yours affectionly
Minnocetus
BIOGRAPHICAL RECORD

OF THE

OFFICERS AND GRADUATES

OF THE

Rensselaer Polytechnic Institute,

1824-1886.

EDITED BY

HENRY B. NASON,
Secretary of the Association of Graduates, 1872—1886.

WITH AN INTRODUCTION

BY

BENJAMIN H. HALL.

TROY, N. Y.:
WILLIAM H. YOUNG.
1887.
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ADDITIONS AND CORRECTIONS.

Page 11, line 18, for $200,000 read $267,000.
" 32, " 38, for man read men.
" 37, " 11, for resided read now resides.
" 41, " 30, add, died in New York city August 10th, 1886.
" 48, " 2, add, Vice-president 1869-72.
" 49, " 10, add, acting president August 10th, 1886, till time of de-

cease, January 10th, 1887.
" 54, " 22, after W. H. Doughty, insert C. E., class of 1858.
" 90, " 17, before Warren insert M.
" 108, " 35, for 1866 read 1868.
" 122, " 27, for instructive read instinctive.
" 128, " 21, for Hamill read Hammell.
" 129, " 24, for companies read compasses.
" 138, " 19, for Hamill read Hammell.
" 146, " 12, after Montreal add, and same degree was conferred by

Harvard College at 200th anniversary, 1886.
" 149, " 20, for Hawaiian read Hawaiian.
" 158, " 14, for three read four.
" 162, " 15, insert, resigned 1886, and elected professor of physics,

Adelbert College, Cleveland, Ohio.
" 202, " 2, for Courtland read Cortland.
" 214, " 15, add, deceased November 28th, 1886.
" 233, " 36, for surveyor read engraver.
" 265, between lines 33 and 34, insert Class of 1847.
" 314, line 30, for Cincinnati, O., read Pittsburgh, Pa.
" 356, " 19, for Mannela read Manuela.
" 420, " 1, for M. read Martin.
" 430, " 7, read C. E., after Graham Macfarlane.
" 511, " 7, for William read Allen.
" 522, " 29, address, Great Barrington, Mass.
" 554, " 37, omit *
" 585, " 18, for Warren read Walter.
This "Biographical Record of the Officers and Graduates of the Rensselaer Polytechnic Institute" was authorized by the Association of Graduates, at their annual meeting in 1873, at which time it was supposed that the work could be finished for the Semi-Centennial Celebration in June, 1874. The gathering of the desired information was immediately commenced, circulars sent to all living graduates and to relatives of the deceased, but during the year less than one hundred answers were received. The interest seemed so small, and the labor so great, that nothing more was done for nearly ten years. In January, 1883, the work was resumed, and circulars again sent out. A few answered promptly, and offered assistance, while others required several circulars and letters before they replied. Postmasters, clergymen, and persons known to be interested in genealogy were addressed; the directories of cities, the records of towns and villages, the catalogues of other institutions, the publications of scientific societies, were searched; and monuments, tablets and headstones examined. Whenever any trace of an individual was found, it was followed until the desired information was obtained, or further effort seemed to be of no avail. Only a very few have been found who were unwilling to furnish information concerning themselves or others, the larger number having manifested great interest by rendering all aid possible.

A serious difficulty arose at the beginning of the work from the fact that all the records of the Institute were destroyed in the great fire of 1862, and the impossibility of completing the list of annual registers. On this account, errors may be found,
and possibly some names have been entirely omitted. Mistakes may also have been made on account of the difficulty in deciphering hastily written records, the peculiar forms of letters and figures, and the copying of thousands of names and a larger number of dates. Corrections of errors in these records and catalogue, and new information, are earnestly desired, and if received will be carefully preserved for future use.

Nearly all the time that could be spared from other duties during the past three years has been devoted to this work. In the compilation of these records, it has been a great pleasure to form the acquaintance of the graduates of the Institute of the first thirty years, and to exchange friendly greetings with those of the last thirty years, with whom it was the privilege of the editor to be associated during their student life.

In giving the various records, the following order has been observed: Name in full, personal history before entering the Institute, date of entrance, professional life and work, books or pamphlets written, honorary degrees received, membership of societies, marriage and number of children, date of death of deceased, present post-office address of the living. If the place of residence at the time of entrance was different from the place of birth, the name is inserted in parenthesis. An effort has been made to make the reports as brief as possible, giving the simple facts without comment.

The catalogue of non-graduates, which follows the biographical records, is of much interest, showing that the Institute has been useful to many who did not complete the course. Some entered only for special work, and others, for various reasons, were obliged to relinquish the course. Many of these, however, have attained to high positions in professional and business pursuits.

In conclusion, thanks are due to all graduates who have so generously given assistance, and especially to Prof. James Hall, class of 1832; to Prof. George H. Cook, class of 1839,
and to J. Francis Williams, class of 1883. Also to Benjamin H. Hall, of Troy, N. Y., for valuable suggestions, and for the introduction, which he has kindly consented to furnish for this volume.

Obligation is acknowledged for facts and some notices from the valuable "History of Rensselaer County," by N. B. Sylvester, from "Contemporary Biography of New York," and from the "History of Troy," by A. J. Weise.

Finally, the editor trusts this book of records will be of interest to all graduates and friends of the Institute; that it may increase and strengthen the ties which bind them to it, and that this pioneer scientific school will ever maintain its present high position, and continue to send out, in all time to come, men fully equipped for the great work of life, thus realizing the brightest hopes of its founder and patron, and of all those who have so faithfully labored to strengthen its foundations and increase its usefulness.

RENSSELAER POLYTECHNIC INSTITUTE,
January 1st, 1887.
HENRY B. NASON.
SUMMARY.

Whole number of Trustees, 1824 to 1887............................ 116
   Elected .............................................. 92
   Ex officio ........................................... 24
Number January, 1887........................................ 24
Whole number of Faculty and Instructors.......................... 112
   Professors and Assistant Professors ......................... 44
   Instructors and Assistants .............................. 68
   Professors, January, 1887................................ 10
   Instructors and Assistants, January, 1887................... 7
Whole number of Students, 1824 to 1887........................... 2,502
   Number of Graduates ..................................... 900
   Number of Graduates deceased .............................. 154
   Number of Non-Graduates .................................. 1,602
   Graduates from the United States ......................... 838
      foreign countries ................................. 62

The graduates of the Institute have engaged in the following professions and occupations:

Civil Engineers .............................................. 346
Mining Engineers ............................................. 36
Mechanical Engineers ......................................... 11
Manufacturers ............................................... 58
Iron or Steel Manufacturers ................................. 24
Merchants ................................................... 71
Professors or Instructors .................................... 42
Physicians ................................................... 25
Lawyers ...................................................... 17
Agriculturists or Planters ................................... 19
Bankers or Capitalists ....................................... 14
Chemists ..................................................... 12
Architects ................................................... 7
Geologists ................................................... 4
Clergymen .................................................... 6
Editors ....................................................... 3
Publishers ................................................... 3
Not classified ................................................ 202
INTRODUCTION.

The place which a work like this volume occupies in the world of letters has long since ceased to be anomalous. The characteristics of such a record, though mainly those which appertain to a collection of data made on certain lines of research, are thoroughly biographical, and to some extent historical. The folios of Anthony Wood, the historiographer of the University of Oxford, are repositories of valuable information, and have served to arouse in others that spirit which tends to preserve, for the benefit of mankind, an account of those whose lives have been examples worthy of imitation, or to be avoided. Early in the history of this country was preserved the record of the lives of the civil and ecclesiastical founders of some of our commonwealths, as it appears on the pages of Cotton Mather's Magnalia Christi Americana. Painstaking fidelity in research and a conscientious regard for the preservation of memoranda of those who have been connected with our academical institutions, are evidenced, in these later years, in volumes whose value is deservedly acknowledged. Of such works no better examples can be mentioned than Sibley's Biographical Sketches of Graduates of Harvard University, Palmer's Necrology of Alumni of Harvard College, Williams Biographical Annals, by Durfee, and the Biographical Record of the Alumni of Amherst College, by Montague and others. To this list the present volume is now added.

The writer of these lives of those who have taught and been taught in, and who have had the direction and management of the affairs of the Rensselaer Polytechnic Institute, as he reviews the pages he has-prepared, can alone estimate the time and labor he has expended upon them. It may seem to many a small matter to have written this volume. Such persons, however, if they give the subject any thought, must view the volume as a whole, but do not appreciate the number and
character of the details of which it is formed. It is comparatively an easy task to write the life of one whose deeds have became the common property of his fellows; but when attention is drawn to the lives of obscurer yet worthy men, the task becomes more difficult. Often a dispute arises as to a date, and the settlement of this point may involve an examination stretching out into months and resulting in a voluminous correspondence. Then, as frequently happens, there are some who are sensitive in regard to the publication of the facts of their lives. If the biographer presents a sketch of the career of such persons he offends them, and if he fails to make such a presentation, he is pronounced by his readers as incompetent for the task he has undertaken.

In perusing these pages it must be remembered that they cover a record of sixty-two years, and that the materials of which they are composed have been gathered, mainly, by the efforts of one man. Every living graduate who could be reached has been asked to contribute the main facts of his life, and information has been sought respecting those graduates who are dead, from surviving relatives or friends. Errors, doubtless, will be found in the volume, but it is believed that most of them are immaterial, or are such as will be readily detected and corrected by the careful reader. The praise due Dr. Nason for the service he has rendered the Institute, in this publication, has been earned by most earnest and devoted labor. His investigations have been carried on while engaged in performing the routine duties pertaining to his position as professor of chemistry in the Institute, and while attending to the multifarious calls made upon him as a scientist. He has received assistance, varying in value, from friends who have appreciated the difficulties of the task in which he has been engaged, but the labor of compiling, arranging and completing the items of information he has gathered from many sources has fallen on him alone.

The members of a school of learning bear to each other, in certain ways, a relation similar to that which exists between the members of a family. When one member of an honored school of learning endeavors, as in the case now presented, to collect and arrange and publish an account of the lives and acts of his fellows, the result of his undertaking should be received with that appreciation which follows when one member
of some distinguished family records, in lasting and truthful words, the history of his kindred. With feelings of this nature, every true son of the "Rensselaer," and every one connected with her management and teaching, will peruse this volume, while those of us who are only the well-wishers and favorers of this renowned mother of scientific learning, will unite with them in congratulations that the story of their lives, and of the lives of their brethren who have finished their course on earth, has been so well and so carefully told in these pages.

There may be some who are not acquainted with the character of the teaching that obtained at the "Rensselaer School" at its inception. To such, a few words on this subject may be both interesting and suggestive. In point of time of organization, the Institute occupies the first place among the scientific seminaries of this country, and it is second to none in the results it has accomplished in its special lines of investigation, when these results are measured by the work which has been done by its graduates. To those who, as teachers, at different times, during the last sixty-two years, have labored to impart instruction in the various departments committed to their trust, are due praise and honor for the good work they accomplished. To one man of them all, however, must be accorded praise and honor the greatest. Amos Eaton stands out as the prominent, central figure from whom emanated the strong, positive and practical character which has entered into the work of this pioneer school. Personally, he was the embodiment of rugged manliness, and physically the repository of great strength and endurance. Practical results were the aim of his investigations, of his studies, of his teachings. He desired to benefit his race. He sought to make easier the condition of the farmer, of the mechanic, and of those whose work is to struggle with the brute forces and products of nature.

