was killed by lightning, in 1851, in her own home. His *mother*, Monzo, was lost by the burning at sea of the ill-fated *Cooney* in 1858.

He was married September 16, 1863, to Martha Daggett Luce, daughter of William Cook and Eleonora Daggett (West) Luce, of Vineyard Haven. He has one son, Howes Norris, jr., born March 20, 1891.

Mr. Norris has been native to his life in two distinct spheres, public and business affairs. On the death of his mother he was taken home



Howes Morris

by his uncle, Shaw Norris, who lived on the east shore of Vineyard Haven Harbor (now Cottage City). Here, though not yet ten years old, he quickly became chore boy, farm hand, and boy of all work. Though well treated, this boyhood life was full of rigid features, and, however unrelished, it would be considered good and necessary discipline for youth.

Mr. Norris was educated in the public schools of Martha's Vineyard, with three years at a private boarding school in Middleboro', and a course at Comer's Commercial College in Boston.

In 1861 he sought a subordinate place in the army or navy, but failing to obtain it he engaged with a manufacturer of small arms, a relative, in Springfield. The business was new and urgent, and being the first clerk employed he had good opportunity for development and advancement, and in a short time was the substantial head of a business employing a large force of help, and in volume running into millions each year. Like all business dependent on war, though completely successful, it ended with it. During this period Mr. Norris was frequently engaged in court cases as an expert in matters involving the production and cost of arms and parts of arms. At the age of twenty-six years he was offered and declined the positions of manager or treasurer of the great arms manufacturing house of the Remingtons at Ilion, N. Y., and a European connection with his employer. Mr. Norris, with a few leading men, organized in Springfield and for several years was treasurer of a thrifty manufacturing plant which still maintains a healthy existence.

In November, 1868, he returned to Martha's Vineyard to look after business interests and severed all business connection with Springfield. Here he took sole charge of a shipping business established by his uncle, which he had been familiar with from boyhood and had owned for several years, that of dealer in ship's supplies. Through this business he became well known in commercial circles throughout the Atlantic ports and British Provinces. During the period between 1868 and 1881 he carried on alone this business at Vineyard Haven Harbor, and found time to perform the many duties hereafter mentioned.

Between March, 1869 and 1886, he was the marine news agent of the Associated Press for Martha's Vineyard and vicinity, which point, outside of the great cities, is the most important marine post on the coast. He resigned this position in 1886 to engage in business elsewhere.

In 1870 he became the owner, publisher and editor of the *Cottage City* (No. 1) newspaper then a few months old, started to promote the cause of the Unionists in the struggle to create the town of Cottage City. The work was successful, and Mr. Norris owned and edited the paper until October, 1885, when he sold it. During the period while in business at the Vineyard he was a notary public and did nearly all the marine notarial work of that section. He was frequently a referee in the settlement of marine cases relative to salvage disputes, collisions, etc.

In 1887 Mr. Norris became interested in a new and wholly undeveloped method of rolling seamless steel tubing, known as the Kellogg process. During all the time since he has devoted himself solely and assiduously to this single enterprise as president and executive head of the corporation.

Mr. Norris was always interested in public affairs and very early participated in political matters. In 1860, while attending school in Boston, he was a member of Lincoln Guard No. 1, a select corps of the organization known as "Wide Awakes." In Springfield, between 1862 and 1869, he was connected with active political affairs. He was secretary and active manager of the Lincoln Club in Springfield, formed in 1861, the only Republican club in that city during that campaign. During his residence there he was secretary at nearly all Republican meetings, caucuses and conventions. Before he was twenty-five years old he was invited and urged to accept a nomination to the Legislature which he declined. On his return to Martha's Vineyard he immediately became interested in political affairs. In August, 1869, there was a vacancy in the office of sheriff of Dukes county and Governor Claflin appointed Mr. Norris to the vacancy, and at the ensuing election he was unanimously elected to the office and served therein until 1873. He pioneered the effort to create the town of Cottage City, and though for many years it failed it was finally successful under his leadership in 1889. He was commissioned as notary public and justice of the peace in 1860, and has continued as such ever since.

Though prominent in local affairs and in politics he neither sought nor held public office until in 1883 he was nominated and elected a senator from the Cape Senatorial District, constituted by the three counties: Barnstable, Dukes and Nantucket. As a member of the Senate in 1884 he served as chairman of the committee on printing and in 1885 he served as chairman of the committee on election laws and mercantile affairs.

In 1885 he was re-elected, serving as chairman of the committee on mercantile affairs, and a member of the committee on railroads and printing. In 1886 he was again returned to the Senate, serving as chairman of the committee on railroads and a member of the committee on redistricting the State, election laws, and other committees. He was in 1884 and 1885 the Republican "whip" of the Senate, and in 1886 for the Republicans he was chairman of the caucus committee of that body. In the fall of 1886 he was a candidate for the Senate a fourth term in a convention which lasted all day, leading the vote during seventy-two ballots, though finally defeated by a few votes.

During most of the years from 1883 to 1892 (when he resigned therefrom) he was member of the Republican State Committee, and he has at different periods for much of the time been a member of nearly all the various Republican committees in his section of the State.

He was commissioned a trial justice for Dukes county by Governor Long and resigned after holding the office six months. He was tendered the same office later by Governor Robinson and declined it.

He is exceedingly active and restless in politics and always has opinions, and occasionally engages in pioneering some prominent name, urging it upon the party for the party's sake.

Mr. Norris is a member of the Middlesex, Norfolk and State Republican clubs (all political), and of the Boston Athletic Association.

Mr. Norris, though doing business in Boston, maintains his residence in Cottage City.

ARTHUR W. POPE.

ARTHUR WALLACE POPE was born in Brookline, Mass., March 9, 1850, and is a son of Charles and Elizabeth (Bogman) Pope. He is of the eighth generation removed from John Pope, who was one of the founders of Dorchester and was made a freeman in 1634. His great-grandfather, Col. Frederick Pope, served with distinguished credit during the Revolutionary War, and for the years 1787, '88, '90, '91, '92, '94 and '96 was a member of the House of Representatives from Stoughton. His grandfather, also named Frederick, was born in Stoughton, in 1772, but early in life settled in Dorchester and was prominently identified with the lumber business, ship building and mercantile pursuits. Charles

Pope, the father of our subject, was born in Dorchester, August 12, 1814, and early in life engaged in the furniture and feather trade. He afterwards carried on the real estate business, but the latter years of his life he engaged in no regular pursuit, devoting his time to the management of his private affairs. He was a highly respected citizen and a man of exemplary character. His wife, Elizabeth Bogman, whom he married August 24, 1834, was a daughter of Captain James and Parley (Nelson) Bogman. She was a woman of strong mental qualities and exercised a wholesome influence upon her children, which is clearly indicated in their careers. She lived to celebrate with her husband their golden wedding in the autumn of 1884. She died February 10, 1885.

Our subject was educated in the public schools of Brookline. At the age of sixteen he entered the employ of his brother, Col. Albert A. Pope, who at that time was in the wholesale shoe finding business on Pearl street. Five years later, in 1871, he was made junior partner under the firm name of Albert A. Pope & Co. In 1876, Albert A. Pope retiring from the business, he became the head of the house, the firm name being changed to its present style, Arthur W. Pope & Co. From that time until January, 1893, when William M. Buffon and Edward S. Wheeler, who had had a working interest in the business for some time, were taken in as partners, Mr. Pope had practically conducted the business alone. Under his judicious management the business has steadily increased from year to year, and to-day the firm is one of the best known in the trade. Not only does this concern conduct a large business of hat and shoe manufacturers' goods and leather, but it enters largely into the manufacture of specialties for the trade, operating factories at Hingham, Salem and New Bedford, while it controls the output of several others. Mr. Pope is a man of great energy, and is connected with business enterprises of various kinds, being largely interested in the manufacture of bicycles with his brother, Col. Albert A. Pope. He has been remarkably successful in all of his ventures, and has the reputation of soundness of business judgment which has gained for him the confidence of all who know him. He is a man of quick business perceptions, and when he embarks in a project he pursues it with a determination that does not stop until success is gained. His resources, of considerable financial ability, and only in the prime of his power, he has before him a future bright with promises of still greater achievements in the years to come.

Mr. Pope has traveled extensively both in the New and the Old World, and partly for business and pleasure, he in 1887 made a tour of the globe. On this journey he ascended the famous Mainurina pass in the Himalaya Mountains, eighteen thousand six hundred feet above the level of the sea, also had the exciting pleasure of an elephant hunt in Ceylon, a trip up the Nile, another to the Holy Land, and ended with a visit to Norway and the North Cape.

Mr. Pope was married, October 25, 1892, to Miss Lilla M., daughter of Myron H. Whittedge, of Lynn, and resides on the famous Baker estate in Wellesley, which is considered the finest in New England. He is a member of the Algonquin, Athletic, Temple, Exchange, Trade, Commodore, and Boston Merchants' Clubs, and the Boston Merchant Association. He has also taken an active interest in the Masonic Order and is a member of the order of thirty-second degree.

FRANCIS W. BREED.

THE wonderful development in the shoe industry of New England during the last quarter of a century has furnished a field wherein has been displayed many instances of remarkable business success. To those of the right force and energy and not only able to keep abreast of the changing conditions wrought by mechanical ingenuity, but to foresee and appreciate the future possibilities of this great interest, it has afforded many and great opportunities for advancement. Francis W. Breed's career is a striking illustration of these facts. His success has been honestly earned and built upon a most substantial basis. Born in the city of Lynn, in 1846, his life has been coextensive with the development of the modern shoe factory system. The characteristics which have made him a successful business man were developed very early in life. With true independence of spirit he was ambitious to help himself, and from the age of twelve he has made his own way. He was educated in the public schools of Lynn, and at the age of fifteen graduated from the Lynn High School. His business career commenced one year later as teller in the First National Bank of Lynn. Here he was obliged to work three months without pay, and then was allowed the munificent salary of \$50 per year. But his natural business aptitude was soon recognized, and his promotion followed until, at the end

in two years he had secured a position as high as he could reasonably expect to many years to come. Such a condition illly suited his ambitious and energetic nature, and he immediately began to look for a more promising avenue of employment. At the age of eighteen he entered the employ of William Porter & Co., shoe manufacturers, as book-keeper. He soon made himself so familiar with the business that he was sent out to sell the goods of the firm, in which direction he was at once successful and secured a good line of customers. Three years later, at the age of twenty one, he entered into partnership with P. A. Chase in the manufacture of shoes, which was successfully continued for eight years. At the end of that time Mr. Breed bought out his partner and has continued his constantly increasing business alone from that time to the present. During the great fire of 1889 his immense Lynn factory was swept away, but almost before the walls of his establishment had fallen he had secured a vacant factory at Marblehead and was soon turning out shoes with almost the same rapidity as before. He now has three factories, one at Lynn, another at Rochester, N. H., and one at Athol, Mass., their combined output being 8,000 pairs of shoes daily. Mr. Breed is also extensively interested in the leather business, being president of the Breed Leather Company. His success has been remarkable and in every sense deserved. He is a man of great energy, alert and enterprising, and possesses the executive ability necessary to the management of extensive business enterprises. He has the keenness and quickness of perception which enable him to grasp the intricacies of large transactions and quickly reach a determination. It is these qualities, with his active, pushing temperament, which have placed him among the foremost manufacturers of the United States, at a period of life when most men have barely laid the foundation of their careers.

It is not strange that one who has achieved so much in his private business affairs should be sought for to participate in public affairs and to take a prominent and leading part in financial institutions and trade associations. He is president of the New England Shoe and Leather Association, a director in the Boston Chamber of Commerce, and member of the Board of Credits, a director in the Boston Merchants' Association, and in the Honor Market Club. He is also director in the Elliot National Trade of Boston, and the First National Bank of Lynn, and the Lynn Association for Savings.

Mr. Breed has been an extensive traveler. Commencing in a business career which led him to all parts of our country where Lynn shoes are sold, he has supplemented his business trips by journeys for pleasure, visiting Florida, Colorado, California, Alaska, and is thoroughly familiar with the natural beauties and the principal cities of the United States. He has crossed the Atlantic three times, visiting all the countries of Europe, pursuing his travels even to the land of the "Midnight Sun." With a natural and cultivated taste for art, he has made during his travels a fine collection of art objects characteristic of the countries he has visited. During one of his vacations he visited the Exposition at Paris, and made a most careful study of the leading features of that great undertaking. His experience at Paris, and also at the Centennial Exhibition at Philadelphia and the Brussels Exposition, well qualified him as Massachusetts commissioner at the World's Columbian Exposition at Chicago, to which position he was appointed by President Harrison. He served on the Executive, Electrical and Legislative Committees of the Commission, and appeared before the committee of Congress at Washington to secure funds for the Fair, which were granted. In obtaining a site for the shoe and leather building he rendered great service, visiting Chicago several times for the purpose, also in having the classification arranged to put all the shoe and leather exhibits in this building.

In politics Mr. Breed is a Republican, and has been a prominent factor in party councils for several years. To party success he has been a free contributor both of his influence and his means. As a member of the Finance Committee of the Massachusetts Republican Club he bore an important part in the campaign of 1892, his services being highly appreciated. He has never sought political advancement, but his abilities for high political stations are readily conceded, and he has been repeatedly urged to allow his name to be used in connection with the Republican nomination for lieutenant-governor. He has, however, been so busy in managing the details of his extensive business enterprises that he has had little time for the consideration of propositions looking toward personal political honors.

