

THE MISSOURI BOTANICAL GARDENS.

I.—HISTORICAL AND DESCRIPTIVE.

BY HENRY V. CLARKE.

On the western outskirts of the city of St. Louis lies a glorious monument to the life-work of one of her most loyal-hearted citizens—the Missouri Botanical Garden—the outgrowth of a private pleasure that has become a great public good. It is the lasting and living memorial of the labors and nobly-conceived purposes of Henry Shaw, and the memory of his never-failing interest in this work of the best years of his life is perpetuated by the name, "Shaw's Garden," in spite of the founder's decree to the contrary, that the title should ever be "The Missouri Botanical Garden." But if we wander through this treasury of plant-life and learn the story of the man who made it, a merely casual glance about enables us to fully realize how inseparably must his name be connected with all that is there, for few indeed have been the private citizens who have left an estate which so eloquently bespeaks the spirit of their lives, and round which are clustered more fascinating associations. Three years only have passed since Shaw's last bequest made the garden a public institution, and so from the time of its founding as a simple pleasure ground, in '58, it grew up under his eyes till it became one of the first of its kind in this country, and able to hold its own by the side of Kew and Melborne, in the Old World.

England claims Henry Shaw as one of her true-hearted sons, for America was his country by adoption only, and St. Louis was the city in which he cast his lot, where he made his fortune, and to which he left it. The closing year of the eighteenth century saw the beginning of his nearly ninety years of smooth-flowing life. The home of his boyhood was Sheffield, and in several excellent schools in its vicinity he received a quite thorough education. Early he evinced the love for plants and flowers which in later years became a ruling passion, but it was a taste he was not permitted fully to indulge till nearly half his life was spent. For a year he was engaged in his father's hardware manufactory, and then, at the age of eighteen, came to New Orleans to undertake cotton-raising. But the prospects did not prove to be what he had anticipated, and in the same year he reached St. Louis and started out in business with a small stock of endery furnished him by a uncle. Inborn business ability and frugal habits were the foundation of success, and as the years rolled on he became a prosperous merchant, loved and respected by his fellow-citizens, but at no time aspiring to more than a quiet and unassuming position among them. Each year profit and capital increased, and finally, in 1839, when account was taken of the annual gains they were found to exceed \$25,000—"more," said Shaw, in afterward telling the story, "than it seemed one man in my circumstances should make in a single year." And so, with a consistency as remarkable as the view he took of his good fortune, he retired from business life, purposing to be a free and satisfied man for the rest of his days, though he was scarce two-score. A quarter of a million seems now but moderate wealth, in these days when millionaires are far from rarities, but in the forties such a sum was worth full four times as much; and so, with no one but himself to care for, he might well feel that, carefully invested, two hundred and fifty thousand made him thoroughly independent. And to show how well he knew just where to best place this fortune, it is only necessary to recall that the assessed valuation of the real estate he bequeathed the Botanical Garden now aggregates over a million and a quarter.

It was natural that after his retirement he should wish again to visit his home in England, and, accordingly, during the next five years he twice crossed the waters and made extended journeys through continental Europe. Well, too, was he fitted to be an all-observant traveler, and he found in all he saw and heard an education which broadened and elevated his ideas and conceptions and exercised a marked influence over his after-life, yet gladly he returned to the country of his choice and to the city in which he had spent twenty years of active and happy pursuits, and only once more did he see his fatherland.

It was on this journey and in an historic spot that the

Inspiration came to him of founding a great garden in his adopted town, for the lasting benefit of coming generations and the furthering of scientific learning. All the long years that had been too crowded for the indulgence of his love for nature had yet not dulled the lingering passion, and again it was fired within him as he strolled through the marvelous gardens of Chatsworth, the ancestral domain of the house of Devonshire, where limitless means and thorough refinement had labored for three hundred years to produce the garden spot of earth. Here, along these paths he strode, had been the son of William the Conqueror, and William Cavendish, and the fated Mary, Queen of Scots. The idea conceived at Chatsworth grew and took shape during the several years following his return to St. Louis, and through the aid and counsel of Sir William Hooker, director of the gardens at Kew, and Dr. George Englemann, the physician and botanist of St. Louis, definite plans were made in 1857, and in '58 the garden was actually started round Shaw's country residence at Tower Grove; and from that time on all his resources and time were devoted to this dearest project of his life. Year by year it grew, and in '66 Mr. James Gurney came from the Royal Gardens at Kew to take the position of head gardener, and in the same year the

his will these trustees were appointed—The Mayor of St. Louis, the Episcopal Bishop of the Diocese of Missouri, the President of the St. Louis Public School Board, the President of the Academy of Sciences of St. Louis, and the Chancellor of Washington University, St. Louis, all these ex-officio—and ten other acting trustees, severally named, whose places would be filled by election as they became vacant. Also the late Dr. Asa Gray, who had watched the growth of the work with the greatest interest, and had done much to aid it, was made an honorary trustee, as was also Prof. Spenser F. Baird, of the Smithsonian Institute. To the able body of men he had thus chosen he willed the garden, consisting of about forty-five acres under cultivation, and fifty or more acres of pasture land adjoining, to be used in extending the work as might be advisable. For the perpetual maintenance thereof he provided an endowment, almost entirely in real estate about St. Louis, aggregating over a million and a quarter, and now bringing the immense income of about \$135,000 per annum, a princely sum for the support of an institution of such nature.

But this alone was not the whole of his plan for furthering botanical science, for in 1885 he transferred to Washington University, of St. Louis, by deed of gift, a tract of land with improvements which brings an income of about five and a half thousand per annum, for the endowment of a School of Botany, "to augment and perpetuate the usefulness of the Missouri Botanical Garden," and "for the promotion of education and investigation in that science [Botany], and in its application to Horticulture, Arboriculture, Medicine and the Arts, and for the exemplification of the divine wisdom and goodness as manifested throughout the vegetable kingdom." Few schools of botany in the country have such opportunities for thorough work, for, in addition to its liberal endowment, there is the garden, with its unlimited supply of material and its magnificent herbarium and botanical library. The director of the garden, moreover, by provision of the will, holds the chair of botany, thus insuring harmonious cooperation between garden and school.

To the various public charities about his city he gave but little—a thousand or two thousand dollars to each of several he selected—he devoted his fortune to the one great charity of which he was himself the author. And as we turn the pages of the will we cannot but marvel how thoroughly he provided for every detail that would go toward maintaining the cause he espoused. One thousand dollars yearly, he decreed, should be devoted to a banquet, at which should be gathered the trustees, literary and scientific men, and friends and patrons of the natural sciences; and in addition to this, four hundred dollars annually for a banquet to the gardener's, florist's, nurserymen, etc. Both these we can see were the wisest of provisions for keeping awake and fresh before the minds of all the interest in the work which must needs be ever present to make it a lasting success. At the annual banquets which have thus far been held have been represented the chairs of science and literature in great colleges and universities all over the country; eminent statesmen have been present; military officers and private citizens, who watch with interest scientific advancement and are ever ready to give their encouragement and patronage; and on each occasion heartfelt and eloquent responses have been called forth by the announcement of the toast of the evening: "The Memory of Henry Shaw."

One other provision of the will, small in itself, impresses us perhaps more than any of the rest, for none more forcibly displays the reverential esteem in which he held the children of Nature, to whom his life-work was devoted. It is a bequest of two hundred dollars a year to the Episcopal Bishop of Missouri, to be paid by him to such minister of the Gospel as he may select, for a sermon to be preached in one of St. Louis'



From the last Photograph Published in the Garden Report of 1890.

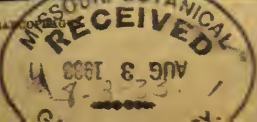
HENRY SHAW.

first steps were taken toward the founding of Tower Grove Park, the beautifully picturesque and artistic park just south of the gardens. For thirty years Shaw watched over the great work he had begun, each month his own hand made out the pay-roll up to the very month he died, and at last, in August '89, at a venerable old age, he passed away, leaving as his last will and testament a document that bespoke the thoughts and spirit of the man more truly far than could be told by mere biography.

In 1893, on petition of Henry Shaw, the Missouri General Assembly passed an act enabling him to establish a permanent board of trustees to whom to bequeath the Botanical Garden and the endowment thereof, and by



FIGURE OF SHAW ON THE SANDS



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ANIMAL LANGUAGE.

There has just been issued an édition de luxe of that unique and delightful book, "Three Girls in a Fiat," published a few weeks ago by the authors, Laura Hayes, Jean Loughborough, and Enid Yandell. Each of these young women have been associated with the Board of Lady Managers since its organization, and as much of the interest and value of the book pertains to that body and its work the following inscription is expressly appropriate: "To that noble body of women which is acting as advance guard to the great army of the unrecognized in its onward march toward liberty and equality, The Board of Lady Managers of the World's Columbian Exposition." The book is like a freshly gathered bouquet, placed as the flowers were culled, without regard to arrangement. It is the simple, straightforward story of three refined young girls who wearying of boarding-house life, made themselves a home so attractive that in reading of it one finds himself wishing that he could have been one of their guests. It is, however, much more than an alluring tale, as it contains that which is of interest in regard to the Columbian Exposition that is not to be found elsewhere. The édition de luxe is an exquisite volume bound in cream silk, over which is strewn great soft blue panes. It is printed on heavy paper, on which the numerous illustrations show to the best possible advantage.

It is charm of manner rather than value of matter that has given Renan the fame which assures him a prominent place in the history of the nineteenth century. It is good to be able to record of a book, that in style it is expressly excellent, and that can be said of "Spanish Cities; with Glimpses of Gibraltar and Tangier," by Dr. A. G. Stoddard; published by Charles Scribner's Sons. Dr. Stoddard is the editor of the New York Observer and also author of "Across Russia," a book of travels distinguished among books of its kind for the elegance of its diction. "Spanish Cities" is a capital book for young people. It would, indeed, be difficult to find a book of travels at once so entertaining, instructive and pleasing.

"Cousin Phillis, a story of English Love," is one of a unique little set of books by foreign authors called respectively stories of Spanish, French, Russian, German, Italian and English loves, being published by A. C. McClurg & Co. This small volume by Mrs. Gaskell represents the English love, and is one of the most delightful of her charming stories. The picture presented is clean, wholesome and alluring from its simple and hourly beginning until its finish. The tale is one of a by no means large number which can with confidence be put in the hands of a young girl. Both as to manner and matter it is all that could be desired.

LITERARY NOTES.