The benefits he was eager to bestow were not those of the mere visionary or enthusiast, who looks, with seemingly prophetic eye, to a far off future of alleviation. The relief he desired to give was to be immediate, effective, tangible. This underlying principle of his whole career as a teacher, found expression in his first published work, a little treatise entitled "Art without Science," which appeared in the year 1800. In this composition, and to a great extent in the forty-four or more
works from his pen that followed it, truth was investigated pri-
marily in the realm of art for the sake of production, and only
incidentally in the realm of science for the sake of knowledge.
When, in the year 1810, Eaton formed, at Catskill, in this state,
what the learned Dr. Hosack called "the Botanical Institution,"
he prepared, for the use of his pupils, a small elementary com-
pilation on botany. Referring, many years after, to this occa-
sion, he said: "I made then the first attempt in this country at
a popular course of lectures, with a view to make practical bot-
anists of young persons of all conditions and pursuits."

The first edition of Eaton's "Index to the Geology of the
Northern States" appeared in the year 1818. This was an elu-
cidation of the geology of portions of the states of New York,
Massachusetts, Connecticut and Vermont, and "was the first
attempt at a general arrangement of geological strata in North
America." In collecting data for this work he travelled more
than a thousand miles on foot. The frankness with which he
stated his positions and the personal character of his observa-
tions, as presented in this work, aroused the attention of the
public and won the praise of learned men. His methods of in-
vestigation were approved, and one reviewer of his statements
declared, that "by such accurate observations and zealous exer-
tions, the science of practical geology can be successfully culti-
vated, and can attain all the certainty of which it is capable."
When, two years later, Eaton published the second edition of
the "Index," he stated that his journeys on foot, while in search
of geological facts, exceeded, at that time, two thousand miles,
leaving out of the account his excursions in the vicinity of Troy
and Albany and more than a thousand miles of "carriage and
water travelling." In the preface of the second edition he
alluded with great respect, and by name, to the American geolo-
gists who, at that time, had made large collections of minerals,
or had taught the science of geology with success. Of himself
he wrote, in these words of modest import: "But the drudgery
of climbing cliffs and descending into fissures and caverns, and of
traversing, in all directions, over most rugged mountainous dis-
tricts, to ascertain the distinctive characters, numbers and order
of our strata, has devolved on me. I make no pretensions to
any peculiar qualifications, other than that bodily health and
constitutional fitness for labor and fatigue, which such an employment requires.”

These facts in the life of Eaton, manifested at periods antedating the formation of the Institute, showing, as they do, his character as a student of the mysteries of nature and as a teacher of what he had learned of her secrets, are interesting, not only as evidence of his capacity for the position he was to be called on by Stephen Van Rensselaer to assume, but also of the practical ideas which Mr. Van Rensselaer desired to have taught, inasmuch as he was thoroughly conversant with the modes of thought and action which were Eaton’s peculiar possession.

When Eaton published the second edition of his “Index,” he was forty-four years old. The practical spirit within him was a part of himself. If it was not born in him, it had become his second nature, and when, in 1825, he took charge of the “Rensselaer School” as senior professor, he did so fully imbued with the conviction that his duty was to make practical men of those entrusted to his tutelage and teaching. This conviction remained with him as the guide of his life’s work, and with it he imbued not only his pupils but those associated with him in teaching. The example thus presented, punctuated as it was by the strong, native, intellectual power which inhered in Eaton, permeated and became a forming force in the Institute. The senior professors and directors who have followed him as the heads of the Institute in instruction, have ever sought for practical results in their administration of affairs. Such were the aims of Cook, B. F. Greene, Beman, Drowne and Adams, and such for the last eight years has been, and is now, the object to the attainment of which have been devoted the energy and ability of the present head of instruction, Director D. M. Greene.

The interest which the citizens of Troy have always taken in the success of the Institute ought not to pass unnoticed. Often in its history when, owing to some unforeseen circumstance, the means for the successful prosecution of its work have been curtailed, voluntary subscriptions varying in amount, but in the aggregate sufficient, have borne testimony to the devotion of those within whose borders this school of science had its birth. It may seem invidious where many have done so much, to single out individual instances of well-doing, but a reference to some
of the instances in which benefactions have been made to the Institute, may serve to direct attention to certain ones of its needs, for the supply of which intermittent provision is, at present, its only reliance.

On September 24th, 1875, as Williams Proudfit, of Troy, a member of the class which graduated in 1877, was driving on Second street in that city, his horse became frightened and unmanageable, and he was thrown from his wagon. Striking the pavement with great force he received internal injuries, from the effects of which he died on the following day. He was born on November 30th, 1856, was an only son, and his young life ended just as it had begun to develop those characteristics which betoken a manly nature and are prophetic of a useful career. On November 6th, 1875, his parents, Ebenezer Proudfit and Margaret E. Proudfit, in a letter dated at Troy, addressed to the trustees of the Institute, proposed to erect, at their own expense, a suitable structure for an astronomical observatory, on land to be provided by the Institute, in memory of their son and to be called after his name. The proposition was received with favor by the trustees, and in their letter of November 10th, 1875, they notified to the generous donors their acceptance of the gift as "not only a valuable contribution to science and learning, but also an appropriate memorial to their lamented son."

The rearing of this structure was commenced soon after, and the Williams Proudfit Observatory has, for a number of years, been one of the most prominent of the Institute buildings. Though admirably located and firmly founded architecturally, it has not yet received that equipment which is needed to bring into practice its work as a means of education. Is it too much to hope, that the time is not far distant, when, by the aid of appropriate instruments within these well-constructed walls, a clearer view shall be had of those worlds revolving in space, whose mysteries and glories, we believe, are now fully revealed to the purified vision of him in whose memory this Observatory crowns the adjacent hills?

By the will of Lewis L. Southwick, which was admitted to probate June 4th, 1878, the Institute received the sum of two thousand dollars for the general purposes of the corporation. Mr. Southwick was born in Troy, August 19th, 1819, and died
in that city March 5th, 1878. He was a member of the Institute in 1834.

Henry P. Filer was born in Troy, on October 13th, 1805, and was the son of Zephaniah Filer, who was a resident of Troy as early as 1795, and was the first librarian of the old Troy Library at its inception in the year 1800. The education of young Filer was such only as was obtainable previous to the introduction of our public system of teaching, and probably ended when he was fifteen or sixteen years old. Soon after, he began to learn the trade of a silversmith, with James Young, in Troy. He subsequently engaged in the tailoring business with his father, and later on with a brother. In this latter occupation he continued until 1846, when he was made Librarian of the Troy Young Men's Association, and served with great faithfulness, in that capacity, until 1864. He then became the clerk of the Troy Cemetery Association, and for several years administered that department of its affairs committed to his care with marked fidelity and correctness. His eyesight having become much weakened, he retired from business, and in May, 1876, removed to Cambridge, in this state, where he passed the remainder of his days, and where he died on May 11th, 1884.

At Christmas in the year 1882, by a paper which he styled an agreement, and which bore date at that day, he gave to the Institute ten thousand dollars in money, on condition that that corporation should pay to him quarterly, during his natural life, the sum of one hundred and fifty dollars. This gift was accepted on the terms proposed, the acceptance being in the form of an instrument in writing, dated also at Christmas. At a meeting of the trustees of the Institute, held March 27th, 1883, they, in appropriate memoranda, which were made a part of their records and were also addressed to Mr. Filer, manifested their appreciation of his generous act, and declared their "desire to enter upon their minutes and to express to Mr. Filer their deep sense of thankfulness and obligation to him for this great aid to the Institute, and to the cause of science and learning as cultivated in this school, and also to express the hope that his honorable and useful life may be prolonged in health and happiness, to reap the reward of good deeds done to his fellow-men."

The life of Mr. Filer was not passed amid the glare and splen-
INTRODUCTION.

dor of the world, nor was it surrounded with the pomp and circumstance which pertain to men high in official or affluent station. On the contrary, quietly and unobtrusively, but faithfully and diligently, he performed whatever work he was called on to do, and dignified by conscientious service every position he filled. At the same time, his habits of observation were ever wakeful, and careful and long-continued attention to the facts and events connected with the educational interests of the city, ended in the formation of a judgment, consequent upon which came the gift, the full benefit of which the Institute will always enjoy. In his honor let it be remembered that, as he neared the end of a toilsome, modest, honest, honorable life, he devoted a large share of the accumulations which were the result of years of self-denial, rectitude, diligence, and temperance in all things, to the education of young men and to the development of scientific knowledge.

The William Howard Hart professorship of rational and technical mechanics is the only fully endowed professorship of the Institute. William Howard Hart, the eldest son of Richard P. Hart, who was one of the original trustees of the Institute, was born in Troy on November 7th, 1820, and received his youthful education in that city, in Danbury, Conn., in the city of New York and at the village of Chambly in Canada. He passed several years in foreign travel and in journeys through the middle and western states of this country, and in the year 1844, soon after the death of his father, commenced his career in connection with business enterprises, and as the chief adviser concerning the large estates whose management gradually came, in great measure, to be confided to his care and judgment. Although following no special profession, his life was, in every sense, a busy one. His tastes in study were essentially philosophical, but as his early education had not been formed on any particular plan, and had been desultory rather than defined, and owing, in part, to the uncertain condition of his health, did not include a collegiate or scientific training, he found himself, later on in life, not only an inquirer in the realms of scientific and academic knowledge, but also a student of the technical nomenclature of the departments of learning with which he desired to become familiar. He delighted to follow the lucubrations of Huxley, and regarded Haeckel and Charles Robert Darwin as
among the foremost of the original scientific investigators and thinkers of the world.

His residence, during nearly the whole of the last twenty-five years of his life, was in the country. Opportunities were thus afforded for open air exercise, and for a long time his health improved as the result of the recreation and employment which he found in the development of the grounds which surrounded his beautiful dwelling. He was acquainted with the name and habit of every plant and shrub and tree that grew on his place, either normally or as an exotic. The birds and insects also came under his inspection, and his examination of the nature and acts of the latter opened for him a field of investigation limitless in extent and suggestiveness. He was familiar with the use of the microscope, and was specially interested in the results developed by its manifestations in the studies which he pursued by its aid. Historical topics afforded him much pleasure, and he evinced peculiar delight in locating, on the field where a battle had been fought or some other transaction of moment had occurred, the positions and the movements of those engaged in such battle or transaction, and the situation of any constructions, now obliterated, that had been of importance on the past occasion.

His death occurred at his residence—Fernwood, in the town of Watervliet, in Albany county—on April 3d, 1883. On the 11th of June following, his widow, Mary E. Hart, “in furtherance of the views” of Mr. Hart, “and as a fitting memorial of his interest in the prosperity and success” of the Institute, gave to that corporation “the sum of sixty thousand dollars in invested funds and cash,” to be “used and employed exclusively for endowing in the Rensselaer Polytechnic Institute, a professorship to be forever known and designated as the William Howard Hart Professorship of Rational and Technical Mechanics.” At a meeting of the trustees of the Institute, held June 13th, 1883, this benefaction was accepted in terms of acknowledgment befitting its nature and character, and formal action was at once taken conformable to the conditions upon which the foundation was created. Among the expressions of regard and respect which were adopted at this meeting was the following resolution: “And it is further resolved, that this magnificent gift by Mrs. Hart is received by the trustees of the
Rensselaer Polytechnic Institute with profound thankfulness for her great generosity toward the Institute, and revives many pleasant memories of her late husband's pure and benevolent life and character, of his love of scientific pursuits, and of his interest in the prosperity and success of the Institute, of which his father, the Hon. Richard P. Hart, was one of the first trustees, and continued in that office for eighteen years, from 1825 to his life's end in 1843; and that this gift is all the more valuable at this time, as evidence of the increasing confidence reposed in the character and stability of the Institute by our own people, who are willing to give it of their wealth, and also for the splendid example now set before them of the first endowment of a professorship in the Institute, and that by a lady."

To this deserved tribute to the giver and to the memory of him in whose honor the gift was made, may be added the statement, that the effect of this generous act has been, without doubt, to keep alive the seeds of beneficence in some hearts, and to plant them in others, and that from these germs, at no distant future, results will follow, rich and abundant in their power to sustain and further develop into actual being, the possibilities of scientific culture which are existent in this city.