Mr. Breed was married in 1813 to an Illinois lady of fine education and rare intellectual abilities. Their two sons and three daughters complete a most charming family circle. Their elegant home on Ocean street, Lynn, with its fine old mansion, handsome lawn and splendid ocean view, is one of the most attractive places on the north shore.

Mr. Breed possesses sterling moral qualities. He is a member of all the leading churches, including the Ango-piin, Massachusetts, Essex, Massachusetts, North, Oxford, Pa. Atletic, Union League of Chicago, and a past member of others. His hospitality is proverbial, and his guests have included many of the most distinguished names in the country. A man of tender feelings and generous impulses, Mr. Breed readily responds to every call upon him in behalf of worthy objects. He is a generous patron of the Lynn Y. M. C. A., and also of the Central Congregational Church, being a member of the parish committee and of the building committee, which is erecting a new house of worship.

The foregoing constitute but a few incidents in a remarkably busy career of one who is an excellent type of the successful American man of business, of one whose success has been conducive to the public good, and whose energies are directed in channels such as make the community in which he lives prosperous and happy.

A. F. SMITH

ALEX F. SMITH, one of the best known and most successful shoe manufacturers of Lynn, was born in West Danvers, now West Peabody, Mass., in 1835, and is a son of John and Elizabeth Smith, who had a family of six sons and four daughters. His early life was spent on a farm, and his educational advantages were such as fall to the lot of most farmers' sons. At the age of twenty he went to Danvers Centre. Here he bought a stitching machine, then but recently invented, and being of a natural mechanical turn of mind soon learned to operate it. In 1857 he started a stitching shop in Lynn, commencing with ten operators, and at present fifty were employed in doing the stitching for several large manufacturing manufacturers. His success in this line of work led him in 1861 to embark in the manufacture of shoes, for that purpose forming a partnership with his brother, J. N. Smith, which continued for some years past, since which Mr. Smith has conducted the business alone. The first shoe factory in Lynn was on Spring street, and such was the success of the Old Danvers factory was built on Oxford street. The latter business kept increasing and growing, and in August, 1892, the present building on Essex street was completed. This is one of the best equipped factories in New England. It is a brick structure 210 by 60



W. L. Smith

feet in dimensions, four stories in height, and fully supplied with the best and most approved machinery for the manufacture of shoes. Mr. Smith has been remarkably successful in business; a steady and substantial progress has been made from year to year, and at the present time his annual productions reach a value of \$800,000, and furnish employment to about 400 hands. His goods, which consist exclusively of ladies', misses' and children's shoes, have gained an enviable reputation among the trade, and are in ready demand. In New England they are sold only to jobbers, but in the West they are sold direct to the retailers. During the last two years Mr. Smith has maintained in Boston a store for the storage of his goods and as a distributing center for local jobbers, a new departure for a manufacturer, which has proven to be a wise innovation.

Outside of his regular shoe manufacturing business Mr. Smith has been very successful as an inventor of shoe machinery. He possesses a high order of mechanical ingenuity, and in 1886 invented the Smith shaving machine, which is now in very general use in all the great shoe manufacturing centers. This machine is made in Boston by the Union Heel Trimming Co., its manufacture furnishing employment to sixty hands. Mr. Smith has improved, by valuable inventions, a number of other machines, notably a machine for moulding counters, and is also interested in the manufacture of several other machines which he assisted to invent. Work in this direction of activity has been a most congenial field to Mr. Smith, his natural liking for mechanical work and inventive genius finding wide scope in the modern demand for labor-saving machinery in the shoe industry.

Mr. Smith's business career has been one not only of exceptional success, but one in which he has reason to feel a pardonable pride. For nearly forty years he has been in active business life, and during that long period he has never failed to meet any obligations he assumed. He has passed through trying times, but his business affairs have been so well managed that he has suffered no reverse strong enough to shake for a moment his well established reputation for reliability. He is a man of excellent business judgment, a careful manager, and closely and persistently follows any enterprise in which he may be engaged. He has allowed no allurements of politics to divert his attention from his business, and the main secret of his success lies in the fact that he has unreservedly devoted himself to his work. He is financially interested in many business enterprises, and is a director in the Central

Next day he died. His life was devoted to doing good, and the making of some good men, who have spent abundantly his time and attention. He is a member of Washington Street Baptist Church in Lynn, and his family and abundant good work is a most liberal and disinterested laborer. In all efforts to advance the welfare of the city or nation, or to improve the condition of its people, he lends ready aid. His standing in the community is that of a man of the highest character, and he enjoys to the fullest degree the respect and confidence of all who know him.

Mr. Smith was married in 1864 to Miss Helen M. Hoyt, of New Hampsire. They have one daughter, Ella F., the wife of Frank T. Moore, the manager of Mr. Smith's factory.

V. K. JONES

V. K. Jones was born in Brunswick, Me., October 15, 1846, his paternal ancestors being Quakers. During his boyhood his school advantages were limited to short periods during the summer and winter months. The intervening time between the terms of school was occupied in learning the art of making shoes by hand, such as was in vogue prior to the introduction of the ingenious machinery now so extensively employed, which has made the old system of shoemaking almost a thing of the past. After mastering his trade the young shoemaker came to Lynn during the winter of 1863 and obtained work upon the bench, continuing in this employment until October, 1864, when he entered the Union Army.

He took part in the battle of Nashville when General Hood made a successful attack on the Union forces on December 15 and 16, 1864. In this engagement he was disabled and carried to the hospital, where he lay until through a lingering sickness of typhoid fever, from the effect of which he suffered for several years. At the close of the war Mr. Jones returned to Lynn and secured employment at his trade, being discharged from the Army on November, 1869, when he accepted a position in the Boston House of Correction as instructor to the prisoners in the art of shoemaking. At the end of a year he was promoted to the position of superintendent of the cutting yards, very acceptably holding this position until December, 1877, when he resigned and again returned to

Lynn, and with his brother, A. H. Jones, embarked in the manufacture of a fine grade of leather shoes under the firm name of V. K. & A. H. Jones. They were the first to attempt the manufacture of a superior grade of ladies' shoes at a medium price, and from the start the undertaking proved a success. In a short time their goods were introduced into the best houses of the country, and the demand for them became greater than they were able to supply. Under Mr. Jones's management the business continued to steadily increase, and by the year 1883 had reached the sum of \$1,000,000 per annum, employment being furnished at this time to from five to six hundred hands. At this comparatively early period of the firm's business they had entirely outgrown their original manufacturing quarters, and in August, 1883, they commenced to build a seven story brick factory on the corner of Broad and Beach streets, and so rapidly was its construction prosecuted that the building was completed in December of the same year. It was the first brick factory built on Broad street. It contained floor space of 42,000 square feet and in appointment and machinery was considered the best equipped factory in the State. The business soon outgrew the facilities of even this large factory, and in 1885 they were operating in connection with their Lynn business two large factories in the State of New Hampshire, one at Strafford and the other in the old town of Hampton. The Strafford factory was destroyed by fire in December, 1887, and on November 26, 1889, their Lynn factory was totally destroyed in the great fire which will ever be memorable in the annals of Lynn for the extent of the loss occasioned by the destruction of valuable business property. The work of rebuilding at Lynn was at once begun, and the factory as it is to-day was completed in December, 1890. From that time to the present Mr. Jones has enjoyed an uninterrupted period of business prosperity. His personal efforts in behalf of the house in which he is the senior member has been unremitting. With practical experience in every part of the business in which he is engaged, he not only intelligently understands all of its requirements, but is withal a man of keen business sagacity, great force of character, and possesses excellent executive ability. His personal supervision of the business is most thorough and painstaking, having done all of the designing and modeling of lasts and patterns that the firm has used since the firm commenced business in 1877. To-day the product of the establishment he founded and has done so much to perfect and advance to its present high position in the trade is found in every part of the

United States, the daily production of the firm averaging 3,000 pairs of shoes, and furnishing employment to about 500 hands. Credit is due to Mr. Jones's part in the establishment of this great industry, but no means represents the limit of his business enterprises. He is financially interested in three boot and shoe factories outside of the city of V. K. & A. H. Jones, and has been associated with several other enterprises, all of which have proven successful. Success, such as he has gained, has been acquired by persistent, well directed efforts, which no reverse could more than temporarily check, and to-day his position in one of the great industries of New England is one of which he has reason to feel a pardonable pride. In the best sense of the term he is a fine example of the self-made men of America, a distinct type of men such as no other country can present.

Mr. Jones was married in December, 1868, to Miss Eliza A. Mayhew, daughter of Capt. Vinal Mayhew, of Belfast, Me., who died October 13, 1890, from the effects of a cold received during the great Lynn fire of 1889. She was a model wife and mother and did much to contribute to her husband's success. They had one son, Harry E. Jones, who is associated with his father in business.

HOUSE OF B. F. BROWN & CO.

Boston is headquarters for several great houses which have acquired celebrity for the superiority of their products. A notable instance of this is afforded in the successful career of the firm of B. F. Brown & Co., manufacturers of blacking and dressings for leather. It was founded in 1815 by B. F. Brown, who was born at Hanover, N. H., December 23, 1811. He came to Boston in 1837 and embarked in the wholesale drug business. The knowledge acquired in this branch of business led him to experiment in the preparation of blacking and dressing for leather, and in the year named he produced upon formulas original and exclusive to himself an article which speedily arrested the attention of the trade as far superior to any other in the market. The demands for the preparation increased rapidly and a large and profitable business was soon established. Mr. Brown remained at the head of the house until his death, May 17, 1879. For several years prior to Mr. Brown's death Edward Henry Fennessy had been a partner in the business, and



Frank E. Finney

the success of the firm was largely due to his well directed efforts. Mr. Fennessy was born in Dublin, Ireland, December 13, 1833. At the age of eighteen he came to the United States and located in Island Pond, Vt., where he secured employment in the railroad service, and finally became superintendent of the Grand Trunk Railway. May 1, 1866, he married Miss Ella F., daughter of B. F. Brown. After his marriage he went to Newburn, N. C., where for one year he carried on a cotton plantation. He then returned to Island Pond and engaged in mercantile business until he came to Boston in 1868, and became a partner in the business of B. F. Brown, under the firm name of B. F. Brown & Co. From that time until his death, May 19, 1888, Mr. Fennessy devoted himself almost exclusively to the development of the blacking and leather dressing business of the firm, and under his wise and energetic management the business grew to large proportions and the productions gained a world wide reputation. Their productions were honored with prizes at the great expositions of the world, at the Centennial Exposition in Philadelphia in 1876, at Berlin in 1877, at Paris in 1878, where they received the only medal awarded for leather dressings, in Melbourne in 1880, at Frankfort in 1881, at Amsterdam in 1883, and the New Orleans Exposition in 1884 and 1885, also Paris 1889. In 1881 Mr. Fennessy became sole proprietor of the business, and so remained until his death, but continued operations under the old house B. F. Brown & Co., which is still retained. He was a man of great business capacity and eminently successful in all of his undertakings. He left a family of six children, two sons and four daughters, all of whom are living. His eldest son, Frank E. Fennessy, who has succeeded to his father's business, was born in Island Pond, Vt., August 31, 1868. He was educated in the public schools of Newton, and at the age of eighteen became connected with B. F. Brown & Co. Soon after the death of his father he became sole proprietor, and has since successfully carried on the business. Besides the manufacturing quarters in Boston this house has a factory in London, England, and another in Montreal, Canada, and at the present time its productions are sold not only in every part of the United States and the Canadian provinces, but throughout Europe and all foreign countries.

JAMES J. WALWORTH

JAMES J. WALWORTH, son of George and Phibara (Jesse) Walworth, was born in Canaan, N. H., on November 18, 1808. He received his early education in the public schools of his native town, and in the academies of Thetford, Vt., and Salisbury, N. H. He taught public schools during three successive winters in Dorchester, Concord and Canaan, N. H.

At the age of twenty years he came to Boston, and was for ten years engaged in the hardware business. First with Alexander H. Twombly & Co., then with Charles Scudder & Co., and later, as partner, in the firm of Scudder, Park & Co., and was subsequently appointed agent of the "Canton Hardware (Manufacturing) Company," of Canton, Mass., which position he resigned in the year 1841, in order to enter upon a new enterprise, as will hereafter appear.

The business now so widely known as the steam heating business, or the construction of steam apparatus for warming buildings and for other cognate uses, and the kindred business of manufacturing the great variety of special goods of brass and iron related thereto, had its birth in the city of New York in the year 1841, when James J. Walworth, in co-operation with his brother-in-law, Joseph Nason, then in England, purchased a small stock of pipe and fittings of James Russell & Sons, of Widnesbury, England, who were the first manufacturers of wrought iron tube machinery.

This small lot of pipe, with a few crude fittings, had been sent to this country on a venture to be sold on commission by an agent who came with the goods. After an experiment of a year or so, this agent came to the conclusion that the business would not afford him a living. He therefore notified his principals that he must give it up and return to England. Mr. Walworth took possession of this stock in a small store (No. 36 Ann street in the month of June, 1841). A year later Mr. Nason returned to Boston, and proposed to introduce into this country a newly invented hot water apparatus for warming buildings; an apparatus with which he had become acquainted while in association with the inventor, Angus M. Perkins, of London. The principal material used in the construction of this apparatus being brought from

London, it was suggested to the latter field for this business. The result was that the inventor, now in New York and one in Boston, both to be

carried on under the firm name of Walworth & Nason, and as one interest.

