



Photo by E. Norton Collins,]

[South Norwood.

FIREWORK DISPLAY DESIGNED BY MR. WALTER CRANE FOR LABOUR DAY AT THE CRYSTAL PALACE.

## PICTURES IN FIRE.

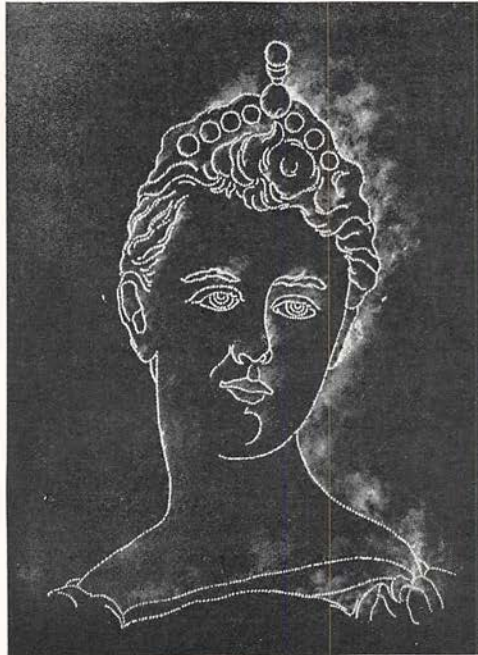
BY FREDERICK A. TALBOT.

**F**IREWORKS, we are told, were invented by the Chinese; but from the crude efforts which have satisfied the almond-eyed, conservative Celestial for so many centuries, to the colossal and ingenious conceptions of Messrs. Brock and Co., is a very far cry indeed. It may be safely asserted that since 1865, when the first pyrotechnic display was given by this firm at the Crystal Palace, that home of entertainment has never yet possessed an attraction that has appealed so extensively to the community at large. The Crystal Palace is now universally conceded to be the centre of firework exhibitions, upon an elaborate scale, in the same sense that Drury Lane is regarded as the headquarters of gorgeous pantomime.

Although fireworks have been in existence for hundreds of years, it is only during the past half century that pyrotechny has been raised to its present artistic and scientific level, a

metamorphosis mainly if not entirely accomplished through the indefatigable efforts of Messrs. Brock and Co. What that level is may be very comprehensively gauged from the numerous unique illustrations that accompany this article. There may be some who would cavil at the utilisation of the words "art" and "science" in connection with fireworks, but surely the manufacture and judicious combination of the various chemicals in order to produce harmonious blending of colours, and the construction of the different subjects, sufficiently prove that the terms as applied to pyrotechny are by no means employed in too elastic a sense.

The largest set piece ever produced in fire was that which constituted the *pièce de résistance* at the Crystal Palace in 1898. It represented the destruction of the Spanish fleet in Manila Bay by Admiral Dewey, during the Spanish-American war. This



FIREWORK PORTRAIT OF THE QUEEN OF HOLLAND.

particular set piece was over 700 feet in length, and represented a surface area of nearly 60,000 square feet. It cost more than £500 to construct, while something like £100 vanished in smoke every time it was fired. As a realistic display it would be almost impossible to excel. Upon the right of the set piece was lined up the American fleet, while opposite were the defending Spanish vessels anchored in the bay, with the forts on shore in the background. The noise of the cannonade was deafening. The shells flew about in all directions, their trajectories in the air being rendered plainly visible by the burning fuses attached thereto. In the

it may be mentioned that photographs were obtained, with one exception, of all the vessels that were engaged in this particular conflict, and from these the artist constructed his design. One cannot fail to notice the striking difference between the modern American battleships and the antiquated, inferior type belonging to their enemy. The photographs of this miniature naval battle were taken, while the conflict was in progress, with no other illuminant than that supplied by the display itself. In order to obtain a more convincing idea of the mammoth proportions of this set piece, the lower photograph should be placed on the right-