The latest benefaction made to the Institute is that of Betsey Amelia Hart. She was the daughter of William Howard, of New York, and in that city she was born December 9th, 1798. On February 8th, 1816, she became the wife of Richard P. Hart, and in that year removed to Troy, where she resided until her death, which occurred August 23d, 1886, she having lived since 1827 in the house which her father gave her in the last named year. She was the mother of fourteen children, and her other descendants numbered fifty-two grandchildren and thirty great-grandchildren. Her husband died December 27th, 1843, and during the long widowhood that followed, she constantly manifested an equanimity and good judgment that gave her the esteem of all, while her tender regard for every member of her large family and its various branches, was continually apparent and warmly reciprocated. She was interested in the success of religious, benevolent and charitable institutions, and on fitting occasions gave evidence of that interest by the bestowal of generous assistance. By her will she gave and bequeathed to the Rensselaer Polytechnic Institute the sum of
five thousand dollars, to be paid within six months after her decease, on the express condition, as stated in her will, "that the said sum, if accepted, shall be accepted by the Rensselaer Polytechnic Institute as a principal fund to be invested and kept permanently invested by it, and that the income to be, from time to time, derived therefrom, only, shall be applied to the support of said Rensselaer Polytechnic Institute."

Since pages forty and forty-one of this volume were printed, James Forsyth, the seventh President of the Institute, and who had filled that position for eighteen years, has been summoned hence. His death occurred in the city of New York, on August 10th, 1886. To what is already recorded of him in this volume may be added the statements, that he held the presidency for a longer term than any of his predecessors, the Rev. Dr. Beman alone excepted, whose term was twenty years; that during his long official career the Institute has enjoyed a greater degree of prosperity than ever before in a similar period of time; and that he was enabled, by his genial and courteous manner, his inherent common sense, and his good judgment, to maintain his position with dignity and composure, and to discharge with fidelity the duties which pertained to his important trust.

In several colleges in this country, the custom has been prevalent for many years, for each class to procure what is known as a class-book, in which autobiographical sketches of the lives of the members of the class are recorded, and a statement of the period of time which each person remained at college. This record is intended to include all persons who have been, at any time, connected with the class. When a class graduates, the class-book is left with a class secretary, who is to be kept informed of the main facts in the subsequent lives of his classmates, and who is to enter these facts in the class-book as he receives them. When the class becomes extinct the book is deposited in the archives of the college to which the class belonged. A custom like this, if now inaugurated and maintained at the Institute, would furnish the materials for the compilation of the annals of its present and future students, and would insure the accuracy of such annals.

In the preparation of these pages much care has been bestowed in endeavoring to ascertain the titles of the printed books and pamphlets which have emanated from members of the Institute.
No separate list of such publications has been attempted, but the names of the publications of each person are given in connection with his biographical sketch. That the titles of many works have been omitted, there can be no doubt. It is to be hoped, however, that this effort to obtain the names of the publications indicated may induce others to engage in the undertaking of forming, at the Institute, a collection of such publications. A valuable addition would thus be made to the literature of the Institute, and a permanent and abiding demonstration would be presented of the character of the contributions to human knowledge which have been made by the alumni of this school of science—contributions, it is believed, so numerous, that were they all collected they would form a library of no inconsiderable extent.

While engaged in gathering the materials from which these pages have been compiled, the writer of this volume has also made memoranda of many facts and incidents which could not be incorporated in it without departing from the plan upon which it was originally designed. From these facts and incidents, and from sources which are open for his examination, might well be constructed one volume containing a history of the Institute, and another devoted to the life of its principal promoter in science, the distinguished Amos Eaton. Many will join me in expressing the hope that Dr. Nason may be induced to begin and complete these works, which would necessarily embrace within their scope a detailed statement of the plan upon which the Institute was founded, would convey a correct idea of the many-sided man who gave it form and development, and would preserve a record of the work it has accomplished in the domain of science. For the present, these pages pertaining, in great measure, to the past, while they preserve in abiding form the data they record, cannot fail also to deepen in those to whose care the future is confided, a conviction of the importance of their trust, and to incite them to renewed effort in insuring the permanence and prosperity of the Rensselaer Polytechnic Institute.

B. H. HALL.

Troy, N. Y., December 25th, 1886.
TRUSTEES
OF THE
RENSSELAER POLYTECHNIC INSTITUTE.
1824-1886.

*Hon. Stephen Van Rensselaer, LL. D., Patron, Albany...........1854—39

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*Rev. Eliphalet Nott, D. D., LL. D., Schenectady..............1829—45
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*Thomas C. Brinsmade, M. D., Troy.................................1868—68
*Hon. James Forsyth, LL. D., Troy................................1868—86

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*Orville L. Holley, First Vice President........................1824—31
*T. Romeyn Beck, M. D., Second Vice President................1824—26
*Hon. David Buel, Jr., Second Vice President...................1829—60
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*William P. Van Rensselaer........................................1845—64
*Thomas C. Brinsmade, M. D........................................1864—68
*Hon. George Gould..................................................1868—68
   E. Thompson Gale, C. E.........................................1869—72
   Hon. William Gurley, C. E....................................1872

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*Moses Hale, M. D....................................................1824—35
*Rev. Erastus Hopkins.............................................1835—41
*Hon. Isaac McConihe, LL. D......................................1841—42
Hon. Joseph White, LL. D..........................................1842—49
   Stephen Wickes, M. D...........................................1849—54
   Rev. John B. Tibbits, A. M....................................1854—61
   Hon. William Gurley, C. E....................................1861—72
   William H. Doughty, C. E....................................1872
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*Thomas C. Brinsmade, M. D.............................................1844–47
*Hon. Day Otis Kellogg..................................................1847–50
William H. Young..........................................................1850

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*Hon. Simeon DeWitt......................................................1824–28
*T. Romeyn Beck, M. D., LL. D........................................1824–28
*Hon. John D. Dickinson, LL. D.......................................1824–40

*Jedediah Tracy.............................................................1825–25
*Hon. Richard P. Hart....................................................1825–44
*Judge Jesse Buel..........................................................1826–35
*Philip S. Van Rensselaer, A. M......................................1833–44
*Rev. Phineas L. Whipple..............................................1833–37
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*Rev. Eliphalet Nott, D. D.............................................1842–45
*Hon. David Buel, Jr.....................................................1842–44
*Hon. Jonas C. Heartt, (ex officio)................................1842–43
*Hon. H. W. Strong, ....................................................1842–44
Daniel G. Egleston, ....................................................1842–44
*Rev. W. B. Sprague, D. D.............................................1842–65
*John Holme, Esq..........................................................1842–65
*Hon. Isaac McConih, LL. D.............................................1842–67
*Hon. Gurdon Corning, ..................................................1843–68
*Rev. Reuben Smith......................................................1843–45
*Jared S. Weed, ............................................................1844–45
*Stephen Bowman, ........................................................1845–47
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*William P. Van Rensselaer..........................................1845–69
*Luther Tucker.............................................................1845–69
*Hon. Daniel D. Barnard, LL. D......................................1845–50
*James Dana, (ex officio)................................................1847–49
*Hon. Francis N. Mann, A. M., (ex officio).........................1847–50
Stephen Wickes, M. D....................................................1847–54
*Benjamin P. Johnson.....................................................1849–66
*Alexander Van Rensselaer, M. D....................................1849–68
*John Wilkinson...........................................................1849–55
Hon. Joseph M. Warren, A. M..........................................1849
RENSSLEAER POLYTECHNIC INSTITUTE. 15

Le Grand B. Cannon ........................................... 1849-64
*Hon. Thomas Vail, A. M. ..................................... 1849-82
*Hiram Slocum .................................................. 1849-65
*Orsamus Eaton .................................................. 1849-59
Rev. John B. Tibbits, A. M. .................................... 1849-68
Hon. Joseph White, LL. D. ...................................... 1850-55
*Hon. Day Otis Kellogg, (ex officio) ......................... 1850-50
*Amos Dean, LL. D. ............................................... 1850-53
*Hon. Hanford N. Lockwood, (ex officio) ..................... 1850-51
Hon. Joseph M. Warren .......................................... 1851-52
*Hon. George Gould, " .......................................... 1853-53
Hon. Foster Bosworth, " ....................................... 1853-53
*Hon. Elias Plum, " ............................................. 1853-54
*Thomas W. Blatchford, M. D. .................................. 1854-66
*Hon. Jonathan Edwards ......................................... 1854-68
*Hon. John A. Griswold, (ex officio) ......................... 1855-56
B. Franklin Greene, C. E. ...................................... 1855-59
Hon. William Gurley, C. E. .................................... 1855
*Hon. Jonathan E. Whipple ...................................... 1856-66
*Hon. Hiram Slocum, (ex officio) ............................... 1856-57
*Hon. Alfred Wotkyns, M. D., (ex officio) .................... 1857-58
*Hon. Arba Read, " .............................................. 1858-60
Hon. John F. Winslow ........................................... 1860-68
E. Thompson Gale, C. E. ....................................... 1860
*Hon. John A. Griswold .......................................... 1860-72
Hon. Isaac McConihe, Jr., A. M., (ex officio) ............... 1860-61
Hon. George B. Warren, Jr., " ................................ 1861-62
William H. Young ................................................ 1861
*Hon. Lyman Wilder .............................................. 1861-85
*Hon. Arba Read .................................................. 1861-63
Albert E. Powers ................................................ 1861
*Rev. Peter Bullions, D. D. ................................... 1862-64
*Hon. James Thorn, M. D., (ex officio) ....................... 1862-63
Hon. Wm. L. Van Alstyne " ................................... 1863-64
*Hon. James Thorn, M. D., " .................................. 1864-65
Rev. Duncan Kennedy, D. D. .................................... 1864-68
*Hon. Jonas C. Heartt .......................................... 1864-74
*Hon. George Gould .............................................. 1864-68
David Cowee ..................................................... 1865
*Alexander L. Holley, LL. D. ................................... 1865-67
Hon. Uri Gilbert, (ex officio) ................................ 1865-66
*Frederick B. Leonard, M. D. .................................. 1866-69
James S. Knowlson, A. M. ...................................... 1866
Hon. Uri Gilbert .................................................. 1866
Hon. David A. Wells, LL. D., D. C. L. ....................... 1866-76
*Hon. John L. Flagg, (ex officio) ............................... 1866-68
Hon. Charles R. Ingalls ........................................ 1868
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*Hon. James Forstyth, LL. D. ......................................... 1868—86
Joseph W. Fuller .......................................................... 1868
Hon. William Kemp ......................................................... 1868
*Azro B. Morgan ............................................................ 1868—69
Hon. Miles Beach, (ex officio) ........................................ 1868—70
Rev. J. Ireland Tucker, D. D. ........................................... 1869
*Alexander L. Holley, LL. D. ............................................ 1870—82
Capt. Clarence E. Dutton, U. S. A. ................................... 1870—76
Hon. Uri Gilbert, (ex officio) .......................................... 1870—71
Henry C. Lockwood ........................................................ 1871
William H. Doughty, C. E. ............................................. 1871
Hon. Thomas B. Carroll, (ex officio) ................................. 1871—73
Hon. William Kemp, .................................................... 1873—74
Hon. Edward Murphy, Jr., ............................................ 1874—82
Rev. William Irvin, D. D. ................................................ 1876
John D. Van Buren, Jr., C. E. ......................................... 1876—82
Charles Macdonald, C. E. ............................................. 1880
James P. Wallace, C. E. .................................................. 1880
Joseph C. Platt, Jr., C. E. ............................................. 1882
Elias P. Mann, C. E. ...................................................... 1882
Hon. Edmund Fitzgerald, (ex officio) ............................... 1882—86
Stephen W. Barker, M. E. ............................................. 1886
Charles W. Tillinghast ................................................... 1886
Robert W. Hunt ........................................................... 1886
Henry G. Ludlow ........................................................... 1886
Henry B. Dauchy ............................................................ 1886

N. B. The last five Trustees were elected after the Records were printed.
This Institution was founded on the fifth day of November, 1824, by the Hon. Stephen Van Rensselaer, of Albany, as a school of Theoretical and Practical Science.