The New York concern had thus far been wholly devoted to the selling of goods, undertaking no mechanical work, while in Boston the construction of apparatus for warming by the hot water system was to be the principal business.

It was now but a step, though a colossal one, from this hot water heating, to the radically new movement of using the small wrought iron tubes for heating by *steam*.

This was an entirely new departure from anything that had been attempted in this country or anywhere else.

The practical application of the new system to cotton mills, woolen mills, and other large buildings, quickly demonstrated its superior merits, and so commended it to public favor that it soon became the prevalent type of heating apparatus for all large structures, and so remains to this day, not only in this country, but in all civilized countries.

This system of steam heating does not necessarily provide for any special ventilation. It was therefore deemed important that in dealing with public buildings, such as hospitals, court-houses, school-houses, legislative halls, and other audience halls, a scientific treatment, such as should secure ample and well regulated supplies of fresh air, should be adopted, and this could be satisfactorily accomplished only by the use of mechanical power, and for this purpose the "fan-blower," propelled by a steam engine, or some other motor, was obviously and pre-eminently the most effective and economical instrument. This fan system of ventilation was therefore introduced into this country, by Walworth & Nason, in 1846, and was, during that year, applied to the United States Custom-house in Boston, at the time of the erection of that edifice. At that time this was the only *ventilating fan* blower in America. Small machines for smelting iron, blowing blacksmith's fires, etc., had been used, but nothing of the character of these large ventilating fans which have ranged from eight to twenty feet in diameter. Since that time the system has been applied to numerous public buildings in nearly every State in the Union, and is to-day recognized, by the most distinguished engineers, as by far the best system in use. Although Mr. Walworth has been the responsible business head of the concern, yet as engineer in steam heating and ventilating, he has de-

ing and construction of many important works in that line in several of the States in the Union.

During the first eight years of the history of this business Walworth & Nason had no rivals, if an embryo effort started in New York by one of the employees of their New York firm be excepted. But about the year 1850 two of the leading workmen, who had received their training in the original concern, started in the business in Boston, and their successors are now doing a prosperous business, under the name of Braman, Dow & Co., with the able management of Henry O. Barrett, a son of one of the founders of the firm.

In 1852 the firm of Walworth & Nason was dissolved, Mr. Walworth continuing the business in his own name. At a later period he associated with himself, as partners, Marshall S. Scudder, as a business man, and C. Clark Walworth, as a mechanic, neither of whom contributed any capital, and continued the business in the name of J. J. Walworth & Co. for nearly twenty years.

In the year 1872 the corporation of the Walworth Manufacturing Company was organized, with a paid up capital of \$400,000, all but a small fraction of which came from the old firm. Mr. Walworth was president of this corporation from its organization until a year and a half ago, when he declined a re-election, since which time he has partially withdrawn from active duties.

This company now owns and occupies extensive manufacturing works at South Boston, employing at these works, and elsewhere, a force of upwards of eight hundred workmen and other employees.

Their annual sales amount to about two millions of dollars. Their manufactured goods are shipped to all parts of the United States, and to several South American and European countries. Their salesrooms and offices are at Nos. 16 to 28 Oliver street, Boston.

From this root, thus planted a half century ago by this pioneer concern, has grown an industry of immense proportions, represented by numerous establishments in nearly every State in the Union, as well as in some foreign lands, involving an aggregate capital of fifty or sixty millions of dollars, and the employment of more than one hundred thousand workmen in the country alone.

Mr. Walworth has been for the last twenty eight years president of the "Manufacture Iron & Brass Company," a corporation carrying on an extensive manufacturing business at Branford, Conn.

He was a member of the Lower House of the Massachusetts Legislature in 1870 and 1871. He has been president of the following corporations and associations; the Wanalancet Iron and Tube Company, the Massachusetts Steam Heating Company, the Canton Debating Society, the Alton "Franklin Society" (a literary association), the Educational Association of Auburndale, the Union Flax Mills Company, and the Consolidated Gas Company. He was one of the founders of the Lasell Seminary at Auburndale.

Mr. Walworth is in direct descent from Sir William Walworth, who was lord mayor of London at the time of the great Wat Tyler rebellion in that city, during the reign of King Richard II, in the year 1381.

Tyler, the leader of the rebellion, having been granted an interview with the king at Smithfield, where were assembled 60,000 of his rebel followers, insulted the king by his insolent language, whereupon Walworth smote him down with his dagger, and as he fell from his horse, the rebels, seeing their leader dead, became demoralized, and were soon vanquished.

In consequence of this brave act Walworth was knighted, and "the King gave the dagger to the Arms of London." A statue of Walworth was erected in Fishmonger's Hall, near London Bridge, where it still stands.

Mr. Walworth's first ancestor in this country was William Walworth, who came from the neighborhood of London and settled in Groton, Conn., near the close of the seventeenth century.

Mr. Walworth has been twice married. His first wife was Elizabeth Chickering Nason. His present wife was Lydia A. Sawyer, a widow of one of his former partners.

He has one son, Arthur Clarence Walworth, who married a daughter of the late Gardner Colby. They have six children, four sons and two daughters. He is now president of the Walworth Construction and Supply Company. In religion Mr. Walworth is a Congregationalist; in politics, a Republican.

E. W. DENNISON.

ELIPHALET W. DENNISON, the founder of the Dennison Manufacturing Company and the creator of practically a new industry, was born in Topsham, then in Kennebeck, now Sagadahoc county, Me., November

23, 1819. He was one of ten children, four sons and seven daughters, of Col. Nathan Dennison, one of the early pioneers of the Androscoggin region of Maine frontier life. He resided with his father at Topsham until nine years of age, when the family removed across the river to Brunswick, with which village he held close and cordial family and business relations up to the time of his death.

Col. Dennison, the father, was an old-time shoemaker, a thorough master of his trade, a good workman, a noted and influential citizen, and one who left his impress for good on all who came in contact with him. His shop, like many another of its kind in those days, was one of the rendezvous of the village and vicinity where politics and religion, manners and minners, and gossip of the day had active discussion. Country village boot and shoe making in New England finally lost its importance after the rise of the large manufacturing centers, such as Lynn, and the village shoemaker of the period was either forced to remove to these more favored localities for the business, or to seek new avocations. In the year 1844 one of Colonel Dennison's sons, A. L. Dennison, being then in the jewelry business at Boston, conceived the idea of establishing his father in the business of making paper boxes for jewelers' uses, all such boxes as were then in use being imported in small assortments only and at a heavy expense. In furtherance of his plan he bought a bundle of pasteboard from John and Alexander Prestly, and a ream of assorted papers from David Felt, both of New York, the latter of whom was the only manufacturer of enameled and gilded paper in the country; took them under his arm, went with them to Brunswick, and set his father at work cutting out boxes. At this time Quincy Tutts, a Boston importer, was the only man from whom the imported boxes could be had, and Mark Worthley was the only paper box maker in Boston.

The first lot of boxes made at Brunswick were cut out with a shoe knife and straight edge by Colonel Dennison's own hands, and the nimble fingers of his two daughters put the prepared pieces together, completing the boxes in a remarkably neat, work-woman like manner. As the first lot of Dennison boxes were well made and presentable in appearance, the demand at once exceeded the supply. A. L. Dennison attended to the business of his Maine boxes in Boston, and took orders from Deane & Palmer, Brewster & Palmer, Bachelder & Co.; Jones, Lows & Bell, and S. C. C. Crump & Dev., and Bigelow Brothers, now Bigelow, Knowlton & Co., most of these places giving liberal orders. Here then

was a new industry born into a healthy existence, which could almost run alone before its foster parents were fully aware of the fact that it had a being and a business name and place among men.

Two weeks after receiving his first samples Mr. Dennison went once more to Brunswick with a goodly stock and with such heavy orders as to convince him that some portion of the work must be done by machinery to enable him to supply the demand for boxes which had already come to their hands. To this end, in connection with his father, he invented and built Dennison's paper box machine, which proved a great labor saving invention, and was so perfect in construction and in its adaptability to the economic wants of paper box making, that it has served its purpose well these many years and is still used in the best appointed paper box manufactories. The wholesale jewelry dealers of Boston were the first customers of the Dennison paper boxes, but New York merchants in the same line of business soon found out their merits and put in earnest claims for a supply. The perfection with which the boxes were made gave them great prestige with the trade and a preference over the clumsily made boxes imported by Mr. Tufts. Customers poured in from all directions and the demand became so great that ingenious machinery was from time to time added, and the product of the little factory greatly increased. The business of the first year, with a producing force of ten hands, amounted to \$3,000, a tremendous business for the day, and the wonder of the times through all the region around Brunswick.

At the age of sixteen E. W. Dennison went to Boston as a clerk in a shoe store, where he remained six months, at the end of which time he took a situation in the wholesale dry goods store of Burnham & Dow, on Water street, remaining with that house three years. At the expiration of this term of service he made an engagement with his brother, A. L. Dennison, then a watchmaker and jeweler on Washington street, Boston, to learn the trade of watchmaking, and after remaining a year in this position he was sent by his brother to Bath, Me., with a stock of goods, and started out for himself by establishing a jewelry store in Bath. The enterprise, however, was not a success, and was abandoned. He then returned home, whence, after remaining a short time, he came to Boston, in 1839, and secured a position as salesman in a watchmaking business on Washington street, but soon after departed for Bangor, Me., to engage in the watchmaking and jewelry business in that place. After remaining there eight years he

good of the business, the enterprise proving, as did the one in Bath, to be entirely unprofitable. His next engagement was in the same it, as salesman for his brother in the Boston store, but his restless disposition would not permit of his settling down as a mere salesman. In 1819, on his brother selling out his business with a view to engaging in his favorite scheme for the manufacture of watches upon an improved system, our subject took the agency for the sale of the Brunswick paper boxes, the amount of business of which, starting at \$3,000 the first year, grew to \$6,000 the second, and to \$7,000 the third. He was now in the right channel, and his subsequent career was one of conspicuous success. After he gave his undivided attention to the selling of these goods the business grew rapidly, so much so that early in the year 1855 he established an office in New York for their sale to the wholesale trade, and soon after gave a partnership interest to Henry Hawks, putting him in charge of the New York office, and to his excellent business qualifications and popular manners is due much of the early growth of the business. A few years before this, some time in the year 1851, the making of jewelers' cards was added to the box business, Mr. Dennison buying imported Bristol boards and cutting them up in uniform sizes for jewelers' uses, the custom heretofore having been to cut up pieces of paper or card with scissors, by the clerks of the jewelry stores, as occasion required.

The latter business led to the use of a large amount of Bristol card board and consequently to a search for a supply at home of something equal in quality to that imported. At this time E. Lamson Perkins had a card board manufactory in Roxbury, Mass., and was the first to make Bristol boards in this country. So excellent and satisfactory was the product of this establishment for the desired purpose that a business arrangement was made between him and Mr. Dennison, which bore, to the pecuniary advantage of both parties, until 1878—a period of twenty-eight years—when Mr. Perkins retired with an ample compensation, and the card factory and its entire business and good will to the American Manufacturing Company, which has since carried on the business.

In 1854 carders' cotton was added to the catalogue of paper boxes and tags, previous to which all jewelers' cotton was imported. So popular were the carders' cards become that as early as 1857 similar carders' cotton was imported from Germany and offered for sale, and finally in 1867 American carders' cotton was introduced with the Dennison goods, but their quality

as compared with the latter was such that competition quickly died out and the field was left to the originator of the idea.

In 1857 some imported jewelers' tags were put upon the market, which, however, were so poor in quality as to command only a limited sale. They gave to Mr. Dennison a valuable suggestion. He was quick to see that here was another field from which a good harvest could be reaped if only properly cultivated and cared for. He at once added their manufacture, and soon was established a ready market for them. In their introduction was planted the seed which has eventually grown into the large tag business of the Dennison Manufacturing Company, which has doubtless given it more notoriety and a wider name and fame than any half dozen other articles of its manufacture and sale.

The shipping tags and the merchandise tags, at once so common and so useful now, had their birth in much the same manner as the jewelers' tags. A few years prior to 1863 Victor E. Mauger came from Scotland and established the first manufactory of shipping tags in this country and located in New York. He produced a so-called linen tag (the kind still to be seen on the luggage of the English tourist). Mr. Mauger met with excellent success until the premium on gold made the cost of material so high that other and cheaper material was sought, but none that proved reliable or suitable was found, until cotton shippers complained that their tags became detached, causing much annoyance and risk in consequence of their frequently having to look up lost or strayed goods. This suggested to Mr. Dennison the device patented by him in 1863, and a re-issue of the patent in 1871, by which the acme of strength and economy was attained. It was one of the simplest devices ever patented or invented, and, as afterwards proved, one of the most prominent instances on record of the great value of a very little thing successfully handled in a commercial way. During the first year after its introduction to the public ten millions of shipping tags were sold, the Dennison Company and Mr. Mauger then being the only makers of tags in this country. It is now thirty years since these shipping tags were first put upon the market, and where 10,000,000 were then called for, probably 300,000,000 are now sold by the different manufactories, which are numerous, but the bulk of the business, from the very nature of things, will doubtless continue to be, as it is now, done by the Dennison Manufacturing Company.