A singularly interesting book is "An Englishman in Paris," published by D. Appleton & Co. It is a volume of recollections including anecdotes and pen pictures of kings, queens, leading lights of the stage, great painters, writers and politicians. It is a remarkable mélange where good, bad and indifferent are made bed-fellows. Still it is highly informative and interesting. The author of "Cross Currents," Miss Mary Angela Dickens is a granddaughter of Charles Dickens. She does not, however, in this work show any trace of her grandfather's brilliant genius.—Somewhat misleading is the title of Walter Besant's "London." The book does not deal with modern London, the time of George II being the latest period embraced by the narrative. As did M. Maspero, in his "Life in Ancient Egypt and Assyria," Mr. Besant presents pictures of London as it was in the time in which he writes.—"Other Things Being Equal," by Emma Wolf, published by A. C. McClurg & Co., is interesting as a sign of the times but as a literary production it is uncertain in touch and lacking in finish. Miss Wolf is a Jewess who in her book strongly advocates the intermarrying of Jews and Christians.—The Scribners have issued a new addition of "South Sea Idyls," by Charles Warren Stoddard. In an introductory letter W. D. Howells says: "Long ago I delighted in these things, the lightest, sweetest, wildest, freshest things that ever were written about the life of that summer ocean."—The highest price ever paid in France for the serial rights of a novel was recently paid to M. Zola for those rights in his new story, "Docteur Pascal," for which he received \$7,000.—A new story by W. D. Howells, entitled "The Coast of Bohemia," is to be published as a serial in the Ladies' Home Journal.—"The Principles of Ethics," by Professor Borden P. Bowne, of the Boston University, is a somewhat exceptional book in that it reverses the usual method, and deduces a theory from the moral life instead of a moral life from a theory.—A volume of short stories, called "The History of a Failure, and Other Tales," from the pen of E. Chilton, although not a work for children has a decided flavor of Mrs. Ewing about it, and contains a study that is well worthy of attention.

It used to be told in the fairy tales that the hero could hear the grass grow and speak with the animals. In reality it is not likely that we ever shall develop the sense of hearing sufficiently to hear the grass grow, but it is quite likely that we shall be able to converse with the beasts of the field. But, do the beasts have a language? He would be bold, indeed, who would deny it point blank. We observe all around us too many indications of conscious communication between them, to have a right to say "no" absolutely. To be sure, some animals are silent, totally, it seems. But may they not convey their "thoughts" in some way, for instance, as the deaf-mutes do? Or may they not use a secret language, one like that of lovers, employing gestures and looks? When we speak of language in this connection, it must be understood that we do not mean articulate speech. We take the word in its broadest sense as an expression for the means of mental communication existing between one creature and another. A sound or gesture made by an animal under any mental or emotional impression, and calling out a similar one in another animal, is an element of language. When the rabbit quickly beats the ground, its fellow-rabbits know that there is danger somewhere, and they take action accordingly. That is rabbit language. When the hunter imitates the rabbit and thus conveys the same idea, he is "speaking" the rabbit language for the time being. Many animals use signs, which, of course, are understood through the eyes. The ants converse by touching antennae and feet; many insects rub the elytra. This is animal language in its simplest form. It expresses but few ideas. But there are animals which are capable of modulating their "voices." Even the common rabbits, which seem to be mute, are constantly making sounds, which a little observation will soon discover to be ever changing in volume, modulation, etc. Much of this method of communication changes when the animal is brought into civilization from the wild state. The wild-dog, for instance, barks very little when in freedom. How the household dog barks and is able to express himself is well known. It has been observed that if the tamed dog is taken back to the wild state, he loses his voice. These "sounding voices" are produced in the animal throat in a way similar to human language, but are not "voices" proper, nor "languages" proper, and yet they are full of psychological expression and reveal the animal's psychic states. If we tickle a chimpanzee in the armpit, the touch produces a grin on the face similar to that of a man under like circumstances; he also emits laughter-like sounds. The same is the case with the orang-outang. The gorilla knits the brow when angry, just like men. We often observe in apes a complete change in the facial muscles, when something is going to happen, be it agreeable or disagreeable. It is so also with the child. In the apes there is evidently the same connection between the facial muscles and vocal muscles as in man.

If animals are able to express every idea they have, why not allow them a language? To be sure, a very undeveloped language, yet relatively no farther from civilization than that of Psephenus, which in European ears sounds like animal screams and yells. Bechstein has noted that the chaffinch expresses a joyous emotion by a single sharp "Fink," and anger by "Fink-Fink-Fink!" sorrow and sympathy by "Trif-Trif." Houslean has found that the common hen has at least ten distinct sounds, well understood by the chickens. Renger observed that the long-tailed Cebus of South America expressed astonishment by a sound between whistling and screeching, impatience by repeating "hu! hu!" and that he had a peculiar scream for pain or fear. Darwin thought he observed ten distinct sounds in the same ape, all of which called forth corresponding states of mind in other apes. Brehm says the same. However, why quote the learned? We have all, in everyday

life, observed something similar. Dr. Garner's experiments in the Simian language are also known. One must, however, guard against the belief that monkeys possess an articulated language. About some savages it can hardly be said that they possess an articulate language. The Bushmen speak in a sort of articulated "voicing," and must add gesture to make themselves understood. On the other hand, the raven, the thrush, the mocking-bird, the starling, etc., express themselves in well-articulated sounds. The parrots articulate in a surprising manner, though they do not understand the meaning of their own words. This shows that other living beings beside man possess the necessary organs for articulated sounds. The apes of Dr. Garner seem to possess articulation, according to his reports, but their vocabulary is extremely limited. As regards this point, however, it can be said that, even among civilized people, very limited vocabularies are found. A French peasant, whose sphere of thought is not very wide, gets along with 600 words, while a philosopher will use twenty times as many. The Old Testament uses only 5,649 words, Shakespeare 15,000, and Voltaire 20,000. In view of this, why should an ape not be satisfied with twenty? Garner's experiments must needs be verified by many anatomical and physiological examinations; for Broca has, as it seems, proved absolutely that articulated language depends upon certain convolutions of the brain, particularly on the left side of the head. Do the speaking monkeys possess those convolutions? Broca has admitted the possible rudiments of such convolutions in certain apes; but later researches have not proved their existence in lower apes. Whatever may be the outcome of Garner's reported trip to the land of the gorillas, science must remain indebted to him for his discoveries, and the opening up of new fields on the subject of animal language.—George Lütken, in the *Illustreret Familie-Journal* (Copenhagen).

One thousand francs was recently paid for the broken wooden horse with which Napoleon played as a child.

In 1870 the proportion of certificated women teachers was 48 in every 100, to-day it is 66. Similarly, the number of women assistants has risen from 60 to 77 per 100. In 1870 there were 7,273 girls and 5,569 boy teachers. There are now 21,771 girls and only 6,360 boys learning the art of teaching.

As an evidence of the rapid development of the Northwest, the last census shows that taking one tier of counties on each side of the Red River valley, from the international line to the southern boundaries of Richland county, North Dakota, and Wilkin county, Minnesota, it is found that there was a total increase of 2,463,450 acres, or 1,424.54 per cent in the area devoted to cereals in that well-known region between 1879 and 1889.



JOHN E. RICKARDS.
Republican Nomine for Governor of Montana. [Page 321.]

churches, "on the wisdom and goodness of God as shown in the growth of flowers, fruits and other products of the vegetable kingdom." The first of these sermons appears in the Report of the Garden for 1890, and was delivered by the Rt. Rev. Daniel S. Tuttle, on the text: "Consider the Lilies of the Field." Eloquently, again, in '91, the Rev. Montgomery Schnyler preached from the 33d verse of the IVth chapter of 1st Kings: "And he spake of trees, from the cedar that is in Lebanon even unto the hyssop that springeth out of the wall," and to these words of Solomon he gave a significance that, had he heard it, could well have warmed the heart of him who paid this unique tribute to the Creator's wisdom.

It seemed that, as the years rolled by, the desire grew upon the old man that all which had belonged to him should be identified with the garden; and so, to still further carry out this end, he set apart \$10,000, to be devoted to removing his city residence from the heart of St. Louis, on the corner of Seventh and Locust streets, to some site in the garden. Last year the work was done, and now it stands on Tower Grove avenue, in a break in the east garden wall, brick for brick and timber for timber as it stood in Shaw's lifetime, save that it has been made absolutely fireproof. On the massive door still stands out the old-time door-plate, bearing the legend: "Henry Shaw"; and about the whole of the old-fashioned place there must linger a certain picturesqueness and almost historic interest. Over three times the amount provided was expended on this work, but it has supplied a much-needed want in furnishing a safe, appropriate and convenient home for the valuable herbarium and library, as well as comfortable offices for the director and his assistants. The botanical library now numbers over 6,000 volumes, besides all the current botanical periodicals and pamphlets, and includes many extremely valuable works, such as are to be found in but few places in the country. Several thousand dollars are expended each year in additions to this library and in the purchase of herbarium collections. The herbarium now occupies two floors of the house and contains an immense number of specimens, including the great herbaria of Beruhard and Englemann.

In the southern portion of the garden, with a great lawn sweeping around it, stands Shaw's old country mansion, bearing on its front the inscription: "H. S., 1849." Here, in accordance with the provision of the will, resides the director, Prof. William Trelease, and just across the lawn stands the beautiful grove of magnificent trees of our own and foreign climes surrounding the mausoleum in which reposes the dust of the garden's master. Around it, and up and down each side of the pathway through the grove, are scattered splendid palms, with all the luxuriance of their tropical foliage. And in this enchanting setting, in the quiet shade away from the glare of open day, is placed the simple yet artistic granite structure, octagonal in form, domed, and surmounted by a Latin cross. A large glass door with iron grating forms each side, and within rests the sarcophagus, surmounted by a life-size reclining statue, chiseled by a master-hand from purest Parian marble, and so life-like that at first sight we start back involuntarily, and almost feel that it could stir and speak. This figure truly is a marvel of the sculptor's skill; and as we gaze upon the expressive features, it seems as if Shaw had risen from his tomb and lay before us, wrapt in peaceful sleep and grasping one of the blossoms so dear to him. On the sarcophagus below we read, on

one side, the simple date of his birth, and on the other, of his death, but we note, half-surprised, half-wondering, that the bronze-relief work round these inscriptions is brightly gilded. Why this glittering adornment, we cannot refrain from asking, so inconsistent with the unassuming ways, the disregard for pomp or ostentation, of the man who is resting here? The story is a simple one, yet fascinating. As his life was drawing to its close, he seemed to dread the thought that some day the tomb which marked his last resting place must crumble into ruins. One mausoleum of rough face stone he erected just outside the grove,



1. The Old Mausoleum with Statue of Victory. Thomas Nuttall.



2. The Mausoleum and Monument in Memory of Thomas Nuttall. 3. Entrance to Grove of the Mausoleum.

but in the course of years discovered that the stone was crumbling. Grieved to see so soon the dread disaster, he placed within it, instead of the intended sarcophagus, a marble figure, representing "The Victory of Science over Ignorance," with the inscription: "Ignorance is the curse of God; knowledge is the wing wherewith we fly to heaven." And then he raised the second granite mausoleum in the grove, firm enough to stand the ravages of centuries. An Italian sculptor crossed the ocean to make the drawing for his statue, and he, yet by no means aged, posed for it. All was ready years before he died, and the figure and sarcophagus sealed

And still, besides its strangeness, there was pathos in the fancy. So while we naturally may wonder how one who found so much in life could calmly plan for the day when it must pass away, let us seek to appreciate the spirit in which these plans were made, and gladly accord to the noble-hearted philanthropist the grateful remembrance he so longed for, and to his work the recognition it well deserves.

THE GOVERNORSHIP OF MONTANA.

