IS A CAPTAIN OF INDUSTRY NOW

CHARLES P. STEINMETZ'S RISE AS AN ELECTRICAL ENGINEER.

Came Here in the Steerage Fourteen Years Ago a Refugee From Germany and Worked at $2 a Day—Now One of the Leaders in His Profession—His Strenuous Student Days in Germany.

SCHENECTADY, March 7.—When the 100 Captains of Industry were invited to meet Prince Henry in this city, the name of Charles P. Steinmetz upon the list attracted attention mainly because he was known to few of the newspaper-reading world. He had not been identified in any manner with the striking revolution in business methods brought about by the trusts, nor had he taken part in the organization of any of these combinations of capital.

Nevertheless he was by every consideration entitled to a seat among these mighty men of manufacture and commerce, not by reason of his wealth or his executive ability, but because of the great work he had done and is still doing toward the development and advancement of the science of electricity, both upon its theoretical and its practical side. Although but 37, it is safe to say that few men have reached, or can hope to reach, the eminence Prof. Steinmetz has attained in the fascinating field of electrical research.

His position with the General Electric Company, whose gigantic plant here is

CHARLES P. STEINMETZ.

typical of the strides made in the practical application of electricity in the past decade, would be hard to define. Ask one of the thousand young electricians here:

"Who is Steinmetz and what does he do?"

The chances are 100 to 1 that the answer will be something like this:

"Why—er—why—he's Steinmetz."

Ask in the office, where nearly a thousand persons are employed, and the heads of the great departments will tell you that he is the consulting electrical engineer of the corporation and that no electrical project of any magnitude is undertaken without first seeking his advice. You will get probably the additional information that he is the most wonderful mathematical genius of the age.

Ask Prof. Steinmetz himself and he will assure you that he has no set title or distinct place in the system under which the affairs of the company are administered. He is the one freelance in the plant.

He refuses to be tied down to any certain line of work or to be burdened with details of any kind. Yet he is a tireless worker.

When he leaves the magnificently equipped research laboratory at the plant it is but to take up again the task on which he is engaged in the laboratory at his home. Here he labors far into the night surrounded by the implements and mechanism so dear to the heart of the thorough electro-chemist.

His income is large, larger, in fact, than his needs, yet he came to his country only fourteen years ago, a penniless German scholar, and toiled for $12 a week in the draughting room of a small electrical manufacturing concern. Then he knew no English and was ignorant alike of the manners and customs of this country. His rise in the world has been little short of marvellous, when it is considered how great were the handicaps under which he worked.

His career in his native land was romantic and strenuously active. He was born at Breslau, where his father was in the Government railroad service.

After graduating from the high school he entered the Breslau University with the intention of making mathematics a life study and gaining, perhaps, a professorship in that branch of science. Being eager for knowledge, however, he did not confine himself to one study, but took up astronomy and physics, in both of which he soon became proficient.

Later he studied chemistry and afterward went into electrical engineering in order to help along a friend. He also delved into theoretical medicine, sociology and political economy.

In this way he became acquainted with theoretical socialism, which was then beginning to take a great hold on the German cities and seats of learning in spite of the zeal of the Government to suppress it. The laws against socialism were very rigid and the penalties severe; nevertheless the cult spread with wonderful rapidity, catching in its train thousands of educated men in and out of the universities. Prof. Steinmetz was one of the victims. He joined one of the student clubs at the Breslau University and entered into the cause with all the ardor of his nature.

When an editor of a weekly socialist paper was sent to jail for his extreme views Steinmetz took his place for seven weeks. The paper had a circulation of 12,000 and the novelty of editing it and writing freely for its columns charmed the young student.

But his joy was short-lived, for the police got after the publication. In the edition that was confiscated two of the three articles on which the proceedings were based were written by the acting editor.

This paper issued a popular weekly scientific library and for it Steinmetz wrote a series on astronomy. Subsequently this work was issued in bound form and it has since had a tremendous sale, going through many editions. He also took a hand in the editing of two other publications of socialistic tendencies but he never got very far with the work because of the unremitting activity of the police.

Then still another political paper was started with Steinmetz at the helm. The first difficulty was to find a responsible editor as he, being a student, could not fulfil the requirements of the law by signing as such. At last a Pole who kept a small store agreed to assume the responsibility, although he could barely read or write and had the greatest difficulty in signing his name.

In the meantime the police had instituted an active campaign against the student socialist clubs. They were held to be especially dangerous and no effort was spared to break them up. A system of espionage was initiated on both sides. The police watched the students and the students watched the police. Both were vigilant and active.

The new political paper was suppressed and the evidence of Steinmetz's connection therewith was sent to the authorities of the university. Disciplinary proceedings were instituted against him and hearing after hearing was held, but nothing came out of it.

The young editor was by far the most brilliant scholar at the university and the professors were all secretly on his side. As there was a new president elected every year it was never possible to finish the matter in the term of office of any one. Fresh proceedings had to be inaugurated under each and so they dragged along without definite conclusion.

Meanwhile, Steinmetz continued actively to espouse the cause of socialism. Finally, his trial at the university was dropped and proceedings were begun against him by the public prosecutor of Breslau.

Through the watchfulness of his fellow students he was able to learn in advance that his arrest had been decided upon and he concluded to take a trip to the Austrian frontier to visit a friend. By way of assuring the authorities of his native town that he had no intention to remain away permanently he bought a return ticket.