From 1850 the growth and extension of the business of the Dennison Company was rapid, the constant increasing output of tags, together with the introduction of other new things, forced them to repeatedly increase their facilities for manufacturing. A rehearsal of the details of those of the different articles manufactured by the Dennison Company have been introduced to the public, and roused along their different ways to their present haven of usefulness and prosperity would be but a repetition of what has already been given, both as regards the outgo and outcome of each individual instance. One by one the manufacture of useful articles was introduced, in many instances some of them unobtrusively tried at first, but of real every day necessity. In 1878 the company was incorporated under the name of the Dennison Manufacturing Company, with Mr. Dennison as president, which position he held until his death, September 22, 1886. From his connection with the business he was its controlling, animating spirit. Under his excellent management it grew to large proportions, with factories employing hundreds of hands at Roxbury, Mass., Brunswick, Me., Brooklyn, N. Y., and branch houses for the sale and distribution of goods in New York, Chicago, Philadelphia, Cincinnati and St. Louis.

Mr. Dennison was a pioneer along original lines. By the application of right business principles and practices properly applied to the detailed manipulation of, in themselves, small and seemingly insignificant things, but of universal convenience, he built up a business of immense proportions, with it a peer in its peculiar position before the world, and in many directions without a competitor. Mr. Dennison, in addition to his excellent qualifications as a leader and director, had the happy faculty of calling around him, and of retaining an interest with men, capable, faithful and reliable lieutenants. By nature he was one of the most genial and approachable of men, and his judicious and winning manner endeared him to his large force of employees, contributing, no doubt, largely to the success of the business by their hearty cooperation in carrying out his plans. He was a modest man in the world's estimation, a lover of the good and true, and a hater of guile and all that pertained to hypocrisy or subterfuge. His conscience unimpaired, and in any cause he believed right and a good thing. He was not inclined to public affairs, preferring the attractions of business and the comforts and the quiet pleasures of a well-ordered and useful organization. He works of practical merit he has bequeathed, and used his ample means to benefit the un-

fortunate. With strong affections, pure instincts and predilections for the right, he won distinction to himself by the strict integrity of his business conduct and the purity of his domestic life. By his industry and ingenuity he reared, on the foundation laid by his brother and father, a structure that completes a most interesting chapter in the industrial history of our time.

After the death of Mr. Dennison his son, Henry B. Dennison, became president of the company, and continued as such until the end of the year 1892, when ill health caused him to resign. He was succeeded by H. K. Dyer. The other officers of the company are Charles S. Dennison, vice-president, and Albert Metcalf, treasurer. Mr. Metcalf is the oldest member of the company, having been admitted as partner in the firm in 1863, after having for ten years previous to that time been intimate with Mr. Dennison and also familiar with his business. Since the company was incorporated he has served as treasurer and has been an important factor in the success attained. About eight years ago the Boston headquarters of the business was removed from 21 Milk street to 26 and 28 Franklin street. Here are found samples of the "thousand and one" articles manufactured or controlled by the company, including tags of all descriptions, morocco, velvet and plush jewelry cases, jewelers' cotton, "absorbent" cotton for surgical and medical uses, apothecaries' powder papers, tissue and crepe papers for making artificial flowers and for decorations, hooks, fasteners and card holders, paper and wood boxes of all descriptions, sealing wax and prepared seals, gummed wafers and papers, and scores of other specimens of stationers' supplies, and numerous other articles which are in every day use in every place of business and households where comfort, convenience and economy are recognized.

To the manufacturing centers at Roxbury, and at Brunswick, Me., was added about ten years ago a sealing wax factory on Green avenue, Brooklyn. At these three centers and in the Franklin street headquarters fully one thousand hands are employed. To this again must be added an industry that surely has no duplicate, which is that of stringing tags by the industrious housewives and children of the Cape Cod cranberry regions, where merchandise tags are sent for stringing in quantities sufficient to call for an expenditure of \$15,000 annually to pay for such work there performed; in some cases entire families gain their entire worldly subsistence in this way.

The following has been translated the story of an interesting industrial enterprise which began from a bundle of board and a ream of paper carried after one man's arm, to a business which now demands a consumption of tons of the same material daily; gives employment to hundreds of hands, and in magnitude of operations stands without a peer in the world. The inception of the enterprise is due to A. L. Dennison, who is well known as the originator of the American system of watch making, and whose sketch appears elsewhere in this volume. The foundation was laid by Col. Andrew Dennison, but the development of the business from the early days of experiment to those of great achievement and final success belongs almost solely to E. W. Dennison. It stands to-day as a monument to his business generalship and will always be laudably associated with his strong and vigorous personality.

AARON L. DENNISON.

The genius of American mechanics is displayed in the most conspicuous manner in the development of the watch industry, which in the past forty years has reduced the price of high grade watch movements from \$300 to \$50 each, in fact as good a watch movement can now be bought for \$3 as would have cost \$50 forty years ago. In 1850 there were no watches manufactured in this country. In forty-three years the business has developed so that the output of the American watch industry is sixty-five hundred movements per day, and for which an equal number of cases is made.

The New England mechanic who proposed the general plan of manufacture and for a long time worked out its details, and was so fully identified with its interests as to earn the title of "the father of the watch industry," is Aaron L. Dennison, whose portrait appears in this volume.

Mr. Dennison is a son of Col. Andrew Dennison, of Brunswick, Me. He was born in 1812. He commenced work at a very early age, including that he walked 1,500 miles driving cows to pasture, and received considerable profits and a packing box mounted on wheels as full payment for this work. He also worked at shoemaking with his father. When he was eighteen years old he was apprenticed to a watch and clock repairer in Brunswick, Me., where he remained

until he was twenty-one. He early showed an organizing and systematizing turn of mind, and made many improvements in the then crude manner of manufacturing clocks. In 1833 he went to Boston and commenced work as a watch repairer. He soon discovered that there was a total lack of system in the manufacture of the English and Swiss watches which were brought into this country, and he conceived the idea of carrying on the manufacture of watches upon what may be termed the American system of manufacture, *i. e.*, the making of watches upon a large scale with such exact work that the various parts of a watch could be assembled without the selection and fitting of each individual part. From 1840 to 1850 this subject engrossed all his spare moments, and he devised a plan of manufacture which he felt sure when successfully carried out would produce fifty watches per day, with 250 employees. In other words, that five operatives could make a watch each and every day. He foresaw that the increased mileage of railroads would create a largely increased demand for watches, consequently he endeavored to interest capital in his projects, and in 1850 he succeeded in forming a partnership with Messrs. Edward Howard and D. P. Davis, under firm name of Dennison, Howard & Davis, who were engaged in manufacturing clocks and various other articles in Roxbury. These gentlemen started a factory in Roxbury, in a building opposite the building now used by the E. Howard Watch and Clock Co., where they made their first watches.

They soon discovered that so much travel past their buildings created a great deal of dust, and Mr. Dennison began his explorations into the adjoining country to find a suitable place to which they could remove. One of his excursions extended to Stony Brook Station, in Weston, where he found a site where the romantic scenery and rough surroundings reminded him of the Swiss watchmaking sections, but being unable to make terms with the owner, he returned to Waltham, where a friend suggested the purchase of a site where the present American Waltham Watch Co. is now located. They applied for a special act of incorporation for the manufacture of watches, and on receipt of the charter the buildings were immediately commenced, and the machinery was then moved from Roxbury to Waltham.

Mr. Dennison's idea of a proper watch for American use was an 18 size, full plate, four pillared watch, and the wisdom of his selection is proven by the fact that nearly every watch factory that has been started in this country has followed his idea of size and general style.

The proof of his labor is shown in the fact that the American Watch Case Co. is the first and only company that has ever attempted to make a complete watch, and has the largest watch factory in the world.

More of what may be termed the foundation principles on which watch manufacture is conducted, originated in Mr. Dennison's mind. So fertile was his ingenious mind in devising ways and means, both mechanical and in general management, that Mr. Robbins, treasurer of the American Waltham Watch Co., once said: "It would be impossible for any body to propose anything in watch manufacture that Mr. Dennison has not at some time suggested."

Mr. Dennison remained in charge of the Waltham factory until January, 1862, when he retired, but soon induced Boston capital to start another factory in Boston, which was afterwards moved to Melrose. In this factory they did not attempt to make all the parts of a watch. The frame and some of the finer material was manufactured in Switzerland, and Mr. Dennison soon found it necessary to go to Switzerland to take charge of that department of the business. This project did not prove a financial success, and most of the machinery in Switzerland and in America was transferred to Birmingham, England, and formed the nucleus of the present British Watch Co.

Mr. Dennison, at the age of eighty-one, is still connected with the watch industry, being the senior partner of a firm in Birmingham, England, that is engaged in the manufacture of watch cases. His even temper and disposition, combined with strictly temperate habits, have enabled to a long and useful life, and he is at the present time as deeply interested in the manufacture of watches as he was at thirty-five, when he was working up the projects which resulted in building up the American watch industry.

ALBERT METCALF.

ALBERT METCALF, of West Newton, Mass., treasurer of the Dennison Manufacturing Company, was born in Wrentham, Mass., November 25, 1825. He is a descendant in the eighth generation of Michael Hanson, who to escape religious persecution, sailed from Norwich, Denmark, April 15, 1637, and on his arrival in New England became a



Albert Helwig

townsman of Dedham, resident in that part of the town which afterwards became Wrentham. Thomas Metcalf, of the sixth generation, was father of eleven children, constituting a family remarkable for its longevity, attaining to the average age of nearly seventy-six years. The ninth of these children was Reuben Grant Metcalf, Albert's father, a highly esteemed citizen of Wrentham, repeatedly representing his fellow citizens in the Legislature and other positions of honor and trust. He owned and tilled one of those many New England farms that afford a livelihood only on condition of the hard work and rigid economy of every member of the occupant family, and it was under such conditions that the subject of this sketch passed the years of his boyhood. Every day and every hour had their allotted duties, and the opportunities for boyish recreation or amusement were very few. As he approached manhood he sought employment somewhat more varied than constant farm work, but this was by casual engagement only. His education was such as a fairly good district school afforded, supplemented by two winter terms at neighboring academies.

His first commercial venture was as proprietor of a country store in Attleboro, in connection with cotton factories operated by H. N. & H. M. Daggett, which business, after about three years, was succeeded by a five years' engagement with H. M. Richards & Co., manufacturers of jewelry, a portion of the time being passed at the factory. After a few years' experience in the New York office, he became Boston resident agent for the firm.

He was afterwards engaged in the Boston office of Palmer, Richardson & Co., jewelers, of Newark, N. J., Thomas S. Drowne being the resident partner. He was then for several years partner in a woolen goods jobbing business in Franklin street, Boston.

These varied business experiences admirably fitted him for the responsible position he was thereafter to occupy.

In 1862 he became associated with E. W. Dennison, who had for several years been engaged in the manufacture of tags, tickets, labels, jewelers' paper boxes, and similar goods, and who was then located at the corner of Milk and Congress streets, in the building known as "Julien Hall." The business was then of very moderate dimensions, and Mr. Metcalf became sole salesman, sole bookkeeper and sole general assistant in the Boston office. There was at that time a small New York office at 17 Maiden Lane, in charge of Henry Hawks, whose young assistant was Henry K. Dyer, now president of

the Dennison Manufacturing Company. Four persons thus constituted the entire commercial force of the now great establishment of the Dennison Manufacturing Company, with large stores in Boston, New York, Philadelphia, Chicago, Cincinnati and St. Louis, the commercial corps numbering more than 150, with several factories and a manufacturing force of operatives to be counted by thousands.

Among the characteristics of Mr. Dennison's business genius none was more marked than his accurate judgment in selection of his lieutenants. Seldom have two business associates been more unlike than Mr. Dennison and Mr. Metcalf, and as seldom have two men been better fitted to be commercially helpful to each other; the one overflowing with invention, enthusiasm and energy, the other full of quiet industry, cool judgment, and conservatism without timidity. During thirty years a superb corps of young men have grown up to occupy the many posts of responsibility in the commercial work of the Dennison Manufacturing Company, all of whom regard Albert Metcalf with love and respect, as if he were in truth an elder brother.

Mr. Metcalf's life-long religious associations have been with the Universalist church, in whose work he has been a diligent promoter and generous contributor. In philanthropic and educational interests, especially those organically identified with the Universalist church, his benefactions have been bountiful, although always unostentatious. His comfortable home at West Newton is a center of hospitality alike to rich and poor.

He has never held nor sought public office, although, as a citizen, his duty is always recognized and cheerfully performed.

Mr. Metcalf was married in 1860 to Mary C. Roulstone, and three children have been born to them.

GEORGE THOMAS McLAUTHLIN.

GEORGE THOMAS McLAUTHLIN, son of Martin and Hannah (Reed) McLoughlin, was born in Duxbury, Mass., October 11, 1826. His ancestors on his father's side were Scotch and settled in Pembroke in the early part of the eighteenth century, about two miles from the birthplace of Mr. McLaughlin. The Scotch name was Maglathlin, but after undergoing various changes finally became McLaughlin.

