

Spurn Point Lighthouse

By Wayne Wheeler

In 1676 a patent was granted by King Charles II to Justinian Angell, a London Merchant, to allow him to continue, rebuild and maintain certain navigational lights he had erected upon Spurn Point to assist navigation along the coast and into the Humber River. Vessel losses had become so numerous, especially at night, that masters of merchant vessels contacted the owner of Spurn Point, Mr. Angell, and beseeched him to erect lights on his land to benefit vessels passing the area. The lights warned mariners of a sand bar which had formed out into the Humber River.

By 1766, several vessels found, to their dismay, the sand bar had extended much further from Spurn Point, to the extent that the lights were no longer effective and, in fact, actually caused wrecks by misleading mariners, causing them to navigate too close to the coast.

An application was made to parliament to remove the existing lights. King George III signed the Act; "An Act for taking down and removing certain Lighthouses now standing near the Spurn Point, at the mouth of the Humber, and for erecting other fit and convenient Lighthouses, instead thereof . . ."

The Act indicated that three-fourths of the land was owned by Mr. Angell [his son?] and the other one-fourth by a Mr. Leonard Thompson, but the Act gave the right to Mr. Thompson to ". . . change the situation of the said Lighthouses, so as to answer the ends and purposes for which they were originally designed; and this application having been ineffectual, it is thereby enacted; That the said Leonard Thompson should

be entitled, as soon after the first day of June, 1766 as conveniently could be, to erect two new and sufficient Lighthouses, with suitable offices and conveniences at or near the said Spurn Point. The Act called for Trinity House to survey the area, and approve of the plans for the structures. Prior to the erection of the lighthouses, though, Thompson was to construct two temporary beacons, at or near, the location where the new towers would be constructed.



Rear Range light tower.

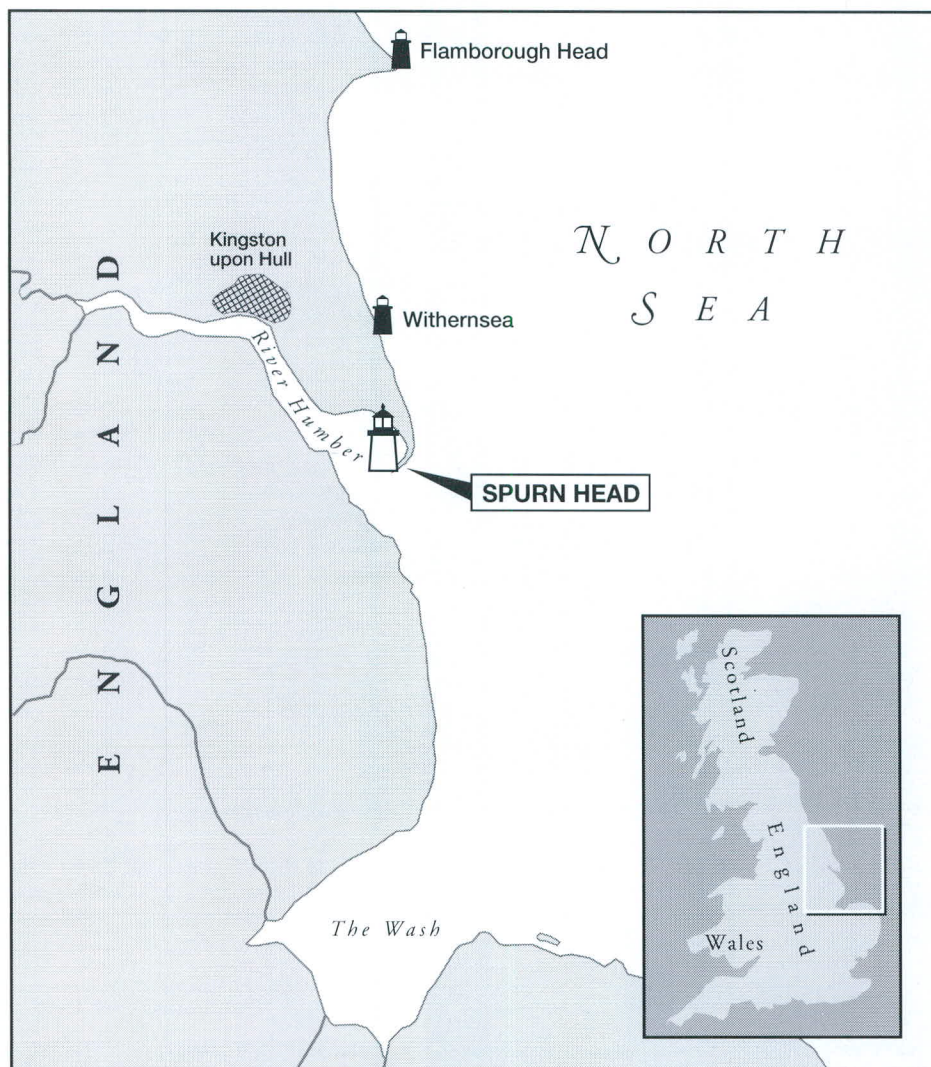
Trinity House contacted John Smeaton, the engineer who constructed the third Eddystone Lighthouse in 1759, off Plymouth, England. Smeaton, as a consulting engineer, and members of Trinity House visited Spurn Point by water. The Trinity House Board members were interested in having the lighthouses constructed out on the sand bar, as close to the end of the point as possible. They asked Smeaton if it were possible to build a substantial brick structure on this new land which had only been in existence for 90 years. He wrote in his journal, "That though the ground upon which they proposed to erect the Lights was new Ground, in comparison upon that where the present Lighthouse stood, yet as it appeared to be of the same quality, whereon that had already stood 90 years, without apparent crack or settlement, I did not doubt of making a foundation, at least as much more firm than