The State election in Montana will be very close, and at this date it is impossible to predict success for either party. The Republicans, however, are fortunate in having nominated for Governor a candidate who was elected Lieutenant Governor at the same time as a Democratic Governor was chosen. The term of office of the State officials is four years. In the State election of 1889 the vote for Governor was: Toole, Democrat, 19,564, and Power, Republican, 18,968. The present State Legislature stands Republican, thirty six, and Democrats, thirty-five. The nominees for Governor are John E. Rickards, Republican, and Timothy E. Collins, Democrat.

Mr. Rickards was born in Delaware, July 23, 1848. Coming west in 1870, he spent eight years in Colorado, four in California, and settled in Butte, Montana, in 1882. He represented Silver Bow county in the territorial council, and was a prominent member of the constitutional convention which framed the constitution of the State. He was elected Lieutenant-Governor in the first State election, receiving the highest vote of any candidate, and in the trying period which followed his conduct was such as to command public approval. He is a man of capacity, a sound and aggressive Republican without being a bitter partisan, and a thorough Western man.



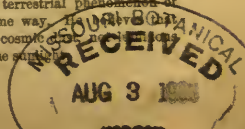
2. Shaw's Old City Residence Reconstructed in the Garden.



1. The Garden Mansion.

to view. But once he discovered the verdigris upon the bronze. Ah! here was what he feared—'twould crumble into dust. 'Twas one of those little eccentricities no argument could shake. And so the bronze was gilded. No thought of ostentation prompted it. In persurance of the same odd idea he once gilded the magnificent bronzes of Shakespeare, Humboldt and Columbus in Tower Grove Park.

It is well known that the tails of comets stream away from the sun, and are of very low density. Various hypotheses have been propounded to explain their movement away from the sun; but the most promising is that of a Russian physicist, who ascribes it to the repulsion of the solar radiation acting on a mass of extreme tenuity, whilst, on the other hand, the attraction of gravitation operates between the solar mass and the solid nucleus of the comet. The same physicist accounts for the mysterious terrestrial phenomenon of the zodiacal light in the same way. It is well known that the earth has also a trail of cosmic dust, and that it is of itself, but by reflecting the sunlight.



MUSIC AND DRAMA.

No part of the dedication ceremonies of the Columbian Exposition evoked more interest or won greater praise than the magnificent musical programme. The famous Mexican band was a notable feature, as was also Sousa's new Chicago band. The grand chorus of nearly six thousand voices, under the leadership of Theodore Thomas and Director Tomlins, was an inspiring sight and a brilliant triumph for choral music on a grand scale.

Modjeska has entered a few pertinent criticisms concerning our country. She says there is great talent among American women. I have cried with Georgia Cayvan and laughed with Ada Rehan; and Annie Russell and Mrs. Booth—all are talented. But it is the people. They have no respect for art. They and the star system, the love of money, kill artistic growth.—A new play at the Paris Odéon is called "A Marriage of Yesterday." It is by Victor Jannet, a young author, and is a great success. The piece treats of divorce, and the status of the divorcee after her second marriage, not being recognized by the Catholic world.—"A Trip to Chinatown" celebrated its 350th consecutive performance at Hoyt's Madison Square Theater last week.—Mr. E. S. Willard has been well received in Montreal with "The Middleman." Before leaving England this summer, Mr. Willard secured for production in the United States a play by Lord Tennyson, one of the last messages sent by the poet before the commencement of the illness which terminated so sadly, being an expression of pleasure at the fact that Mr. Willard was to appear in a play of his.—Salvini made his first appearance on Monday in San Francisco as Don Cesar de Bazan.—Stuart Robson is making a tour of the South.—The inflexible Ibsen has acquired on the German stage is shown by the continued attacks he is subjected to and the many who try to imitate him. In the last week two new plays have been produced in Berlin due indirectly to his success, one at the Lessing Theater, called "A Blank Page," by Paul Heyse, and the other at the Wallner Theater, called "Mila," by Arthur Zapp, both of which met with poor success.

LOCAL.—Thomas W. Keene, the only tragedian of great reputation on the road this season, began an engagement at McVicker's Theater, Chicago, on the 24th. He has been very successful everywhere, particularly in his great production of Richard III, in which character he is said to be the best now on the stage. The personation of the Shakespearean drama by Mr. Keene is always a welcome theatrical event, for Shakespearean drama, when fairly presented, stands for the best culture and influence of the stage. Mr. Keene's engagement is for two weeks, during which time he will present his entire repertory.—Rosina Yokos has been well received at Hooley's Theater, and her new play, "The Paper Chase," has won many admirers. Felix Morris has a good part, which he plays well. The new comedy entitled "Friends Across the Potomac" will be presented for two weeks, beginning October 30.—Charles Dickson revived "Inceog" at the Grand Opera House on the 23d, and has been playing to good houses. He remains until November 5.—"Ali Baba" continues at the Chicago Opera House.—Russell's comedians, in the "New City Directory," have been doing very well at the Columbia Theater. They will be followed by Nellie

McHenry in "A Night at the Circus."—Bartley Campbell's "Siberia," at Havlin's Theater, will be followed by "The Limited Mail."—"Aunt Bridget's Baby" has been the attraction at the Windsor Theater.—Corbett has been the feature of the week at the Haymarket Theater.—Haverly's Home Minstrels, at the Casino (Eden Musee), continue to improve, and it is now one of the best organizations of the kind in the country.—Clarence Dickinson is giving a series of organ recitals at Church of the Messiah.

The Chicago Orchestra inaugurated its second regular season at the Auditorium October 22 with a popular program. The new season bids fair to eclipse its predecessor in every respect. New and talented musicians have been engaged for the leading violins, special attention will be given to the quality of the symphony programs, and fifteen concerts are announced for the series.

The first symphony concert was given on the afternoon of October 28, and will be continued on the evening of the 29th.



THOMAS W. KEENE, AS "RICHARD III," AT McVICKER'S THEATER, CHICAGO.

The report of the select committee appointed by the House of Commons to inquire into matters relating to the licensing and regulating of theaters and places of entertainment has been issued. They do not suggest any alteration in the management of such places by public authorities in the provinces, or in Scotland or Ireland. With regard to London, they recommend that a standing arbitrator be attached to the Office of Works, to whom any dispute on structural matters be referred. They do not concur with the desire of the London Council to act as the licensing authority of London theaters, evidence showing that the jurisdiction of the Lord Chamberlain, as at present existing, gives entire satisfaction. They suggest that the licensing authority for London music halls should be a small standing joint committee of the County Council and of Quarter Sessions. They also recommend that in theaters of varieties it be made lawful to present those performances commonly called sketches, under restrictions set forth in the report.

FOREIGN.

GREAT BRITAIN AND IRELAND.—An anti-Catholic association in London will present a petition to Queen Victoria asking her to refuse to confirm the selection of Aldermen Stewart Knill as Lord-Mayor of London because he is a Catholic. The petitioners will probably be snubbed.—Mr. Gladstone's majority in the House of Commons has been reduced to thirty-nine by the defeat of his candidate, Mr. Harry Lauson, in one of the divisions of Gloucestershire, England.—Thomas Neill, said to be an American, is on trial in London on the charge of murdering four unfortunate girls by administering poison to them.—At a meeting in Manchester, England, of cotton operatives, representing the whole cotton trade of England, it was resolved to resist the reduction of 5 per cent in wages, and that all members of the Cotton Operatives' Union should go on strike on November 5 unless the reduction was rescinded.—English cattle breeders advocate a bill providing for quarantining all live stock except such as are intended for slaughter. The movement is understood to be directed chiefly against American cattle.—Owing to increasing competition, the copper smelter works of Pascoo and Grentelt, at Swansea, Wales, established a century ago, it is reported, will be wound up. The closing of the works will throw 700 persons out of employment.

FRANCE.—Trouble is feared at Carmanx, France, where the coal miners and glass-workers have been on a strike for some time. A political aspect has been given the trouble, and many members of the Chamber of Deputies who are in sympathy with the strikers are now in Carmanx.—Paul Déroulède, the noted Bonapartist member of the Chamber of Deputies, is seriously ill from an attack of cholera.

GERMANY.—Emperor William has signed Chancellor von Caprivi's military bill, and has empowered him to dissolve the Reichstag in case it refuses to approve the measure.—An effort made by Herr Bebel, the German socialist, to organize the employés of tramway and omnibus companies in Berlin, at a midnight meeting of the men in that city, resulted in only nine men being induced to form a union.—Herr von Brandt, German minister to China, has resigned.

SOUTH AMERICA.—Senor Luis Saenz Pena has been inaugurated as President of the Argentine Republic, and has formed his cabinet as follows: Minister of the interior, Manuel Quintana; minister of foreign affairs, Tomas Anchorena; minister of finance, Juan Jose Romero; minister of justice and public instruction, Calisto de la Torre; minister of war and marine, Benjamin Victorica.—The Venezuelan trouble still holds the attention of South America, though it is generally believed that the war is over and that peace will soon be restored.

MISCELLANEOUS.—Owing to the recent heavy rains, Lake Como, in Italy, has overflowed its banks and a number of towns in the vicinity are flooded. Considerable damage is reported. Floods in the province of Genoa are growing disastrous.

THE GOVERNORSHIP OF WASHINGTON.

The term of office of the State officials of Washington is four years, and the election takes place at the same time as the vote for the National ticket. The present State officers, at the head of which is Governor E. P. Ferry, are all Republicans, as also are the Senators and Representatives in Congress. Under the new Congressional apportionment, the State is entitled to two Congressmen, giving it an electoral vote in the college of 1892 of four. The vote for Governor in 1889 was, for Ferry, Republican, 83,711, and for Semple, Democrat, 24,732. The present State Legislature is composed of ninety-one Republicans and twenty-one Democrats, and though the latter have made some gains recently, as shown by local elections, the State is considered safely Republican in all its branches.

H. J. Snively, Democratic nominee for Governor, was born in Taylor county, Virginia, now West Virginia, in August, 1856, where he resided until he came to Washington, in 1885. He was educated at the University of West Virginia and at the University of Virginia, having taken the degree of Master of Arts at the former and the degree of Bachelor of Laws at the latter. He was District Attorney of Yakima and other counties for two terms of two years each, and was a member of the last Washington Territory Code Commission, and the Democratic candidate for Attorney-General at the first State election. He was elected as Representative from Yakima county in 1890, and was a delegate to the recent National Democratic Convention at Chicago, and seconded the nomination of Cleveland.

The Republican nominee for Governor is Mr. John H. McGraw, a prominent banker of Seattle, and a native of Maine, where he was born in 1850. He is a self-made man, and a good representative of the enterprise which has developed the young State of Washington.

THE MISSOURI BOTANICAL GARDEN.

II.—THE GARDEN PROPER.

BY HENRY L. CLARKE.

Only a few years ago "Shaw's Garden" meant one of the most inaccessible spots around St. Louis—out of the way of street cars and all manner of public conveyances—hut now a well-equipped electric road goes up the gentle slope of Tower Grove avenue, with its shade trees on one side and the long, substantial stone wall of the garden on the other, and passes the Gateway and the Reconstructed House, stopping before the north entrance of Tower Grove Park. The Garden Gate is an imposing structure of rough gray stone, substantial in its build, and somewhat Grecian in its outlines, and beneath its cornice stands the official title: "Missouri Botanical Garden. 1858." Within, through the iron grating of the portals, we catch a glimpse of trees, shrubs and flowers; hut turning and looking eastward toward the city we



1. THE GARDEN GATE. 2. THE GATE FROM WITHIN. 3. THE GATEWAY BEFORE THE OLD MUSEUM.

gaze down and through an avenue of magnificent silver maples, forming a most charming vista over a mile in length. A glorious space it would be to build a splendid boulevard, and we cannot hut regret that it is still only a country road.