Mr. McLauthlin's mother was a daughter of Col. Jesse Reed, who was born in 1778. His ancestors settled in Weymouth, Mass., in 1635. Colonel Reed was an inventor of wide reputation. Among his earliest and most noted productions were the nail machine and the development of a line of machinery for making and preparing the nail plates for that machine. The nail machine is used in practically its original form throughout the civilized world, and wherever "cut nails" are made we find the Reed machine. Colonel Reed devoted a long and busy life to inventing and perfecting mechanical devices, many of which were of extensive public benefit and are still in general use. Mr. McLauthlin inherited largely his grandfather's inventive genius. His parents permanently settled in East Bridgewater, leaving Duxbury when George was two years old. His father was a machinist and his two boys, Martin and George, were brought up in the Old Colony style with close economy and under strict industrial training. Through this beneficent parental discipline the boys early became self-supporting, self-reliant, and full of ambition. The public school was their early educator and later they took academic courses, paying by their own earnings their board and other expenses. George began shoemaking, without instruction, at sixteen years of age, and began to employ help the following year. He applied himself nearly fifteen hours a day, between the terms of the schools, in which he was either pupil or teacher. He continued his studies while at his work, the work bench serving the purpose of a school desk for the open books, so that the mental and physical work could progress simultaneously. At the Adelphian Academy he mainly paid his board and tuition by shoemaking during early and late hours. At the age of twenty he conceived the plan of running the shoe shop on a system of subdivision of the work, so that each workman taking a certain part might readily become proficient therein, and thus, by the united work of the gang, produce a largely increased result. In the execution of this plan he arranged with his schoolmate, James S. Barrell, now an esteemed master of one of the Cambridge schools, to join him. They used the rolling machine, which had just begun to take the place of the lap-stone, and the shoe-jack in place of the knee-strap. These were the only machines then known in the shoe shop. They employed a boy of sixteen years—now the Hon. James S. Allen, of East Bridgewater—and two sons of Rev. Baalis Sanford, Baalis, then thirteen years old, and now an honored business man of Brockton, and William A., then twelve years old, now in business in

Woodward. The school room constituted a "gang" which originated the gang system in schooling. All soon became experts in their craft and probably demonstrated the success of the system. The gang of workers was also a gang of students. Occasionally the members introduced themselves in the morning as historic personages, by whose name they were known during that day, and the prominent incidents of the life of each were reviewed. The school studies were daily rehearsed in an entertaining and instructive manner, and through this notable combination of profit, education and pleasure, toil disappeared. At the age of eighteen Mr. McLauthlin began teaching in the public schools, and taught four winters, the first in Hanson, the next in Pembroke, and the third and fourth in the North Marshfield Graded School. He succeeded in gaining the esteem and good-will of his pupils so fully as to entirely avoid punishment. In the Marshfield School self-government and mutual instruction were so successfully carried out that the teacher could be absent an entire day, assured that the scholars would conduct the school in as orderly a manner as if he were present. He found his inventive genius as valuable in disciplining and teaching as in other matters. He taught his scholars how to learn, how to make study a pleasure, how to help each other, how to make the school self-governing; in short, how to run the school successfully without a master.

Mr. McLauthlin's ingenuity and mechanical tastes led him to seek a wider field when he became "of age," and though almost without means he, with his brother, Martin P., began the manufacture of shoe machinery at Marshfield. At that time this now extensive industry was upon a special manufactory, though new machines were here and there offered for use, but shoemakers, as a rule, could not be induced to buy even quite inexpensive machines, although it was certain that they would save their cost in a short time. Therefore the new business proved to be hated for both, and George T. bought the interest of his brother. In 1850 Mr. McLauthlin moved to Plymouth and added to his shoe machinery business the manufacture of water wheels and general machinery. He there became widely known as the "Water-wheel Man." He took his first order for a water wheel and portable grain mill from David Webster, who in his genial spirit gave the order in the following words: "Give me one of your best Rider Water-wheels and one of your best Harrison Mills, and let me have the best mill in Plymouth Co., and when you can come down to my house and take some

of the results of it in the form of baked bread." Mr. McLauthlin sold his water-wheels in almost every State and Territory of the United States, and also in Canada, Nova Scotia, South America, Turkey and Africa.

In 1852 he opened an office at 108 State street, Boston, and in 1854 moved his works to Albany street, Boston. In 1858 he moved to East Boston, leasing the East Boston Iron Company's machine works, the business of which he added to his own. In 1861 his works were destroyed in the great East Boston Fourth of July conflagration, where a fire cracker caused the destruction of some fifteen acres of property. Before the destroyed premises had ceased burning he bought the works of the late William Adams & Company at No. 120 Fulton street, Boston, where his works, and since 1864 his office, have been permanently located. Here he added the manufacture of steam engines, elevators and the general business of that well-known house to his previous lines of work.

By the earnest advice of his physician Mr. McLauthlin spent the year of 1870 in Europe.

In 1878 he bought a considerable portion of the J. C. Hoadley Co.'s stock of portable engines, which were far-famed as superior in economy and durability to any other make. He then secured the assistance of Mr. Hoadley as consulting engineer and became successor to the J. C. Hoadley Co.'s portable engine business.

He retained Mr. Hoadley's co-operation as consulting engineer until the death of that gentleman in 1886.

Mr. McLauthlin found in his intercourse with Mr. Hoadley ample proof of his high character, his great talent, and his scrupulous integrity. He esteemed him as a man having the highest sense of honor and a keen appreciation of right: a man who could sit in equitable judgment in cases of difference between himself and others as disinterestedly as any referee.

Mr. McLauthlin has always been engaged in inventions, experiments and tests, the most extensive of which was the series of comparative model tests on water-wheels, which undoubtedly excelled anything of that kind which has ever been attempted. From the time he began the water-wheel business he had experimented and tested both on models and on wheels in practical operation. This extensive series of comparative tests began in 1860 and was finished in 1868. For absolute accuracy and reliability of results, and withal the best economy of the

work, a testing apparatus was required. With much study and experiment he perfected an ingenious automatic apparatus which maintained the level of the water at one exact level, recorded the time of the test more accurately than it could be taken by any known method, recorded the pounds of water used for each test to a fraction, and the exact distance the weight was raised, and all these during the time only that the wheel was in regular working operation. The operator had only to prepare the wheel, set the apparatus for the test, hoist the gate and, after the test was finished, to close it. He then could take off the automatically noted records, and with a largely reduced amount of mathematical calculations, from that which had formerly been necessary, determine the result of the test to within one-twentieth of one per cent. of absolute accuracy. Mr. McLauthlin is now engaged on a line of inventions of very remarkable merit. Though with impaired health since 1858, Mr. McLauthlin has from boyhood devoted long days to study and the varied requirements of his business. He has maintained a sound unbroken business record for more than forty-six years, and that he has retained the esteem and confidence of his patrons is proved by his reputation for frank and upright dealing and fidelity to their interests. He has been a director in nearly all of the companies in which he has held interest.

Mr. McLauthlin married Clara M. Holden in 1854, daughter of the late Freeman Holden, of Boston. She died in 1882.

GEORGE H. HOOD

GEORGE HENRY HOOD, son of Jacob and Sophia (Needham) Hood, was born in Salem, Mass., May 30, 1835. On his father's side he is a descendant of Richard Hood, the first of the family in America, who settled in New-England in the year 1628.

George Hood began his life work as an instructor in Bradford Academy, and later was a teacher in the public schools of Salem, where much of his early life was spent. For many years he was the principal of the West School.

In 1855 he moved to Lynnfield, Mass., where he became the pastor of the Congregationalist Church. He was active in this work until 1880, and died in Lynnfield five years later at the advanced age

of ninety-four years. Sophia Needham, his wife, was the daughter of Daniel Needham, an officer in the Revolution, and later in life the Squire of Lynn and one of the best known and most prominent citizens of Essex county. She outlived Jacob Hood but one year, dying in 1886, at the age of ninety years, after a married life of sixty-eight years.

The early life of the youngest boy of a family of six, George Henry Hood, was passed in Salem, where he was educated in the public schools, graduating from the High School in 1851. For three years after leaving school he was in a general store at Beverly, Mass.

In 1854 he came to Boston and for five years was a salesman for the clothing house of Whiting, Kehew & Galloupe.

In 1859 he first entered the rubber business as salesman for the Rubber Clothing Company, with a factory at Beverly. Toward the close of the war he engaged in the rubber business for himself until 1873, when, with R. D. Evans as an associate, he became the general manager of the Eagle Rubber Company, with a factory at Jamaica Plain.

Soon outgrowing their little factory, under Mr. Hood's supervision was built for this company, in 1877, a factory in Cambridge. Three years later a part of this was burned, and on its site has since been erected the present factory of the American Rubber Company.

In 1878 Mr. Hood severed his connection with the Eagle Rubber Company and started the present Boston Rubber Company, associating with him Eustace C. Fitz and Charles S. Dana.

The new company bought an old mill in Chelsea, near the Ferry, and a very few years saw it thoroughly rebuilt and running full.

In 1883 Mr. Hood bought out the interest held by Mr. Fitz and Mr. Dana, afterward selling a portion of it to E. S. Converse and George A. Alden.

About this time he assumed charge as general manager of the Revere Rubber Company, retaining as well the principal ownership of the Boston Rubber Company, of which he has since been president and treasurer.

In the summer of this year Mr. Hood's plans were rudely broken up one unlucky night by the factory of the Revere Rubber Company burning to the ground.

In September it was decided to rebuild, and in December of the same year, only three months later, goods were being delivered, a practically

entirely new factory having been built under Mr. Hood's active supervision.

He remained as general manager of the Revere Rubber Company until 1887, when, at the death of his eldest son, George Henry, jr., who had been associated with him in the management of the Boston Rubber Company, he resigned his position as general manager of the Revere Rubber Company, which had become well organized and prosperous, and devoted his entire time and attention to the development of the business of the Boston Rubber Company.

In 1888 the Boston Rubber Company purchased a rubber boot and shoe factory in Franklin, Mass., and began the manufacture of rubber boots and shoes in addition to the business of rubber clothing, rubber carriage cloth, and a large variety of mechanical rubber goods to which the Chelsea factory has always been devoted.

Under his able management the business of the Boston Rubber Company has steadily increased from year to year; in fact, all the additions to the plant since the start, in 1878, have been paid for out of the earnings.

Since the acquisition of the Franklin property, the yearly production of the factories amounts to about one million and a half dollars annually. Their products are sold in every part of the United States, and are well known as thoroughly reliable and of the highest class.

The establishment of these two industries, their development and their present prosperity are results attained almost solely through the intelligent and well directed efforts of Mr. Hood. His energies have been unreservedly devoted to the task, and to him credit for the high degree of success achieved is freely given.

Mr. Hood was married in 1859 to Miss Frances Henrietta Janvrin. Four six children have reached maturity, and all but one, George Henry, jr., are living. Two of his sons are associated with him in business: Frederic C. is the secretary and assistant treasurer of the Boston Rubber Company; Arthur N. is general superintendent of their two factories. Richard P. is a student at Harvard College. Miss Helen is well known by her musicianly works, some of which she has composed. One of her latest productions appears in the *Columbian Harmonist*. Miss Florence has a decided talent for the violin; in fact, all of the children inherit musical ability.

Thanks to the upon Mr. Hood's time and energies in connection with his business interests have been so great as to allow him to take

no active part in other enterprises. He was, however, one of the organizers of the Rubber Mutual Insurance Company and is still one of its directors. He is also a director of the Winnisimmett National Bank of Chelsea, and other similar enterprises.

He is a Republican in political faith, but with the exception of having been a member of the Common Council in Chelsea in 1857, has never held public office.

He was one of the constituent members at the organization of the Cary Avenue Baptist Church in Chelsea, in 1860, and has ever since retained his membership.

WILLIAM H. MOODY.

WILLIAM H. MOODY was born in Claremont, N. H., May 10, 1842. He is a son of Jonathan and Mary C. Moody, both of whose ancestry can be traced back to the colonial days of New England through sturdy Saxon blood. The country schools furnished the training ground of young Moody until his sixteenth year, when he entered the employ of George N. Farwell & Co., of Claremont, who were among the earlier firms to employ those simpler machines which were first used to supplement hand work in the manufacture of footwear. In their employ he became thorough master of his trade, and at the age of nineteen came to Boston and for a short time was employed as salesman in the Washington street store of John Wallace. He then entered the employ of Tenny, Ballerston & Co., where he remained for two years, and for three years thereafter held the position of buyer for Sewall Raddin & Son. The last named firm was succeeded by Sewall Raddin & Co., and soon after reorganized as McGibbon, Moody & Raddin. When this partnership expired, the firm of Crane & Leland became Crane, Leland & Moody, and afterwards Crane, Moody & Rising. At this time Mr. Moody's health became impaired, through the unremitting labor he had bestowed upon his business, and for a time he retired from active work. When thoroughly restored he organized the firm of Moody, Esterbrook & Anderson, calling into the new concern former tried and experienced men. He has built in Nashua, N. H., the largest shoe industry under one roof in the world. Mr. Moody is a director in the Shoe and Leather Bank, and a Republican in politics. He makes

Boston by winter come, and Claremont his summer residence. His estate there, which is well named "Highland View," is one of the finest in New Hampshire. A beautiful house, six hundred acres of broken up land, a private track, more than a hundred horses, and splendidly appointed barns are its features. To the American trotter he gives special attention. In Claremont he has perpetuated the memory of his mother by means of the Mary Moody parsonage, given to the Baptist Church, of which she was for more than sixty years an honored member. Mr. Moody was married twenty-five years ago to Miss Mary A. Maynard.