This move probably prevented his instant arrest, as the police seemed to rest content in the belief that no citizen of thrifty Germany would be so foolish as to waste money on a return ticket unless he intended to use it. But the young scholar, who had been destined for great honors at the university, never came back.

After remaining a short time with his friend on the frontier, he decided to make another excursion, this time into Austria. He went to Vienna, not troubling himself much about extradition, because he knew that the Austrian police were notoriously slow.

His next move was to Switzerland, where he studied a year in the Polytechnic at Zurich. He made the acquaintance of a student from San Francisco and went to live with him on the outskirts of the city.

His articles in various scientific and political papers brought in a sufficient income to keep him in comfort and he had plenty of time to take lessons in steam engine designing and to study mechanical engineering. It was while there that he wrote his first great article on electricity for the *Elecktrotechniche Zeitschrift*, the leading technical paper of Germany.

He also prepared his thesis on the polydimension of space for his graduation at the university at Breslau, for he fully intended to go back and win the prize of 150 marks when the trouble into which his socialistic predilections had gotten him should blow over. A professorship in Zurich was out of the question, as the country was already overcrowded with native scholars and the Government did not look with favor upon educated foreigners settling there.

About this time Steinmetz's American chum fell in love with a Swiss girl of good family, but no fortune. His uncle in San Francisco, with whom he lived, forbade the match and ordered the lovesick youth home. Steinmetz determined to go with him and try his fortune in the Western world.

Their last night in Zurich was given over to a celebration of their prospective departure. The feast was spread in their room and extended into the small hours. So when the editor of the *Elecktrotechniche Zeitschrift* called in state upon Steinmetz the next morning the young scholar was not in readiness to receive him, being still in bed dreaming of the scientific conquests he would make in America. Nevertheless, before the great editor left he appointed Steinmetz American correspondent of his paper.

The young men came over on a French liner, Steinmetz in the steerage, where he spent most of his time in picking up what he could of the English language. He bore several letters of introduction to electricians in New York, but he had no success in obtaining employment until he met Rudolph Eickemeyer, himself a distinguished inventor and a pioneer in the field of electrical research in America. He had made a fortune in other lines and the electrical work he did was mainly for the love of it.

Steinmetz was set at work in the draughting room of the Eickemeyer plant and his remuneration was fixed at $2 a day. But his marvellous ability was soon recognized and presently his name began to be known in the electrical world. Especially did he distinguish himself by a series of papers which he wrote for the *Elektrotechnische Zeitschrift* on the theory of alternating currents.

He made exhaustive scientific investigations into the subject of electric motors for elevators and the methods of controlling them and with the aid of the knowledge thus gained Eickemeyer took out many patents. Steinmetz grew very fond of his employer and even to-day he speaks in the highest terms of his ability as an electrician and an inventor.

He remained with him four years, at the end of which period the Eickemeyer plant was bought by the General Electric Company. Steinmetz went to Lynn to work for that corporation in 1893 and remained there until the following year, when he was transferred to Schenectady where he was better able to follow out the experiments he had under way.

His dream had always been of a great laboratory where he might pursue under the most favorable circumstances his investigations into the wonderful phenomena of electricity, particularly those relating to polyphase currents, in which branch of the science he is now recognized as the first authority of the world. His first work to establish it was done in the barn attached to his residence, where he slowly built up a laboratory of no mean equipment.

But a fire one night destroyed all his apparatus. Then it was decided to build the great laboratory at the works which was constructed, and is now under the direct management of Dr. Whitney, a well-known electro-chemist. There Prof. Steinmetz spends the greater part of his time while at the plant.

It is a vast place, occupying two floors, and from it visitors are rigidly excluded. It is looked upon as the holy of holies of the concern. In it are constantly employed twenty electro-chemists and electrical engineers, whose experiments cover a wide range. It contains a fine scientific library and once a week the men who labor there come together for a general discussion of their work.

Prof. Steinmetz is now building a new home here. The first part to be constructed was his new private laboratory. Next came the conservatory in which are displayed more than a hundred specimens of cacti. It is lighted by mercury arc lamps, and the effect is akin to fairyland. In this light there is no red, but other colors are intensified so that the plants appear to be greener than they are in daylight.

Prof. Steinmetz is a firm believer in the future of the mercury lamp. He has recently given much of his time to experimenting with a view to overcoming the serious loss of electrical efficiency in both the incandescent and arc lights. In a recent article on the subject he said:

While the electric motor is rapidly replacing all other methods of power transmission and distribution, due to its greater economy, electric power when used as a source of light is still at a disadvantage regarding economy. That is, as a rule electric power is more expensive than gas or kerosene, and the extensive use of electric light is due rather to its greater convenience, reliability and cleanliness than to its economy.

This follows from the fact that the efficiency of producing light from electric power is extremely low, below [illegible] per cent. in the most efficient carbon arc lamp and something like 3 per cent. in the incandescent lamp and the Nernst lamp.

It is obvious then that if the efficiency of light production could be raised to figures even half as high as that of power production, the electric light would sweep every other illuminant out of existence by its greater economy. These considerations led me some years ago to undertake a systematic research into the method of conversion of electric power into electric light.

