

### A HANGING GARDEN AND A MODEL OFFICE BUILDING.

BY H. C. HOVEY.

Circumstances have combined to make the city of Minneapolis remarkable in an architectural way. There is its location, to begin with. The broad sandy plain on which it lies reaches from the gorge of the Mississippi River back to Lakes Calhoun and Harriet, a breadth of about four miles. Lengthwise it extends from a rolling prairie whose hills are crowned by charming houses, nine miles southward to the cliffs around Fort Snelling. Underneath the surface of sand and loam is the Trenton limestone, on which rest the solid foundations for the great mills and other massive edifices, while the compact sand is firm enough to support lighter structures. Hence there is no need of the costly digging and blasting that makes similar work elsewhere so expensive. Excavations for cellars, sewers, water pipes, etc., are made at a comparatively light outlay. Then, again, every kind of building material is at hand, and of the very best quality. There is abundant clay for manufacturing the cream-colored bricks that give the city such a sunny look. The limestones and sandstones of the region are noted for their admirable variety of color and texture. Granites can be had capable of standing, by actual test, nearly double the pressure of those quarried along the Atlantic coast. The vast forests of the Northwest furnish every kind of lumber desired, whether for construction or for finish. The numerous glass works of the West make plate glass so cheap that almost every house makes use of it. It is safe and in every way practicable to pile up edifices to a height that might be hazardous if less durable and compact materials were used. Still another favorable consideration is the fact that the wisdom and good taste of the founders of the city were shown in the laying out of the original streets and avenues with ample width, varying from 80 to 200 feet, thus inviting the erection of costly mansions and public edifices, with the assurance that their noble proportions would not be hidden from observation.

During the past ten years enterprising young architects, who had yearned for a field in which to display their talents, have brought to Minneapolis the freshest and the best ideas and inventions of foreign as well as domestic architecture, besides here and there, it must be confessed, notions rather wild and fanciful. The general result, however, is a city of novel and often brilliant effects, so that the visitor is greeted by surprises whether he pushes along through the crowded business streets, strolls amid the luxuriant parks, or is whirled by the electric railway through the spreading suburbs.

My object in this communication is particularly to describe a model office building recently erected by the Northwestern Guaranty Loan Company, of which pictorial representations are also offered. The building is of immense size, yet combines beauty and grace with the necessary elements of strength and durability. It covers an area of half an acre, and boasts six acres of flooring. Its dimensions are 156 by 132 feet, and its twelve stories rise to the height of 172 feet. The observation tower rises 48 feet above the flat roof, making the total height 220 feet. The first three stories are built of green granite, and the upper nine stories are of red sandstone, and its four sides are finished alike. The interior materials used are iron, brick, terra cotta and antique oak. The building contains 400 office rooms, all heated by steam and supplied with water drawn from an artesian well 750 feet deep, the pipes running in summer through a packing of ice, thus giving all tenants an abundance of ice water free. These offices are arranged in suites, each suite having front windows, steel vault accommodations, and ventilated by the most approved methods. The entire building is brilliantly lighted by 15 arc and 3,000 incandescent lamps, connected by 31 miles of electric wire. It has been estimated that this ponderous structure weighs 100,000 tons. The basement contains a complete system of safety deposit vaults. The public law library, free to all tenants, includes more than 10,000 volumes, with full sets of American and foreign reports, and stand-

ard works of the latest and best editions. There are six elegant passenger elevators, besides a special one for freight. The twelfth story is entirely occupied by the Guaranty Loan Restaurant, including the public dining room, private dining rooms, cafes, smoking rooms, etc., elaborately and expensively furnished.

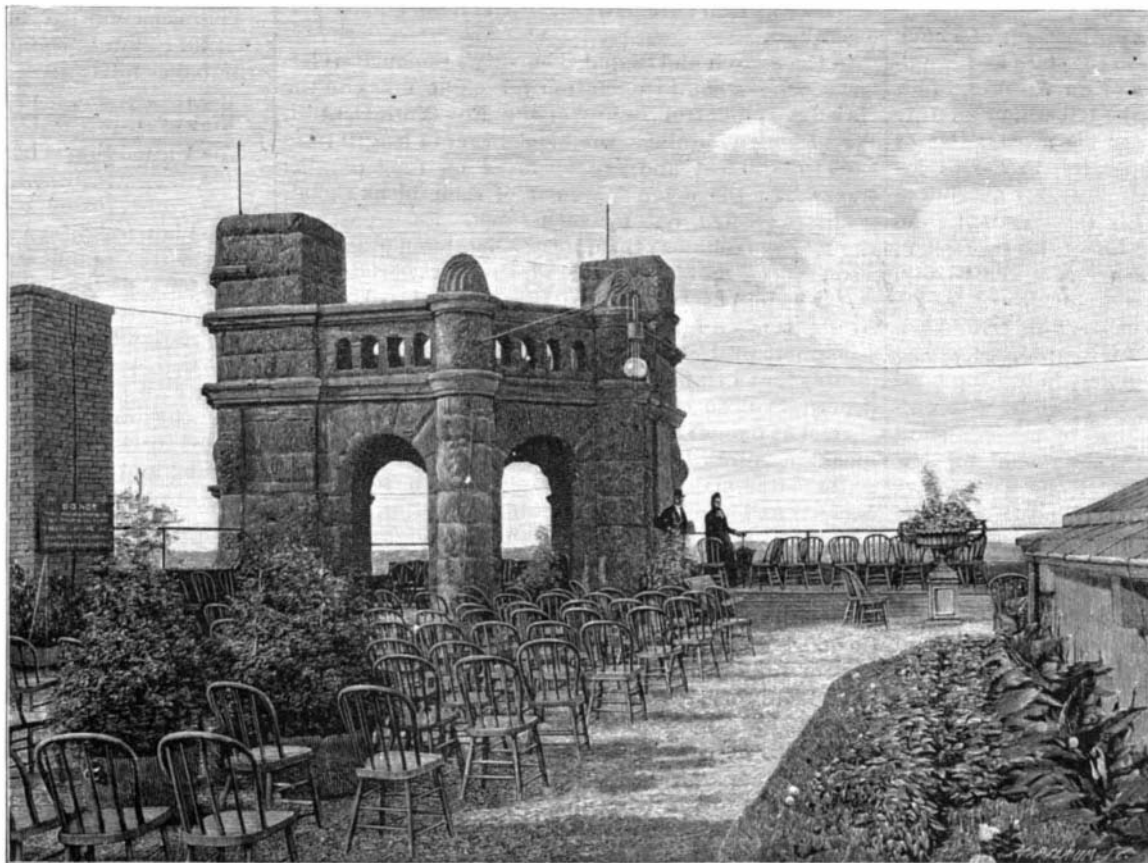
Probably the feature that would strike the visitor as most unique and charming is the beautiful garden on