ROBERT D. EVANS.

ROBERT D. EVANS, the founder of the American Rubber Company and one of the best known rubber manufacturers in the United States, was born in Boston, September 30, 1845. After his graduation from the Boston High School he entered the employment of H. A. Hall, who later established the Hall Rubber Company. He subsequently accepted a position with C. M. Clapp, with whom he was engaged until April, 1864, when he enlisted in the Thirteenth Massachusetts Volunteer Infantry and for two years served with this regiment in the army of the Potomac, passing through some of the severest engagements of the war and twice being wounded.

After the close of his term of service Mr. Evans returned to Boston and formed a partnership with his former employer, Mr. Clapp, in the rubber business, under the firm name of Clapp, Evans & Co. The new firm had a mill at Jamaica Plain, where they made clothing, carriage cloths and wringer rolls. Mr. Evans owned a part of the Moulton roll, with exclusive right to manufacture it. Suits for infringement were brought against the concern by large New York and Boston manufacturers, and as Mr. Clapp thought the other side had a very strong case, and that there was an infringement, he wished to discontinue the manufacture, and the firm was dissolved.

Mr. Evans then started a small plant in Jamaica Plain, called the Eagle Rubber Company, and kept on making the Moulton rolls, at the same time defending his title. The best legal talent attainable was procured and the suit resulted in favor of the Eagle Company.

In 1873 the American Rubber Company was started by Mr. Evans strictly as a jobbing concern. In addition to this the agency of the Myer Rubber Company was taken by the new concern. A large business was done, the wringer-roll portion being especially profitable. In 1877 the large works at Cambridge were started, the Eagle Rubber Company and the American Rubber Company being consolidated, and the erection of a plant at once begun. At this plant were manufactured clothing, carriage cloth, boots and shoes, and wringer-rolls. The business was continued very successfully until December, 1881, when the works were completely destroyed by fire. In the following spring new factories were built on the same site and the plant then erected, together with numerous buildings added from time to time as the growth of the business required, constitute the present large manufacturing properties of the American Rubber Company.

The destruction of the plant by fire was a severe blow. It occurred in December, and was followed by a severe winter, when but little outside work could be done. In addition to this, all of the larger rubber shoe concerns at that time had greatly increased their plants and were looking for additional markets for their goods. The new mills of the old companies served for several years to overstock the market with goods, a state of things the American Company felt seriously. To make the complications even worse the Pará Rubber Shoe Company had come into existence and had their mill in operation three months before it was possible for Mr. Evans's new factory to begin work. The superintendent of the American Rubber Company and the foremen of all the departments, although they had been carried for months on the payroll while the plant was in ashes, deserted to the Pará Company, and took with them nearly all of the skilled help. Left in a position where it was necessary to rely entirely on new and comparatively inexperienced help, the energetic founder and his lieutenants were confronted with many difficulties. For a time the goods turned out were rather "poor," as the president now confesses, but speedily this condition of affairs was corrected, and in a short time the concern was on a paying basis and declaring dividends. To-day the works have an annual productive capacity of \$3,500,000 worth of rubber goods. For the last ten years the American Rubber Company has been among the most successful rubber concerns in its line in the United States. At the start the capital was \$200,000, later it was increased to \$500,000, and

of \$1,000,000 to \$1,000,000. To-day the capital and surplus are \$2,500,000.

The phenomenal success of this concern is due to the energy and business ability of Mr. Evans. He has in a rare degree the faculty of securing the best assistance and of surrounding himself with bright and successful young men. He has always been a hard worker. It was his custom for years to spend his forenoons at the factories with his superintendent, and his afternoons at the city offices looking after finances, sales and all the details. There was no part of the business—whether buying supplies, marketing or manufacturing the goods—with which he was not as familiar as his most skilled lieutenant. His devotion to the success of the American Rubber Company has been so absorbing that outside of having served for several years as a director in the Massachusetts National Bank he has declined frequent offers of position in banks or other corporations.

Mr. Evans was one of the leading spirits in the consolidation of the leading rubber companies in this country in the corporation known as the United States Rubber Company. This was perfected in April, 1892, and upon election of officers in October following the presidency of this immense company was conferred upon Mr. Evans, an honor entirely unsought and only assumed upon the urgent solicitation of his associates, who recognized his eminent qualifications for the trust. A remarkable thing about his election to this office was the unanimous expression of the whole rubber trade as to the fitness of the choice. He discharged the duties of the position to the entire satisfaction of his associates until May, 1893, when the state of his health, as well as other business engagements, compelled him to resign, but he is still officially connected with the company, and is a valued factor in the management of its affairs.

Mr. Evans is a member of the leading clubs of Boston, although far from being a club man. He is fond of yachting and relies upon that and horse and riding for recreation. He was married in 1868 to a daughter of David Hunt, and resides in Boston.

JOHN P. SQUIRE

John P. Squire, who died January 7, 1893, was a son of Peter and Deborah Squire, and was born in the town of Weatherfield, Windsor

county, Vt., on the 8th day of May, 1819. His father was a farmer. The years of his boyhood were spent at his home, attending the public schools and working on the farm.

On the 1st day of May, 1835, he entered the employment of a Mr. Orvis, the village storekeeper, at West Windsor, Vt., and remained with him until the winter of 1837, when he attended the academy at Unity, N. H., of which the Rev. A. A. Miner was then principal. He taught school at Cavendish during a part of the winter of 1837-38. On the 19th of March, 1838, he came to Boston; entered the employ of Nathan Robbins, in Faneuil Hall Market, and continued with him until April 30, 1842, when he formed a co-partnership with Francis Russell, and carried on the provision business at No. 25 Faneuil Hall Market, under the style of Russell & Squire, until the year 1847, when the co-partnership was dissolved.

Mr. Squire continued the business alone at the same place until the year 1855, when he formed a new co-partnership with Hiland Lockwood and Edward Kimball, under the name of John P. Squire & Co. The firm name and business continued until April 30, 1892, when the firm was incorporated under the name of John P. Squire & Company Corporation. The changes in the partners have been as follows: the retirement of Edward D. Kimball in the years 1866; the admission of W. W. Kimball in the same year, and his retirement in 1873; the admission of Mr. Squire's sons, George W. and Frank O. Squire, in the year 1873; the death of Hiland Lockwood in the year 1874; the retirement of George W. Squire in the year 1876; the admission of Fred. F. Squire, Mr. Squire's youngest son, January 1, 1884; and the death of the founder of the house, leaving the corporation to-day composed of Frank O. and Fred. F. Squire. In 1855 Mr. Squire bought a small tract of land in East Cambridge and built a slaughter house. Since that time the business has grown to such an extent that the corporation of John P. Squire & Co. has to-day one of the largest and best equipped packing houses in the country, and stands third in the list of hog packers in the United States.

On October 5, 1891, a fire partially destroyed the large refrigerator of this corporation. This necessitated rebuilding. A system of artificial refrigeration has been adopted in place of the old method of refrigerating with ice, whereby the capacity of their packing house has been increased about double its capacity before the fire. The melting capacity of the ice machines used is one hundred and fifty tons of ice

country. A box of mney two hundred and twenty-five feet high, with a floor ten feet across at the base, and with walls four feet thick, was constructed to run the refrigerating machines. With these alterations and improvements their plant, as far as equipments and conveniences are concerned, is second to none in the country.

In the year 1843 Mr. Squire married Kate Green Orvis, daughter of his old employer. Eleven children were born of the marriage, nine of whom are now living, as follows: George W., Jennie C., Minnie E., John A., Kate I., Nannie K., Fred. E., and Bessie E. Squire. One son, Charles, died in infancy, and a daughter, Nellie G., died October 13, 1890.

In 1848 he moved to West Cambridge, now called Arlington, where he lived up to the time of his death.

Mr. Squire joined the Mercantile Library Association when he first came to Boston, and spent a great deal of his leisure time in reading, of which he was very fond. The high position which he held in commercial circles was due to his untiring industry, undaunted courage and marked ability.

ORLANDO E. LEWIS.

ORLANDO ETHELBERG LEWIS was born in Hardin county, O., July 19, 1846. His parents, Richard Kennedy and Elizabeth (Jackson) Lewis, were natives of Ohio. His father, who died in 1848, was a farmer, and the usual experience of the average farmer's son in Western Ohio fell to the lot of our subject during his youth, his education until his fourteenth year being confined to the ordinary country school. The war of the Rebellion changed the tenor of his life, although he was but a youth of fourteen when it began. Being large for his age, robust and strong, he enlisted in Company D, Fourth Regiment of Ohio Volunteer Infantry, on June 1, 1861, more than a month before he had attained his nineteenth birthday, being the youngest member of the regiment. Few, if any, during the war entered the service on the Union side so young in years. He participated with his regiment in all of the engagements from the battle of Rich Mountain—the most important contest of the war prior to Bull's Run—until, disabled for service, he was discharged from Harewood Hospital on March 9, 1863.



O. E. Lewis

During nearly three years he was in active service, his regiment during this period forming a part of the Army of the Potomac, and being almost constantly engaged in the vigorous campaign in Western Virginia and later in McClellan's Peninsular campaign. At Rich Mountain, Petersburg, Mechanicsburg Gap, Romney, Winchester, Cedar Creek, Harrison's Landing and Fredericksburg our youthful soldier faced the stern realities of war, performing his part in this memorable period of the nation's life with fidelity and courage equal to that displayed by his older comrades.

After his discharge from the service Mr. Lewis resumed his education, which had been interrupted at the time he entered military life. For a time he attended school at Canton, O., later at Alleghany College at Meadville, Penn., and finally completed a course of three months at a commercial school in Cleveland, O. At the age of twenty he began his business career as a commercial traveler for the boot and shoe house of King, Crawford & Co., of Cleveland, O., continuing as such for about a year, when he accepted a similar position with the shoe house of Mead & Townsend, of Broadway, New York. After a successful experience of two years with this firm, he bought out a retail boot and shoe store in Urbana, O., and for several years did a successful retail business, in the mean time, however, also embarking in the manufacture of boots and shoes for the wholesale trade. Mr. Lewis was married in 1869 to Miss Eliza M. Seymour, of Hardin county, O. They have one child, a daughter, named Milie. In 1882 he sold out his business in Urbana and located in Columbus, O., where he engaged exclusively in the manufacture of shoes. A year or two later, in connection with Prof. S. W. Robinson of the Ohio State University, he developed the wire grip fastening machine. In 1885 a company was organized, under the laws of Illinois, at Chicago, for the manufacture of these machines, with C. M. Henderson as president, and Mr. Lewis as general manager. At this time Mr. Lewis gave up shoe manufacturing and moved to Boston, where he has since remained, devoting his time and energies to the sale and development of shoe machinery. Through the modifications and improvements of their original patent it has developed into what is known as the "wire grip slugger," of which there are now over one thousand in use in the United States and Europe. It is considered one of the most practical and valuable inventions which has been brought forth in the wonderful results attained in shoe machinery during recent years, and is practically without a rival. In the

more time. Mr. Lewis and Prof. Robinson developed the automatic "foot" (1890-1900), which has proven a great success as a sole fastener. The records, time and sale of these two valuable patents have not, however, completely engrossed Mr. Lewis's time and attention. He is president of the Shoe Lasting Machine Company of New York, which owns and controls in all foreign countries the Chase Lasting Machine — a lasting machine in its line. He is also interested in several other machines well known and generally used in the shoe industry.

Mr. Lewis has borne an important and well recognized part in the present advanced condition of the boot and shoe industry caused by mechanical appliances. He is a man of great inventive ingenuity, of excellent business qualifications, and both from a personal standpoint as well as in results beneficial to the interests with which he is so largely identified, has been highly successful. He is a member of the Park Street Church, the Art Club, Congregational Club and Apollo Club of Boston; the Aphelion Club of Winthrop, and the John A. Andrew Post 15, G. A. R.

Mr. Lewis resides at Winthrop, where he is chairman of the Board of Selectmen, and has taken an active part in public affairs and the material progress of the town. He is a Republican in politics, but always a strong adherent of his party's principles and policies, has been too closely devoted to his large and constantly increasing business connections to take part in political life.

M. M. CUNIFF.

MICHAEL MATTHEW CUNIFF, son of Michael and Ellen (Kennedy) Cunniff, was born in Boscommon, Ireland, in 1850, his parents coming to Boston when he was three months old. His elementary education was obtained in the Boston public schools, supplemented by a course of commercial training in the Bryant & Stratton Commercial College, Boston. His business career was commenced in Boston in the wine and spirit trade with his brother Bernard. He subsequently retired from that line to enter a general banking and brokerage business, principally in the handling of gas securities and real estate. He has associations connected with the West End Street Railway, the Charles River Transportation Company, and other land and railroad improve-

ments in Boston and vicinity. For many years he has been an active force in State and city political affairs. He was chairman of the Democratic City Committee for two years, chairman of the executive branch of the Democratic State Committee two years, and has been a member of the State Committee for fifteen years. He was a member of the executive council of Governor Ames in 1888, and was renominated, but declined the honor for 1889. He is a director in the Mechanics' National Bank of Boston, having taken a prominent part in its reorganization; also a trustee in the Union Institution for Savings, Boston; a director in the Bay State Gas Company; is one of the foremost capitalists in the organization of the Boston Gas Syndicate, and is largely interested in the gas business. He is also a member of several local yacht clubs, always having taken a lively interest in yachting matters; is a prominent member of the Suffolk Club, and of the Charitable Irish Society of Boston. He was chief ranger in the Independent Order of Foresters and is a member of the Protective Order of Elks, and an honorary member of the Kearsarge Veterans.