From the mercury lamp Prof. Steinmetz estimates that as much light of a better quality can be obtained with one-half the power as from the ordinary carbon arc. A similar advance in incandescent lighting is the result of his new Meridian lamp, just perfected in the General Electric laboratory. In this laboratory there are also new arc lamps based on entirely new principles, in which a flame similar to gas is produced in an elongated arc. The light contains all the colors of the solar spectrum and under its rays the most delicate shade of color may be matched.

The one drawback to the mercury lamp is the fact that there is no red in it. If too strong it appears to make the cheeks, lips and ears show purple. It may never be popular for house lighting. Nevertheless, Prof. Steinmetz declares that it is of enormous commercial value and that as it is the easiest light on the eyes known to man, it is bound to be of great use in many places, such as newspaper offices, where so much work is done under artificial light.

A vital improvement in the mercury lamp was made by Dr. Weintraub of the General Electric laboratory. The great difficulty in its use was found in starting. The method used by Dr. Arons and other investigators was to send a high-voltage discharge of several thousand volts through the vacuum tube, thus breaking down the vacuum.

This difficulty was overcome by a very ingenious device developed by Dr. Weintraub, which permits the starting of the mercury arc by means of a small auxiliary arc without any increase of voltage over that at which it operates normally.

But to return to Prof. Steinmetz. Since coming to this country he has taken out no fewer than 100 patents, most of them on devices used in connection with alternating currents. Besides his work for the General Electric Company he is professor of electrical engineering at Union College and a member of the commission appointed by Gov. Odell to establish a laboratory for the purpose of constituting standards and establishing calibration for electrical apparatus, to carry on experiments and research, to encourage development commercially and scientifically of electrical devices, methods and principles. A bill appropriating $275,000 for the erection of the laboratory on a site not yet chosen has just been introduced into the Legislature by Senator McEwan.

Prof. Steinmetz now writes in pure and vigorous English. His views on socialism have been materially modified since settling in this country. In fact, he does not believe that the system would be practicable here where every man, no matter what his surroundings or his birth, has a chance to rise in the world.

He is a naturalized citizen and keenly interested in the public affairs of the land of his adoption. He was president of the American Institute of Electrical Engineers from 1901 to 1902.

MUSIC AND MUSICIANS.

Adelina Patti is actually coming to this country again. She will be amazed at the changes and developments in musical knowledge with which she will be confronted, provided she goes anywhere outside of her own concerts. If she does not, she will know nothing about them. Patti audiences in America will be composed almost wholly of people who wish to see the celebrated singer, not to hear her. About 10 per cent. of each audience will consist of persons who believe in the "Home Sweet Home" tradition, and have travelled many weary miles to have Patti make them cry.

The entire name of this singer is Adela Juana Maria Patti, and she was born in Madrid on Feb. 10, 1843, so that she was 60 years of age last month. She made her début at the old Academy of Music in this city on Nov. 24, 1859, as *Lucia*, the flute lady. She bade New York farewell in 1894, when she sang at Carnegie Hall on March 16. She then sang Eckert's "Echo Song," and for encores Tosti's serenade and "Home, Sweet Home."

In the second part of the entertainment she appeared in a little one-act opera, which had been composed expressly for her. The name of it was "Gabriella" and the composer was Emilio Pizzi. In this opera Mme. Patti appeared as a poor orphan, a rôle which she assumed with life-like fidelity. She has now been an orphan a long time, but she has ceased being poor. She is, however, still astonished when flowers are handed to her across the footlights. It is beautiful to be forever young.

Mme. Roger-Miclos went to the Kneisel Quartet concert the other night and sat with an expression of bored toleration on her countenance. No doubt it was hard for her to endure such playing, so different in style from her own. Also she wore a hat, and observant humans at once knew why she trimmed herself up in Greek style for concert appearances. Without the Psyche knot Mme. Roger-Miclos is not even early English. She needs the atmosphere of Roman courts, of bare-headed patios and fountained gardens. Also she needs a whole lot of perspective, and that cannot be obtained in Mendelssohn Hall.

She was accompanied by a tall blonde young woman, with a swaying walk and a sternly forbidding countenance, supposed erroneously to be her press agent. Press agents should always be winsome, and should never glare at people.

Speaking of press agents, the person who uses the megaphone for Mr. Duss loudly proclaims that Edouard De Reszke is going in for white-front performance for the first time. THE SUN'S omnivorous commentator on theatrical doings, who gathers into his fold all fish and fowl, has already bruited his recollection of a charity concert at which the ponderous Pole appeared in a vast expanse of snowy bosom; but that is not all.

Little Edouard has sung at several weddings, he has officiated at musicales, and has "concertized," as the unmusical papers say, in several ways, but that does not complete the utter whiteness of his record. He has sung at Sunday night concerts in the Metropolitan Opera House. Mr. Grau used to let him show himself thus about once a season and announce it as his only concert appearance. Jean, the subtle brother, never disclosed the secrets of his top hair in concert. If Mr. Duss could catch him and lead him to the sacrifice, he might let his megaphone man shout as loudly as he pleased.

There is no truth in the rumor that Carrie Bridewell is studying *Brangaene* in "Tristan und Isolde." Nor is there any truth in the report that she is making herself letter perfect in *Fides* in "Le Prophète." As far as can be discovered, Miss Bridewell is not studying anything, not even how to sing.

A kind and thoughtful lady writes to the music reporter of THE SUN to say that she thinks the buxom Carrie's voice is all frayed out in the upper register and that the curvilinear contralto sings out of tune about as actively as any of the rest of them. Alas! all true, all true. But, nevertheless, the winsome Carrie has a beautiful voice. The only trouble is that she is unacquainted with the approved methods of using voices and just uses hers any old way, except the old Italian way.