All the year long this gate is open to the public, except Sunday and on legal holidays. This regulation Shaw himself instituted, to prevent the garden from being overrun by thousands who would make it a mere picnic ground and unavoidably do an immense amount of injury; hut Shaw's will provided that on two Sundays in the year it should be opened to the public from 2 p. m. till sunset—on the first Sunday in June and the first in September. On these occasions it regularly becomes a Mecca for St. Louisians. Last June, the gatekeeper stated, over 16,000 people, at a moderate estimate, passed under the gateway.

On either side of the broad pathway just within the gate are immense beds of splendid Cacti, representative specimens of over fifty species in these two beds alone, and dozens of the finely-grown plants rising ten or twelve feet high. Many of the oldest plants are veritable trees, and there is something wonderfully attractive in their grotesque and twisted forms and bristling spines. We note with special interest a great number of odd types of *Cereus*, several with their great flower-buds developed, and also huge plants of the well-known Indian fig, *Opuntia Ficus-Indica*, and of the cochineal-bearing cactus, *Opuntia cochineifera*—both these species of the same genus to which belongs our common wild prickly-pear. Not far from these a large circular bed of low-growing species of *Mammillaria* and *Echinocactus*, most artistically arranged with pieces of rough-hewn rock, present a remarkably fascinating appearance, forcibly reminding one of the arid deserts and rocky plateaus of Mexico, where the Cacti luxuriate and reign supreme over barren wastes. Still other beds of these odd denizens of the New World are ranged along the walk passing northward from the gate—the whole collection filling, perhaps, over a dozen beds of various shapes and size. There are, in fact, few finer, more complete collections in existence, and there is a peculiar fitness in the location of it in the city of Dr. George Engelmann, who so indefatigably labored over this strange family of plants, and accomplished in the work more than any of his predecessors or contemporaries. He was ever an ardent patron of the garden, and everything in it was always freely placed at his disposal. The chair of botany endowed by Shaw in Washington University received the title of the "Engelmann Professorship."

Opposite the main entrance, and in the heart of the garden, is situated the "Parterre," a rectangle with terraced sides, most artistically cut by winding paths and adorned with varied groups and beds of rarely beautiful plants. In the centre stands a marble statue of Juno, from the antique, and round it are grouped a luxuriant array of tall foliage plants. Scattered about are a number of great-leaved palms, several graceful Australian pines—*Araucarias*; a variety of glossy-leaved India-rubber trees; immense crenary plants; and an infinitude of other botanical rarities. As a back-ground for the Parterre, rises on one of the large greenhouses, along the eaves of which we read an inscription peculiarly characteristic of the spirit of Henry Shaw's thoughts and deeds: "Glory to God in the Highest, On Earth Peace, Good Will Toward Men." All winter long this is a paradise of beauty and tropical luxuriance, until it is emptied in the spring for the preparing of the garden. Popularly, this conservatory is known by the laborers and gardeners a "Strobel's House," for here presides Constance Strobel.

A stone walk leads from the end of the turf pathway through the grove of the mausoleum to the broad lawn before the Garden Mausoleum, the residence of the director. Over to one side of the lawn stands the old Museum building, erected upon the suggestion of Sir William Hooker by Henry Shaw in 1858, and formerly occupied by the library and herbarium, hut now containing only a heterogeneous chaos of botanical and other specimens which, it is the director's intention, will be properly assorted and made the basis for a new and really valuable museum collection, to complete the usefulness of the garden, library and herbarium in the persistence of scientific research. A number of excellent portraits of the great botanists of the century form one interesting feature of the old Museum which will be well worth preservation. In the library, too, of the Reconstructed House hangs a fine old portrait of Shaw, painted when he was a sprightly young merchant of thirty-five.

A short distance north of "Strobel's House" is the second large conservatory, termed the "Linnean," over whose doorway stands the bust of the immortal botanist, flanked on each side respectively by the busts of Thomas Nuttall and Asa Gray, while under them we read:

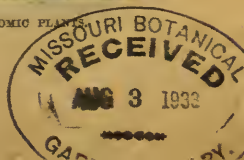
"Dedicated to Linneus, the Prince of Nature, by Dr. George Engelmann, 1881."

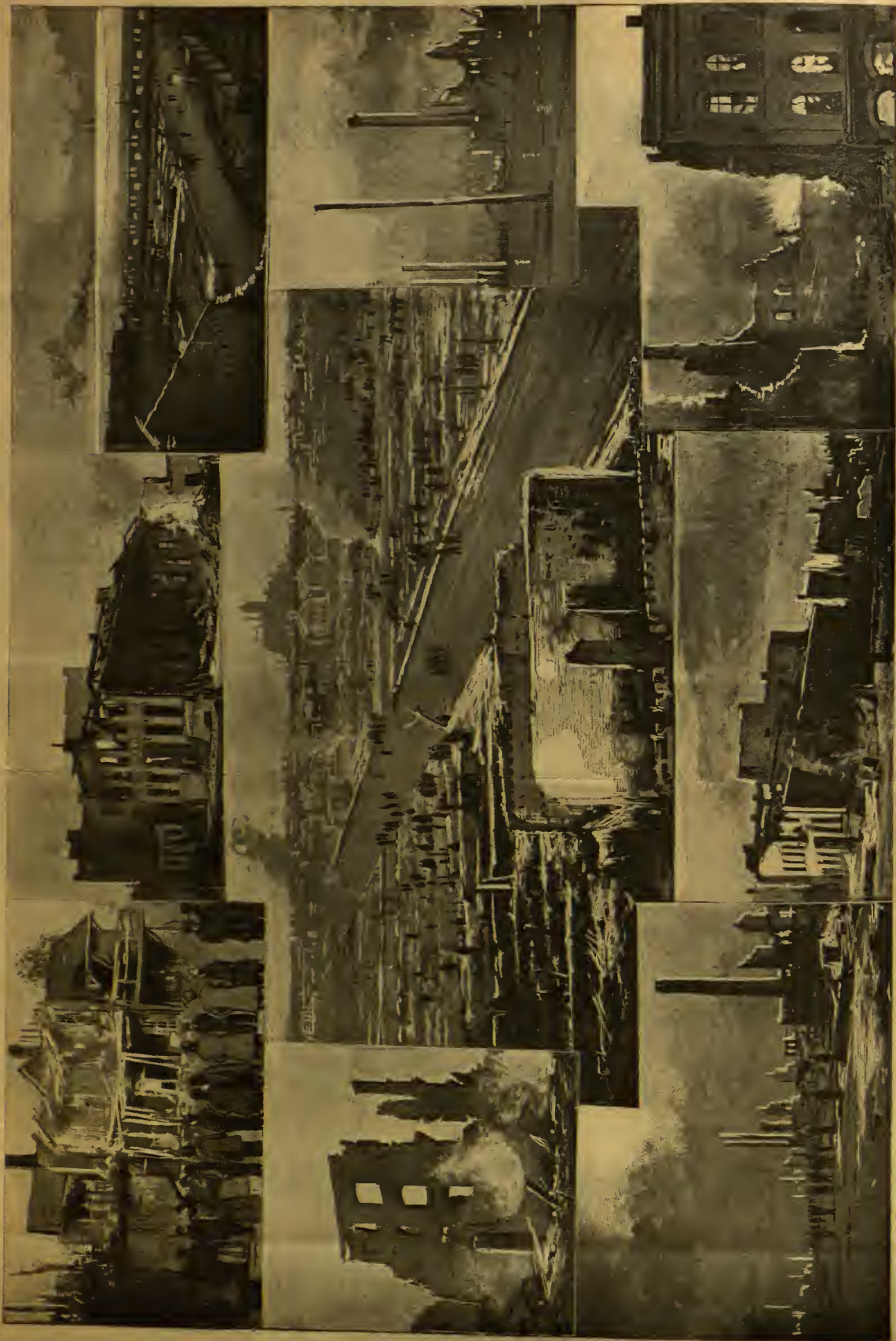
A midwinter view in the interior of this is given, though necessarily a photograph presents hut a meager idea of the rich and varied foliage which here pays fitting tribute to the father of modern botany. Just north of the Linnean House, and separated by it from the garden proper, is the Fruiteum, the old orchard and nursery. Of this, and also of the Arboretum—the wonderful collection of forest trees—we will speak more fully in another paper. This forest lies just west of the garden proper, separated from it by a high stone wall, and is of peculiar interest to every visitor of the grounds.

For the present, let us turn to some of the particular botanical features of the garden proper which deserve a special notice, in addition to the general one thus far given. The west garden wall is a sight worth seeing in the month of July, when it is covered with a mass of Virginia creeper and the trumpet vine, the latter brilliant with its array of flaming scarlet blossoms three or four inches in length. Its own common wild flower, *Tecoma radicans*, but few exotics can present a more gorgeous display. Up a portion of this wall, too, are trained some luxuriant plants of the fig of commerce, *Ficus carica*—fine-looking specimens, fifteen feet or more in height and loaded with fruit. Each winter, the director stated, the plants are taken down from the wall, laid flat on the ground and protected with straw—this, naturally, being a troublesome task, hut making it possible to grow the tree to considerable perfection for so cold a climate. One group of plants well represented are the Agaves, popularly known as century plants. Nearly seventy specimens are grouped about the Parterre,



1. PALMS NEAR THE MAUSOLEUM. 2. A VIEW OF THE TROPICAL ECONOMIC PLANTS. 3. WINTER VIEW IN THE LINNEAN HOUSE.





THE MILWAUKEE CONFLAGRATION—VIEWS OF RUINS THE DAY AFTER THE FIRE.—[PAGE 353]

Drawn by Hugo von Hofsteden from Photographs.

most of them being large and well-grown specimens, and together they exhibit an interesting variety in their remarkable fleshy leaves—some smooth, some rough, the margins often armed with formidable spines, sometimes broad and thick and rigid, in other species round and tapering. The shades of green exhibited by the leaves are numberless, and the differing habits of the various plants are equally remarkable. So many specimens are grown in the garden that a plant in blossom is a matter of almost yearly occurrence, though the average mortal in this part of the country is favored if he sees a century plant in bloom twice in a



THE LINNEAN HOUSE.

lifetime. This year the Agave Salmiaua was gracious enough to send up a mighty flower-stalk twenty odd feet high, and in the month of July it blossomed in all its glory. Last summer, however, was a red-letter day in the history of the Agaves of the garden—a new species, presented by Dr. Engelmann, blossomed for the first time recorded in the annals of botany, and was duly christened, by Professor Trelease, Agave Engelmanni—an appropriate memorial to Dr. Engelmann's masterly work on the Agaves. Of kindred interest is the other group of plants so characteristic of southwestern North America, the Yuccas, members of the royal order Liliaceae. A splendid collection of them is grouped in several beds about the grounds, including all the more important species; and hundreds of the common variety—*Yucca filamentosa*—are scattered here and there among the trees and shrubbery. Their great white spikes of bloom are the glory of the place all through the month of June. Some representative specimens were obtained this spring by Director Trelease in Southern California and the adjacent regions, through which he made an extended botanical expedition in the interest of the garden. This trip also added many valuable Cacti and several Agaves. These three groups—the Cacti, Agaves and *Yucca*—are especially well represented; and this we must consider a most wise provision, since a field is thus offered for the study of these forms of vegetation peculiar to the barren lands of Mexico and the adjacent portion of the United States.