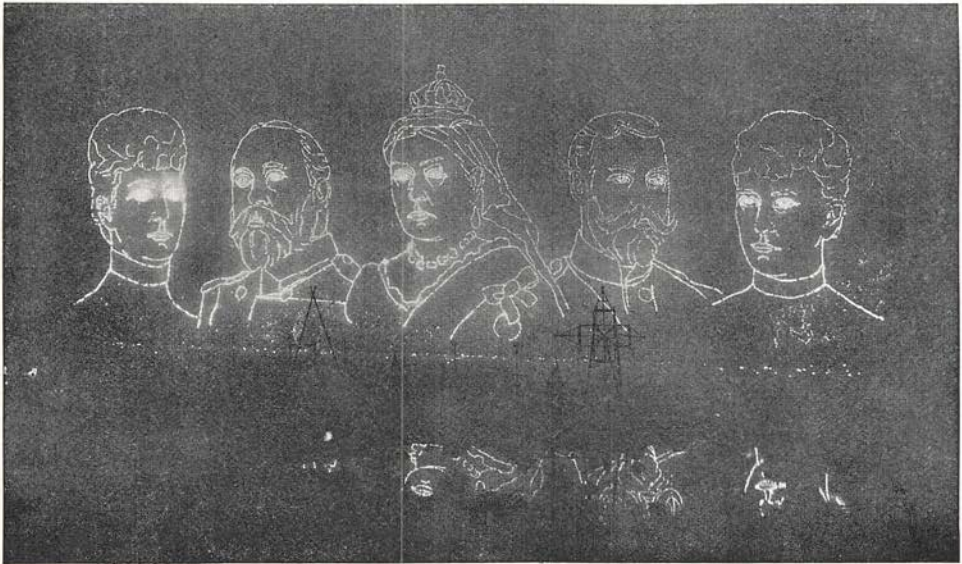


Photo by]

[Negretti & Zambra.

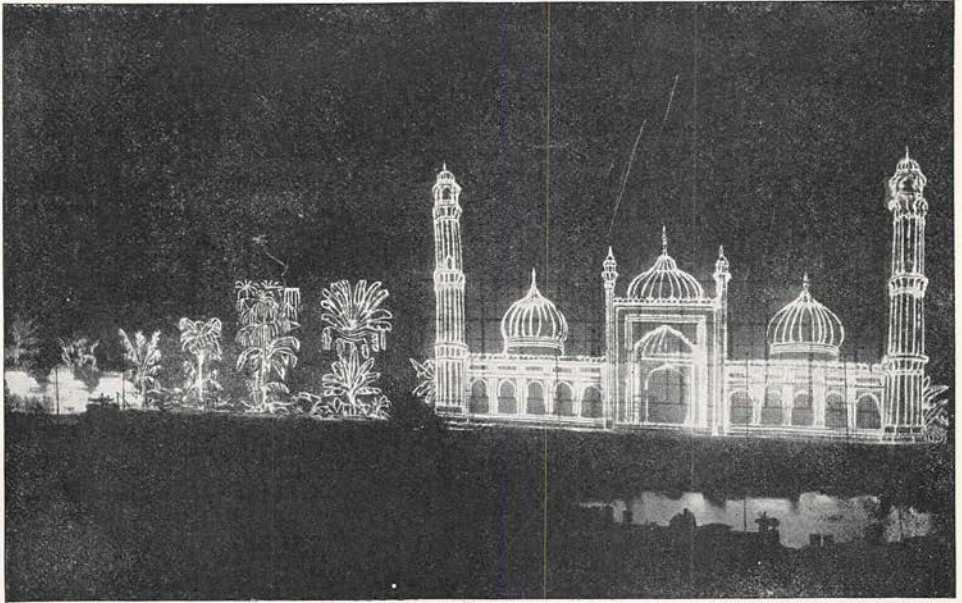
FIREWORK PORTRAITS OF HER MAJESTY THE QUEEN, AND THEIR ROYAL HIGHNESSES THE PRINCE AND PRINCESS OF WALES AND THE DUKE AND DUCHESS OF YORK.

photograph of the unfortunate Spanish fleet will be observed the inscription, "True Till Death." This depicts an actual incident that occurred in the battle. The *Antonio del Ullva* received such terrific, concentrated fire that she was nearly overwhelmed, and before she had time to recover, another shower of shot and shell was poured into her. Her commander was called upon to surrender, but with fearless patriotism refused, and the vessel went down with all hands, and with her colours balled to the mast. The foundering of the battleship was portrayed with striking vividness.