Singers often are at a loss to find copies of well-known songs in the original keys. The common sheet music prints have them for high voice or low voice, soprano or alto. Men sing them from these prints, tenors using naturally the soprano copy and baritones the alto. But the original keys of the songs become lost to sight.

The John Church Company of Cincinnati is doing a good thing in publishing collections of famous songs of different characters in the original keys. They have issued famous songs by the great song writers, and also collections of songs from operas and oratorios.

The printing of collections of different sorts is going on actively just now. The Ditsons and Schirmers are also at it and each of these houses have turned out some valuable libraries of good music.

There is a story afloat that Paderewski has sold his farm in Poland. He said it didn't pay. Poor Paderewski! The truth is that he had tangled himself all up in a sort of universal charity enterprise and he could not stand the pressure.

When he bought the estate he began sending his poor relatives to it as a sort of easy asylum. It was not long till he had some ten or twelve of them there. Of course, not a mother's son of them would lift a finger. They all expected to be supported by the princely pianist in ease and luxury. Now it does not make a whit of difference how good a pianist a man is, he must play a great many recitals to big houses to support a large estate with a dozen lordly gentlemen of leisure upon it.

These people will drink milk, and every one knows that milk costs as much as champagne to a gentleman farmer. So wonder Paderewski sold his farm. How could he afford to compose operas under such conditions?

STATUES TO GREAT AMERICANS

MEMORY OF THE DEEDS OF THESE LIVES AFTER THEM.

Never a List of Our Nation Builders Has Yet Been Printed, but Here Is One as Complete as Search Can Make It—A Work That Edward S. Holden Has Done.

About a year ago the United States Military Academy was celebrating its one hundredth birthday. It was founded in 1802 and since that time many of its 4,000 graduates have become celebrated in one way or another. They have been Presidents, Cabinet Ministers, Senators, Ambassadors, members of Congress, Governors of States and Territories, presidents and professors of colleges, builders and managers of railways and canals, Judges, clergymen, bankers, editors and authors in civil life—and good, true and steady soldiers in all our wars.

Our continent was opened to settlement by explorers, many of whom were from this school; the dragoons of early days joined with hardy pioneers to make the frontiers safe and peaceful; the railway routes that unite the East and West were explored and surveyed by graduates, and the first railways of this country, and some of the most important of other countries, were built by them. Our marvellous network of rivers has been improved by their skill. Harbors and lighthouses constructed by them make the navigation of our seas and lakes secure. Our national domain is divided into homesteads by their system. In the arts of peace no less than in war they have been eminent among their fellow citizens.

At the time of the centennial of the academy Dr. Edward S. Holden, Librarian of the Academy, and himself a graduate, set out to make a list of the memorial statues that had been erected to graduates of the Military Academy, supposing that the task would be simple. The guide books should, it would seem, give full lists of the statues of each city, and a little research ought to discover those in smaller places. At the very beginning of the task it became evident that the preparation of such a list was no simple matter. The present one is the result of many months of searching of books, of inquiries by letter, of questions sent to the foundries where bronze statues are cast, &c. It is by no means complete, but Dr. Holden's inquiries have made it certain that it will be of use even in its present state. Additions and corrections to the list will be thankfully received by the compiler.

The catalogue that follows contains the name and a brief description of each portrait memorial statue known to him. It is probably very nearly exhaustive for the graduates of West Point, but it is far from complete for the statues of the celebrated men of the whole country.

TENTATIVE LIST OF THE PORTRAIT STATUES OF FAMOUS AMERICANS.

(Arranged alphabetically.)

Anderson (Robert H.); U. S. M. A., 1857 bronze bust by ——, in cemetery at Savannah, Ga.

Arthur (Chester A.); bronze seated statue by ——, in Union Square, N. Y. city.

Breckinridge (C. H.); General C. S. A.; bronze statue by E. V. Valentine, in Lexington, Ky.

Bryant (William Cullen); bronze bust, Bryant Park, New York city.

Buford (J. B.); U. S. M. A., 1827; bronze statue by J. E. Kelly, in Gettysburg, Pa.

Buford (N. B.); U. S. M. A., 1827; statue by ——, Chambersburg pike, at Gettysburg, Pa.

Burnside (A. E.); U. S. M. A., 1847; bronze (equestrian) statue by Thompson, in Providence, R. I., erected 1887.

Carr (Major-Gen Joseph Bradford); bronze portrait medallion by John F. Brines, in Oakwood Cemetery, Troy, N. Y. (1900.)

Clark (George H.); bronze statue by J. H. Mahoney, at Indianapolis, Ind.

Clark (George Rogers); standing statue by ——, in Monument Place, Indianapolis; erected 1895.

Clinton (General); bronze statue by H. K. Bush-Brown, in Newburgh, N. Y.

Clinton (George); bronze standing statue, by J. Massey Rhind, Broadway and Exchange place, New York city.

Cobb (Howell); statue at the Confederate Monument, Augusta, Ga.

Columbus (Christopher); bronze statue, The Circle, New York city.

Conkling (Roscoe); bronze statue, seated, Madison Square, New York city.

Corse (T. M.); bronze equestrian statue by Carl Rohl Smith, at Des Moines, Ia.

Cox (S. S.); standing statue by ——, Lafayette place, N. Y. city.