The genera *Ficus* and *Musa*—the figs and bananas—are tropical economic plants of particular interest, and many species of both are to be counted. Some superb specimens of the India-rubber trees (*Ficus Indica* and *F. elastica*) ornament the Parterre, and a noticeable variety is the famed Australian bayau (*Ficus macrophylla*), a plant of which stands prominently in the foreground in the photograph of economic plants (Fig. 3). The collection of economic plants, for the most part tropical, is one of the most instructive features of the garden to the average visitor. The species number several hundred and are bedded out over a considerable area just west of Strobel's House. Winding paths twisting through the beds make it possible to show the whole number to advantage, and a careful examination is a profitable investment of time. To catalogue even a few of them here is hardly possible, for dozens of them are of equal interest and no satisfactory reasons could be offered for mentioning a particular few. Many are medicinal, some deadly poison when taken internally, like the *Strychnos nuxvomica*; others are violent blood and skin poisons, as the devil-tree of India, the sandbox, and the fabled deadly upas of Java and the ordeal-unt of Madagascar. Some are delicious edibles—the sugar cane, the pineapple and the famed mangosteen of Africa; still others are fiber-plants, valuable timber trees, gum-bearing trees, and so on *ad infinitum*.

Near the economics is a unique and fascinating group of "Biblical plants," round each of which hovers some treasured association for the Bible student or historian. Over one end of the bed sweeps a splendid

THE PARTERRE AND STROBEL'S HOUSE.

almond tree, the "tree of hastening" of the Scriptures (*Amygdalus communis*). Beside it stands the weeping willow (*Salix Babylonica*), drooping gracefully over the mustard tree, wherein the "birds of heaven were wont to light"—the *Salvadora Persea*. Near the almond stands the mulberry (*Morus nigra*), the "sycamine," and just beside it the oft-mentioned "sycamore," (*Ficus sycamorus*). The camphor and the pomegranate, and the beautiful "green hay-tree" (*Lanrus nobilis*) stand round the almond, and near the willow the holly-leaved oak of Palestine. The "nut-tree" (*Juglans nigra*), the "Johannis brot-baum" and the shitimwood (*Acacia Senegalensis*) are here. The oil-tree of Gethsemane and the supposed Christ-thorn are among the collection.

Side by side stand the wild and the true grape. The allspice and myrrb represent two of the "spices" of the Bible, but a less attractive plant than either of these is the stinging nettle—he who touches it too hastily is apt to rue it. Before the willow stand two beautiful plants of the "box-tree" of Isaiah, the ever-verdant *Buxus sempervirens*, and between is the humble hyssop "that groweth out of the wall," the insignificant little trailing vine known to botanists as *Capparis rupestris*.

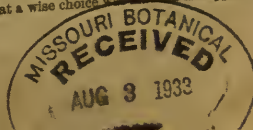
It is particularly striking to note that all about the grounds magnificent palms are promiscuously scattered, all growing as luxuriantly as if St. Louis was their native habitat. Especially in the grove of the mausoleum are some remarkably well-developed specimens, growing apparently indifferent to the hot, dry sunshine, which ordinarily in our climate quickly browns the leaves. They are an immense addition to the beauty of the place, and especially appreciated, because so rarely do we see them thus thriving out-of-doors. When asked the secret of their treatment, Mr. Gurney, the head gardener, said it was simply this: The green-houses in which the palms were wintered were kept cool and shaded—too cool to allow them to grow. Thus, when they were carried into the open air in summer, growth immediately set in, and the leaves thus formed in the dry, open sunshine, would naturally be able to stand it after they were formed, whereas growth made in a hot, moist conservatory could not survive the change of condition. So an extremely simple principle is made to produce a much to-be-desired result.

Trees and shrubs innumerable are everywhere—beautiful evergreens, indigenous and foreign; ornamental and economic trees; nearly a dozen species of magnolias of America and Europe; and the wonderfully graceful and remarkable maiden-hair tree of Japan (the *Ginkgo biloba*). One of these latter is now loaded down with fruit, a rare occurrence in this region. And then, too, there are hedges, hedges on every side, hedges of every description—ask the reason and the answer comes: "Shaw was an Englishman in all save his abode; a 'fine old English gentleman' through and through."

One provision of his will has not been mentioned. It was for six constant scholarships for the training of thorough practical and theoretical gardeners. A lodge is provided near the garden for the pupils, and a six year's course of study in the library and herbarium and practical work in the garden has been arranged. The pupils are under the charge of the director and his assistants, and every opportunity is offered to aid them in becoming skilled and proficient in all the departments of their work. This is but one of the educational features of the garden and the Shaw School of Botany.

Upon the man who holds the directorship of the garden and the Engelmann professorship in the school devolves the responsibility for the management of this entire bequest to American science made by Henry Shaw, and the experience of the past three years has proven that a wise choice was made in the appointment

of Professor William Trelease to fill this post. Well has he performed the duties incident upon his two fold office; and the trustees have found in him one who works in entire sympathy with all the best interests of their trust, and who shows himself to be the happy combination of a thorough scientist and an energetic, practical business man. Under his able control immense improvements have been made in the condition of the garden, which, during the last years of Mr. Shaw's life, was somewhat neglected. These undertakings have necessitated large expenditures, but, now that they are nearing completion, it is intended to devote all possible funds toward important additions to the garden, library and herbarium. Professor Trelease is ably assisted in his efforts by Mr. J. C. Duffley in the department of horticulture, and by the head gardener, Mr. James Gurney, a man thoroughly well versed in all the branches of his work, and rendered familiar with all the trees, shrubs and flowers about him by a lifetime's experience in caring for them—first, from early youth, in the Royal Garden at Kew, and for the past twenty-six years at the Missouri Garden. A skilled gardener, too, is one who was long a trusted employe of Mr. Shaw—Michael Savadil. To him is intrusted much of the responsible work about the place which requires intimate acquaintance with all the varied forms of plant-life gathered together there. The foreman, Mr. W. Page, is an energetic young man, who recently came to the garden, and who has rendered able service in the practical management of affairs. A grateful acknowledgement is due Director Trelease and his co-workers for the extreme courtesy and kindness with which they gave every possible assistance in the collecting of the necessary material for the preparation of these papers.



MUSIC AND DRAMA.

The reception accorded Dr. Antonin Dvorak, who has assumed the directorship of the National Conservatory of Music in New York, was most cordial. The leading musicians of the country unite in the expression that

Dr. Dvorak is a valuable accession to the musical art of the United States. His formal introduction to an American audience was celebrated by the production of two new works, both of recent date—"The Triple Overture" and the "Te Denm." The former is in three movements, either of which might stand alone as a symphonic poem. The separate titles of the parts are



ANTONIN DVORAK.

—Nature, Life and Love. As a leader, Dr. Dvorak is possessed of an excellent faculty of keeping his forces under perfect control and of obtaining the most delicate gradations of tone.—Gilmore's Band is to be continued under the same plans that were adopted by the late leader. A trip called the Columbian tour of the band was begun about two weeks ago. All the principal cities will be visited. Colonel D. W. Reeves will be the conductor and Charles A. Barcher manager. The band will be in Chicago November 14, 15 and 16.

went on the stage at thirteen and became a star at fifteen. Mr. Gerry, of the Society for Prevention of Cruelty to Children, it is said, will use this case to show the injury sustained by children undertaking the arduous work of theatrical life at an early age.—Sarah Bernhardt is playing in St. Petersburg, Russia.—Imre Kralffy's great spectacular production will begin in Chicago in April next.

LOCAL.—Lottie Collins has been at the Schiller Opera House this week. Charles Frohman's comedians will present "Settled out of Court" at the Schiller for a short engagement beginning November 21.—"A Knotty Affair" has been holding the boards at the Haymarket Theater.—"Friends Across the Potomac," which began a two weeks' engagement at Hooley's Theater on November 6, is meeting with a cordial reception. The play is a romance of the Civil War, written by Augustus Piton and Edward M. Alfriend, and is full of striking scenes. The staging of the play is elaborate. Lovers of realism should find in this play all they demand. Two murderers and a female spy who enlist in the Union army to escape being captured provide the minor plot of the piece.—"By Proxy" has had a successful engagement at McVicker's Theater.—Roland Reed has been well received at the Grand Opera House. Hoyt's "A Trip to Chinatown" will begin an engagement at this house on the 20th.—"All Baba" has left the Chicago Opera House.—Havlin's Theater will present "The Hinstler" for one week, beginning the 20th.—"Tony Farrell" is at the Windsor Theater, and will be followed by the "Spider and the Fly."

FOREIGN.

GREAT BRITAIN AND IRELAND.—The British Cabinet is unanimous on Mr. Gladstone's home-rule scheme.—Mr. Morley, Chief Secretary for Ireland, will propose to the Cabinet to release all political prisoners in Ireland.—The President of the English Board of Agriculture refuses to repeal the prohibition against the importation of live cattle into England.—In consequence of the depression in the agricultural industry, English farmers are petitioning their landlords for a reduction of rent.—A bill is to be introduced into the House of Commons providing for the adoption of the American patent system.—It is believed in London that the threatened strike of cotton-spinners, which would affect 13,000,000 spindles, may be averted.—The unemployed Hebrew workmen in London will march barefooted through the streets of the city three different days.—The ballot of the Dunham miners on the subject of making an eight hours working day compulsory by law resulted in a vote of 12,634 in favor of making eight hours compulsory, and 28,217 in opposition to an eight hours enactment.—William Watson, a young poet, who published the best Tennyson obituary poem, is said to be a favored candidate for the poet laureateship of England.—It is reported in London that the Prince of Wales and his son, the Duke of York, will visit the Chicago Columbian Exposition.—Miss Cozens, a noted female suffragist, in a meeting of the Woman's Emancipation Union, advocated the use of dynamite by women to secure a redress of their wrongs.—On and after March 3, next, the Inman Line Steamship Company will dispatch all its vessels from Southampton, Eng., instead of Liverpool.

FRANCE.—The French expedition, under Col. Dodds, has defeated the entire army of King Behanzin, of Dahomey.—A meeting of unemployed workmen in Paris, held in the garden of the Tuilleries, was so menacing in character that the police were obliged to disperse the crowd.

GERMANY.—Emperor William will open the Reichstag in person on November 22. The army bill will first engage the attention of the body. The Prussian Landtag, which was summoned to meet on November 9, will soon enter upon a bitter party fight on the fiscal reforms proposed by Dr. Miquel, Minister of Finance. Members of the ministerial circle declare that the government will be triumphant in all its policies.—The army bill provides for an increase of 2,138 commissioned officers, 11,857 non-commissioned officers, 72,073 privates and 6,130 horses. The annual expenditure for the army will be 64,900,000 marks.—It is announced that negotiations for a commercial treaty between Russia and Germany will shortly be taken up again.—It is reported



HOOLEY'S THEATRE.

that a careful canvass of the situation at Hamburg has shown 15,000 workmen to be without employment and 8,000 small tradesmen to be financially ruined by the cholera epidemic.