that of the old one, as the new building would be more lofty and that it would stand as long as the ground remained . . . and we all agreed that as Spurn Point was a piece of ground that was rapidly increasing, there would be no danger of the ground washing away. Therefore, the judgement would be to place the new lights as near the point as possible.

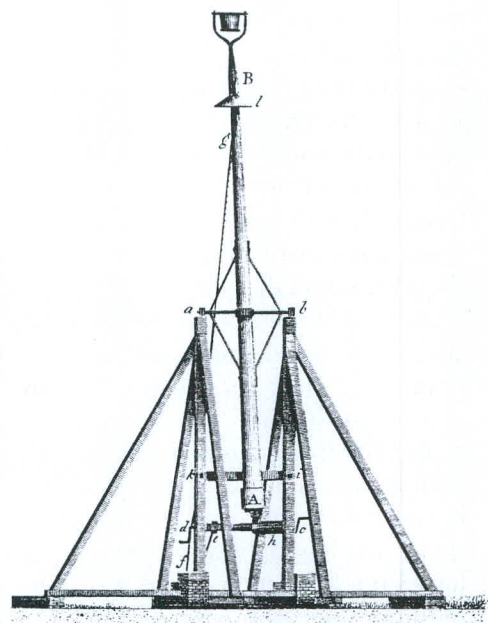
Smeaton inspected the temporary light erected by Mr. Thompson. It was a "Swape," a crude apparatus devised by the Swedish. It consisted of a long arm with an axle in the center attached to a tower. On one end of the arm was a long rope and at the other end an open-work iron basket. The weight of the basket caused that end to remain on the ground. The basket was filled with lighted coals and the basket hoisted into the air by the rope, which was then made fast. The existing swape was only able to elevate the burning coals some 25 feet.

Smeaton thought this insufficient and recommended a swape with the ability to elevate the 'light' 50 or 60 feet above the water.

In 1766, Trinity House published specifications for the new lighthouses. Actually a set of range lights. They were to be orientated on a NW/SE axis some 300 yards apart. The Lighthouses to be built of brick: the larger one to be 90 feet high from the mean surface of the ground to the center of the light. The smaller one to be 50 feet high, that is 40 feet lower than the other; both with enclosed lanterns for fire lights. The specifications also called for the establishment of two lower swape lights, 50 and 35 feet high on the NW-SE line but slightly south of the permanent structures and with a walkway between the lights for the keepers.



The original front tower was a shorter version of the tower on the opposing page. When the front tower was destroyed by erosion the structure below (a 'Swape') was installed to provide the front light. The long arm was lowered during the day and filled with coals. At sundown the coals were lighted and the arm swung up and secured. This "lighthouse" was first used in Sweden.