Curtis (S. R.); General U. S. A., 1831; bronze equestrian statue by Carl Rohl Smith, at Des Moines, Ia.

Davis (Jefferson); U. S. M. A., 1828; bronze statue, by G. J. Zolnay in Richmond, Va.

Davis (Jefferson); U. S. M. A., 1828; small copy of a plaster portrait bust made during the Civil War, by ——; owned by the Virginia Historical Society, Richmond, Va.

De Peyster (Col. Abraham); bronze statue, by G. E. Bissell, in New York city.

Dodge (Gen. Henry); bronze equestrian statue, by Carl Rohl Smith, at Des Moines, Ia.

Dodge (William E.); bronze standing statue, Broadway and Thirty-fourth street, New York city.

Dupont (Admiral S. F.); statue, Dupont Circle, Washington, D. C.

Ellis ——; standing statue, by ——, Gettysburg.

Ericsson (John); bronze standing statue, by J. S. Hartley, Battery, New York city.

Everett (Edward); bronze statue, Public Gardens, Boston, Mass.

Farragut (D. G.); bronze standing statue, by St. Gaudens, in Union Square, New York city.

Farragut (Admiral D. G.); statue, 17th and I sts., n. w., Washington, D. C.

Farragut (Admiral); bronze statue (standing figure), by C. H. Niehaus, at Hackley Park, Muskegon, Mich.; the gift of the Hon. Charles Hackley (1900).

Franklin (Benjamin); statue, Penn av. and 10th st., Washington, D. C.

Franklin (Benjamin); bronze standing statue, by Ernst Plassman, Printing House Square, New York city.

Garfield (General); bronze statue, bronze bust by Augustus St. Gaudens, in Philadelphia.

Garfield (General); bronze statue, by J. Q. A. Ward, in Washington, D. C.

Gates (Maj.-Gen. H.); bronze statue, by G. E. Bissell, in Saratoga, N. Y.

Grant (U. S.); U. S. M. A., 1843; bronze statue, heroic size, by Lorado Taft, at Fort Leavenworth, Kan.

Grant (U. S.); U. S. M. A., 1843; bronze statue, heroic size, by Robert Bringhurst, at St. Louis, Mo.

Grant (U. S.); U. S. M. A., 1843; bronze statue, heroic size, by J. Gelert, at Galena, Ill.

Grant (U. S.); U. S. M. A., 1843; bronze statue (standing), by J. Massey Rhind, in Muskegon, Mich.; gift of Charles Hackley.

Greeley (Horace); bronze seated statue, by ——, Broadway, 33d st., New York city.

Greeley (Horace); bronze seated statue, by J. Q. A. Ward, Printing House Square, New York city.

Hale (Nathan); bronze standing statue, by Macmonnies, in City Hall Park, New York city.

Halleck (Fitz Greene); bronze statue, by Wilson MacDonald, Central Park, New York city.

Hamilton (Alexander); granite standing statue, by Charles Conradts, Central Park, New York city.

Hancock (W. S.); U. S. M. A., 1844; bronze equestrian statue, by ——, Cemetery Hill, at Gettysburg.

Hancock (W. S.); U. S. M. A., 1844; bronze statue, by J. Q. A. Ward in Philadelphia, Pa.

Harrison (Gen. W. H.); bronze statue, by J. H. Mahoney, at Indianapolis, Ind.

Hartranft (General); bronze statue (equestrian), by F. W. Ruckstuhl, in Harrisburg, Pa.

Henry (Joseph); standing statue, Smithsonian Institution, Washington, D. C.

Hill (A. P.); U. S. M. A., 1847, statue by [illegible], in Richmond, Va.

Hill (D. H.); U. S. M. A., 1842, statue by ——, at Atlanta, Ga.; unveiled [illegible].

Holley (Alexander L.); bronze bust, Washington Square, New York city.

Hudson (Henry); bronze standing statue, by J. Massey Rhind, Broadway and Exchange place, New York city.

Hughes (Archbishop); bronze statue, by W. R. O'Donovan, St. John's College, Fordham, New York city.

Hunt (Richard Morris); bronze portrait medallion, Fifth avenue and Seventieth street, New York city.

Irving (Washington); bronze bust, Bryant Park, New York city.

Jackson (Andrew); bronze statue (equestrian), by Clark Mills, Lafayette Square, Washington, D. C.

Jackson (T. J.); U. S. M. A., 1846; statue at the Confederate Monument, Augusta, Ga.

Jackson (T. J.); U. S. M. A., 1846; statue by ——, at Lexington, Va.

Jackson (T. J.); U. S. M. A., 1846; bronze statue (life size), by —— in Richmond, Va.

Kearny (Philip); bronze statue, by H. K. Bush-Brown, in Washington, D. C.

Kearny (Gen. Phil); bronze statue, by H. K. Bush-Brown, in Muskegon, Mich.

Lafayette (Marquis de); bronze statue, by J. Q. A. Ward, in Burlington, Vt.

Lafayette; bronze standing statue, by Bartholdi, Union Square, New York city.

Lafayette; bronze statue, by Bartholdi, Lafayette Square, Washington, D. C.

Lee (R. E.); U. S. M. A., 1829; bronze equestrian statue, granite base, by —— in Richmond, Va.

Lee (R. E.); bronze bust on a marble column, by Alexander Doyle, in New Orleans, La.