RUSSIA.—It is stated that during 1891 109,515 persons emigrated from Russia to America, as against 83,548 in 1890.—The Russian government has recently demanded that the Belgian authorities, in issuing passports to persons intending to visit Russia, shall state therein the religion of the bearer. If Belgium complies with the demand, Belgian Hebrews will be treated to many indignities if they visit Russia. If she refuses, no Belgian passports will be accepted in Russia, and consequently no Belgians can enter that country, though the Russian demand is aimed solely at Hebrews.

MISCELLANEOUS.—The ceremony of the rededication of the restored church in Wittenberg, Saxony, to the doors of which Martin Luther nailed his famous thesis against papal indulgences, was characterized by great earnestness and enthusiasm. The Emperor of Germany and many other distinguished persons were present.—Count Westerloo has been appointed Minister for Foreign Affairs in the Belgian Cabinet.—Prime Minister Ferreira, of Portugal, was defeated in an election for members of the Chamber of Deputies of that country.—It is reported that a plan has been arranged for a pilgrimage of American Catholics to Rome next spring in celebration of the Pope's episcopal jubilee.—The wreck of the Anchor Line steamer "Ronmania," near the mouth of Arelto river, Portugal, resulted in the loss of 115 lives. There were 122 persons, passengers and crew, aboard and only seven were saved.—A report received from Cagliari, in the island of Sardinia, states that floods on the island have destroyed 248 houses at Sans Perate, and that 100 persons are supposed to have been drowned.—The ravages of cholera at Chngng King, China, are appalling. The deaths there are estimated at from 30,000 to 40,000. The people going any distance from home carry tags, with the name and address thereon. Cholera is also raging at Hankow.—The German steamship companies have agreed not to forward Russians or Hungarians to the United States so long as cholera exists in Russia and Hungary.

THE USES OF THE BICYCLE.

To those who are enthusiastic over the many practical uses of the bicycle, the appearance of the Toledo, Ohio, Cadets in the great military parade at Chicago on the occasion of the dedicatory ceremonies of the World's Fair was a feature of much interest. They made a splendid appearance and held their places so well as to win general admiration. The trials made by some of the European armies, and those made from time to time under various conditions in this country, indicate that the wheel is to have a field of usefulness which never entered into the mind of the inventor.

In this connection the following article on "The Influences of the Bicycle," in the Arena, will be of interest:

Far-reaching results may confidently be expected in a future by no means remote. The bicycle, with its light and graceful metallic construction, its remarkable strength in proportion to its weight, its noiseless rubber tires, both its friction and the wear and tear to the highway reduced to a minimum, contains the elements of a new type of vehicle that will come into universal use with the supplanting of animal traction by mechanical traction, which must come with the development of electricity. Horses and other draught animals will eventually disappear entirely from the highways, just as they are now rapidly vanishing from the street railways. Perfectly smooth pavements will follow; first in the cities and, ultimately, on the roads everywhere, constructed upon the most perfect scientific principles, as railways now are. Freed from the destructive impact of horses' hoofs, the item of maintaining the roads will be reduced to a minimum. Street railways themselves will, perhaps, be made superfluous; for with such smooth pavements mechanical traction will be practically as easy without any rails whatever. Railways will therefore be used only for swift transit and freight transportation, and will have their own exclusive rights of way, probably both overhead and under ground. The "conductivity" of the streets, so to speak, will thus be enormously increased by the ease of motion gained from the universally smooth surfaces, together with the removal of the tramways and their obstruction to travel. Costly widenings, in cities where the streets are now too narrow, will therefore become needless. Multitudes of light vehicles, of various sizes, impelled by electricity, will speed noiselessly in every direction, and bicycles will be numbered by the thousand, their utility for transportation, as well as their value for pleasure and exercise, immensely enhanced.

The effect upon the development of cities will be nothing less than revolutionary. Not only will the advance of public convenience be invaluable, but the

THE MISSOURI BOTANICAL GARDEN.

III.—THE ARBORETUM, FRUITICETUM AND TOWER GROVE.

BY HENRY L. CLARKE.

There is a luscious but deceptive sound in that classic title—"Fruiticetum," and a twinge of disappointment touches us when we find it means a "shrubbery" instead of a good old-fashioned orchard. Nevertheless, Shaw, like a broad-minded old Englishman, planted some things in this Fruiticetum that justified the popular as well as the learned interpretation of its name. Its location was mentioned in the last paper—just north of the garden proper, and cut off by the Linnæan House and tall stone walls on either side thereof, over which, in several places, a loaded pear tree hangs their branches, exasperating the public who must stand outside and wonder what lies within. For this, be it understood, is the garden's sanctum, wherein step only the favored few, partly, perhaps, because the pear trees, heavy-laden with delicious fruit, and the apple strewn ground might prove too tempting to the general gaze; or partly, perchance, because—the management may feel a certain pride in Henry Shaw's good housekeeping; and this, the truth to tell, was one of the corners where the old gentleman was wont to plant everything and anything, and then let anything grow as it pleased. A would-be chaos was the natural consequence, and so now the task has been intrusted to Mr. J. C. Duffey, of the horticultural department, to bring order out of the confusion and establish a valuable and systematic orchard and shrubbery. The area is large, but the work is rapidly progressing, and the place has once more assumed the order and neatness characteristic of the garden. A large and varied collection of interesting shrubs is being brought together, and a number of additional fruits have been planted, so it will before long become an instructive field for horticultural study. Of interest to horticulturalists also are some extended observations on insect pests and their extermination, made by Mr. Duffey during the past year or so, and still in progress. The view here given of the Fruiticetum was taken from the summit of the Linnæan House, in line with the central walk, in the middle of which stand three representative gardeners, in all their glory, and in consideration of the fact that they previously "boosted" the photographer to the level of the chimney.

And now let us turn to the portion of the garden which is of the whole one of the most fascinating and interesting features. It is the Arboretum, a splendid forest of over twenty acres, spread over a gently rolling slope, and filled with luxuriant trees of every clime. Cool, inviting shade reigns throughout it on the hottest day, and a special charm is added to the place by the appearance it presents of nature unadorned. It was here above all other places Shaw loved best to work, and nowhere did his work display a broader spirit of humanity, for ever, as he planted the little saplings, he would calmly say he did not hope to live to see them grow to trees—he "was planting for posterity." But his life, prolonged to venerable old age, permitted him to witness an outcome of his labor he had not dared to

hope for. On either side the driveway near the entrance of the Arboretum stands a superb and towering forest monarch—the pin oak—*Quercus palustris*. These two trees are splendid representatives of their kind—erect and firm and vigorous in every limb. There is a sense of power in a mighty oak that irresistibly attracts a dweller in the North, and these special ones world of themselves arrest the attention of a passer-by, but besides all this there gathers round them a memory which all the workers round the garden seem to cherish reverentially. The old gardener, Constance Strobel, had been telling of the garden's early days, when suddenly he stopped, his face beamed up—"Ah!" he exclaimed, "you haven't seen the finest sight of all," and off he started for the Arboretum, while, in utter forgetfulness of everything, German words and English fished indiscriminately side by side. Reaching the roadway, he pointed out the two spreading oaks, and told how nearly two-and-thirty years ago, back in '61, those trees had been planted among the first in the Arboretum, and as the dirt was thrown round their roots Mr. Shaw held them up erect and firmly with his own hand. "Und jetzt!" and sulking action to the word, Strobel threw both arms around one of the saplings of thirty years gone by, only to show that each arm must be stretched a good foot longer to make the circuit. Here truly it seemed there were "tongues in trees."

On every side are glorious silver maples, red maples, maples from England and Norway; tall, spreading honey-locusts; gigantic plane trees from the Levant; the alantans of China, the gingko of Japan; elms, alders, hitches, everything—a bewildering variety. Rare forest trees from a dozen lands, ornamental shade trees, timber trees of Europe, Siberia, and America—all are gathered together. The pines and firs and tall, symmetrical bald cypresses are everywhere. Here and there stand tall, swaying Norway poplars, and graceful Lindens, magnolias, and giant tulip trees. And so the enumeration might be continued, if there were ought to gain by cataloguing. The student who is looking for a place to study the philosophy of trees need look no further if he once lands here.

A most commendable work, that is constantly being carried on, is the careful labeling of all the specimens. It is an almost endless task, but nearly every flower and tree around the garden has been duly marked. On the trees are nailed large oval plates of "white bronze," with the name—popular and scientific—and the habitat, stamped therein, and all the smaller plants have little squares of celluloid, fastened to wire rods, with the name in absolutely indelible ink. Nothing contributes more than this to the broad usefulness of a botanical or other scientific collection, for it opens up to even the uninitiated a means of gratifying a very useful kind of curiosity; and, in truth, it is an inward satisfaction to even the time-tried scientist to find a plant, or beast, or bird, or stone correctly named and labeled.

Last year a new and valuable feature was added to the Arboretum, in the way of a large collection of native plants, numbering about eighteen hundred species, more than the flora (of flowering plants) of Great Britain includes. This wild garden is scattered through some seventy odd beds, placed here and there

in open places or in the shade of the overhanging branches as the species may require. In one open patch of low ground a large artificial peat bog has been prepared, and in it dozens of the brilliant are luxuriating as though in their native wilds. In one corner of this bog is growing a remarkable family of insectivorous plants—four or five species of the strange order Sarraceniacæ—the pitcher plants, a large group of the Venus fly-trap, and the dainty little sun-dew. Near by stands a glorious cluster of the brilliant Cardinal flower, and scattered in different portions of the bog are clumps of several varieties of lady's slippers, and other native orchids. Hidden away in another secluded nook of this "forest primeval" is the "Willow Pond," a little expanse of clear, still water, grown over with white water-lilies and bordered with reeds and *Sagittarias*. Over its margins droop graceful, melancholy weeping-willows, and at its head a lofty honey-locust rears its trunk aloft and spreads out its beautiful, fine-cut foliage. It is intended that the wild-flower garden thus being introduced shall play an important part in certain practical botanical work Director Trelease now has in progress—monographs on the systematic classification of various groups of North American plants. Two of these papers, already prepared by him, have appeared in the Garden Reports for 1901 and 1902—one on the genus *Rumex*, the other on *Eupatorium*. Such a field as is here offered for the combined study of our native forest trees and herbaceous flora is of peculiar interest to the Northern botanist, and especially appreciated by even the nonscientific observer.

In this article and the one preceding it a general review has been made of the three divisions which make up the Botanical Garden, strictly so-called, but only a few pages therefrom lies a fourth division inseparably connected with it in thought and history, though somewhat different in character and purpose. It is the park already incidentally referred to—Tower Grove—one of the most beautifully artistic and classically adorned places of its kind, of such limited area, that any city in the land can boast of. The garden was the great public educator and scientific institution which Shaw justly realized was his crowning achievement, but to a nature such as his the park eloquently appealed as a great pleasure-ground and place of rest for the wearied masses, of rich and poor, high and low—a spot where there might come to all that unconscious elevation of thought and spirit—the broadest education—ever begotten of restful, quiet communion with the handiwork of nature, that

"glides
Into his darker musings, with a mild
And healing sympathy, that steals away
Their sharpness, ere he is aware."