On this date he wrote a letter to the Rev. Samuel Blatchford, D. D., of Lansingburgh, requesting him to open the school on the first Monday of January, 1825, and take charge of it as President. In the same letter he appointed Amos Eaton, of Troy, Senior Professor, and Lewis E. Beck, of Albany, Junior Professor. He appointed a Board of Trustees also, with ten articles, or orders, for the temporary government of the school.

On the 29th of December, 1824, the Board of Trustees was called together by the President. At this meeting the name, "Rensselaer School," was given to the Institution, and at this and two following meetings, June 5th and March 11th, 1825, a code of by-laws was adopted, and Mr. Van Rensselaer's letter adopted as the constitution.

In accordance with the above request, Dr. Blatchford and Professors Eaton and Beck entered immediately upon the work, opening the school on the first Wednesday of January, 1825.

The school was incorporated March 21st, 1826, by special act of the Legislature, under the name of "The Rensselaer School," and for purposes set forth in the preamble of the act, as follows: Laws of 1826, p. 63.

The act proceeds to name Simeon DeWitt, Samuel Blatchford, John D. Dickinson, Guert Van Schoonhoven, Elias Parmelee, Richard P. Hart, John Cramer and Theodore Romeyn Beck as trustees, and to define their powers. The income was limited to $20,000 a year.

On the eighth of February, 1828, Governor Clinton transmitted to the Legislature, with his cordial approval, an application from the trustees of this school, consenting to an alteration
of their charter, so as to vest in the Regents, or in the Trustees, the power to change its location to any place in Albany, Rensselaer, Saratoga or Schenectady counties, and by a change that might allow the appointment of trustees—two from each of these counties—without regard to any particular city or village therein.

The gratuitous use of the school, with all its apparatus and facilities of every kind, was tendered to the Legislature for the purpose of qualifying suitable persons for teaching the practical application of the experimental sciences to agriculture, the arts, manufactures and domestic economy. There had been expended within seven years over $10,000 in making trials to ascertain the best and most economical method of teaching the practical application of experimental science, and extending it to the laboring part of the community, and in searching out the natural resources of the State. The collections and library were valued at $3,615, and the real estate at $1,348, making, with recent additions, $3,009. The free use of a large brick building formerly used by the Farmers' Bank was also offered, with several wooden buildings then occupied by the school.

This application was referred to the Regents, and on the eleventh of March, 1828, they agreed upon a lengthy and highly favorable report, as follows:

"The sciences taught in the Rensselaer School are immediately connected with agriculture and the arts, and are considered indispensable to the successful prosecution of the great branches of manufacturing labor, in wool, cotton and iron, in which the nation has embarked, and upon the success of which the prosperity of our State is materially involved. The plan of instruction is new, and in the opinion of the committee, perfectly efficient and highly commendable. By putting the pupil in the place of the professor, he necessarily acquires a knowledge of the principles of the science on which he lectures; while the experimental demonstrations of the laboratory render him familiar with the practical application of those principles to agricultural and manufacturing operations."

The committee proceed to consider at length the advantages to be derived from such an institution, refer to the particular industries that derive aid from chemistry and other sciences, and conclude by saying that they do not hesitate to express their
belief "that the system of instruction pursued in the Rensselaer School is eminently calculated to promote the best interests of the State, and they therefore respectfully suggest that the Board of Regents do recommend the proposition of the Trustees to the favorable consideration of the Legislature."

The building used for the purposes of the school was the old Farmers' Bank building, still standing on the northwest corner of Middleburgh and River streets. In 1832, by an act of the Legislature, the name was changed to "The Rensselaer Institute." Laws of 1832, p. 567.

In April, 1834, the Rensselaer Institute, with the consent of Hon. Stephen Van Rensselaer, was removed to the Vanderheyden Mansion House in Troy, on the south side of Grand Division street, east of Seventh.

By an act passed May 9th, 1833, the Trustees of the Rensselaer Institute (formerly Rensselaer School,) were empowered to establish a Department of Mathematical Arts, for the purpose of giving instruction in engineering and technology as a branch of said Institute, and to receive and apply donations for procuring instruments and other facilities suitable for giving such instruction in a practical manner, and to authorize the President to confer certificates on students in said department, in testimony of their respective qualifications for practical operators in the mechanical arts.

In 1835, an act was passed, increasing the number of Trustees, adding the Mayor and Recorder, and also the Alderman of the Fourth ward. Laws of 1835, p. 296.

The act incorporating the Troy Academy was revived May 8th, 1837, and the Trustees were allowed to unite with those of the Rensselaer Institute, and to be known as the Department of Classical Literature of the latter. Each was to conduct its own operations according to its own laws and usages, and as respected the use of instruments, apparatus and library, particularly in field exercises and various excursions for purposes of improvement in the mathematical arts and the natural sciences.

Soon after the death of Prof. Amos Eaton, Senior Professor, which occurred May 6th, 1842, Prof. George H. Cook, C. E., B. N. S., of the class of 1839, was appointed to fill his place. By him the school was reorganized, and the courses of study somewhat extended.
In 1843, the city of Troy gave to the Rensselaer Institute "the Infant School lot," northwest corner of Sixth and State streets, and the building thereon, valued at $6,500, provided William P. Van Rensselaer, a son of the "patroon," gave a like amount in money, to which proposition he acceded.

In 1844, the Rensselaer Institute was removed from the "Vanderheyden Mansion House" to the building erected on "the Infant School lot."

The Institute, under this union, was received and made subject to the visitation of the Regents, with the privileges of an academy, February 5th, 1846, and was classed with them until its reorganization in 1852, receiving for eight years a share of the literature moneys distributed to the academies of the State. It has at several times received appropriations from the Legislature. In 1863, it obtained a grant of $10,000 to assist in rebuilding after the fire; in 1868 it received $15,000, and in 1871 $730.

In 1847, B. Franklin Greene, C. E., B. N. S., of the class of 1842, was appointed in place of Professor Cook, who had resigned to accept a position in another institution. By Professor Greene, new plans for the extension of the course were made, the number of instructors increased, and in 1849, it may be said that a complete change and re-organization were effected, "with a view to enable it to discharge with all possible efficiency its intended functions as a Polytechnic Institution, including those in a more special sense of a College of Engineering." Among the changes then introduced were, a material enlargement of its course of study, with a proportionate increase of time allotted to it, and a correspondingly more elevated, and more rigidly held, standard of requirements for the admission of candidates to scholastic honors.

By an Act passed March 8, 1850, the restriction as to places of residence of Trustees was removed, and the number was increased to 19, the first members of the new Board being named. The office of Director was created. He was always to be an acting member of the Faculty. (Laws of 1850, p. 54.)

By an act passed April 8, 1861, a full Board of Trustees was named, their powers enlarged and defined, and the name changed to the "Rensselaer Polytechnic Institute." (Laws of 1861, p. 428.)

The purposes of the Institute were declared to be, the main-
tenance in the city of Troy, of a school for instruction in Mathematics, Civil Engineering, Chemistry, Mineralogy, Geology, Botany, Literature, and, in their application to the arts, Agriculture, Domestic Economy and Manufacturing, as the Trustees might direct.

The Faculty, consisting of the President of the Board of Trustees, the Director, Professors and Instructors, were to have charge of instruction and discipline, their duty being to pursue such a system as would be calculated to make thorough scholars in the several branches of civil engineering, and other studies in the Institute.

The Trustees might confer the degrees of Civil Engineer, Topographical Engineer, Bachelor of Science, and such other academic honors as they might see fit, upon those who had pursued the course of study prescribed, and who had passed a thorough examination, and had been recommended by the Faculty. The Institute was subject to visitation by the Regents, and entitled to the same privileges as academies, colleges and schools of the higher order, upon complying with the terms required by law, and with the votes of the Regents. The change of name was to affect no right.

The fire of May 10, 1862, destroyed the buildings and all the furniture, appurtenances, library and cabinets, together with the records of the Board of Trustees. The School took refuge in the University on the hill (now the Provincial Seminary), until the fall of the year, when it obtained quarters in Vail's Building, northeast corner of Congress and River streets, till May 1st, 1864, when the Rensselaer Polytechnic Institute entered into possession of the land and buildings at the head of Broadway, where it now stands, a substantial and imposing structure, 115 feet long, 50 feet wide, and four stories high. It contains full suites of recitation, lecture, and drawing rooms, the cabinet of natural history, the library, and the quarters for the janitor. The rooms are spacious, conveniently arranged, and well lighted and ventilated. The corner-stone was laid March 28th, 1863, with appropriate ceremonies.

The Winslow Laboratory, named in honor of John F. Winslow, Esq., of Poughkeepsie, former President of the Institute, was commenced in 1865, and completed September, 1866. On August 27th, 1864, this building was partially destroyed by fire.
The upper story, containing lecture room, recitation room and library, was burned. The apparatus and collections used for general chemistry and over one thousand volumes of chemical works were wholly lost. The building was immediately remodelled, somewhat enlarged and made ready for occupancy February 1st, 1885. It is 70 feet in length, 40 in width and three stories high. The first story contains the metallurgical laboratory. The second story contains the chemical laboratory, and the third floor the lecture, recitation and apparatus rooms, which are fitted up in the most approved manner for complete courses in general and analytical chemistry.

The Williams Proudfit Observatory, erected by the late Ebenezer Proudfit, Esq., of Troy, as a memorial of his deceased son, formerly a member of the Institute, occupies a commanding site, and consists of a central part 30 feet square, with north, south and east wings, with a total length of 76 and total breadth of 60 feet. The central part is two stories in height, surmounted by a dome 29 feet in diameter, under which is the large pier designed for an equatorial telescope. The east wing contains piers for the meridian instruments, and the other wings are used for computing and clock rooms, and library.

The site selected for the Institute Buildings, on the eastern slope of the city, at the head of Broadway, combines the advantages of a commanding position, and quiet surroundings, with great convenience of access.

The "Henry B. Nason Collection of Minerals," named for the donor, contains nearly 5000 specimens, arranged in several divisions to illustrate their structural, physical and chemical properties; also, a large number of models.

The Geological Collection is divided into several sections, illustrating lithological and phenomenal geology, the geology of some peculiar localities, and paleontology. The State Paleontologist was directed by act of April, 23, 1864, to present to the Institute as full a series of fossils from the duplicates of the State Museum as could be made up, for the use of the school, and these were added to the collection.

A valuable collection of rocks illustrating the lithology of the State of New York has been recently given to this department by Joseph Mullen, Jr., C. E., of Watertown, N. Y., as a memorial
of his brother, Anthony T. E. Mullen, C. E., late Passed Assistant Engineer in the U. S. Navy.

The Collection of Shells contains nearly 10,000 specimens, and was made and arranged by the late Henry Rousseau, Esq., of Lansingburgh. Many of the specimens are very rare, and the completeness of several genera is quite remarkable. A number of very handsome specimens of coral, and about 500 specimens of shells, were added to this collection by Mrs. George B. Warren.

The Herbaria contain about 5,000 specimens of American and European plants, and nearly 300 specimens of wood from all parts of the world.

The Collection of Birds, numbering 140 specimens, with the Indian relics and curiosities, was presented by the Troy Lyceum of Natural History. Another collection of very rare birds from all parts of the world, numbering 220 specimens, and made by the late George B. Warren, Esq., was presented by Mrs. Warren as a memorial of her husband. During the year 1884 the collection was considerably increased by John Hobart Warren, Esq.

