

## JOHN BLOOMFIELD JERVIS.

THE subject of this sketch, one of the most eminent of American engineers, died at Rome, N.Y., Jan. 12, 1885, after a long life, distinguished for the prominent enterprises with which he had been connected and to which he had given many features they still retain. He was noted for his purity of life, and professionally for his caution, accuracy, sound judgment, and integrity. His engineering training was not obtained in any technical school, such as is offered to the youth of the present day, and his preparatory education was extremely moderate in amount.

John Bloomfield Jervis was born at Huntington, Long Island, Dec. 14, 1795, and was the oldest of seven children. His father was a carpenter, who in 1798 removed to the neighborhood of Rome, N.Y., and engaged in sawing lumber. The son attended the common school of that date until he was fifteen years old; and for the following seven years he worked at the saw-mill, on the farm, and in the woods. In 1817 the construction of the Erie canal through that region brought about his employment as axeman on the work, and first turned his attention to engineering. He was soon promoted to rodman, and in two years was made resident engineer of a section of seventeen miles, from Canastota to Limestone Creek. He gave such satisfaction that in 1821 he was assigned to a similar position near Amsterdam, and was retained, after the opening of the canal, to superintend repairs.

A condensed statement of the more important of his professional engagements, which are described at greater length in the *Railroad gazette* of Jan. 23, will give an idea of how active and responsible a position in life he has occupied. In 1825 he became chief engineer of the Delaware and Hudson canal company, and remained until 1830. He constructed the inclines of the Carbondale railroad, and ordered from England the 'Stourbridge lion,' the first locomotive imported into this country. In 1830 he was made chief engineer of the Albany and Schenectady railroad, the first rail-

road constructed in the state of New York, and, later, of the Schenectady and Saratoga railroad. Here he devised the four-wheeled, swivelling or 'pony' truck used for the leading wheels of a locomotive, and generally adopted in this country. In 1833 he was chief engineer of the Chenango canal, ninety-eight miles in length, with a hundred locks, where he originated the use of artificial reservoirs for the supply of the summit level. In 1835 he made surveys and estimates for an enlargement of the eastern section of the Erie canal. He was made chief engineer of the Croton aqueduct in 1836, — a work considered, at the time of its completion, as a magnificent example of hydraulic engineering, and in which the Croton dam, High bridge, and the 42d-street reservoir show his professional skill. From 1846 to 1848 he was consulting engineer on the Cochituate aqueduct, Boston water-supply. Water-works at Port Jervis and at Rome, N.Y., were later constructed under his supervision. Between 1847 and 1850 he was first chief and then consulting engineer of the Hudson-River railroad when it was completed from New York to Poughkeepsie, a portion covering most of the difficult work of that line. After a short trip to Europe, he became chief engineer on the construction of what is now the western part of the Lake shore and Michigan southern railroad, and was connected with this road until 1858. During 1851 he was made president of the Chicago and Rock Island railway. In 1861 he became general superintendent of the Pittsburgh, Fort Wayne, and Chicago railway; in 1864 was made its chief engineer, and in 1866 its consulting engineer, — a position he held until 1872. In 1868 he was connected with the organization of the Rome iron-mill company, and was its secretary from 1872 until his death.

After retiring from active work in the field in 1866, he wrote a book on 'Railway property,' and another on 'The question of labor and capital.' In 1868 the American society of civil engineers elected him an honorary member, and in 1878 Hamilton college conferred on him the degree of LL.D. Mr. Wil-

liam P. Shinn, in the sketch of his life in the *Railroad gazette*, says, "His last professional work, and that which most fully illustrates the extraordinary character of his professional ability, and the esteem in which he was held by his engineering contemporaries, was his employment as a consulting engineer on the proposed new Croton aqueduct. . . . That he should be equal to this work at the age of eighty-six was sufficiently remarkable; but that he should be considered as worthy of being consulted by men themselves veterans in the profession, is a still more extraordinary evidence of the exceptional character of the man."

His health and his faculties remained unimpaired till near the close of his life; and he died of old age, in his ninetieth year.

#### THE NEW PALACE AT SÖUL.

SUCH is the name of that collection of grounds and buildings in Söul which is at present the abode of the reigning sovereign of Korea. Strictly speaking, the title is in both parts a misnomer: for the place so called is neither new, nor is it exactly what in western parlance would be styled a palace; and yet to Korean thought it is both. Its age is comparative merely, as indeed must be that of every thing which does not contain within itself a term of life. In this case, the comparison is with what is now known, in the same antithesis, as the Old Palace. But there is also a certain absolute justice in this last name; for the Old Palace could not possibly be any older where it is. It is coeval with the beginning of the present state of things, dating from the founding of the city of Söul, now hard upon the five-hundredth anniversary. The New Palace was laid out some hundred years later, and is therefore about four centuries old at the present time. In consequence of being later built, it occupies a somewhat less honorable position than the older one; for even position has its allotted ceremonial in Korea. North, east, west, and south,—this is the relative rank of the four cardinal points. In etiquette the sovereign always faces the south, and his subjects look to the north. Following the same rule, the post of honor generally, on all occasions of ceremony, such as dinners or feasts, is at the northern end of the room. A singular practice this, of determining by exterior terrestrial phenomena the etiquette of en-

tertainments carried on within four walls, which are themselves in no wise subjected to orientation, and may face any direction indifferently, according to the fancy of the owner.

When the city of Söul was laid out, therefore, the palace was given the post of honor,—the northern end of the space enclosed by the city's wall; and, when the second palace came to be built, it was placed as nearly north as was possible consistently with the position of the older one, to whose left, reckoned as facing the city, it lay.

Exactly what was the origin of this custom of allotting a rank among themselves to the cardinal points, it would be interesting to know. We may, perhaps, look to some rude astronomy for an explanation. Like the pyramids, it may, in its way, be the relic of an old study of the stars. Certainly early man could hardly fail to be struck by the sight, that, while all else in the heavens moved, the pole alone remained in dignified repose. The Koreans themselves suggest a more earthly origin for the practice. Because the south is the bright, the warm, and therefore the happy, region of the earth, they say, the king sits so that he may always face it. When we call to mind the cold winters of those lands whence the far-eastern peoples migrated, as well as those to which they afterwards came and now inhabit, we realize how instinctive this turning in body, as in thought, toward the south, would naturally be.

The New Palace was originally built as a residence for the crown prince, or, to speak more accurately, the heir apparent; for in Korea the heir to the throne is chosen by the king during his life, and is not necessarily born to the position, though it is customary for his majesty to so designate his eldest son. This is no doubt a reason for the superiority, architecturally, of the other, the older one. But the newer possesses a charm of its own, first from the uneven character of the ground over which it rambles, and secondly from being much less artificially laid out. It is also somewhat the larger of the two in the extent of ground it covers. The high wall which surrounds it encloses about ten thousand acres. In this wall are set gates at various points, fourteen of them in all. There is no symmetry in their arrangement; nor is there any in the line of wall itself, which meanders about in so aimless a fashion as to cause surprise when at last it ends by meeting itself again. The gates, or archways, are quite as various in size and honor as they are unsymmetrical in position,—a fact typified by their names, which range through