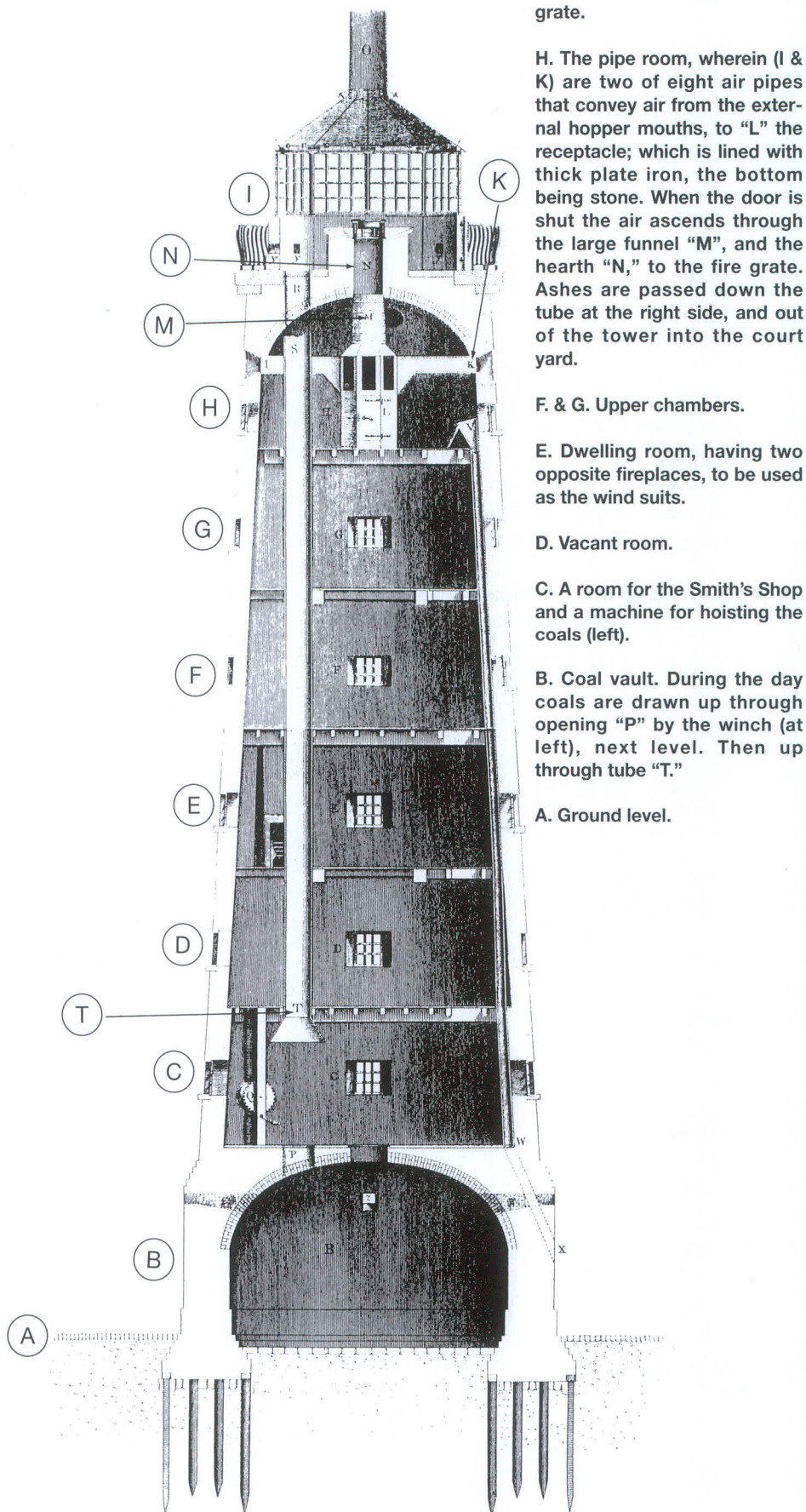
At the beginning of 1767 Smeaton presented designs for the two lighthouses and the temporary swapes. The plans were approved and given to Leonard Thompson to execute. During the year he constructed the two swape lights, keeper's dwellings and conveniences. However, over the next two years he had difficulty finding a contractor to construct the permanent lighthouses. At the end of two years, Trinity House cancelled his contract. In 1770, a Mr. William Taylor of York won the low bid for the construction of the new towers.