The Metallurgical Collection contains a very large number of metals and products from their ores. It is especially rich in the different varieties of iron, steel, and slags, from works in the vicinity. Copper, lead, zinc, silver, and gold, are also well represented.

The Chemical Cabinet contains a complete set of chemical elements and many of their compounds; also specimens illustrating the manufacture of glass, earthenware, porcelain, gunpowder, illuminating gas, coal tar products, and a large collection of specimens of common salt, native, and manufactured from American and European brines. A large number of models, charts, maps, engravings, and photographs, add much to the completeness of these collections.

In addition to the foregoing, a collection of minerals and rocks numbering over 3,000 specimens is placed in the mineralogical lecture room, for the constant use of the students in the lectures and practical exercises.

The Library contains many valuable scientific works. It has recently been increased by a valuable collection of American and foreign scientific periodicals, and, in 1882, was enriched by the bequest of the very valuable professional library of the late
Alexander L. Holley, LL. D., of Brooklyn, N. Y., formerly a trustee of the Institute.

The collections of Apparatus and Instruments in the Departments of Astronomy, Geodesy, Chemistry, and Physics, are quite complete and in good order.

Additions are being made every year to these collections, which already are of great value and assistance to the student.

During the year 1882, through the liberality of several citizens of Troy, provisions were made for the addition of many valuable and specially useful pieces of apparatus, to the collections in the departments of Mechanics, Physics, Astronomy, Geodesy, and Drawing. Most of these have already been procured, and others will be secured as rapidly as they can be properly selected.

There are extensive collections of various kinds, in different departments of the natural and physical sciences, including apparatus, instruments and models, and other conveniences for instruction.

The total value of property is reported at $200,000, of which $110,500 is in buildings and grounds; $10,500 in library; $37,500 in educational collections, and $108,500 in property of other kinds.

The number of graduates June, 1885, was 32; whole number of graduates, 852.

The Register for 1885 shows a list of 19 professors and instructors, and an attendance of 234. There is now but a single course of instruction, which all regular members of the Institute pursue. The degree conferred is that of Civil Engineer. This includes mechanical or dynamical engineering, road engineering, bridge engineering, hydraulic engineering, steam engineering and mining engineering. The studies of the course, which extends throughout four years, are designed to secure to all graduates a professional preparation at once practical and thorough for the following specialties of engineering practice:

The location, construction and superintendence of public works, as railways, canals, water works, etc.; the design, construction and management of mills, iron works, steel works, chemical works and pneumatic works; the design and construction of roofs, arch bridges, girder bridges and suspension bridges; the survey and superintendence of mines; the design, construction and use of wind motors, hydraulic motors, air
engines, and the various kinds of steam engines; the design, construction and use of machines in general, and the determination of their efficiency; the survey of rivers, lakes and harbors, and the direction of their improvements; the determination of latitude, longitude, time, and the meridian in geographical exploration, or for other purposes, together with the projection of maps; the selection and tests of materials used in construction; the construction of the various kinds of geometrical and topographical drawings.

In addition to the regular course there are now summer courses during vacation, in chemistry and assaying, continuing six weeks, when classes can be formed of not less than eight members.

In 1874, June 14th to the 18th, a semi-centennial celebration of the Institute was held. A large number of the graduates and friends of the school gathered from all parts of the country. A monument to Prof. Amos Eaton was placed in Oakwood Cemetery, and a handsome memorial window, bearing his portrait, was placed in the large hall of the Institute.
STEPHEN VAN RENSSELAER,
PATRON.

Hon. Stephen Van Rensselaer, LL. D., known as the "patroon," was born in New York, Nov. 1st, 1764, and died in Albany Jan. 26th, 1829. He was the fifth in lineal descent from Kiliaen Van Rensselaer, the original patroon, or proprietor, of the "whole of Rensselaerwyck," who in 1630, and subsequently, purchased land which in 1637 formed a tract of 24 miles in breadth and 48 in length, extending from the immediate vicinity of Fort Orange (now Albany) over the greater part of Albany, Rensselaer and Columbia counties. The mother of Stephen was Catharine, daughter of Philip Livingston, the proprietor of Livingston Manor, under whose care he was placed by his mother, after the death of his father.

He entered Princeton College in 1778, but owing to the proximity of the British army, was removed to Harvard College, where he was graduated in 1782. He married, the next year, a daughter of Gen. Philip Schuyler. In 1789, he was elected to the House of Assembly of this State and the next year to the Senate, to which he was re-elected annually until 1795, when he was chosen Lieutenant-Governor, which office he filled for six years. He was member of the constitutional convention in 1801, and most of the time its presiding officer, and in 1810 to 1811 was one of the commissioners for exploring the route and considering the feasibility of a western canal.

He was made a commander of cavalry of the State with the rank of general in 1801, and in 1812, soon after the commencement of the war, was called by Gov. Tompkins to the command of the New York militia. He served two months, assaulting and taking Queenstown, Canada, but was eventually defeated in consequence of the refusal of the militia under his command to go out of the State, from alleged constitutional scruples. Disgusted with their conduct, he resigned. In 1813, as once before, he was a candidate for governor, being both times defeated by an inconsiderable majority.

After the war he devoted his energies, in connection with De
Witt Clinton, to the prosecution of the Erie Canal, and was from 1815 until his death one of the board of canal commissioners, and for 15 years its president. He was again a member of the Legislature in 1816; in 1819 was elected regent of the State University, and subsequently its chancellor; in 1820 president of the agricultural board of the State, and in 1821, a member of the constitutional convention. In 1821-22 Prof. Amos Eaton, under his direction and at his expense, made a geological survey of Albany and Rensselaer counties, including an analysis of their soils, and in 1823 a similar survey across the State, along the line of the Erie canal, while Prof. Edward Hitchcock, afterward president of Amherst College, was employed to make another across New England. These surveys he published in 1824, at his own cost. He next employed Prof. Eaton to deliver familiar lectures on natural science throughout the State.

In November, 1824, he provided suitable buildings at Troy, and established a scientific school for the instruction of teachers with two professors, employed at liberal salaries. This school was incorporated in 1826 as the Rensselaer Institute. Fully one-half of the current expenses were borne by Gen. Van Rensselaer, and he made the offer to the clerk of each county in the State to nominate one pupil to enjoy a three years' course of gratuitous instruction at the Institute, the only condition being that they should teach for one year after graduation. He continued to aid in supporting the institute until his death.

In 1823 he was elected to Congress and subsequently re-elected for eight consecutive terms. His vote determined that of the delegation from New York in favor of Mr. Adams, and caused his election. In 1825 Yale College conferred on him the degree of LL. D. (See "A Discourse of the life, services, and character of Stephen Van Rensselaer, with a Historical sketch of the colony and Manor of Rensselaerwyck," by Daniel D. Barnard, Albany, 1839.)

Says Rev. Dr. Sprague: "He could claim, on the score of earthly rank, perhaps, as much as any individual in the land. He was not only rich, but, unlike most others in this country, he had never known what it was to be poor. He was high in office, both civil and military." He was equally distinguished for his piety and active benevolence.
PRESIDENTS.

The Rev. Samuel Blatchford, D. D., the first president of the Institute, was born in Devonshire County, England, in 1767. He was educated for the ministry at the Dissenting College of Theology, at Homerton, near London; married in 1788; ordained in 1789 pastor over the Presbyterian Church in Kingston, Devonshire. In 1791 he became pastor of the church at Top-oham, near Exeter, in Devonshire, where he remained until in answer to a call from the church at Redford, Westchester County, N. Y., he, in 1795, came to America. For eleven years he lived at Redford and at Bridgeport, Conn., and in 1804 he was called to take charge of the church at Lansingburgh and Waterford. Here an acquaintance with the Hon. Stephen Van Rensselaer grew into a friendship, and he was named in 1824, by the founder, as one of the trustees and first president of the Institute. This position he held for four years. He died at Lansingburgh on the 27th of March, 1828. He was the father of Dr. Thomas W. Blatchford, of Troy; of Richard M. Blatchford, of New York, and the grandfather of the Hon. Samuel Blatchford, U. S. District Judge for the Southern District of New York.

The Rev. John Chester, D. D., second president of the Institute, was for twelve years pastor of the Second Presbyterian Church in the city of Albany, from 1815 to 1828. He was born at Weathersfield, Conn., in August, 1785—the son of Col. John Chester, of the Revolutionary Army. He entered Yale College in 1801 and graduated in 1804. He pursued his theological studies under the direction of Dr. Joseph Lyman, of Hatfield, Mass., and was licensed to preach by the Hartford Association College in 1807, at the age of 22. His first efforts to publish the gospel were made in Marblehead, Mass. He also preached a short time in Springfield, Mass., and also in Middletown, Conn., and then removed to this State and was stationed at Cooperstown, and from 1810 to 1815 was pastor at Hudson, from which latter place he was called to Albany, where his relations
with Mr. Van Rensselaer, the Founder, was such as led to his appointment and acceptance of the office of President on the 25th of June, 1828, which office he held, in the declining state of his health, for the period of only about six months. In 1821 he was honored with the degree of Doctor of Divinity by the corporation of Union College. He died at Philadelphia on the 12th day of January, 1829. He was an eminent divine of that day, of great learning and eloquence, and having the respect and love not only of the people of Albany but of all the Church. An eloquent scholar himself, and deeply convinced of the connection and dependence between science and religion, he was devoted to the cause of education. He married, in Philadelphia, the daughter of Robert Ralston. He was the associate and friend of Chancellor James Kent, and succeeded him as the president of the Albany Female Academy, of which he was one of the founders. He was also a patron and trustee of the Albany Academy. Dr. Nott preached his funeral sermon. He left a family. One of his daughters married J. L. Van Schoonhoven, Esq., of Troy.

Eliphalet Nott, D. D., LL. D., the third president of the Institute, and at the same time President of Union College, Schenectady, N. Y., was born in Ashford, Windham County, Conn., June 25th, 1773, and died in Schenectady, January 29th, 1866. He was to a great extent self-educated, having never received a college training. He studied divinity in his native county, and at the age of twenty-one was sent out as a domestic missionary to the central part of the state of New York, at that early day offering a wide field for evangelical effort. On passing through the old settlement of Cherry Valley, he was requested to take charge of the Presbyterian Church at that place, which call he accepted, and, in addition to his pastoral duties, he also became a teacher in the Academy. Two or three years later he was called to the Presbyterian Church at Albany, where he at once took a prominent position as a preacher, and was listened to by large congregations. Among his successful pulpit efforts while at Albany, was a sermon on the death of Alexander Hamilton. In 1804, he was chosen President of Union College, Schenectady, which place he continued to fill for sixty-two years, until his death, being the oldest head of any literary institution in the
United States and doubtless in the world. Probably fully 4,000 students graduated during his Presidency, and among them some of the most eminent men of the country. In the language of a well known publicist, "Union College is emphatically of his own formation; he came to it in its poverty and infancy, and has raised it to wealth and reputation." In 1854 occurred the semi-centennial anniversary of his Presidency, when there came together to do him honor between 600 and 700 of the men who had graduated under him. Dr. Nott was an earnest advocate of temperance, and published at Albany, in 1847, "Lectures on Temperance." Although he has written largely, and on many subjects, his publications are confined principally to occasional addresses and "Counsels to Young Men," (New York), and a discourse delivered before the General Assembly of the Presbyterian Church. He devoted much thought and attention to the laws of heat, and, besides obtaining some thirty or more patents for applications of heat to steam engines, the economical use of fuel, &c.; he was the inventor of a stove bearing his name and very extensively used. Dr. Nott stood pre-eminent as an educator, and was universally esteemed, venerated, and loved by the many who enjoyed his teachings and counsels. His labors in the temperance cause, both by voice and pen, and his many and long-continued experiments on heat, with the view of applying it to useful and economical purposes for human benefit, if not as successful as he had hoped, evinced the fertility of an intellect which loved to rise itself for the good of others. As a preacher, his style of thought, his manner, his elocution were all his own—the chief characteristic being his impressiveness. In 1805, the College of New Jersey conferred upon him the title of D. D., and in 1828 he received the title of LL. D. He married the daughter of Rev. Joel Benedict, D. D., of Plainfield, Conn., under whose instruction in early life he pursued his classical and mathematical studies.