Mr. Cunniff possesses excellent business qualifications and has been highly successful in all of his undertakings. He is an ardent Democrat and has been earnest in his support of the principles and candidates of his party. Naturally a leader and organizer, his services are eagerly sought, and the victories of his party in city and State owe much to his skillful generalship. Loyalty to his friends is one of the cardinal traits of his character and the secret of his popularity. Mr. Cunniff was married in Boston, June 30, 1890, to Miss Josephine McLaughlin, daughter of the late Francis McLaughlin, one of Boston's leading merchants and manufacturers. Two children, Michael M., jr., and Josephine, have been born to them.

JOHN C. SPOFFORD.

JOHN C. SPOFFORD, one of the leading architects of Boston, was born in the town of Webster, Me., November 25, 1854, where his early life was spent on a farm. His father was Phineas M. Spofford, a ship carpenter and farmer of more than local repute. The first rudiments of the carpenter and mason trade, which have been of such incalculable service to him in his extensive building operations since, were obtained

born in 1812, at Canton, Spofford, who still resides in Webster. On the paternal side he is descended from John and Elizabeth (Scott) Spofford, who came from Yorkshire, England, and in 1638 settled at what is now Georgetown, Mass. On the maternal side he is also connected with the Wentworth family, being a lineal descendant of John Wentworth, who held by Queen Anne's appointment the lieutenant-governorship of the Province of New Hampshire from 1717 to 1730. Captain John Wentworth, the grandson of Governor Wentworth, and great-great-great grandfather of our subject, fought on the "Plains of Abraham" at the battle of Quebec and was one of those brave men who helped to carry the gallant Wolfe to the rock, beside which he died. Foster Wentworth, the son of Captain Wentworth, entered the Revolutionary Army at the age of seventeen as waiter for his father. He died at the advanced age of ninety-nine years, and is distinctly remembered by Mr. Spofford, who was seven years old at the time of his death.

Young Spofford early evinced a taste for the calling in which he is now so successfully engaged. While attending the district school he practiced drawing and attained to quite a degree of proficiency even at this early age. He supplemented the district school with several terms at Monmouth Academy and the Maine Wesleyan Seminary at Kent's Hill. While prosecuting his studies at these institutions he taught in district schools for several terms, and with such acceptance that he was chosen a member of the School Committee in his native town, where he did valuable service in the cause of education. Later on in 1876-7 he served as principal of Smith's Business College in Lewiston, Me.

Having early evinced a liking for architecture, Mr. Spofford in 1879 determined to adopt it as a profession. With this end in view he in the year named entered the office of H. J. Preston, a well known Boston architect, where he began in earnest the practical study of architecture. In February, 1881, he engaged as a draughtsman with Messrs. Sturgis and Brigham, then one of Boston's leading firms of architects. Under his engagement with this firm he had charge of many important public and private buildings. Among the number may be mentioned the Executive Residence of H. H. Rogers, of the Standard Oil Company of New York city, and the Massachusetts Hospital Life Insurance Company's building, State street, Boston. In 1887 he entered into copartnership with Walter M. Bacon, under the firm name of Spofford & Bacon, but this partnership only extended one year, when Mr. Spofford

united with Charles Brigham, his former employer, and formed the firm of Brigham & Spofford. While this copartnership continued, Mr. Spofford obtained many large and valuable contracts for the firm, among them being the alteration and enlargement of the Capitol buildings of Maine and Massachusetts. The contest for the former work was a most bitter one. A large number of architects were banded together to defeat the enterprising young man who proposed to rebuild the Capitol in his native State, but he showed the committee such a comprehensive, simple and practical plan for the work in hand, at such a low figure, that they decided in spite of outside pressure to award him the contract. He is entitled to no little credit for the part he bore in this memorable struggle and for the victory he won against great odds. The conflict for the Maine State House only sharpened his zeal to win the contract on the Massachusetts Capitol. Here he met the same opposition, but was armed with an unanswerable argument in the shape of the most complete set of plans and specifications for the work shown to the legislative committee, and after long and deliberate consideration his firm again bore off the banner.

Of other important work, of which Mr. Spofford had charge during his partnership with Mr. Brigham, might be mentioned the Lewiston City Hall, one of the most beautiful buildings of its kind in New England; the Memorial Hall of Belfast, Me.; the beautiful Presbyterian Church at Roxbury, Mass.; the Asylum for Inebriates and Dipsomaniacs at Foxboro, Mass.; and the magnificent residence of J. Manchester Haynes (which was recently burned), of Augusta, Me.

In February, 1892, Mr. Spofford severed his connection with Mr. Brigham, and the work of completing the building of the Massachusetts State House devolved upon his partner, who now has full charge of the work.

Early in the year 1892 Mr. Spofford's health failed him, and in company with his physician, Dr. A. Sanford, he took a trip to Europe. While abroad he made the best use of his time, in not only repairing his health, but in glancing over the finest architectural structures in London, Paris, Liverpool, and other cities which he visited at his leisure. Returning to his old home in Boston after five months' absence, he opened an elegant suite of offices in the John Hancock building, and commenced business on his own account. He has now in operation the plans for several large buildings. His plans and specifications for the Bangor City Hall were accepted by the city government, and the

building will be erected under his supervision. He has also in hand at present the erection of a Methodist Church at Everett; alterations of a town hall at Tyngsboro; a beautiful residence at Arlington, besides several minor residences. Mr. Spofford takes great interest in social and fraternal organizations. He is a Mason and Odd Fellow, and has been grand protector of Massachusetts in the Knights and Ladies of Honor, not to speak of the dozens of minor fraternal associations he is a member of, many of which have honored him with the highest offices in their gift. In 1888 he was elected president of the "Spofford Family Association." At the time he was chosen to this position seven hundred of the members of the Spofford family from all parts of the country assembled to commemorate the two hundred and fiftieth anniversary of the arrival from Yorkshire, England, in this country of John Spofford and Elizabeth Scott. He is also a member of the Massachusetts Historical Genealogical Association, and has served for four years as a member of the School Board of Everett.

Mr. Spofford was married, July 7, 1881, to Miss Ella M. Fuller, of Furner, Me., an accomplished and charming lady. Their whole married life has been spent in the town of Everett, where they have a beautiful home. They have one daughter, Mabel Fuller Spofford, now nine years of age.

A staunch Republican in political faith, Mr. Spofford has been a conspicuous figure in Everett politics ever since his residence there; is a member of Young Men's Republican Club of that city; of the Republican Club of Massachusetts, and has been chairman of the Republican Town Committee of Everett. He is a firm friend and a zealous advocate of any cause he espouses, and socially is popular and highly esteemed. Mr. Spofford belongs to a long lived race, and can look back upon a childhood spent in a home where have dwelt five generations of his own kin. He possesses extraordinary powers of physical endurance, and to day, hardly in the prime of his usefulness, he has attained to a position of well deserved prominence, which gives promise of brilliant achievements in the future.

GEORGE A. LITCHFIELD

GEORGE A. LITCHFIELD was born in Scituate, Mass. His early manifested a passion for books, and with an unconquerable desire for a liberal



John C. Spofford

education fitted for college by studying while at work upon a shoemaker's bench. He studied at Brown University, after which he entered the ministry. His health breaking down after a settlement of five years in Winchendon, Mass., he was obliged to discontinue a professional life, and entered upon a business career, which has always been successful.

For several years he had a large life insurance business in the western part of the State, but sold to engage in other enterprises. In 1872 he purchased one-half interest in the well-known firm of Brigham, Whitman & Co., tack manufacturers of Whitman, Mass., and the firm name became Brigham, Litchfield & Vining. For seven years they did a large and successful business. At the expiration of this time they sold the entire plant, making one of the largest sales ever occurring in that town.

Mr. Litchfield then became the active promoter of the Massachusetts Benefit Association, which has since, under his management, grown to be the largest Natural Premium Life Company in New England, and one of the largest and most successful in our entire country.

Mr. Litchfield is widely and favorably known in insurance circles, and great credit is due him for his conservative and energetic policy in the management of his company, which has brought it to its present prosperous and commanding position.

His untiring and whole-hearted attention to business has not, however, prevented him from always manifesting a deep interest in all the public affairs that have a claim upon the time and effort of every true citizen. He was for twelve years a member of the School Committee in Winchendon, and also for some time in Whitman, and was prominent in the management of town affairs.

In politics Mr. Litchfield has always been a staunch Republican, until recently being the president of the Republican Club in Quincy, in which city he has resided for thirteen years.

But it is not alone Mr. Litchfield's ability that has brought him an enviable reputation. He has other qualities which are equally deserving of mention, and these are his never-failing kindness and courtesy of manner—shown impartially to all with whom he has dealings—and, best of all, his incorruptible integrity, which scorns a mean act, and will triumph by fair means, or not at all. The crying need of our age is more men of the stamp of Mr. Litchfield.

ADAM WARNOCK.

ADAM WARNOCK, supreme secretary of the American Legion of Honor, was born in New York city, December 19, 1846, where he received his education and business training.

Early in life he became connected with fraternal organizations and has occupied prominent positions in every society with which he has been identified. He joined the American Legion of Honor in Brooklyn, and at the organization of the Grand Council of New York he was elected supreme representative, being chosen supreme secretary in 1882, which position he has occupied up to the present time. During his occupancy of the office the society has erected a magnificent building for its headquarters at No. 200 Huntington avenue, Boston; has rapidly increased its membership, and has accumulated a reserve fund of \$500,000 with which to guarantee its certificates, and stands to-day one of the strongest organizations of its kind in the country. It is principally due to Mr. Warnock's keen business insight, and his careful study of life insurance, that has placed the American Legion of Honor in the advanced financial position it now occupies.

He has held many positions of trust in other societies, having been for a number of years representative from the State of New York to the Supreme Lodge Knights of Honor, president of the Knights of Honor Veteran Association, president of the National Fraternal Congress, and grand secretary of the Royal Arcanum, State of New York. He was long a member of Atlas Lodge, F. & A. M., of New York city, and is now a member of Columbia Lodge of Boston. He is also a member of Corinthian Royal Arch Chapter and Ivanhoe Commandery, Knights Templar. He is connected with the Odd Fellows, Knights of Pythias and several similar societies. His activity in the many societies with which he is connected has made the name of Adam Warnock familiar to thousands throughout the length and breadth of the land, and he is one of the best known and best informed men associated with the business of life insurance. A natural force, strength of character and will power are among his conspicuous characteristics, and he is an admirable business manager.

Mr. Warnock is a member of the Union Boat Club and Boston Athletic Association, and takes a keen delight in the better class of athletic sports, being himself a good amateur tennis player and oarsman. Personally he is one of the gentlemen, with whom it is a pleasure to be ac-



Adam Warnock.

quainted, and one has to meet him face to face and feel the charm of his genial and unaffected manners to understand the hold he has upon the hearts of his companions in the various organizations with which he is connected.

Since his election as supreme secretary of the American Legion of Honor he has resided in Massachusetts, in a pleasant home at Cambridge, where his fireside is graced by his esteemed wife and a happy family of three sons and two daughters.

WARREN W. RAWSON.

WARREN W. RAWSON, son of Warren Rawson, was born in West Cambridge (now Arlington), January 23, 1847. He was educated in the public schools of his native town, also at the Cotting Academy, and at a commercial college in Boston. At the age of seventeen he began work with his father, who was a leading market gardener. He enthusiastically entered upon the work, studied the science of the business in all of its aspects, and successfully mastered every detail. At the age of twenty-one he purchased one-half of his father's farm, and three years later the remainder, since which he has also become the owner of a place on the corner of Medford and Warren streets, purchased about ten years ago of W. H. Whittemore, where his residence and hot-houses are established. The intelligence with which his business has been prosecuted, united with energy and well directed persistence, has met with a high degree of success. He was the first to build hot-houses to any extent in his town, and the first to put in an irrigating plant for outside purposes. He was also the first to use steam in heating green-houses, and to use electric light in bringing forward plants. He found that this light hastened the growth of plants fifteen per cent., particularly in the winter season. His place embraces one hundred acres, where are employed sixty-five men and twenty-five horses. Three thousand cords of manure are used each year besides large quantities of fertilizers. He is the most extensive market gardener in this part of the country, and the leading producer of celery. Large quantities of seeds are raised by Mr. Rawson, and he has been instrumental in introducing many new kinds of vegetable seeds, which are sold by him not only in this country but Europe. As a seedman he is especially

and labor, and was vice-president of the National Seedsmen Convention which met in Chicago in 1893. He also has a large seed store at No. 31 South Market street, Boston. Outside of his private business, which he has so successfully managed, he has occupied many prominent positions. He is president of the Middlesex Agricultural Society of Concord; president of the Market Gardeners' Association of Boston; member of the State Board of Agriculture, and one of the Executive Committee of that board, member of the Board of Control of the Massachusetts Experiment Station at Amherst; president of the Brackett Club, which was instrumental in electing J. Q. A. Brackett governor in 1889; chairman of the Republican Town Committee, and a member of the School Committee, now serving his third term of three years each. He is a well known lecturer on agriculture; is the author of a work entitled: "Success in Market Gardening," and also a work on celery culture. In the spring of 1890 he was appointed by the governor chairman of the Gypsy Moth Commission. On February 20, 1868, Mr. Rawson was married to Helen M. Mair. Two children were born to them, only one of whom (Mabel) survives. His wife died May 4, 1872. He married his present wife, Sarah E. Mair, September 21, 1871. They have had three children, of whom two are living, Alice and Herbert Rawson.