In May of 1771, Smeaton accompanied Mr. Taylor to the site as a surveyor. When they reached Spurn Point Smeaton noted that the original location for the low, or front, light which had been 116 yards from the high water, some five years before, was now the high water mark itself. While he had been correct in his assessment that Spurn Point was increasing in length, he had not accounted for the slewing of the point to the west. This 'movement' proved to be much more drastic than he had anticipated and, eventually, cost him his front range structure.

Smeaton proposed to Trinity House that the site of the Low Light be 80 yards further inland. And he suggested to the contractor that he drive plenty of piles as the sea might continue to encroach toward the front structure. After some delay, due to legal problems, the contractor continued construction. The site for the rear light was moved back 60 yards to off-set some of the distance the front light site was moved (80 yards). This placed the rear structure close to the water, but Smeaton felt that side of Spurn Point would probably continue to be built up. He was correct, but, again, misjudged the amount of loss on the other side of the point.

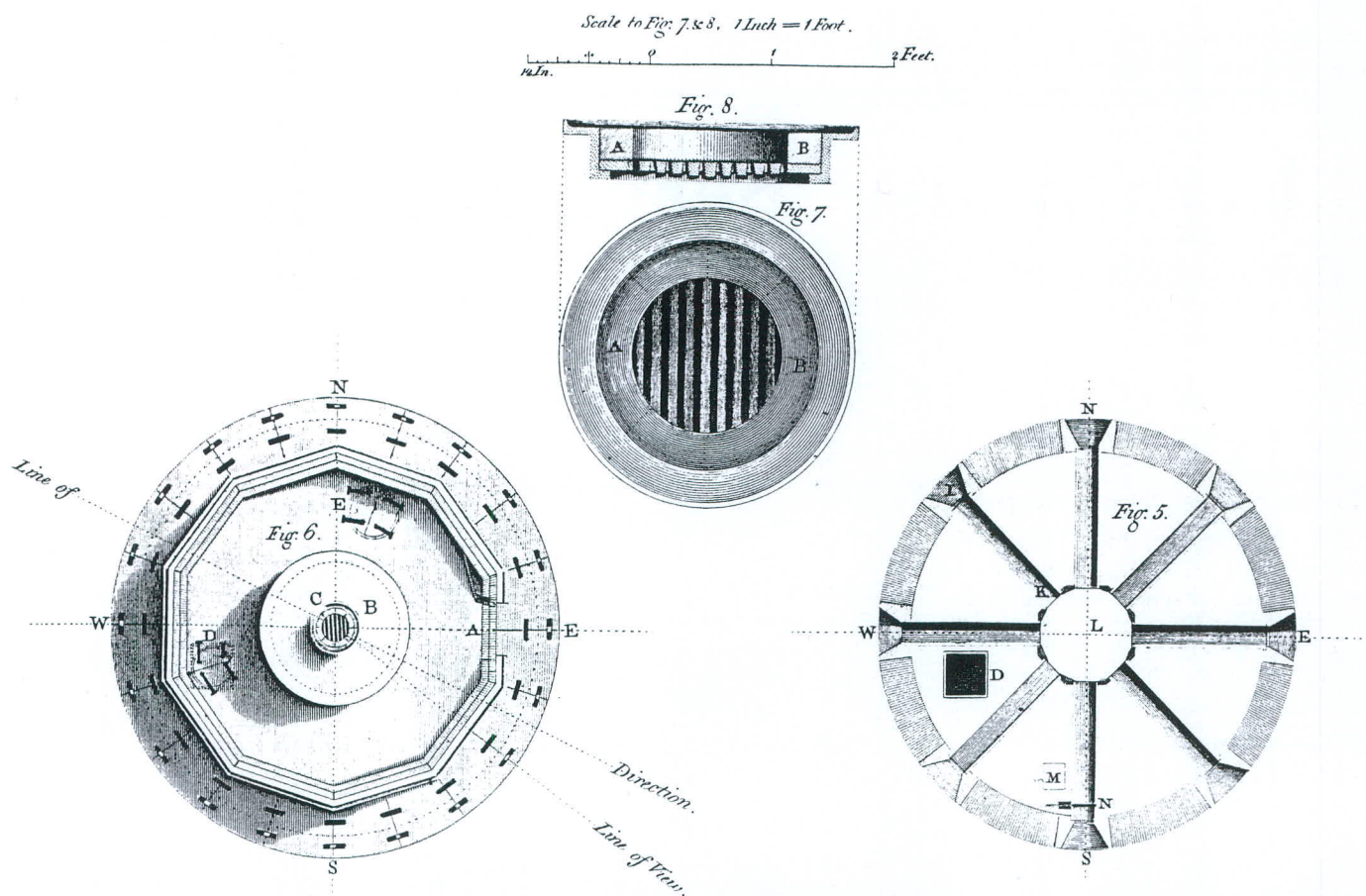
In 1774 the structures were nearing completion, but during a visit Smeaton noticed that the sea was within 40 yards of the front structure.