Nathaniel Sydney Smith Beman, D. D., the fourth president of the Institute, was born in that part of Canaan, N. Y., which is now called New Lebanon, on Sunday, November 26th, 1785. He was a son of Samuel and Silence (Douglass) Beman, his paternal ancestors being of German and his maternal ancestors of Scotch origin. When he was four or five years of age his parents re-
moved to Hampton, Washington County, N. Y., then called Greenfield. His father was a gentleman of the old school, who was strongly attached to ancient customs in dress, and to the day of his death, which occurred in 1845, he wore the short breeches and knee buckles and queue of old times. He was a man of good intellect and business capacity. He was a communicant of the Protestant Episcopal Church, and his funeral was attended by the Right Rev. Dr. Onderdonk, then bishop of New York. Nathan commenced his preparation for college, in company with the late Hon. Rollin C. Mallory, at Poultney, Vt., in 1801, with Mr. Bolles, an eminent teacher, a graduate of the University of Dublin. In 1802 he went under the tuition of a private instructor at Williamstown, Mass, then at the grammar school in that place. He entered Williams College in 1803, but at the close of his freshman year took a dismission, and spent the following year in teaching at Fairhaven, Vt. In the summer of 1804 he entered Middlebury College, graduating in 1807. His classmates were Ira Bascom, D. A. A. Buck, Miles Purdy, Stephen Royce, William Slade and Oliver Stewart. Four of this class, including Dr. Beman, became distinguished men, and perhaps in no one class of the college have so many attained eminence as the class of 1807. Mr. Buck was long a member of Congress; Mr. Royce was Chief Justice of the Supreme Court and Governor of Vermont, and Mr. Slade was a member of Congress and also Governor.

After graduating he became preceptor, in the autumn of 1807, of Lincoln Academy at Newcastle, Maine, where he remained more than two years, at the same time pursuing the study of theology with Rev. Kiah Bailey. He was licensed to preach June 14, 1809, by the Lincoln and Kennebec Association. About the same time he was appointed tutor at Middlebury and entered upon the duties of his appointment; but receiving an earnest call from the Third Presbyterian Church in Portland, Me., to which he had preached a few times, he resigned the tutorship and was ordained pastor of that church March 14, 1810. Rev. Kiah Bailey preached the sermon. His health failed in a year or two, with decided symptoms of consumption, and in October, 1812, he was dismissed. He immediately went south and took up his residence in Hancock County, Georgia, at a place afterward called Mount Zion, where he organized a
Presbyterian Church and established an academy. Under his superintendence, which continued about ten years, the academy acquired a high reputation and attracted a large number of students.

In 1818 he was elected President of Franklin College, at Athens, Ga. He accepted the office, but held it for only one year, and then returned to his academy at Mount Zion. Coming north in the summer of 1822, he preached on the first Sunday in September in the First Presbyterian Church in Troy, N. Y., and by invitation of the officers continued to supply the pulpit until the following November, when he was called to the pastorate. He accepted the call, and was installed June 14, 1823. Rev. Nathaniel S. Prime preached the sermon. In this pastorate he continued just forty years, during which time he received into the church 1,840 members, of which twenty-six became clergymen. He was dismissed June 17, 1863, at his own request, and the church voted him a life annuity of $1,000. He died at Carbondale, Ill., August 6, 1871, at the advanced age of eighty-six years.

In 1824, he was elected a trustee of Middlebury College, and continued so until his death—having been a member eighteen months longer than any of his associates. In 1846 he was elected President of the college, but declined the office. He received the degree of doctor of divinity, from Williams College in 1824, and of doctor of laws from Middlebury College in 1852. His earliest publication was a sermon, occasioned by the death of Rev. Oliver Hulburt, preached at Waynesboro, Georgia, November, 1814, and prefixed to a posthumous collection of Mr. Hulburt's sermons. In 1825, he published “Four Sermons on the Doctrine of the Atonement,” in a duodecimo volume. He also compiled the “Church Psalmist,” a collection of hymns for public worship. A large number of his sermons have been published separately.

Dr. Beman was one of the Vice Presidents of the Rensselaer Polytechnic Institute from 1842 to 1845, and was the President from the latter year to 1865. During these twenty-three years he was also a member of the board of trustees. Brought thus in connection with many young men, at a formative period of their lives, he never neglected any proper opportunity to impress upon them the duty that they owed to themselves, to their
parents or guardians, and to society at large, to increase in wisdom and knowledge, and to show by a studious and honorable deportment, a full appreciation of the privileges to which they were admitted.

The early life of Dr. Beman gave promise of a brilliant future, which his manhood more than fulfilled. For nearly sixty years he stood at his post, full of vigor of mind and strength of body, and then retired to die in a western home attended by the careful ministrations of a beloved daughter. He was a master mind, having a reputation as wide as the limits of his country as a leader among men. A quarter of a century ago a discerning writer said of him, "If ambition for political distinction had been his ruling passion, he could not have failed by his own commanding intellect to have risen to the highest honors, and that, too, without the aid of these petty means and miserable shifts that some little minds resort to 'to be the things they are not.'" His remarkable prophesies as foreshadowed in several of his Thanksgiving sermons, indicated full well the power he would have exerted as a statesman in public life. Some of his discourses were characterized as intensely political, but he always claimed the right of the pulpit to attack evil whether in church or state, but it was only in Thanksgiving sermons that he ventured upon political subjects.

As a pulpit orator he had few superiors—calm, dignified, earnest—oftentimes intensely earnest, but never nervously impassioned—always keeping control of himself and his audience. He was not always confined to manuscript; some of his extempore discourses were his best. His celebrated sermon on the French revolution, delivered before many audiences, was never committed to writing in form, but bore evidence of great thought and was logically divided into divisions. It occupied two hours in its delivery, and never wearied, but enchained the fixed attention of his audience throughout. He was in truth one of the theological and intellectual giants of his time.

He was to those familiar with him a man of rare social qualities, although at times peculiar. He was misunderstood by some, who thought him haughty, cold, over-bearing, tyrannical; yet he was kind, loving, but the most sensitive of men, touched to the very life by a "slight, and pleased beyond
measure by a kindness." His native goodness stood transparent to those who knew him best, and all admired his commanding abilities, notwithstanding his oftentimes cold exterior.

Hon. John F. Winslow, the fifth president of the Institute, was born in Bennington, Vt., November 10th, 1810. He is the descendant of original New England stock, Edward Winslow, the first of the family in this country, and Governor of Plymouth Colony, and his brother Gilbert, being among the original passengers by the historic Mayflower.

Captain Richard Winslow, of the sixth generation in this country, was born in Lyme, Conn. He married in 1804, at Hartford, Mary Corning Seymour, and soon after moved to Albany, where he resided all of his life, with the exception of six or seven years passed in Bennington, Vt., previously to 1815. A large family was the result of this union, John Flack, the subject of this biography, being the fourth child. He was educated at the select schools of Albany, pursuing his studies till 1827, when, declining a professional in favor of a business career, he entered a commercial house as a clerk. After a few years he secured a place in a commission house in New York City, where he remained till his majority, when he was sent by his principals to New Orleans to establish a branch office. After a twelve-month in the South, the climate being uncongenial, he returned to New York, and in 1831 was charged with the control of the works and business of the New Jersey Iron Company, as managing agent, resident at Boston. This connection lasted two years, during which time the young superintendent thoroughly mastered all the details of the important industry. In 1833 he turned the exhaustive knowledge thus acquired to personal account by engaging in the production of pig iron in Bergen and Sussex counties, New Jersey. He continued in this enterprise till 1837, when he formed a connection, which lasted under varied firm names for thirty years, with one of the conspicuous promoters of local enterprise, the late Erastus Corning, of Albany.

The partnership of Corning & Winslow, controlling both the Albany and the Rensselaer Iron Works, was one of the largest producers of railroad and other iron ever established in America, and probably held a higher position in the industry and exerted a more pronounced effect upon the domestic market than any other.
Mr. Winslow, in order to give his exclusive attention to the business, took up his residence in Troy, the seat of the enterprise, where he lived till 1867. In 1863 the late John A. Griswold became a partner of Corning & Winslow in the Rensselaer Iron Works. This company, under the supervision of Mr. Winslow, who in 1852 and 1864 went to Europe purchasing very largely of railroad iron and securing control of the most improved English and continental processes, did an enormous business. Among the valuable results of Mr. Winslow's sagacious enterprise was the purchase of the right to manufacture and sell Bessemer steel in the United States, a feature of the works since developed into a large and remunerative industry.

The signal achievement of Mr. Winslow's life, which will identify an industrial career exceptionally rich in great business results with the history of the nation, occurred in 1861. During the spring and summer session Congress had appropriated $1,500,000 for the completion of one or more armored, or iron or steel clad, vessels of war, or floating steam batteries. John Ericsson, of New York City, of established reputation as an engineer, through his successful adaptation of the propeller to the propulsion of vessels, had prepared designs for iron-clad offensive and defensive war ships, but required the aid of large capital to carry out his theories. At this juncture, naturally attracted by the fame of the Rensselaer Works, he established personal relations with their principal and manager. The exposition of Ericsson's plan for armoring ships could not have been presented to a bolder, more appreciative or more exacting discrimination. Mr. Winslow at once grasped the importance of the engineer's theme, and determined to secure its practical development. With this view, in company with John A. Griswold, of Troy, and C. S. Bushnell, of New Haven, Conn., he visited Washington and submitted the plan of Ericsson to the President, Navy Department and the Naval Committees of both houses. The admirable argumentation of the inventor, and the robust and convincing earnestness of the business men at his back, were effective. Shortly afterward the Naval Board, composed of Commodores Joseph Smith, H. Paulding and Captain C. H. Davis, recommended that an experiment be made with one battery of the description presented by Captain Ericsson, with a guarantee and forfeiture in case of failure in any of the
properties and points of the vessel, as proposed. The contract, as made, stipulated for the completion of the battery within one hundred days from the signing of the contract, which took place on October 5th, 1861, and the extraordinary provision was introduced that the test of the battery, upon which its acceptance by the United States Government depended should be its withstanding the fire of the enemy's batteries at the shortest ranges, the United States agreeing to fit out the vessel with men, guns, and other equipments.

The building of the battery was begun in October, 1861, at the establishment of T. F. Howland, Greenpoint, L. I., the contractors advancing upwards of a quarter of a million of dollars for the purpose, and was prosecuted under the direct supervision of Captain Ericsson. The machinery, the plating of the vessel, and portions of the other iron work were manufactured at the Rensselaer Iron Works, and Corning Iron Works, in Troy. On the 30th of January, 1862, the battery, which had been named the "Monitor," was launched. The entire cost of the vessel complete and ready for active service was only $275,000—less than the government had paid for the engines alone of many a third-class gunboat. The "Monitor" was delivered to the government March 5th, 1862, and at 10 o'clock in the evening of Friday, March 8th, made her appearance at Fortress Monroe. The following day occurred the memorable engagement with the rebel ram, "Merrimac," which had already sank the "Cumberland" and "Congress," and disabled several other vessels of the Federal fleet in Hampton Roads, when it encountered the "Monitor." In this engagement the "Merrimac" was disabled and compelled to retire. It has been said that the fate of the war was decided by this early and brilliant success of the "Monitor," for had the career of the "Merrimac," not been thus timely arrested, Fortress Monroe might have been lost to the Union, and millions of dollars worth of shipping and public property destroyed, and thousands of lives sacrificed.