Lee (R. E.); U. S. M. A., 1829; recumbent marble statue, by Edward Valentine, in the chapel of Washington and Lee University, Lexington, Va.

Lee (R. E.); U. S. M. A., 1829; statue at the Confederate monument, Augusta, Ga.

Lincoln (Abraham); bronze statue (seated figure), by C. H. Niehaus, at Hackley Park, Muskegon, Mich.; the gift of the Hon. Charles Hackley. (1900.)

Lincoln (Abraham); bronze statue, heroic size, by L. W. Volk, at Rochester, N. Y.

Lincoln (Abraham); bronze statue, standing, Park Square, Boston, Mass.

Lincoln (Abraham); statue; Judiciary Square, Washington, D. C.

Lincoln (Abraham); marble statue, by Vinnie Ream (Hoxie), in Washington, D. C.

Lincoln (Abraham); bronze standing statue, by H. K. Browne, Union Square, New York city.

Lincoln (Abraham); bronze statue (seated); Lincoln breaking the chains of the slaves erected by the contributions of negroes (April 14, 1876), in East Capitol street, Washington, D. C.

Lincoln (Abraham); bronze statue (standing), by Augustus St. Gaudens; Lincoln Park, Chicago.

Logan (Gen. John A.); statue; Iowa Circle, Washington, D. C.

Logan (Major-General); bronze (equestrian) statue, by Augustus St. Gaudens, in Chicago, Ill.

Lindesmith (Rev. E. W. J.); chaplain U. S. A.; bronze memorial tablet by Ora Coltman, erected at Dungannon, Ohio.

Marshall (John); statue; west entrance to Capitol, Washington, D. C.

McClellan (G. B.); U. S. M. A., 1846; bronze statue, by P. W. Bartlett, in Philadelphia, Pa.

McLaws (Lafayette); U. S. M. A., 1842; bronze bust (heroic size), by —— on a granite pedestal, in Savannah, Ga.

McPherson (James B.); U. S. M. A., 1853; statue, McPherson Square, Washington, D. C.

Meade (G. G.); U. S. M. A., 1835; statue by ——, at Fairmount Park, Philadelphia; unveiled 1887.

Meade (G. G.); U. S. M. A., 1835; bronze (equestrian) statue; by A. M. Calder, in Philadelphia, Pa.

Meade (G. G.); U. S. M. A., 1835; equestrian statue; by ——; Gettysburg battlefield.

Morse (S. F. B.); bronze statue, by Byron M. Picketts, Central Park, New York city.

Patterson (Major-Gen. John); monument; in Lenox, Mass.

Penn (William); bronze standing statue, on City Hall, Philadelphia.

Pepper (George W.); Chaplain Eightieth Ohio Volunteer Infantry, Chaplain Fortieth U. S. Infantry; bronze memorial tablet, by Joseph Carabelli; erected at Lake View Cemetery, Cleveland, Ohio.

Pierson (Henry L.); bronze bust, corridor of the Post Office, New York city.

Porter (Fitz John); U. S. M. A., 1845; bronze statue (heroic size); by J. W. Kelly; to be erected at Portsmouth, N. H.

Procter (General); bronze, equestrian statue; by Carl Rohl Smith, at Des Moines, Ia.

Putnam (Major-Gen. Israel); bronze equestrian statue, by Karl Gerhart, in Brooklyn, Conn.

Rawlins (Gen. John A.); bronze standing statue; Market Space, Washington, D. C.

Reynolds (J. F.); U. S. M. A., 1841; standing bronze statue, by ——, in the cemetery Gettysburg.

Reynolds (J. F.); U. S. M. A., 1841; bronze equestrian statue; ——, Gettysburg battlefield.

Scott (Gen. Winfield); bronze equestrian statue, by H. K. Brown, Scott Square, Washington, D. C.

Scott (Winfield); bronze statue (standing), by Thompson; at the Soldiers' Home, Washington, D. C.

Sedgwick (John); U. S. M. A., 1837; bronze standing statue, by Launt Thompson, at West Point.

Sedgwick (John); U. S. M. A., 1837; bronze and granite memorial by J. J. Hawley; at West Cornwall, Conn. (1899.)

Seward (W. H.); bronze seated statue, by ——, in Union Square, New York city.

Shaw (Robert G.); bronze memorial group, by St. Gaudens, Boston Common. (Portrait equestrian relief.)

Sheridan (Philip H.); U. S. M. A., 1853; bronze equestrian statue, by J. Q. A. Ward, in Washington, D. C.

Sheridan (P. H.); U. S. M. A., 1853; bronze portrait medallion, by Samuel J. Kitson, on granite monument in Arlington National Cemetery, Washington, D. C. (Cast in 1889.)

Sherman (W. T.); U. S. M. A., 1840; statue by Niehaus; at ——.

Sherman (W. T.); U. S. M. A., 1840; bust by A. St. Gaudens, at ——.

Sherman (W. T.); U. S. M. A., 1840; bronze statue (standing), by J. Massey Rhind, in Muskegon, Mich.; gift of the Hon. Charles Hackley.

Shields (Gen. J. H.); bronze statue, by S. W. Volk; at Washington, D. C.

Sims (Marion, M. D.); bronze statue, Bryant Park, New York city.

Slocum (Henry W.); U. S. M. A., 1852; bronze equestrian statue, by Macmonnies; erected in Brooklyn, N. Y., in 1902.