In 1776 a great storm struck the area taking away the site of the old lighthouse, destroyed the wall surrounding the front, low light and even undermined the foundation piles of the main building. Smeaton ordered hazlecliff



SECTION of the High Lighthouse upon the SPURN POINT.

J. Record, *sculp.* 1781



Above left – A bird's eye view of the lantern room, with the fire grate in the center. A detailed drawing of the grate is in the center, top. Right – looking down on level "H," the pipe room; "D" is the coal pipe and "M" is a plate, called a slider, which is inserted in "N" to block air in the pipe. The keepers blocked or opened pipes to provide air but not strong winds. In a sense, much like 19th century keeper's adjusted the air flow into lantern rooms with brass vents.

stone (a hard chalk stone) be placed in front of, and against the low light building in an attempt to temporarily "... break off the fury of the sea, till the season should come on when something more effectual might be done."

Work proceeded on both structures, with the addition of hazlecliff stone protecting the walls of the lower light facing the encroaching sea. The lantern of the Great Lighthouse was completed, windows glazed and hearth set. Smeaton states, "Upon the 5th September 1776, the fires were kindled with Stone Coal, which exhibited an amazing light to the entire satisfaction of all beholders.

"As soon as the Houses were lighted, I immediately ordered the temporary High Light Machine [swape apparatus] which I found sound and firm, to be set upon the walls, that had been built in the direction of the lights; its centre to be 30 yards near to the Great Lighthouse, than the centre of the Low Light; so that the distance from the centre of

the Great Light would still be 250 yards. These walls, though ordered to be built in length, so as to be only capable to take the length of the machine; yet whenever it should want moving the walls could be lengthened, and the machine then be got upon rollers, would readily be moved to its destined place."

Smeaton declared the range lights completed on April 7, 1777. He stated that the reinforced wall of the Low Light seemed to be holding, although the keepers occasionally complained the structure shook when pounded by heavy seas.

In 1786 Smeaton visited Spurn Point and discovered the Low Light structure had finally succumbed to Mother Nature. His fall back plan of using the High Light (swape apparatus) was, in fact, in place and working well.

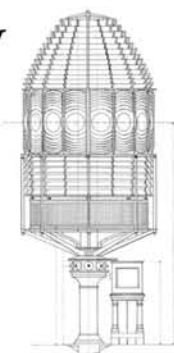
Smeaton — "In departing from the Spurn this last visit, I was struck with an appearance that I can scarcely account for. I did not leave Spurn till some time

after the lights were kindled. The Low Light, though in itself a fire of much less bulk than that of the High Light, yet, at this distance, being now a naked light, without the interposition of glass, appeared more vivid than the High Light. When I got about three miles off . . . they seemed nearly equal; but when I got to Partington, nine miles off in a straight line, the lustre of the High Light was greatly superior . . . now the query is; If glass diminished the lustre of the light in a sensible degree (as it must be expected) when near, why should it not do it proportionally at every other distance?

"I had the great satisfaction to find at Hull, that the Spurn Lights were in such credit among the Seamen, that they were by them esteemed (on account of their clear and brilliant light) to be the best lights in Europe. It is said that vessels going around the Point, in a dark night, have the shades of their masts and ropes cast upon the decks."



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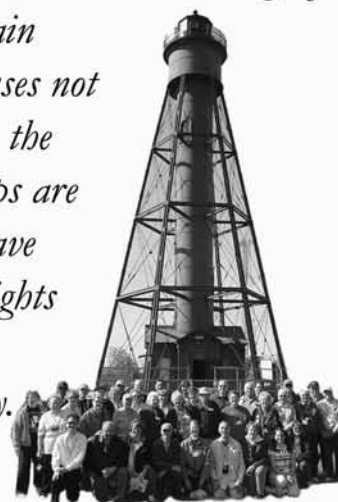
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