Charles B. Boynton, D. D., in his "History of the Navy During the Rebellion," published with the sanction of the Navy Department, thus speaks of the inventor and builders of the "Monitor." "The genius that conceived the 'Monitor,' and the patriot manufacturers who perilled reputation and money in her
construction, were as truly among the heroes and saviors of the country, as the President and his cabinet, or our Legislatures, or the generals at the head of our armies, or our naval officers in their victorious ships. These men were the Hon. J. A. Griswold of Troy, N. Y., C. S. Bushnell of New Haven, and John F. Winslow. The names of such men should be handed down in history equally with those who fought our battles, or those who distinguished themselves as statesmen and legislators."

Mr. Winslow retired from active business affairs in 1867, in which year he removed to Poughkeepsie, where he resided. During his residence in Troy, he was conspicuous for his interest in local politics and social improvement. He was from 1863 till the date of departure, President of the Rensselaer Polytechnic Institute, director of the Merchants and Mechanics' Bank, and connected with the management of other monetary and benevolent institutions. In his new home, his ability and public spirit have similarly demonstrated themselves. He has been director of the Fallkill Bank since 1867, director and president of the Poughkeepsie and Eastern Railroad, and is president of the company for constructing the bridge over the Hudson River. Since 1870 he has been trustee of the Presbyterian Church near his residence. Mr. Winslow has been twice married, the first time in September, 1832, to Miss Nancy B. Jackson, daughter of William Jackson, of Rockaway, N. J., who died in December, 1861, and again in September, 1867, to Miss Harriet Wickes, of Poughkeepsie, daughter of Rev. Thomas Wickes, of that city.

Thomas C. Brinsmade, M. D., the sixth president of the Institute, a prominent physician of Troy, who honored his profession with "good works," was born at New Hartford, Conn., June 16th, 1802. He studied medicine with Dr. Peet, of New Marlboro, Mass., and in March, 1823, was licensed a practicing physician by the Connecticut State Medical Society. In 1839 the honorary degree of M. D. was conferred on him by Yale College. In the latter part of 1823 he removed to Lansingburgh, and after ten years practice in that village removed to Troy.

Dr. Brinsmade may be said to have been a life-long student of medicine and hygiene. He industriously applied himself in
getting knowledge, both from men and books, which would be useful to him in the studies of his profession. As said by his eulogist before the Rensselaer County Medical Society, "He practiced medicine with a singleness of purpose, never excelled, carefully cultivating every department of the profession, avoiding all tendency to special practice, and yet was the trusted counselor of those whose tastes led them to cultivate special branches. He would be one hour discussing surgical pathology and the propriety of an operation; the next, perhaps, equally engrossed in grave questions of gynaecology; on each occasion the associate of men devoted to these specialties. In breadth of professional capacity it is safe to say Dr. Brinsmade had few, if any, superiors in the profession." As a local physician he was a sedulous observer and investigator of diseases special to this vicinity. In the records of his private practice he left invaluable data for reference and practical application. For thirty-five years he made Troy the field of his successful practice, and endeared himself to thousands of families who had secured him as their physician during his life in the city, and was always kindly interested in the professional career of his companions in practice.

In January, 1824, he became a member of the Rensselaer Medical Society, and in 1828 was elected its president, serving two years. On retiring from this office in 1830, he delivered an elaborate address on the medical topography of the city of Troy. This address was published in the "Transactions of the State Medical Society," for 1851. In 1844 he was sent by the Rensselaer Society as a delegate to the State Medical Society, serving four years, and in 1850 was elected a permanent member of that society, after which time he took a prominent part in its proceedings. In 1857 he was elected its vice-president, and the following year, president. In 1858, as vice-president, he delivered an address on the registration of diseases, and furnished the society an accurate record of his practice for twenty-one years, carefully analyzed and tabulated, covering three hundred pages of the published transactions, and comprising statistics of thirty-seven thousand eight hundred and seventy-two cases. In 1860 he presented another paper on the registration of diseases, including statistics of two thousand and fifty-six cases treated in 1858 and 1859. He was health officer of Troy for many years,
and chairman of the board of health. He early became a member of the Protestant Episcopal Church, and was for many years a vestryman of St. Paul's Church; at the time of his death was filling the office of junior warden. He was one of the earliest patrons of the Rensselaer Polytechnic Institute, and a trustee for twenty years. In the paper he was reading in the very last moments of his life he stated that all the property of the Institute was purchased by one of the committee in 1845, for less than five hundred dollars. We are informed of what his characteristic modesty did not allow himself to state, that he was the purchaser, and that he borrowed the money with which to purchase this property, which he eventually gave to the Institute.

He was married on September 24th, 1828, to Elizabeth Walsh, of Lansingburgh. This union proved eminently happy, and many times, when speaking of the prospect of death, he expressed no fear of dying, but much feeling at the prospect of leaving his wife. Three children were the result of this union; one died in infancy; his son, Horatio Walsh Brinsmade, died at the age of twenty-one, just as he had completed a very thorough preparation for the practice of his father's profession, and the only remaining child, an amiable and accomplished daughter, died in 1860, leaving them childless. The death of these children cast a shade of melancholy depression which remained through his life. After their death, he seemed more devoted than ever to his profession, seeming to seek in his labors for the good of his race, that mental solace of which the loss of his children had deprived him.

Dr. Brinsmade wrote but little, but the few papers he published remain as evidences of his devotedness to his profession. His duties as a citizen were promptly and faithfully discharged, but in his own unobtrusive way and manner. The ordinary attractions of public life were lost upon him, but to every movement tending to make men better, physically, mentally, or morally, he gave his best efforts. He was one of the original trustees of the New York State Inebriate Asylum, having been appointed by the act granting the charter, March 27, 1857, and was elected each year from that time. While attending a meeting of the citizens of Troy, convened to raise funds for the Rensselaer Polytechnic Institute, of which he was president, and
while reading an important paper, his heart suddenly ceased to beat, and he passed from time to eternity on the 22nd day of June, 1868.

Hon. James Forsyth, LL. D., the seventh president of the Institute, was born in the town of Peru, Clinton County, New York, on the 8th day of September, 1817. His ancestors were of Scotch-Irish extraction, and came over in the emigration of the years 1719-1730, when about one hundred and twenty families from the north of Ireland settled at Londonderry, Chester, and other towns in southern New Hampshire. His parents crossed Lake Champlain in the year 1816, and settled on the banks of the Ausable river, pioneers in the wilderness. His father, Robert Forsyth, carried on an extensive business, held various offices, and met a premature death by drowning at Plattsburgh, in 1834. His mother was Sabrina, daughter of James Ramsay, of Grafton County, New Hampshire, and was a woman of superior mental force and culture. She died in 1864.

James Forsyth, the subject of this sketch, attended the common schools of his neighborhood, and prepared for college at the Keeseville Academy. In 1835 he entered the University of Vermont, and graduated in 1839. During this year he entered the law office of Simmons & Tabor, of Keeseville, as a student, where he remained until he was admitted to the bar, in 1842.

In the year 1843 Mr. Forsyth removed to Troy, N. Y., where he has since resided. Soon after he came to Troy he became largely interested, professionally, in the railroad interests then developing in the vicinity of Troy, and for more than fifteen years was largely identified with the litigation and legislation growing out of the same, together with other important matters, among which was the noted case of the contested seat of the Supreme Court judgeship, between Judge Wright and Judge Hogeboom. Mr. Forsyth, for many years, held the position of attorney and counsel for the Rensselaer & Saratoga Railroad Company and the Troy Union Railroad Company. Of the latter corporation he was the Secretary and Treasurer from the date of its incorporation until the year 1868. He was also a director, attorney and counsel of the Commercial Bank of Troy, from the year 1853 until its close during the war; also a director of the Troy City Bank in 1865. He was one of the
incorporators and is now a trustee of the Union Trust Company of New York, and since the completion of the work in 1874, has been President of the Troy & West Troy Bridge Company.

When the war broke out in 1861, Governor Morgan appointed Judge Forsyth chairman of the War Committee of Rensselaer County, which committee raised and sent three regiments into the field. He was also appointed by President Lincoln a member of the Board of Enrollment, and was Provost Marshal of the district composed of Rensselaer and Washington counties, from July 1, 1864, until the close of the war. In the years 1868-1869 he was Collector of the United States Internal Revenue for the district. On the 13th day of September, 1881, he was appointed by Governor Cornell to the office of County Judge of Rensselaer County, in place of Judge Strait, deceased. In the year 1859 he went abroad with Governor Seward and Henry J. Raymond, passed the summer on the Continent, witnessing the battle of Solferino, in Italy, on the 24th day of June of that year. In 1870, after the opening of the Union Pacific railroad, he visited California.

Judge Forsyth has at all times manifested a strong interest in educational work. For many years he has been a trustee of the Troy Female Seminary and of the Rensselaer Polytechnic Institute, and is a firm advocate of the free school system. Since the year 1868, Judge Forsyth has been the President of the Rensselaer Polytechnic Institute, and has devoted himself especially to the scientific and technical education of young men for the profession of civil engineering. He received the honorary degree of LL. D. from the University of Vermont in 1882.

Married twice; two children living, one of whom, Robert Forsyth, was graduated at the Institute in 1869.
VICE-PRESIDENTS.

(IN ORDER OF APPOINTMENT.)

Orville Luther Holley, editor, was born in Salisbury, Conn., May 19, 1791; died at Albany, N. Y., March 25, 1861. He was graduated at Harvard University in 1813. He studied law in New York; practiced successively in Hudson, Canandaigua and New York City, and edited successively the Anti-Masonic Magazine in New York, the Troy Sentinel, the Ontario Repository, the Albany Daily Advertiser, and for some years edited the State Register. In 1853 he arranged and indexed twenty-three folio volumes, containing the papers of Gov. George Clinton. He was Surveyor-General of the State in 1838, and during the last ten years of his life was occupied in the office of the New York Secretary of State. He wrote a “Life of Franklin”: “Description of New York City,” 1849. He held the office of vice-president of the Institute from 1824 to 1831.

Theodoric Romeyn Beck, M. D., LL. D., medical professor and author, was born at Schenectady, N. Y., August 11, 1791; he died in Utica, N. Y., November 19, 1855; graduated at Union College, 1807. He studied medicine under Dr. Hosack; obtained his degree in 1811, began practice in Albany, and in 1813 addressed the Albany Society of Arts upon the mineral resources of the United States, believed to be the first published systematic account of American minerals. Appointed in 1815 professor of the institutes of medicine, and lecturer on medical jurisprudence in the College of Physicians and Surgeons in Western New York; professor of medical jurisprudence at Fairfield Medical College in 1826–36, and from 1836 to 1840 professor of materia medica; professor of materia medica in the Albany Medical College, 1840–54; principal of the Albany Academy 1817–48; made president of the State Medical Society, 1829; a manager of the N. Y. State Lunatic Asylum, and in 1854 elected president. He was a member of many learned societies, and an earnest promoter of all philanthropic enterprises. His statistics
of the deaf and dumb, influenced the State Legislature to take measures for their education. He edited for many years the “American Journal of Insanity,” and in 1823 published his famous work on “Medical Jurisprudence”—a standard work in Europe as well as in America. He also published many addresses, reports, and contributed to scientific journals. See Memoirs by F. H. Hamilton, in Gross's Medical Biography.

He was a vice-president of the Institute from 1824 to 1826.

Hon. David Buel, Jr., was born in Litchfield, Conn., October 22, 1784. In 1797 his father removed to Troy, N. Y., which continued to be the place of his residence. He fitted for college in Troy, and joined the sophomore class in Williams College in 1802, and was graduated, with the reputation of being a good scholar, in 1805.

