

this purpose, that submarine lines attained any measure of success. Gutta Percha was introduced in England by Dr. Montgomerie of the Indian Medical Survey in 1843.

Its qualities, a good insulator of electricity, insolubility under water, capability of being laid over wire when hot, yet being pliable and to a certain extent hard when cold, were speedily recognized. Wires, covered with gutta percha, came into use on telegraph lines in England in 1847, and the first experimental cable covered with this material (two miles in length) was laid in the English Channel in 1849, when messages were successfully transmitted thereby. The success of this experiment led to an attempt to lay a submarine cable across the English Channel, between Dover and Calais, in 1850. It consisted of a single strand of copper wire, covered with gutta percha, unprotected by any other covering. It however only worked one day. The next cable was also laid between Dover and Calais, in 1851. This cable was protected by an armor of ten heavy iron wires, laid on spirally, with what is termed a sun and planet motion. It proved an eminent success, and worked over twenty years.

The first cable laid in America was laid between Cape Traverse, P. E. Island, and Cape Tormentine, N. B., in 1852. It consisted of a single copper wire, covered with gutta percha, and protected by iron wires like the Dover and Calais cable laid the previous year. The next long cables were laid in 1853, between Dover and Ostend,



1 Laying Shore end at Valentia.  
2 Bantry Bay, Ireland  
3 Valentia, Ireland.