So, thus viewed, a passing glance enables us to realize that Tower Grove was the pride of Shaw's heart. The idea of its founding was probably not far removed from the conception of the garden, though nearly ten years later in being carried into execution. The ground on which the park is laid out is an oblong strip about a mile and a half in length, and comparatively narrow, and directly adjoins the garden on the south. In 1867 Shaw donated this entire tract, of nearly three hundred acres, to the city of St. Louis, on condition that the city



1. MUSIC STAND—BUSTS OF BEETHOVEN AND WAGNER IN FOREGROUND.

2. AMONG THE TREES.

3. THE FRUITICETUM FROM TOP OF LINNÆAN HOUSE.

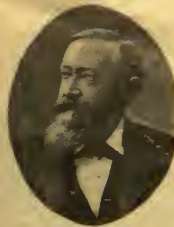
4. THE WILLOW POND.

5. THE POND AND VINE-COVERED RUINS.

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GROVER CLEVELAND.



BENJAMIN HARRISON.

THE PRESIDENTIAL ELECTION OF 1892.

The result of the National election presents a condition which was wholly unexpected by the wisest political leaders of all parties.

For a long time, with a single exception, the responsibilities of Federal government and National legislation have been divided between the Republican and Democratic parties. The exception was during the Fifty-first Congress, when the Republicans controlled both branches of the Federal legislature and President Harrison was elected Chief Executive. The policy of the party was then permitted to be put into practice, and its principle of protective tariff duties found expression in the measure known as the McKinley bill.

Nearly three years have elapsed since the enactment of this law, and an appeal to the country has resulted in a great victory for its opponents. The Democratic party have triumphed in the election of members to the House of Representatives, and will have an overwhelming majority in that body.

The electoral college for 1892 contains 444 votes, making 223 necessary to a choice. The result of the election by States is as follows:

States.	Harrison.	Cleveland.	Weaver
Alabama.....		11	
Arkansas.....		8	
California.....	9		4
Colorado.....		6	
Connecticut.....		3	
Delaware.....		4	
Florida.....		13	3
Georgia.....		24	
Illinois.....		15	
Indiana.....	13		10
Iowa.....		13	8
Kansas.....		8	
Kentucky.....	6		
Louisiana.....		15	
Maine.....	16		
Maryland.....		5	
Massachusetts.....	9		
Michigan.....	9		
Minnesota.....		9	
Mississippi.....		17	
Missouri.....	3		
Montana.....		8	
Nebraska.....		3	
Nevada.....	4		3
New Hampshire.....		10	
New Jersey.....		36	
New York.....		11	
North Carolina.....			3
North Dakota.....	39		
Ohio.....	3		1
Oregon.....	30		
Pennsylvania.....	4		
Rhode Island.....		9	
South Carolina.....	4		
South Dakota.....		12	
Tennessee.....		15	
Texas.....	4		
Vermont.....		12	
Virginia.....	4		
Washington.....		6	
West Virginia.....		12	
Wisconsin.....	3		
Wyoming.....			
Total.....	153	287	24

In the Senate they are assured of the return of party men in the place of all Democrats whose terms of office expire with the close of the present Congress. The result of the election in the States of New York, Connecticut, Wisconsin, Montana and California insures the election of a Democrat from those States to succeed Senators Hiseock, Hawley, Sawyer, Sanders and Felton—Republicans. This will increase the Democratic membership in the senate to 44. In addition to these five,



JAMES R. WEAVER.

the Republicans also lose Senators in Nebraska, Nevada, North Dakota and Kansas, where Senators Paddock, Stewart, Casey and Perkins will be succeeded by Populists. This will reduce the Republican representation to 40 members, four less than the Democratic, and place the balance of power in the hands of the third party, which will have six representatives in the upper branch of Congress. In the lower house the membership stands 230 Democrats, 124 Republicans and 11 People's party representatives. The delegates from the Territories add three to the Democratic column and one to the Republican representation. The Democratic party, it will therefore be seen, notwithstanding its success in the recent contest, will not have complete control of the Federal Government.

The Prohibitionist vote was in no case a prominent factor and did not reach the figures which were claimed for it by the party managers.

The electoral vote of Michigan, which under the new law divides the State's representation in the electoral college according to the majority vote of congressional districts, has, owing to the general result, been of no special importance, and it may be expected that with the Republicans again in control of the State Legislature the act will be repealed and the method of selecting presidential electors again be made uniform in all the States.



THE "HERALD'S" RED LIGHT.

The success of the Populists in the States of Colorado, North Dakota and Kansas was a great surprise. Nevada had been conceded to Mr. Weaver some time before the election, but little credence had been put in the claim made to the electoral vote of other States. The result is the effect of the fusion policy, as combinations were made between the Populists and Democrats embracing some part of the ticket, State or National in each case. In some instances, notably in South Dakota and Minnesota, fusion failed to accomplish anything. In the Southern States the fusion of Republicans with the People's party was unsuccessful in every case. The claims of the third party regarding the South were unsubstantiated, and in no State except Texas did the vote cast for the Weaver electors reach anything like a respectable percentage of the total vote.

Visitors to the Fifty-third Congress will miss several familiar figures in both houses. In the Senate the venerable Henry L. Dawes, of Massachusetts, who succeeded to the seat of Charles Sumner, eighteen years ago, will retire, to be followed, it is understood, by Congressman Henry Cabot Lodge, one of the most accomplished members in the House of Representatives. Senator Frank Hiseock, of New York, will be succeeded by a Democrat; several names are mentioned, the most prominent of which is Carl Schurz, the noted mugwump, who has done so much to secure Mr. Cleveland's election. Mr. Schurz is a gentleman of wide experience and high attainments. The other possible successors to Mr. Hiseock are Edward Murphy, Jr., chairman of the

New York State Democratic committee, and Congressman W. Bourke Cockran. It is thought that Mr. Murphy's chances of election are the best. General Joseph R. Hawley, of Connecticut, who has for twelve years been one of the most useful members and striking personalities in the Senate, will be succeeded by a Democratic member; there is no avowed candidate for the office. Senator Sawyer, of Wisconsin, who has served two terms, will be followed by a Democrat. The most prominently mentioned candidates for Mr. Sawyer's seat are General Bragg, long the leader of the Democracy of Wisconsin, and Congressman John L. Mitchell, who was chairman of the Congressional campaign committee in the recent campaign. The Nebraska Legislature is controlled by the representatives of the People's party, and Senator Paddock, who has won a wide reputation through his pure food bill, will be succeeded by a Populist. The People's party control the Senatorship in Nevada, but it is generally believed that Senator Stewart will be re-elected because of his advocacy of free silver.

In California and North Dakota, where Senator Felton will be followed by a Democrat and Senator Casey by a representative of the People's party, there are no prominent candidates for the office. In New Jersey, Senator Budgett, it is believed, will have a strong opponent for re-election in Governor Abbott. Senator Gray, of Delaware; Turpie, of Indiana; Stockbridge, of Michigan; Davis, of Minnesota; Faulkner, of West Virginia, and Warren, of Wyoming, will probably be returned without opposition. In Tennessee, Senator Bate will be opposed, as will also Senator Pasco, of Florida, and Senator Allen, of Washington. The People's party has had better success in Kansas than in any other State, as by the result of the recent election they will have the two Senators and two Representatives.

In the lower house there will be missed Congressman Herbert, of Alabama, who has so long been the leading member of the Naval committee of the House, and who had come to be looked upon as authority upon all branches of naval improvement; Congressman Blount, of Georgia, who has been the most prominent member of the House Foreign Affairs committee; Congressman Forney, of the Committee on Appropriations, and one of the best informed members of the body on the improvement of rivers and harbors; Judge Taylor, of Ohio, who has for so long a time occupied a prominent place on the Judiciary committee. Among the new members will be the familiar face of ex-Congressman Joseph G. Cannon, of the Fifteenth Illinois district.

It is asserted by some that there will be strong opposition among the Democratic members to the re-election of Speaker Crisp. The friends of Senator Mills, it is said, will make an effort to elect a representative of their faction. Mr. Cleveland, it is understood, was favorable to Mr. Mills' candidacy for the speakership, and it is presumed that his influence will be exerted to secure the election of a Mills man. The most prominent candidate of this wing of the Democracy is Benton McMillan, of Tennessee. In the event of the defeat of Mr. Crisp, however, it is more probable that either Mr. Springer, of Illinois, or Mr. Wilson, of West Virginia, will succeed to the honor. Both of the latter gentlemen, while pronounced in their advocacy of a reduction of tariff duties, are recognized as conservative, and favorable to a gradual revision of the laws rather than a general reduction, such as was contemplated in the Mills bill. Mr. Wilson may be said to be the most probable candidate for the speakership in the event of a determination to defeat Mr. Crisp.



JOHN BIDWELL.



SHAKESPEARE STATUE—NEILSON MEMORIAL TREE ON THE LEFT.



STATUE TO ALEXANDER VON HUMBOLDT.



THE COLUMBUS BRONZE STATUE.

should appropriate proper funds for its improvement and maintenance as a public park forever. The value of the gift was over three hundred thousand dollars, and the city met the proviso with an appropriation of \$660,000 for improvements, and an annual income of \$25,000. Thus within three years a bare and treeless waste of undulating meadow was transformed into a verdant park. Shaw's interest in the park grew as the years rolled on, and constantly he watched for opportunities to add to its perfection. Out of the Arboretum of the garden came over 20,000 trees to identify it, and the supervision of the landscape gardening was placed in the experienced hands of Mr. Gurney. Mr. Shaw himself was one of the Board of Commissioners, and also, after his death, the director who now fills his place at the garden.

Down the center of the park for about two-thirds its length runs a broad bonlevard from the great eastern entrance way on Grand avenue to the statue of Shakespeare over a mile to the west, straight as the bee flies. In one place it is broken by a large circular greenward, ornamented with trees, where stands the statue of Humboldt, facing the Shakespeare three hundred yards or so to the west. And where the bonlevard spreads out before the eastern entrance stands forth the imposing Gateway with its artistic iron-work and four massive columns of limestone and granite, spread far apart, the outer full eighty yards from one another, and each surmounted with a crouching lion of bronze, and the inner each crowned by a mighty dragon. At the west end, also, of the park, is an imposing gateway, and one on the north side, toward the garden, and a fourth on the south. Round about the whole there runs a graceful picket-fence with an inner hedge of Arbor Vite, and at the several gateways are ornamental buildings for the gatekeepers, police, superintendents, etc., and likewise greenhouses and pavilions. On each side the bonlevard, twining through the lawns of richest sod, planted everywhere with myriad trees, are winding paths and driveways. Here and there, bordering the paths, are splendid hedges that would inspire an English soul, and in one corner is a labyrinth of hedges with a central summer house, inaccessible to all save the patient mortal who will unravel the mazes of the path, a most fascinating place to meander round for half an hour without getting anywhere. Still there is negligence in the idea, and the system of beautifully trimmed and cared-for hedge-rows are a credit to the gardener's skill. In a broad lawn eastward from the Shakespeare lies the pond with its central fountain and vine-covered ruins round its edge. These ruins are the relics of the old Lindell Hotel, of St. Louis, which have been brought out and arranged with wonderfully picturesque effect. Near by are several great ponds of Egyptian lotus, gorgeous in their array of rose-tinted blossoms. A huge bed of foliage plants adorns the lawn, and in the foreground of the view we give (Fig. 5) tower a mighty honey-locust and a glorious silver-maple. In still another open space farther to the east is the Music Stand, a graceful structure where every Sunday afternoon, in accord with a provision of Henry Shaw, an orchestra of skilled musicians render a carefully selected programme to the hundreds who gather in the surrounding grove and carriage concourse. A broad stretch of turf sweeps round the stand, and on each of its four sides rises two shafts of polished granite, six out of the eight surmounted by marble busts of great composers, chiseled by masters—Gounod and Verdi, Mozart and Rossini, Beethoven and Wagner—all gazing upon the assembled people of every class and station, who gather there each week to hear the strains which often lift the soul above the sordid cares of daily life to better, nobler thoughts and aspirations. What wonder is it that Shaw found no greater pleasure than his weekly visit to these concerts that were the outcome of his broad philanthropy?