Stannard (General); bronze statue, by Karl Gerhardt, in Gettysburg, Pa.

Stannard (General); standing statue, by ——, Gettysburg.

Stuart (J. E. B.); U. S. M. A., 1854; a monument erected at the spot where he fell, on Brook turnpike, six miles from Richmond, Va.

Stuyvesant (Peter); bronze standing statue, by J. Massey Rhind, Broadway and Exchange place, New York city.

Sumner (Charles); bronze statue, standing, Public Gardens, Boston, Mass.

Thomas (George H.); U. S. M. A., 1840; bronze equestrian statue, by J. Q. A. Ward, in Thomas Circle, Washington, D. C.

Vanderbilt (Cornelius); bronze bust, New York Central freight station, St. John's Park, New York city.

Vincent (Strong); bronze standing statue by ——, Little Round Top, Gettysburg.

Walker (W. H. T.); U. S. M. A., 1837; statue at the Confederate monument, Augusta, Ga.

Walker (W. H. T.); U. S. M. A., 1837; statue at Atlanta, Ga.

Warren (G. K.); U. S. M. A., 1850; bronze statue, by ——, in Gettysburg, Pa.

Warren (G. K.); U. S. M. A., 1850; bronze standing statue by ——, on Little Round Top, Gettysburg.

Warren (General); died 1775; bronze statue, by Paul W. Bartlett in Boston, Mass.

Washington (George); marble statue (seated), by Greenough, east front of the Capitol, Washington, D. C.

Washington (George); bronze statue (standing), by J. Q. A. Ward, Wall street, N. Y. city.

Washington (George); bronze statue, by O'Donovan (copy of Houdon's Washington), at headquarters, Newburgh, N. Y.

Washington (George); marble bust, by Bartolini, in Metropolitan Museum, New York city.

Washington (George); statue, by Houdon, erected in Richmond, Va.

Washington (George); equestrian statue, by Ball, erected 1869, in Boston, Mass.

Washington (George); statue, by ——, erected Feb. 22, 1879, in Newburyport, Mass.

Washington (George); bronze equestrian statue, by Clark Mills, unveiled Feb. 22, 1860, Washington.

Washington (George); bronze equestrian statue, by D. C. French and E. C. Potter; the gift of the women of America to France; Place d'Iena, in Paris; erected 1900; a replica to be erected in Chicago.

Washington (George); bronze equestrian statue, by H. K. Brown; erected in Union Square, New York city, July 4, 1856.

Washington (George); statue (of wood, 1814) and bust (of clay), by William Rush (modelled from life), in Philadelphia.

Washington (George); statue by J. Q. A. Ward in Newburyport, Mass.

Washington (George); statue by Joseph Bailey, in front of Independence Hall, Philadelphia, unveiled July [illegible], 1869.

Washington (George); statue by Edward Sheffield Bartholomew (1857), in Druid Hill Park, Baltimore.

Washington (George); bronze copy of Houdon bust, Riverside Drive, New York city.

Washington (George); statue by Sir Francis Chantrey, in State House at Boston.

Washington (George); wax statue by Mrs. Patience Lovell Wright, modelled from life.

Washington (George); bust by Giuseppe Ceracchi, in Corcoran Gallery of Arts, at Washington, D. C.

Washington (George); bust by John Eckstein (1796); modelled from life; owned by J. C. McGuire, Washington, D. C.

Watts (John); statue by George W. Bissell, Trinity Churchyard, New York city.

Webster (Daniel); bronze standing statue, by Thomas Ball, Central Park, New York city.

Wickham (W. C.); C. S. A.; bronze statue, by E. V. Valentine in Richmond, Va.

Wolfe (Gen. James); bronze standing statue, by J. Massey Rhind, Broadway and Exchange place, New York city.

HELLBENDERS AWAKE.

They Sit Up and Take Notice After Their Long Winter's Sleep.

The hellbenders at the Aquarium came to the surface for air on Wednesday last, March 4, for the first time since they settled on the bottom of their tank, late last fall, for their annual period of hibernation.

To let some water in [illegible] settle a little in their tank the circulation in it on that day was temporarily cut off, with the result that, with no continuing inflow of cold water, the water in the tank rose with the temperature of the building, from [illegible] degrees to [illegible], at which comparatively genial warmth the sluggish salamanders began to take notice, and pretty soon they came to the top for their first breath in more than three months, and their period of hibernation was over.

The LATEST OPERATIC HITS

Are all obtainable for the PIANOLA. Here are a few from the March Bulletin:

SULTAN OF SULU:
- Since I First Met You
- The Smiling Isle (Sung by Mr. Moulan)
- Hike, Soldiers' Song
- March—My Sulu Lulu Lu

WEBER & FIELDS:
- I Never Loved a Man as Much as That (Sung by Fay Templeton)
- Little Widow Brown (Sung by Lillian Russell)

MR. PICKWICK:
- "Acting" (Sung by Marguerite Clark)

The February supplement contained
- When Samuel Pickwick Leads His Own Brigade
- Pickwick Club
- Boys Will Be Boys

SILVER SLIPPER:
- The Girl You Love (Sung by Edna Wallace Hopper)
- Tessie (Sung by Stanley Hawkins)
- Also "Carnations" Waltz

THE BILLIONAIRE:
- Moon Song—ensemble
- Glory (Sung by Julius Steger)
- My Little Pansy
- Here Comes Pansy—trio (Nellie Follis, Kelly & Kennedy)
- Billionaire March and Two-step.

