PIONEERS OF PHOTOGRAVURE: By DONALD CAMERON-SWAN, F.R.P.S.

To the discoveries of two Britons we are mainly indebted for the foundation of the craft of photogravure—William Henry Fox Talbot and Sir Joseph Wilson Swan.

In 1802, Thomas Wedgwood (son of the potter) had produced fugitive "profiles by the agency of light" on sensitised paper, and Talbot, following in his footsteps, endeavoured to add the quality of permanence and increased sensitiveness to the receptive surface.

How well he succeeded is shown by the illustrations in that wonderful volume, "The Pencil of Nature," published in 1844 (the first book ever illustrated by photographs): the illustrations—many of them still quite clear and unfaded—were printed from "Calotype" (paper) negatives made by the author some years previously.

In the preface to that work Talbot says: "Already sundry amateurs have laid down the pencil and armed themselves with chemical solutions and with camerae obscurae," for on January 25th, 1839, Faraday had briefly described Talbot's invention of "Photogenic Drawing," at the Royal Institution, and on the 31st of that month Talbot communicated his photographic discovery to the Royal Society, in a year memorable also for the publication at a later date of the joint discoveries in photography of Niépce and Daguerre. In 1841 Talbot made known his discovery of the "Calotype" or "Talbotype" process, and after several years of systematic experiment, he devised a method of photo-engraving which marks the beginning of a new era in photography, ensuring a permanence in the prints which is known to be associated with mezzotints, etchings, and line engravings.

Talbot's first patent for photo-engraving on steel is dated October 29th, 1852, and his second and more important one (on copper) was patented in 1858.

It will be necessary to quote at some length from these patents, in order to realise Talbot's achievements concerning the process he named "Photoglyphic Engraving."

Before doing so, it should be noted that the photographic property of gelatine sensitised with potassium bichromate was first observed by Mungo Ponton, which was turned to practical account by Talbot in his method of photo-engraving.

In Talbot's first patent he described his method of engraving a steel plate. He coated it with a warm solution of isinglass or gelatine, to which