As an example of the infinite labour that is bestowed upon such gigantic pieces, in order to render them correct in every detail,

hand side of the upper, when a panoramic view of the engagement is obtained.

Such realistic displays, especially when the incident depicted possesses a patriotic sentiment, appeal very strongly to the British public. Messrs. Brock have produced several set pieces dealing with English naval battles, such as "The Battle of Trafalgar," "The Bombardment of Alexandria," "The Siege of Gibraltar," "The Bombardment of Canton," and "The Defeat of the Spanish Armada." We are able to reproduce photographs of the two latter displays. The former was a terrible and furious piece of work during the short time it lasted. There was the town of Canton, flanked by the hills upon which were placed the Chinese guns,



*Photo by*

TAJ MAHAL.

*[Negretti & Zambra.]*



*Photo by E. Hawkins & Co.,]*

FLIGHT OF ROMAN CANDLES AT SHEFFIELD PARK, MAY 9, 1893.

*[Brighton.]*

while out at sea stood the bombarding English vessels. In the photograph may be seen the spouts of smoke issuing from the Chinese cannons. Canton was knocked about as if visited by an earthquake. Buildings were thrown into the air by the explosions of the English shells, and in a very short time scarcely one stone of the town was left upon the other. During the engagement small boats put off from the English vessels and chased the Chinese junks in a very lively manner, though the latter

reduced to dismasted, crippled hulks drifting upon a fiery sea.

To build a set piece is a very elaborate undertaking. The artist first collects all his material from photographs and sketches. In the large realistic set pieces, such as "The Battle of Manila Bay," the artist is not permitted to rely upon his imaginative faculty for his effect. Sometimes he has to make quite a large collection of data before he attempts his design, but in a few instances, such as "The Naval Review of the Jubilee



Photo by E. Hawkins & Co.,]

[Brighton.

THE COLISEUM: EARL OF SHEFFIELD'S DISPLAY AT SHEFFIELD PARK, MAY 9, 1893.

of course shared the same fate as the town itself—dissolved into thin air—and thus left the British triumphant.

"The Defeat of the Spanish Armada" was reproduced from a well-known engraving. The quaint style of the vessels of that period looked extremely graceful outlined in fire. When the scene opened, both fleets were peacefully sailing up the English Channel. It was not long, however, before a furious cannonade ensued, and in a few minutes the erstwhile stately Spanish galleons were

of 1887," the set piece is only an enormous enlargement of one photograph. He then makes a rough sketch of the design upon paper divided into squares. When this is completed, the next thing is to transfer this design to the wooden framework which carries the fireworks. The latter is also divided into small squares which correspond to those on the paper which bears the artist's original sketch. Therefore the artist has simply to transfer the design from the paper, square for square, to the wooden frames.

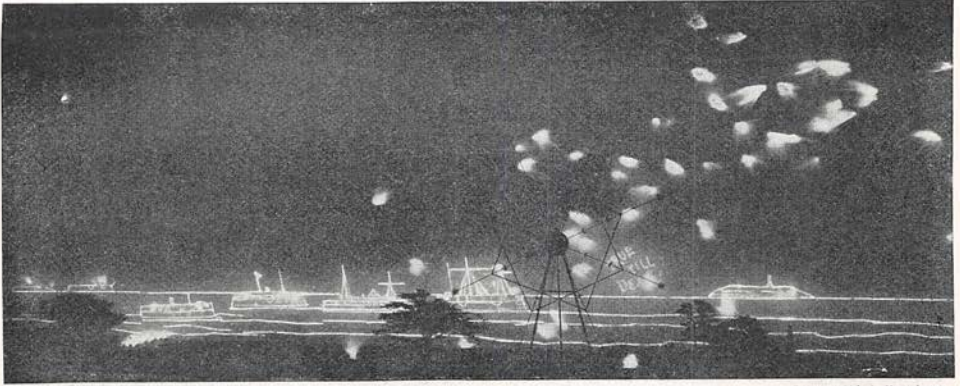


Photo by]

THE BATTLE OF MANILA BAY—

[Negretti &amp; Zambra.