But as we wander through the paths and lawns and groves, the realization flashes over us that the striking

feature of the place, its peculiar irresistible charm and beauty are to be attributed to the unending number of its splendid trees in marvelous variety. On every side are trees of every form and size, planted always, as it seems, just where the most effective result will inevitably be produced, together forming a rarely beautiful display of rich and varied foliage, and each individual a noble representative of its kind. Enumeration would be

useless—impossible here—but it will suffice to say that of deciduous species much over 150 might be counted, and of evergreens fully a third as many more. Thus, both in number and the character of the types, the collection is truly a remarkable one, and such as only a peculiarly favorable climate could support.

A passing mention has been made of the great statues of Humboldt, Shakespeare and Columbus; but, since artistically and classically they are the crowning glory of the park, to each is due a special notice. These three stupendous bronzes are of themselves sufficient to immortalize the munificence of their donor, even were he not also the founder of the splendid setting in which they are placed. There they stand supreme together: the inspired discoverer, the undaunted naturalist and traveler, and the sublime poet—masterpieces from the hand of Ferdinand von Miller—all giants in size and raised on imposing pedestals of granite full fifteen feet in height. On the four sides of the massive cube of granite that forms the main part of each pedestal are chiseled inscriptions, or bronze bas-reliefs, appropriate to the man of genius who rises above.

At the west end of the long main bonlevard, looking toward the east, stands the majestic Shakespeare, the head erect, the bearing courtly, and about the whole a lofty dignity of pose that impresses the mind, and on the bronze work at the feet we read Ben Jonson's eulogy: "He was not of an age but for all time." Below, upon three sides of the granite block are bronze reliefs of Queen Katherine; Lady Macbeth, haunted by her crime; and Hamlet gazing on the skull the grave-digger raises to his view but on the fourth and eastern face, most prominent of all, stands out the jelly figure of the old St. Louis actor, Ben De Bar, as Falstaff.



THE CACTUS.

Odd, perhaps, this choice may strike us, for though he was an excellent actor, there have been many greater; but once old Mr. Shaw explained the reason for it in one terse sentence thoroughly characteristic of all his deeds. Remonstrated the old actor and manager, Mr. Ludlow: "Why, Mr. Shaw, you have honored Ben De Bar as Garrick and Siddons have never been honored!" "True, perhaps," came the response, "from a professional point of view, but I am indebted to De Bar for a great many very pleasant hours, and am glad of the opportunity to partially repay that debt." Those who know how intensely Shaw enjoyed a good bit of classic comedy can well appreciate the spirit of this uniquely-placed memorial; indeed, there is about it a world of meaning a Garrick or a Siddons would have lacked.

Just behind the pedestal, and a dozen paces from it, there stands a beautifully-grown little mulberry tree, round which there is perpetuated a fascinating reminiscence. It was in the March of 1880 that Adelaide Neilson, "the incomparable Juliet," visited St. Louis for the last time and drove to Tower Grove to see the Shakespeare. Reverentially she stood before it, walked about it, viewed it from this side and that, and, nodding her head, thoughtfully exclaimed: "Old fellow, you have done a great deal for me—a great deal for me!" Asked what she thought of it, she declared that she had "seen every Shakespeare memorial of any consequence, public and private, in existence, and this one is decidedly the finest." Then someone suggested that, when she returned to England, she send a slip of the Shakespeare mulberry in Stratford-on-Avon, to be planted near by as a memento of her visit. Gladly she consented, and, pacing off a short distance from the pedestal, she turned her little foot-hool in the sod. "Plant it here," she said. But untimely fate prevented her from ever again seeing the shores of England; so, after her death, Mr. Shaw planted, on the spot she marked, a slip from one of his own choicest mulberries, and now it is growing up into a stately tree, a living monument to the playwright and the player, while a marble tablet at its foot recalls the little incident.

Several hundred yards to the east, looking westward down the bonlevard toward the Shakespeare, rises the imposing Humboldt—of the three great masterpieces probably the masterpiece, the crowning tribute to the sculptor's skill. In every lineament of countenance and detail of form and dress is faultless accuracy, and in the stately, restful poise of all the features can be read at once the thoughtful reverie of the philosopher, the keen observance of the naturalist, and the broad contemplation of the traveler, as if he stood upon a mountain top and was gazing down upon some far-spreading landscape. The niece of Humboldt saw the figure in Munich, and in thanking Shaw for the high honor to her family, declared that neither Europe nor America had done anything for the great naturalist comparable to it. On the front face of the pedestal is the simple name, eloquent in itself: Alexander von Humboldt. The opposite face bears the inscription: "In honor of the most accomplished traveler of this or any other age. Erected by Henry Shaw in 1876." Of the other two sides, one bears in relief a view in the valley of the Amazon, the other a view of the volcano Chimborazo, whose lofty summit the dauntless explorer was the first to gaze. This wrote Thomas E. Garrett—

"Humboldt and Shakespeare in one vista rise—
Explorers of untrodden ways—untangent!
The one, by conquest, made the earth man's prize,
The other crystallized the world of thought.

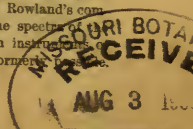
In Shakespeare's presence Neilson bowed the knee—
Here later pilgrims come to honor her;
And here the poet's own memorial tree
Recalls sweet Juliet's best interpreter."

Far down the tree-bordered avenue, before the eastern gate, stands out in all its power the mighty figure of Columbus, acknowledged the finest monumental statue the world has ever reared to him. It stands with firmly-planted feet, like a mariner upon a storm-tossed deck, in one hand an unrolled chart, one limb advanced from under the flowing mantle, and the determined face looking toward the west, where lay the goal of all his hopes and aspirations. Below, two reliefs picture the explorer at the prow of the "Santa Maria," and La Salle on the Mississippi; a third bears the words: "The XIXth Century to Christopher Columbus;" and the fourth presents one laconic sentence, eloquent in praise: "To the discoverer of a new world!"

Thus these three memorials have become a vital part of the broad educational system embraced in the garden and park, for practically garden and park are one in purpose as well as origin. The park's usefulness, it is intended, shall soon be broadened by the careful naming of its trees and shrubbery—in fact, as has been said, it is in respect to these features a botanical garden now; and also we may look for constant and steady improvements and additions in the garden proper. Many are now in view and others will continually present themselves.

Seldom, truly, has our country seen a man dispose of a private fortune—large, yet far less than hundreds of his fellow-citizens possessed—with such broad-spirited purpose and far-seeing judgment as did Henry Shaw. The three-fold monument stands before us: A great botanical garden in the interest of American science; Tower Grove Park, with all its rare beauty, for the masses of a great city; and in this park a grand memorial to each of three men who are counted as the benefactors of no single land or people, but of all mankind.

The eminent scientist, Professor C. A. Young, expresses the opinion that the most important progress made recently in solar spectroscopy is Rowland's comparison of the solar spectrum with the spectra of various chemical elements, made with instruments of so much greater power than was formerly



THE CITY OF LYONS.

Lyons, the second city of the French republic in political, commercial, industrial and military importance, as well as in point of population, has many features of interest for the European tourist, and stands second in this respect only to Paris. The city is the chief town of the department of Rhone, the seat of a court of appeal, of a military government, and a fortified place. It is situated at the confluence of the Rhone and Saone, and has an altitude above the sea of from 500 to 1,000 feet. Where it enters Lyons, the Saone has on its right the faubourg of Vaise and on its left that of Serin, whence the ascent is made to the top of the hill of Croix-Rousse. The river next takes a semicircular sweep around the



NOTRE DAME DE FOURVIERES.

hill of Fourviers, 410 feet above it, which is fully occupied by convents, hospitals and seminaries, and has at its summit the famous church, the resort of 1,500,000 pilgrims annually. From this point the best view of the entire city is obtained. First the busy Saone is seen with its thirteen bridges and animated quays. Next on the peninsula between the two rivers at the foot of the hill of Croix-Rousse come the principal quarters of the town: the Terreaux, containing the hotel de ville, the prefecture, and the chief commercial



PLACE BELLECOUR.

establishments. Bellecour with its large open square, one of the finest in Europe, and the aristocratic Quartier de Perrache. The Rhone and Saone formerly met here, till a hundred years ago the sculptor Perrache reclaimed from the rivers the quarter which bears his name; on the peninsula thus formed stands the principal railway station.

Of the ancient buildings in Lyons, Fourviers is the one which attracts most visitors. It derives its name from the ancient forum (Forum vetus), whose site it occupies. The first chapel, dedicated to the Virgin, was erected in the end of the ninth century. Consecrated afterwards to St. Thomas of Canterbury, and then made a collegiate church, Notre Dame de Fourviers was created superior of twenty-five villages by Louis XI., on the occasion of his visit in 1476. Laid waste by the Protestants, plundered at the revolution, it began to be visited again in 1804, and in 1835 Pope Pius VII., returning from the coronation of Napoleon, ascended thither to give his benediction to the city—a ceremony which is renewed from year to year with

great pomp. The church tower, 172 feet high, is surmounted by a statue of the Virgin in gilded bronze, eighteen feet high, turned towards the town; on the pedestal are bronze plates, with inscriptions assigning to the Virgin the credit of ending the plague of 1643 and of preserving the town during the cholera epidemics of 1832, 1835 and 1850.

Northward from Fourviers appear the green slopes of Mont d'Or descending toward the Saone by pleasant glades sprinkled with villas; to the east, beyond a somewhat monotonous plain, stretch the mountains of Savoy and Dauphine; to the south, below the confluence of the Rhone and the Saone, the river traverses a rich landscape to pass out of sight at the foot of Mont Pilat; and to the west the horizon is bounded by the Forez hills.

The Place Bellecour is adorned west and east by two monumental facades originally erected after plans by Mansard, but destroyed in 1793, and rebuilt under the consulate in a somewhat modified style. In the middle stands an equestrian statue of Louis XIV., by Lemot.



PANORAMIC VIEW OF THE CITY OF LYONS.