NAHUM CHAPIN.

NAHUM CHAPIN, son of Harvey and Matte (Rossa) Chapin, was born at Jamaica, Windham county, Vt., July 16, 1820. His early education was received in the public schools of Waltham, where his parents resided and settled in 1824. Subsequently he for four years attended Smith's Academy at Waltham. After graduating he became a machinist apprentice with the Boston Manufacturing Company at Waltham, where he was made overseer four years later, which position he held for three years.

In 1840 he entered into the provision business in Charlestown, in which he remained for twenty years. In 1860, under the firm name of Rawson & Chapin, he engaged in the distilling business, and in 1877 the firm of Chapin, Trail & Co. was formed, and still continues in successful operation, with works in Charlestown and headquarters in Boston.



A. W. Rawson

During the years 1877 and '78 Mr. Chapin represented Ward Five in the State Legislature, and was on the Board of Assessors in Charlestown and Boston from 1867 to 1879, and was one of the commissioners to carry into effect the act of annexation of Charlestown to Boston.

Mr. Chapin is a veteran and pioneer in educational circles, having for twenty-one years been in active service upon the school boards in Boston and Charlestown. His wide experience and practical knowledge have proved him a valuable member of this important interest of the city, and his conscientious work has earned for him the title of the "fighting member." He was influential in changing the system of furnishing materials for the different school departments, and secured the order creating the Committee on Supplies, which has proved to be of great value financially, and in every way satisfactory. He served in the Common Council of Charlestown from 1856 to 1860, and in the Board of Aldermen in 1861 and 1872.

Mr. Chapin was married at Waltham in 1841 to Lucy, daughter of Zaccheus and Harriet Farwell. They have had four children: George Francis and Lucy E. F., both of whom are married, and John Henry and Nahum Harvey Chapin, both of whom are dead, the latter being married and dying at thirty-nine years of age. Mr. Chapin is one of the trustees of the Warren Institution for Savings, a member of the standing committee of the Universalist Society, a director of the Bunker Hill National Bank, and was a director for many years of the Middlesex Horse Railroad, Boston Consolidated Street Railway, and other corporations, and is one of the most esteemed on the roll of active members of the old City Guards of Charlestown.

GEORGE CURTIS.

GEORGE CURTIS was born in Westminster, Mass., September 3, 1817. His mother was Lydia Gilbert, of Sharon, Mass. His father, Francis Curtis, was a native of Walpole, Mass., and fifth in descent from the ancestor William Curtis, who came from England September 16, 1632. George was educated in the common schools and academy of his native town. At the age of seventeen he left home to learn the carpenter trade with William T. Merrifield, of Worcester, Mass. He remained there until twenty years of age, when he came to Boston and com-

menced working at his trade. He continued (with interval of teaching school) until the age of twenty-eight, when he engaged in business for himself in Roxbury. Several of the large buildings destroyed in the great Boston fire of 1872 were built by him, as were also fine private residences in the towns of Milton, Canton, Stoughton, Waltham, and mills in Malden. He served as alderman for four years before the annexation of Roxbury to Boston; also as overseer of the poor in Roxbury and Boston for nearly a score of years. In 1854, in consequence of an injury received by sunstroke, he left the building business and entered into the lumber trade, wholesale and retail. During the years 1861 and 1862 he was a representative to the General Court of Massachusetts; was connected with several military organizations, and was actively engaged in enlisting soldiers for the war. In the year 1883 he retired from the lumber business, and was succeeded by Curtis & Pope. He served the city of Boston as an alderman in the years 1881, 1883 and 1884, and was again a representative to the General Court in 1885.

THOMAS KELLY.

In the business life of Boston for more than a quarter of a century there were few better known or more deservedly held in esteem for business sagacity of a high order and sterling integrity of character than Thomas Kelly, the subject of this sketch. He was born in Ireland, June 13, 1833, and at the age of eighteen years came to America. Here, without money, without influential friends, and possessing only the advantages of a limited education, he began life in the new world. But he possessed a strong will, robust health, and a determined purpose, which, united to inherited business qualities, eventually won for him a high place among the foremost business men of Boston.

After a business education of some years in various capacities, Mr. Kelly, in 1861, went into business for himself as a member of the firm of Warnock & Kelly, and began the importation of linens. On the death of Mr. Warnock, which occurred shortly after the formation of the firm, Mr. Kelly succeeded to the control of the concern, at which time the firm name of Thomas Kelly & Co. was adopted. The blanket branch of the business was added about this time, and it eventually

became the sole business of the house. So rapid was the growth of the latter business that for several years prior to Mr. Kelly's death his firm stood at the head of that trade in the United States, owning a mill in Lewiston, Me., and controlling the output from mills in California, Ohio, Pennsylvania, Maine and New Hampshire. From modest beginning a business was built up of about \$2,000,000 a year—a wonderful record for a concern dealing in one line of dry goods. Mr. Kelly had partners in business—among them Thomas P. Maguire and James M. Morrison, both able men—but from the beginning he was the moving spirit and the most active member of the concern, whose head he was in every sense of the term. From the start success attended Mr. Kelly in his business career, and although everything was lost in the great fire of 1872, he was not for a moment dismayed, and with energy and well directed efforts soon regained what he had lost.

As a business man Mr. Kelly's career was indeed remarkable. He had the foresight, the keen and discriminating mind and the executive ability to formulate and carry on large enterprises. He readily perceived the possibilities of a business venture, and his judgment invariably led to the right conclusion. He was self-reliant to a wonderful degree, and when he had matured his plans he had the courage to carry them out, regardless of the views of others. Full of resources, he was ready for any emergency. He was neither disconcerted by temporary miscarriage of his plans nor unduly elated over success. Shrewd in making bargains, he was scrupulously careful to live up to every obligation. Fair and just in all of his transactions, he demanded the same treatment from others. Among his business associates Mr. Kelly was deservedly held in high esteem. One of the leading merchants of Boston, in speaking of him to the writer, said: "I was intimately associated with Mr. Kelly for twenty-five years, and considered him one of the ablest business men Boston ever had. Our dealings aggregated many thousands of dollars annually, and I never knew him to deviate one iota from his word. He was a sharp, shrewd business man, but you always knew where to find him, and his word could be implicitly relied upon. I not only learned to respect his judgment in business, but to admire his sterling integrity. All who knew him had the same feeling for the man. As a citizen and an honorable business man he stood high in the community, and his loss will be widely felt."

Personally Mr. Kelly was of a genial nature. He was quick and apt at repartee and was never at loss for a reply to any argument that

could be advanced. As a salesman he was unexcelled. He had that rich sense of humor so common to the Irish character, and keenly relished the society of congenial friends. Upon those, however, who only knew him in a business way, he was apt to leave the impression of being stern, but in social life, where he completely threw off, and apparently for the time forgot, business cares, he was the soul of good nature and good cheer. He was quiet and retiring in disposition and had no inclination even had he the time for public life. He was a member of the Charitable Irish Association and the Catholic Union, and was a ready and cheerful contributor to every worthy and deserving object.

Mr. Kelly's death was particularly sad. Returning home from a visit to the World's Fair at Chicago he was killed in the memorable railroad accident at Chester, Mass., August 31, 1893. The end came in the full tide of his business career and when he had apparently many years in store. In the city of his home the news of his death was received with deep and heartfelt sorrow by hundreds of friends and business associates of many years, while throughout the dry goods world, where his name was so well known, his loss was sincerely regretted.

GEORGE W. GAY, M.D.

GEORGE WASHINGTON GAY was born in Swanzey, N.H., January 14, 1842. His preliminary education was received in the local schools, which was supplemented by a course at the Harvard Medical School, from which he received the degree of M.D. in 1868. Following his graduation he passed a year in the hospital at Rainsford's Island and the same period as house surgeon at the City Hospital. At the end of this period of service he began the active practice of his profession in Boston, in which he has since continued with constantly increasing success, his achievements as a surgeon being especially noteworthy. He is a member of the British Medical Association, of the American Surgical Association, the American Medical Association, the Massachusetts Medical Society, the Boston Society for Medical Improvement, Roxbury Society for Medical Improvement, Boston Society for Medical Observation, and the Suffolk District Medical Society. He is also clinical instructor in surgery at the Harvard Medical School and surgeon to the Boston City Hospital. He has been quite an

extensive contributor to medical literature, having written important papers on croup, hernia, ingrowing toe-nail, tracheotomy, appendicitis, shock, the aspirator, and other topics, which have appeared in various medical journals of the day.

ALBERT WINSLOW NICKERSON.

ALBERT WINSLOW NICKERSON was the son of Joseph and Louisa (Winslow) Nickerson, and was born in Boston, May 21, 1840. He was educated in the public schools in Boston, and became a partner in business with his father. He was fortunate in his investments. After the decease of his father he became prominent as one of the leading managers of the Atchison and Mexican Central system of railroads, also president of the Arlington Mills. He subsequently retired from the active management of property and devoted much of his time to the ornamentation of two large estates which he had acquired, one in Dedham and the other in Marion, Mass. By developing to the utmost the beautiful natural features of the estate in Marion, which comprised about a thousand acres, he rendered it a conspicuous monument to his good taste and artistic judgment. He was a man of great physical and intellectual force and held his opinions on all subjects with great tenacity, expressing them in pure, strong English, and defending them with a vigor which sometimes provoked opposition. But he had warm friends to whom he was attached and for whom he was ready to make and often did make great sacrifices. He died after a short illness, in the full vigor of manhood, May 17, 1893. He was twice married, first to Agnes M. Partridge, and second to Amelia Frances Lindsay.

NATHAN MATTHEWS.

NATHAN MATTHEWS, a prominent capitalist of Boston, was born in Yarmouth, Barnstable county, Mass., September 15, 1814, and is a son of James and Sally (Hallett) Matthews. On both the paternal and maternal side he is a descendant of the earliest settlers of Massachusetts. James Matthews, the first of his father's family in this country, is sup-

posed to have been a son of Edward Matthews, of the Lodge of Tewksbury, Gloucestershire, England, who claimed descent from the Matthews family of Glamorganshire, Wales. He was in Charlestown in 1634, and, probably, removed to Yarmouth in 1639. He settled near the westerly border of Pollen's Pond. He was a man of strong character and greatly trusted by his fellow-citizens, repeatedly serving in local offices. He died in Yarmouth, January 29, 1685.

Nathan Matthews is of the sixth generation removed from this James Matthews, the line of descent being through Benjamin², James³, Isaac⁴, and James⁵. All of these ancestors resided at Yarmouth and were citizens of prominence. His father served for a quarter of a century as selectman of the town. He died December 15, 1856.

The mother of our subject was a descendant of Andrew Hallett, who, in 1637, settled in Plymouth, and afterwards removed to Yarmouth. He was among the earliest of the first comers to Yarmouth, but did not make it a permanent place of residence until 1641.

Although a native of Yarmouth, where his early life was spent, it is his connection with the business life and progress of affairs in Boston that has given Nathan Matthews deserved prominence. He was for some years engaged in the leather business. In 1852 he was elected president and manager of the Winnisimmet Company and has ever since held this office. From 1860 to 1869 he was president of the Boston Water Power Company. He has been particularly successful in real estate speculation, and is one of the large property holders of Boston.

Although for many years removed from his native town, Mr. Matthews has always taken the warmest interest in its welfare. This has been manifested in many ways, and notably so by the erection of a public library building at Yarmouth, which was dedicated on December 20, 1871. Frederick Freeman, the author of the History of Cape Cod, recognized Mr. Matthews's love and interest in the place of his birth by dedicating to him the annals of Barnstable, in which he refers to Mr. Matthews "as the merchant whose sagacity, energy and financial skill give him a high position among his compeers," and "whose unanticipated, nobly disinterested and timely aid," largely made possible the publication of the annals of the shire town of his native county.

Mr. Matthews will always be gratefully remembered by Harvard University, to which institution he gave the princely gift of \$100,000 for the erection of a dormitory, which is known as the Matthews dormitory.

Mr. Matthews was married, September 9, 1851, to Albertine Bunker, daughter of William J. Bunker, of New York city. Six children have been the issue of this union, in order of birth as follows: Nathan, jr., Caroline, Sarah Hallett, Albert, Elizabeth, and William Constant, all of whom are living with the exception of the last named. Nathan Matthews, jr., eldest of the children, is not only a lawyer of high rank, but occupies a prominent place among the foremost leaders of the Democratic party in the State. He is now serving his third term as mayor of Boston.

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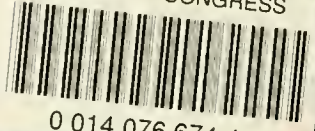
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