JOHN RUGGLES, FATHER OF THE PATENT OFFICE.

the roof, 172 feet above the pavement, where pygmies seem to be walking, and the street along which toy carriages appear to be rolling. This garden is laid out with handsome gravel walks, beds of foliage plants and rare and lovely flowers. During the summer months band concerts are given here, and it is a very popular resort for sight seers. On a clear day, of which there are so many in this remarkable climate, one can see the entire city of Minneapolis and its environs, with the spires and towers of St. Paul not far away. The eye can follow the windings of the Mississippi to its juncture with the Minnesota River, or, in another direction, look off over a broad expanse of woodland and prairie, amid which are embosomed some of the loveliest lakes in the world.

The architects of this magnificent pile were Messrs. Townsend and Mix, whose intention it was to make



A HANGING GARDEN, MINNEAPOLIS.

this the finest commercial building in existence, and the citizens of Minneapolis think they have succeeded.

A WORLD'S fair, in commemoration of the four hundredth anniversary of the discovery of America, will be opened at Rio de Janeiro, under the auspices of the Brazilian government, in November, 1892.

### THE FATHER OF THE PATENT OFFICE.

To the Editor of the Scientific American:

The interesting notices in your columns of those whose administration of our patent system in its early stages so largely contributed to its subsequent growth and usefulness seem to suggest some reference to the statesman whose wisdom conceived and formulated the patent bureau as we know it. There is good ground for belief that although the principle of examination of the novelty and utility of inventions for which patent protection was sought was recognized in the act of 1790, the plan of providing a special corps of examiners originated in the mind of Senator John Ruggles. There appears to be no printed record of the words with which this fruitful thought was presented to the Senate, but the writer is so fortunate as to be entrusted by the presenter's son and namesake with Senator Ruggles' notes for his famous motion. The committee asked for in the motion appears to have been forthwith appointed, and on the 28th of April, 1836, its chairman, Mr. Ruggles, presented the report and bill No. 239. The bill was so well thought out as to quickly pass, substantially intact, into law. It passed the Senate June 20, 1836, the House July 2, 1836, and received the executive signature July 4, 1836. Of the scarcely less important supplementary acts of 1837 and 1839 Mr. Ruggles was, in like manner, the author. Notwithstanding the mover's recognized personal weight, his bold prediction that "there will probably be no less than 1,000 patents sued out the ensuing twelve months," was doubtless received with skepticism by more than one of his listeners. G. H. K.

Washington, D. C., April 13, 1891.

SPEECH OF SENATOR JOHN RUGGLES BEFORE THE UNITED STATES SENATE, FIRST SESSION OF 24TH CONGRESS, INTRODUCING MOTION FOR A COMMITTEE ON PATENTS, DECEMBER 31, 1835.

Mr. President: Having had occasion to transact some business at the Patent Office, I have been led to inquire into the cause of delay which so often attends the suing out of patents, and in so doing, have come to the knowledge of the necessity, which I apprehend exists, of a revision of the laws of Congress relating to this subject. There has been no change or alteration in the laws of Congress providing for the encouragement of useful discoveries and inventions for nearly half a century except extending the privileges to a certain class of foreigners. For a long period after the law was passed under which patents are issued, there were no more than two patents issued in a year. Now there are 800 issued in a year, and they are fast increasing. There will probably be no less than 1,000 sued out the ensuing twelve months. It is not strange that regulations which answered very well at the time should now, under a change of circumstances, require revision and alteration.

One provision of the law of '93 is particularly inconvenient. It is that which requires a patent to be signed by the President, Secretary of State, and the Attorney General. If either of these officers happen to be absent when an application is made, the applicant is delayed until his return, or the patent must be forwarded to him wherever he may be. Such is very often the case in respect to the present Attorney-General. He is now in the State of New York, and I understand that it now requires some two or three months to get a patent through all the modes and tenses necessary to its validity, when, in fact, it ought not to take more than two or three days. It is a very inconvenient and unnecessary formality.

Again, sir, there is no discretion given to any of the officers of government to refuse a patent when applied for, though the subject of it be neither new nor useful. The suing out of a patent is a mere ministerial duty. The consequence is that patent upon patent for one

and the same thing, with, perhaps, some immaterial alteration, is granted to different persons, and thus a foundation is laid for contention and litigation. I understand, sir, that it is not infrequent for a visitor at the model room to take a drawing and description of a model there, and making some slight immaterial alteration, go into the superintendent's apartment and re-