*Tower,* which was built as a lighthouse by Caius Saevius Lupus, an architect of the city of Aqua Flavia, the modern Chaves.

Such seems to be the sum of our knowledge of the an­cient history of lighthouses, which, it must be admitted, is neither accurate nor extensive. Our information regard­ing modern lighthouses, is of course more minute in its de­tails, and more worthy of credit, as the greater part of it is drawn from authentic sources, or is the result of the actual observation of the writer of this article, who has visited the most important lighthouses of Europe. It seems sufficient here to notice briefly the most remarkable establishments of the kind now in existence ; reserving for the latter part of the article, the more appropriate and important topics of the methods of illumination, and the systems of management.

The first lighthouse of modern days which merits atten­tion, is the Tour de Corduan, which, in point of architec­tural grandeur, is unquestionably the noblest edifice of the kind in the world. It is situated on an extensive reef at the mouth of the River Garonne, and serves as a guide to the shipping of Bordeaux and the Languedoc Canal, and indeed of all that part of the Bay of Biscay. It was found­ed in the year 1584, and was not completed till 1610, under Henri IV. It is minutely described in Belidor's *Architec­ture Hydraulique.* The building is 197 feet in height, and consists of a pile of masonry, forming successive galleries, enriched with pillasters and friezes, and rising above each other with gradually diminished diameters. These gal­leries are surmounted by a conical tower, which terminates in the lantern. Round the base is a wall of circumvallation, 134 feet in diameter, in which the light-keepers’ apartments are formed, somewhat in the style of casemates. This wall is an outwork of defence, and receives the chief shock of the waves. The tower itself contains a chapel, and various apartments ; and the ascent is by a spacious staircase. The first light exhibited in the Tour de Cor­duan, was obtained by burning billets of oak-wood, in a choffer at the top of the tower ; and the use of coal in­stead of wood, was the first improvement which the light received. A rude reflector, in the form of an inverted cone, was afterwards added, to prevent the loss of light which escaped upwards. About the year 1780, M. Lenoir was employed to substitute reflectors and lamps ; and in 1822, the light received its last improvement, by the intro­duction of the dioptric instruments of M. Fresnel.

Plate I. fig. 7, shews the form of this celebrated light­house, and is made from drawings in the possession of the writer of this article, who, in 1834, spent several days there.

The history of the celebrated lighthouse on the Eddy­stone rocks is well known to the general reader, from the narrative of Mr. Smeaton the Engineer. These rocks are *91/2* miles from the Ram-Head, on the coast of Cornwall ; and from the small extent of the surface of the chief rock, and its exposed situation, the construction of the lighthouse was a work of very great difficulty. The first erection was of timber, designed by Mr. Winstanley, and was commenced in 1696. The light was exhibited in November 1698. It was soon found, however, that the sea rose upon this tower to a much greater height than had been anticipated, so much so, it is said, as to *“bury under the water"* the lantern, which was sixty feet above the rock ; and Mr. Winstanley was therefore afterwards under the neces­sity of enlarging the tower, and carrying it to the height of 120 feet. In November 1703, some considerable repairs were required, and Mr. Winstanley, accompanied by his workmen, went to the lighthouse to attend to their execu­tion ; but the storm of the 26th of that month, carried away the whole erection, when the engineer and all his assistants unhappily perished.

The want of a light on the Eddystone, soon led to a fatal accident ; for not long after the destruction of Mr.

Wτinstanley's lighthouse, the Winchilsea man-of-war was wrecked on the Eddystone rocks, and most of her crew were lost. Three years, however, elapsed, after this me­lancholy proof of the necessity of a light before the Tri­nity House of London could obtain a new act to extend their powers ; and it was not till the month of July 1706, that the construction of a new lighthouse was begun under the direction of Mr. John Rudyerd of London. On the 28th of July 1708, the new light was first shewn, and continued to be regularly exhibited till the year 1755, when the whole fabric was destroyed by accidental fire, after stand­ing forty-seven years. But for this circumstance, it is im­possible to tell how long the lighthouse might, with occa­sional repair, have lasted, as Mr. Rudyerd seems to have executed his task with much judgment, carefully rejecting all architectural decoration, as unsuitable for such a situa­tion, and directing his attention to the formation of a tower which should offer the least resistance to the waves. The height of the tower, which was of a circular form, and con­structed of timber, was, including the lantern, 92 feet, and the diameter at the base, which was a little above the level of high water, was 23.

The advantages of a light on the Eddystone having been so long known and acknowledged by seamen, no time was permitted to elapse before active measures were taken for its restoration ; and Mr. Smeaton, to whom application was made for advice on the subject, recommended the exclusive use of stone as the material, which, both from its weight and other qualities, he considered most suitable for the situation. On the 5th of April 1756, Mr. Smea­ton first landed on the rock, and made arrangements for erecting a lighthouse of stone, and preparing the foun­dations, by cutting the surface of the rock into regular hori­zontal benches, into which the stones were carefully dove­tailed or notched. The first stone was laid on 12th June 1757, and the last on the 24th of August 1759. The tower measures 68 feet in height, and 26 feet in diameter at the level of the first entire course, and the diameter under the cornice is 15 feet. The first twelve feet of the tower form a solid mass of masonry, and the stones are united by means of stone joggles, dovetailed joints, and oak treenails. It is remarkable, that Mr. Smeaton should have adopted an arch­ed form for the floors of his building, instead of employing these floors as tie-walls formed of dovetailed stones. To counteract the injurious tendency of the outward thrust of these arched floors, Mr. Smeaton had recourse to the in­genious expedient of laying, in circular trenches or beds in the stones which form the outside casing, sets of chains, which were heated by means of an application of hot lead, and became tight in cooling. The light was exhibited on the 16th October 1759; but such was the state of the lightroom apparatus in Britain at this period, that a feeble light from tallow candles was all that decorated this noble structure. In 1807, when the property of this lighthouse again came into the hands of the Trinity House, on the ex­piry of a long lease, Argand burners, and parabolic reflectors of silvered copper, were substituted for the chandelier of candles. Plate I. fig. 3, shews a section of the Eddy­stone lighthouse, as executed according to Mr. Smeaton’s design.

The dangerous reef called the Inch Cape, or Bell Rock, so long a terror to mariners, was well known to the earliest navigators of Scotland. Its dangers were so generally ac­knowledged, that the Abbots of Aberbrothick, from which the rock is distant about twelve miles, caused a float to be fixed upon the rock with a bell attached to it, which being swung by the motion of the waves, served by its tolling to warn the mariner of his approach to the recf. Amongst the many losses which occurred on the Bell-Rock in modem times, one of the most remarkable is that of the York, seventy-four, with all her crew, part of the wreck having