He studied law in the city of Albany, and was admitted as an attorney in the Supreme Court of New York in 1808, and as a counselor in 1811. He was appointed a judge of the county court in 1818, and for some years was the first judge. He was a member of the State Convention for revising the Constitution of the State in 1821, and for a number of years was one of the Regents of the University of the State. Even after the death of his father, he continued to sign his name David Buel, Junior. He died in 1860. Judge Buel was greatly beloved for his many excellencies, and his consistent Christian character.

He was a trustee of Williams College from 1829 to 1847, and a vice-president of the Institute from September 2, 1829 to 1860.

Rev. N. S. S. Beman, D. D., was vice-president of the Institute from 1842 to 1845. See Presidents, page 31.

William Paterson Van Rensselaer, the second son of Hon. Stephen and Cornelia (Paterson) Van Rensselaer, was born in Albany, N. Y., March 6, 1805. His mother was a daughter of Judge William Paterson, of New Jersey. After graduating at Yale College in 1824, he spent four years in Europe, traveling extensively, and pursuing legal studies in Scotland and Germany. For a number of years after his return he resided in Albany, N. Y., and just across the Hudson River in Greenbush, N. Y., but the last twenty years of his life were spent in Rye, Westchester Co., N. Y., where he had a delightful home on Manursing Island.
Mr. Van Rensselaer inherited from his distinguished father many noted characteristics. Conspicuous among these was a true simplicity. Free from all pretensions, and eminently un-selfish, he found his happiness in a life of retirement, and in unobtrusive but earnest efforts to do good. Genuine sympathy with works of Christian benevolence was another inherited trait. He was an attentive observer of the great religious and philanthropic movements of the day, and a most liberal supporter of every worthy cause whose claims were brought to his notice. A man of noble impulses and clear convictions, he was no less decided in the rebuke of injustice and iniquity than in the approval of that which was good. The uprightness and elevation, the kindliness and generosity of his nature, his fine intellectual gifts and high culture, and withal an unaffected humility, the fruit of true religion, made him a marked example of a Christian gentleman. He was a devoted member and officer of the church of Christ. He made profession of his faith in the Redeemer in early manhood, uniting with the North (now the First) Reformed Dutch church of Albany, in which he served for several years as a member of the consistory, and as a superintendent of the Sabbath school.

During the last twenty years of his life he was an elder of the Presbyterian congregation of Rye. Warmly attached to the church of his adoption, as to that of his fathers, he served it faithfully and intelligently, taking part in its councils and giving a hearty support to its benevolent enterprises. His interest in the church at Rye was peculiarly strong. A model of regularity in attendance upon public worship, in reverent and thoughtful attention to the preaching of the gospel, in devotion to the Sabbath school, in the oversight of the flock, and in works of charity, during a long course of years. His latest care was for the erection and completion of the new house of worship, to which he contributed very largely, and in which he placed memorials of several departed members of his family. The last stone was added to this building on the day of his own departure to enter the upper sanctuary.

Mr. Van Rensselaer was a man of prayer, a diligent student of the Bible and a firm believer in the doctrines of grace, which are precious to the faith of God's people. The fervor and the scriptural character of his prayers, the consistency of his life,
not less than his noble benefactions, will long be remembered with satisfaction and profit by his brethren in the church.

His death was sudden, but peaceful. Of nine children, four, with their mother, survive him. He married first, Eliza B. Rogers, and afterwards, for his second wife, Sarah Rogers, who survives him. He died in New York Wednesday, November 13th, 1872.

Dr. Thomas C. Brinsmade was vice-president of the Institute from 1864 to 1868. See Presidents, page 37.

Hon. George Gould was born in Litchfield, in the State of Connecticut, on the second of September, 1807. He was the fifth son of Judge James Gould. His genealogy shows an unbroken succession of educated gentlemen in both the paternal and maternal branches; and in the former he stood but the third remove from his English ancestors, whose descendants (of the junior branch,) are still extant in England, and one of whom is in actual occupancy of the ancient family estate of Pridham-Leigh, in Devonshire, acquired by inheritance from the first Lord Ashburton, who, having married into the family, re-purchased the estate from the Crown after its escheat (in default of male heirs of entail,) about the close of the last century.

His great-grandfather, Doctor William Gould, was born in North Yawton, Devonshire, England, in 1693. He emigrated to this country in 1720, and took up his residence in Branford, Conn. His grandfather, Doctor William Gould, the younger, was born in Branford, in 1727, and his father, Judge James Gould, was born in Branford in 1770.

His father's sister, Elizabeth Gould, was the wife of the Hon. Roger Minott Sherman, and his mother (Sally McCurdy Tracy) was the eldest of four sisters, who were severally married to the Hon. James Gould, Judge of the Supreme Court of Connecticut; the Hon. Samuel G. Howe; the Hon. Theron Metcalfe, Judge of the Supreme Court of Massachusetts, and the Hon. Silas W. Robbins, Judge of the Supreme Court of Kentucky; while his eldest brother, the Hon. William Tracy Gould, became a Judge in the State of Georgia, and he himself a Judge of the Supreme Court of New York.

On the maternal side, his great-grandfather, was Eliphalet Tracy, of Norwich, Conn., and his grandfather was General
Uriah Tracy, for ten years a Senator of the United States from Connecticut, who died at Washington in 1807, and was the first person interred in the Congregational burial-ground at the national capital.

He entered Yale College in 1823, at the age of seventeen, and was graduated with distinction in 1827. He immediately entered upon the study of the law, under the teaching of his father, at whose celebrated law school he was a student for two years. At the end of that period, i.e., in 1829, he removed to Troy, and was admitted to the bar in the following year, 1830. From the time of his admission to the bar, in Troy, in 1830, Mr. Gould continued to practice his profession with constantly increasing success and reputation up to the moment of his elevation to the bench of the Supreme Court in 1855. Although nominated for this judicial position by the party to which he belonged, the large vote by which he was elected was by no means a strictly party utterance, but rather an expression of the high estimation in which his professional ability and personal character were held by men of all parties in Rensselaer county. Prior to this, however, he had occupied many positions of trust and authority, and in 1852 had been elected Mayor of Troy, an office the duties of which he discharged with a rare degree of fidelity, energy and independence. In addition to the public offices held by Judge Gould, he occupied many semi-public posts, and many positions of great trust. He was for several years a director of the old Farmers' Bank of Troy, and at his death was a director of the Merchants and Mechanics' National Bank, and of the Troy Savings Bank. He was successively Vice President and acting President of the Rensselaer Polytechnic Institute. He was for a long time Treasurer of the Troy & Boston Railroad Company, and for several years a delegate to the Diocesan Convention of the Protestant Episcopal Church. He died early in the morning of Sunday, the sixth of December, 1868, at the age of sixty-one.

He was married November 10, 1840, at Troy, N. Y., to Sarah McCoun Vail, daughter of George Vail, of Troy.

Ezra Thompson Gale, C. E., son of Dr. Samuel and Mary (Thompson) Gale, Jr., was born in Troy, N. Y., April 27th, 1819. Mr. Gale and his brother, John B. Gale, are the living repre-
sentatives of one of the earliest New England families that came to Troy.

Mr. Gale received his early education in the select schools of Troy, and graduated at the Institute in 1837 as civil engineer. On leaving school he traveled widely throughout the United States, and returning to Troy, entered a mercantile establishment as clerk, and in 1840 became one of the firm of Brinkerhoff, Catlin & Gale, hardware merchants.

In August, 1841, he went to Europe and was occupied in traveling there until November, 1842. In February, 1843, the firm was changed to E. Thompson Gale & Co., and so remained until 1853, when the name of Catlin & Sexton was adopted, and Mr. Gale became a special partner. The business thus conducted involved the manufacture as well as trade in articles of general hardware. In 1857 Mr. Gale's special interest was withdrawn, and a few years later his son, Alfred DeForest Gale, became a partner, and the firm name thereafter was Lane, Gale & Co. Alfred DeForest died March 30th, 1877.

Previous to his retirement from mercantile business in 1859, Mr. Gale had become interested in one of the oldest monetary institutions of Troy, being as early as 1850 a director of the Farmers' Bank, of whose board his father was a member for many years. In 1859 he became the president of this bank, and retained the position till 1865, when upon the consolidation of the Farmers' with the Bank of Troy—the two oldest banks in the city—under the name of the United National, he became president of the new institution, and held the position until he resigned it in 1885. The United National Bank, under the able management of Mr. Gale, won an exceptional reputation for soundness throughout the State. In 1848, when the Troy & Boston Railroad project was laid before the citizens of Troy, Mr. Gale was one of the first to appreciate the great local importance of the enterprise, and gave it the aid of capital and influence.

With the Troy Gas Light Company he has been interested from the beginning. He has also been vice-president of the Troy Savings Bank, for many years one of the most successful institutions of its kind in the country. Since 1859 he has been one of the most prominent directors of the Rensselaer & Saratoga Railroad Company, which during this period has extended its lines and has become of so much importance and value.
Mr. Gale was elected trustee of the Institute in 1860, and still holds the position. He has always been deeply interested in its prosperity and well being, as evinced by his willingness to devote his time, influence and means for maintaining its high standing and increasing its facilities for usefulness.

He married Caroline DeForest, a daughter of Benjamin DeForest, a prominent New York merchant—deceased in 1850—who died in 1864. Seven children, four living, one of whom, Edward Courtland Gale, was graduated at the Institute in 1883.

Hon. William Gurley, C. E., son of Ephraim and Clarissa (Sharp) Gurley, was born in Troy, N. Y., March 16th, 1821. He received the best education afforded by the schools in this vicinity, and choosing the profession of a civil engineer, attended the Rensselaer Polytechnic Institute, from which he was graduated, with the usual honor, in 1839. After following the business of a surveyor for some years, he turned his attention to the manufacture of the instruments with whose use he was already familiar, learning the business in the shop of Mr. Hanks, then a well-known maker of surveying instruments and church bells, in the city of Troy. He remained five years with Mr. Hanks, and entered into partnership with Jonas H. Phelps, in 1845, and with him prosecuted the same business much more extensively for the next seven years, at the end of which time the firm was changed by the withdrawal of Mr. Phelps, and the accession of his brother, L. E. Gurley. The new firm, under the name of W. & L. E. Gurley, at once greatly increased their facilities, and for the past thirty years they have been by far the most extensive manufacturers of engineers' and surveyors' instruments in the United States. But few years of his mature life has passed free from the cares of public office, and he has ever been interested in, and a liberal contributor to, the educational and religious institutions of the city. For many years he was connected with the Young Men's Association, and in 1851 was elected its president. As alderman of his native ward, he served with general acceptance from 1860 to 1864, and as fire commissioner he helped, in 1861, to inaugurate the greatly improved system now so much approved in all our larger cities. In 1867 he represented the city of Troy in the State Legislature, and was a member of the committee on the
affairs of cities. As a recognition of the mechanical ability of
Mr. Gurley, he was, in 1868, appointed by the Secretary of the
Treasury to act on a commission, in connection with Prof.
Henry and other scientific experts, in examining the best meter
devised for determining the products of distillation, to be subse-
quently adopted by the department.

Mr. Gurley is one of the oldest trustees of the Rensselaer
Polytechnic Institute, having been elected in 1855. He was
secretary of this institution from 1861 to 1872, and has been
vice-president since 1872. He has been a trustee of the Troy
Female Seminary for many years, and in 1872, when its
existence was imperiled, he appeared before the Common
Council of the city, and obtained a resolution giving power
to purchase the same within one year. By the personal efforts
of himself and brother, the amount of fifty thousand dollars
was raised and paid to the city within the specified time.
He was one of the directors of the old Market Bank of Troy,
until it was closed, and was elected president of the National
Exchange Bank in 1877, and enjoying the confidence of the
community as well as that of the stockholders, he was enabled
to retrieve its losses and close up its affairs with a success which
has been rarely witnessed in any similar undertaking.

Mr. Gurley married Maria R. Kenney, daughter of Cyrus
Kenney, of Troy, N. Y. Five children.