The words "True till Death" formed the last flag signal of one of the Spanish commanders as his vessel forlornly.

This he does with chalk, the design, when completed, being outlined in cane and wood. Of course, as may be naturally supposed, when building a set piece of the proportions of "The Battle of Manila," the framework has to be constructed in sections, each of which is carefully numbered, so that no mistakes may occur in the final fitting together.

The cane and wood outline is studded throughout with specially formed nails with double points, placed about four inches apart. Upon these nails are secured the coloured lights, or "lances," as they are technically called, so that when finished the framework with the projecting lances resembles a huge bristle brush. These lances are connected with a quick match, so that when fired they all ignite simultaneously.

One of the most picturesque effects that has ever been produced at the Crystal Palace was "The Avalanche." The scene was a typical view of the Alps, with the rugged, snow-topped crests of the mountains, all outlined in fire, and a railway train passing rapidly out of one tunnel into another. Scarcely had one observed the whole diorama,

when there was an ominous rumble, and down the side of the tallest mountain thundered a huge mass of fiery snow, sweeping away the little *châlet* that reposed at the foot of the mountain in its awful passage. Our photograph was snapped just before the descent, and the *châlet* may be seen at the base of the picture. The avalanche was caused by the sudden igniting of a large mass of bright composition packed closely together on the framework, which when fired became one huge sheet of white flame.

Another striking tableau was the reproduction in fire of the famous Taj Mahal of Agra. It was a facsimile of a photograph, but of course only the front elevation of the building was delineated. The pyrotechnic counterfeit of the sacred temple, however, was scarcely less magnificent than its beautiful original. When Mr. Brock visited India a few years ago, this set piece formed one of the items of his extensive and varied *répertoire*, and the unsophisticated Hindoos were so impressed with the vivid representation of their most sacred edifice that they prostrated themselves before it.

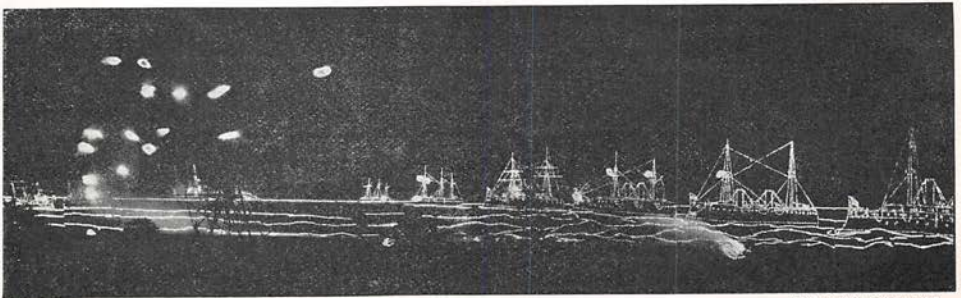


Photo by]

REPRODUCED IN FIREWORKS.

[Negretti &amp; Zambra.

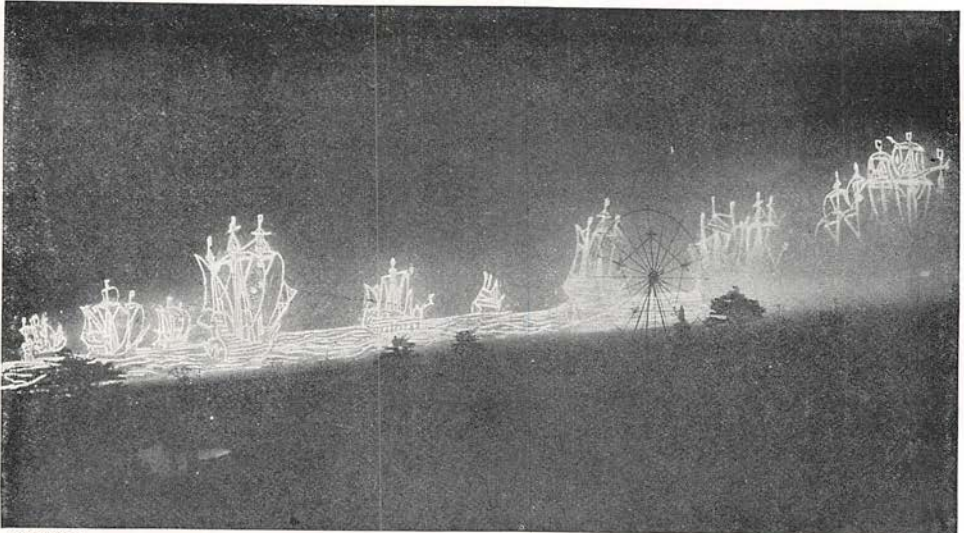


Photo by]