WIZARD OF OZ:
- Sammy
- Rosalie, My Royal Rosie
- That's Where She Sits All Day (Montgomery & Stone)

MR. BLUEBEARD:
- Song Bird of Melody Lane
- Julie
- Beer that Made Milwaukee Famous (Dan McAvoy)
- Let Us Swear It by the Pale Moonlight (ensemble song)
- Pony Ballet Dance
- Hop, Hop, Hippety Hop

PEGGY FROM PARIS—the new Ade opera just produced in Chicago
- My Emmaleen
- I Like You Lil For Fair
- Henny

New dance music which is very popular and catchy:
- Pearl of the Harem—Oriental Rag two-step by Harry P. Guy
- Ping Pong Lanciers, arranged by Ben Jerome
- Dusky Maiden Two-step and Cake-walk. Spencer Morse

New songs specially good:
- Ching a Ling a Loo
- My Little Hong Kong Baby (sung in Chinese Honeymoon)
- Melinda's Rag-time Ball
- Sue, Sue, Raise Your Dreamy Eyes

The Pianola's self is not the question; the music it makes possible is the consideration. At present 9,106 selections are available for the Pianola and two hundred new numbers are added each month. Catalogues containing this list will be sent to any one interested.

The Aeolian Company, AEOLIAN HALL, 362 Fifth Avenue

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SPOOKS FIXED THE RENT.

One Tenant's Plan for Checkmating a Grasping Landlord.

In a part of the city of New York lying so far from the centre of life that it might almost be called the country, is a comfortable house that rents for a very small sum. Visitors wonder at the moderate price that the tenant pays and the neighbors, who are put to greater expense for less comfort, envy him. His landlord who has more reason to complain than any body else, hates him.

Only the tenant, revelling in the possession of a desirable house at a moderate rent, feels at peace with his neighbors and the rest of the world. He does not even object to the reputation of his house. The neighbors say it is haunted.

Far from contradicting them, he looks knowing but courageous whenever his ghosts are referred to. He has even been known to refer to them seriously. But usually he discusses the matter of the spooks only with his landlord, and then he talks to good effect.

After the tenant had rented the house for a term of years at a certain price, a lease was signed for only one year. But a verbal agreement was made that it was to continue for three years at the same price.

With that understanding, the tenant redecorated the house and made important changes in the interior arrangement. He had the house for several years at a small rent and was willing to make these changes.

But at the end of the first year the landlord denied making any verbal agreement, declaring that he remembered no agreement for a longer term and he demanded double the rent he had paid. This meant a total loss of his improvements to the tenant and a rent that he could not afford to pay. He had no witness to the verbal agreement and had depended entirely on the landlord's word.

He was discussing the situation with his wife one night when the sound of a creaking board in the hall startled them. He went to the door, looked out and saw the cook walking through the hall.

"Sounded as if the house were haunted," his wife remarked. "If it were, nobody would want it."

That was an inspiration. The landlord had not played the game fairly with him. He had a right to retaliate in any way possible. So he put on his hat and went to the borough police station only a short distance away.

There he complained of mysterious noises heard in the house, mentioned in particular the creaking of the boards in the hall as if some person were walking over them and asked what the police could do to help him out. A reporter happened in on his regular rounds, heard the story, went to interview the tenant and the next morning thrilled the readers of his paper with an account of the ghostly doings in this attractive house.

The landlord stormed and threatened. But he signed a lease and this time he made it for two years with no advance in rent.

The house is known to this day as haunted. The neighbors wonder why such a nice looking family should be content to live in a spooky house. There has been no more occasion to call in the police. But whenever the landlord shows signs of uneasiness, the tenant only has to write that the noises are again growing very objectionable and that he may have to call in the police.

Then the landlord gets angry and holds his peace.

JUST BY EATING.

Vegetables That Are Said to Aid the Health—Apples a Brain Food.

Girls who value a good complexion and cheerful spirits are advised to eat plenty of spinach. It contains salts of potassium and iron and other wholesome ingredients. The iron in it is easily assimilated. A vegetable not generally made much of by housewives because it is among the less expensive kinds, it is put in first place by the food experts and deserves more prominence in public esteem.

People troubled with poor memories are urged to eat mustard. The seed of the mustard plant is credited with very quickening, livening properties said to have direct influence on those brain cells that have to do with forgetting and remembering.

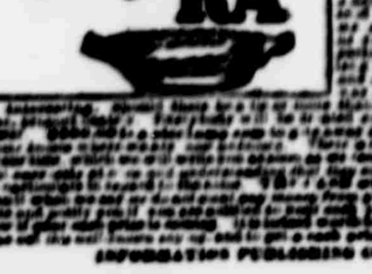
Nervous folks ought to partake often of cheese, which acts as a sedative. They should beware of eating cheese to excess, however, as it is a tax on the digestion. Only moderate consumption is efficacious.

A too steady diet of potatoes induces fatigue of both body and mind.

Apples are now held to contain much sustenance for the brain and to have an exhilarating effect on the spirits. Apples contain phosphorus and also malic acid, which is most beneficial for people under mental strain or who habitually do work which prohibits exercise. The apple should not be munched between times, but taken as a component part of the regular meals.

PUBLICATIONS. PUBLICATIONS.

CAN YOU SOLVE THIS PUZZLE?



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