1639, and was interred in Weſtminſter-abbey. He wrote A Hiſtory of the Church of Scotland from the year 203 to the reign oſ king James VI. in folio.

SPOUT, or *Water-SPOUT.* See *Water-Spout.* Spout-Fish. See Solen.

SPRAT (Dr Thomas), biſhop of Rocheſter, was born in 1636. He had his education at Oxford, and after the Restoration entered into holy orders. He became fellow of the Royal Society, chaplain to George duke of Buckingham, and chaplain in ordi­nary to king Charles II. In 1667 he publiſhed the Hiſtory of the Royal Society, and a Life of Mr Cow­ley ; who, by his last-will, left to his care his printed works and MSS. which were accordingly published by him. In 1668 he was inſtalled prebendary of Weſtminſter ; in 1680, was appointed canon of Windſor; in 1683, dean of Weſtminſter ; and in 1684, conſecrated to the biſhopric of Rocheſter. He was clerk of the cloſet to king James II. ; in 1687, was made dean of the chapel royal ; and the year following, was appointed one of the commiſſioners for eccleſiaſtical affairs. In 1692 his lordſhip, with ſeveral other persons, was charged with treaſon by two men, who drew up an aſsociation, in which they whole names were subſcribed declared their reſolution to reſtore king James ; to ſeize the princeſs of Orange, dead or alive ; and to be ready with 30,000 men to meet king James when he ſhould land. To this they put the names of Sancroft, Sprat, Marlborough, Saliſbury, and others. The biſhop was arreſted, and kept at a meſſenger’s, under a ſtrict guard, for eleven days. His houſe was ſearched, and his pa­pers ſeized, among which nothing was found of a treaſemable appearance, except one memorandum, in the following words : *Thorough-paced doctrine.* Being aſked at his examination the meaning of the words, he ſaid that, about 20 years before, curioſity had led him to hear Daniel Burgeſs preach ; and that being ſtruck with his account of a certain kind of doctrine, which he ſaid *entered at one ear, and pacing through the head went out at the other,* he had inſerted the memorandum in his table-book, that he might not loſe the ſubstance of ſo ſtrange a ſermon. His innocence being proved, he was ſet at liberty, when he publiſhed an account of his examination and deliverance ; which made ſuch an impreſſion upon him, that he commemorated it through life by an yearly day of thankſgiving. He lived to the 79th year of his age, and died May 20. 1713. His works, beſides a few poems of little value, are, The Hiſtory of the Royal Society ;” “The Life of Cow­ley ;” “ The Anſwer to Sorbiere ;” “ The Hiſtory of the Rye-houſe Plot ;” The Relation of his own Ex­amination ;” and a volume of “ Sermons.” Dr Johnſon says, “ I have heard it obſerved, with great juſtneſs, that every book is of a different kind, and that each has its diſtinct and characteriſtical excellence.”

Sprat, in ichthyology. See Clupeλ.

SPRAY, the ſprinkling of the ſea, which is driven from the top oſ a wave in ſtormy weather. It differs from spoon-drift, as being only blown occaſionally from the broken ſurface of a high wave ; whereas the latter continues to fly horizontally along the ſea, without intermiſſion, during the excels of a tempeſt or hurricane.

SPRING, in natural hiſtory, a fountain or ſource of water riſing out of the ground.

Many have been the conjectures of philoſophers con­cerning the origin of fountains, and great pains have been taken both by the members of the Royal Society and thoſe of the Academy of Sciences at Paris, in or­der to aſcertain the true cauſe of it. It was Ariſtotle’s opinion, and held by moſt of the ancient philoſophers after him, that the air contained in the caverns of the earth, being condenſed by cold near its ſurface, was thereby changed into water ; and that it made its way through, where it could find a paſſage. But we have no experience of any ſuch tranſmutation of air into wa­ter.

Thoſe who imagine that fountains owe their origin to waters brought from the ſea by ſubterraneous ducts, give a tolerable account how they loſe their ſaltneſs by percolation as they paſs through the earth : but they find great difficulty in explaining by what power the water riles above the level of the ſea to near the tops of mountains, where ſprings generally abound ; it be­ing contrary to the laws of hydroſtatics, that a fluid ſhould riſe in a tube above the level of its ſource. How­ever, they have found two ways whereby they endea­vour to extricate themſelves from this difficulty. The one is that of Des Cartes, who imagines, that after the water is become freſh by percolation, it is raiſed out of the caverns of the earth in vapour towards its ſurface ; where meeting with rocks near the tops of mountains in the form of arches or vaults, it ſticks to them, and runs down their sides, (like water in an alembic), till it meets with proper receptacles, from which it ſupplies the fountains. Now this is a mere hypothesis, without foundation or probability : for, in the first place, we know of no internal heat of the earth to cauſe ſuch evaporation ; or if that were allowed, yet it is quite incredible that there ſhould be any caverns ſo ſmooth and void of protuberances as to anſwer the ends of an alembic, in collecting and condenſing the vapours together in every place where fountains ariſe. There are others (as Varenius, &c. ) who ſuppoſe that the wa­ter may riſe through the pores of the earth, as through capillary tubes by attraction. But hereby they ſhow, that they are quite unacquainted with what relates to the motion of a fluid through ſuch tubes ; for when a capillary tube opens into a cavity at its upper end, or grows iarger and larger, ſo as to ceaſe to be capillary at that end, the water will not ascend through that tube into the cavity, or beyond where the tube is capillary ; becauſe that part of the periphery of the cavity, which is partly above the ſurface of the water and partly be­low it, is not of the capillary kind. Nay, if the ca­vity is continually ſupplied with water, it will be at­tracted into the capillary tube, and run down it as through a funnel, if the lower end is immerged in the ſame fluid,· as in this cafe it is ſuppoſed to be.

It has been a generally received opinion, and much eſpouſed by Mariotte (a diligent obſerver of nature), that the riſe of ſprings is owing to the rains and melted ſnow. According to him, the rain-water which falls upon the hills and mountains, penetrating the ſurface, meets with clay or rocks contiguous to each other ; along which it runs, without being able to penetrate them, till, being got to the bottom of the mountain, or to a conſiderable diſtance from the top, it breaks out of the ground, and forms ſprings.

In order to examine this opinion, Mr Perrault, De la Hire, and D. Sideleau, endeavoured to make an