[Negretti & Zambra.

THE DEFEAT OF THE SPANISH ARMADA.

Mr. Brock is most ingenious in the devising of new attractions. One of the most popular is the fire portrait, in which enormous life-like enlargements of celebrities are outlined in lambent flame upon the framework screen. One of the largest of these was that of Queen Wilhelmina of Holland, which was produced *à propos* of her coronation at Amsterdam in 1898. It measured sixty feet by forty. Our photo-

graph of this interesting piece of work is particularly brilliant, owing to the comparative absence of smoke. This latter is one of the greatest disadvantages against which the man with the camera has to contend, since smokeless fireworks are still an invention of the future. If the wind be blowing from behind the set piece, the display is almost entirely obscured by the copious clouds of sulphurous smoke emitted from the various

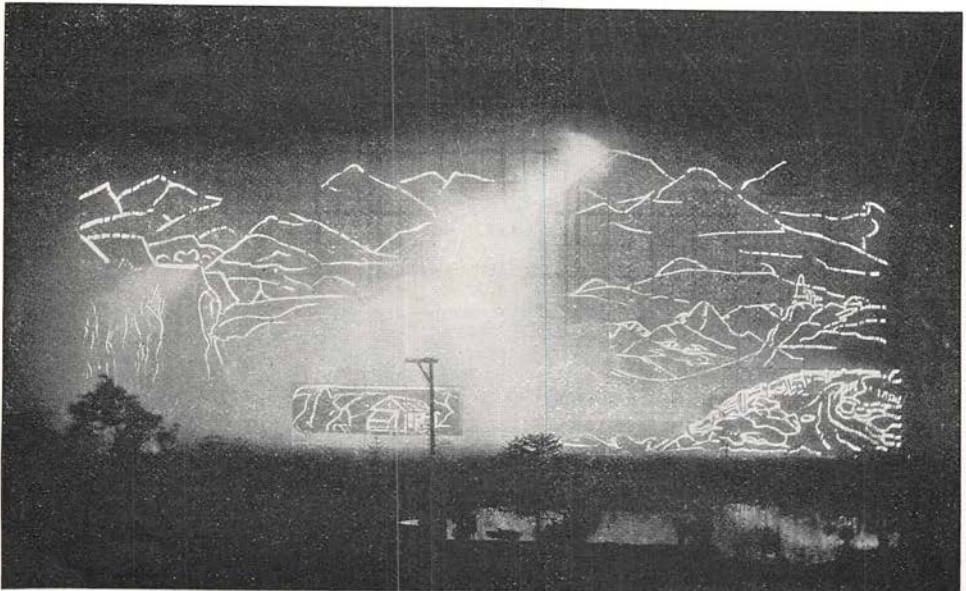


Photo by]

[Negretti & Zambra.

THE AVALANCHE.

compounds of which the lances are manufactured, so that a successful photograph becomes an impossibility. On the other hand, if the wind blows directly on the face of the set piece, carrying the smoke behind, the outline is rendered sharp and brilliant. There is one important point which the artist must remember when designing his picture. He must obtain the maximum of effect with the minimum of lines; otherwise, should the design be at all intricate in construction, when ignited the effect of the picture is lost in the extensive sheet of fire. Bearing this in mind, one cannot help admiring the skill of the artist, who obtains such veracious reproductions by, as it were, a few dashes of the pen.

The firework portrait, however, has been still further increased in novelty and interest by the resourceful genius of its inventor. There is a cunningly contrived transformation device by which one scene is gradually dissolved into another.

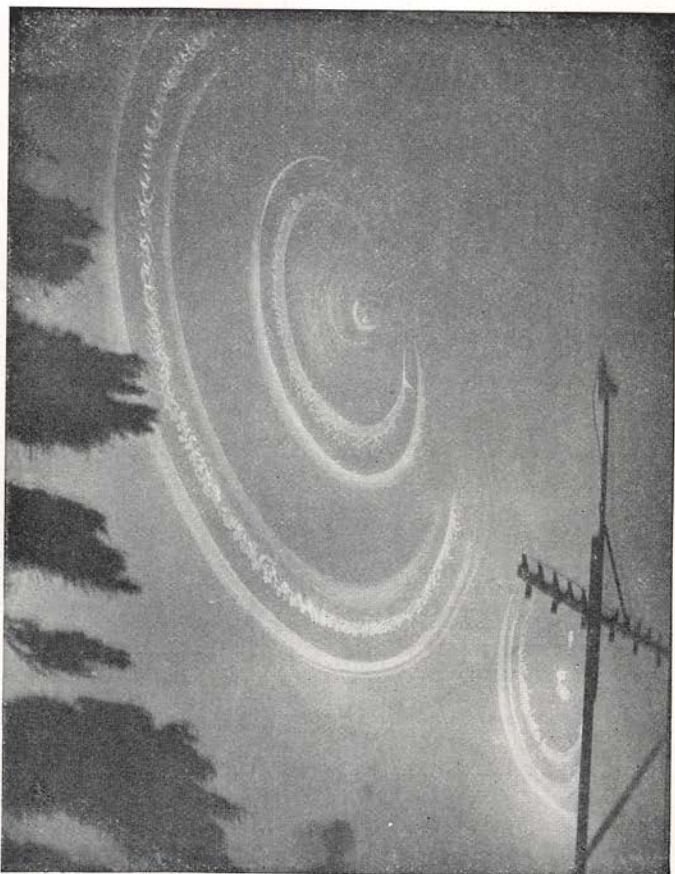


Photo by]

[Negretti & Zambra.

CURIOUS EFFECT OF A CATHERINE WHEEL PHOTOGRAPHED WHILE REVOLVING.

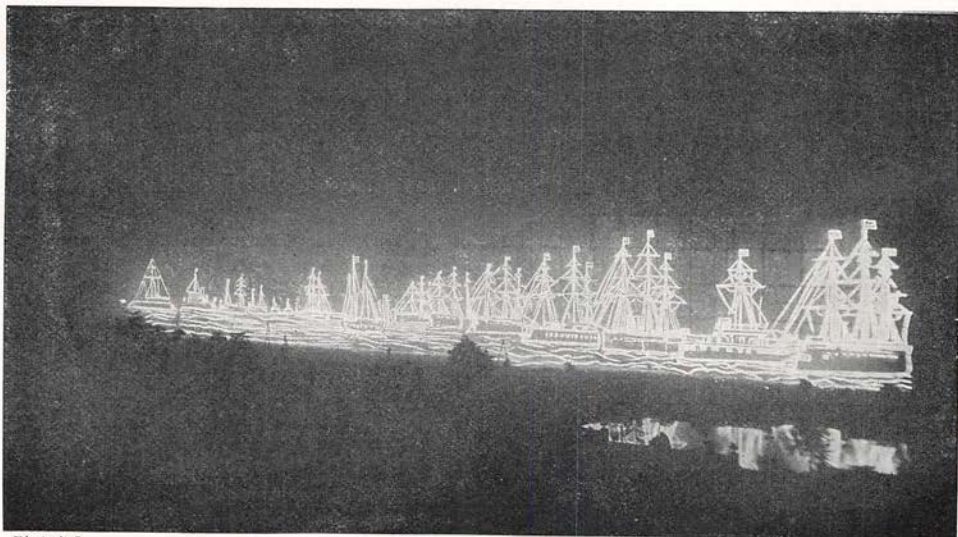


Photo by]

[Negretti & Zambra.

THE NAVAL REVIEW, QUEEN'S JUBILEE, 1887.

For instance, there was one long set piece which when first fired depicted a cluster of roses, shamrocks, and thistles, and then a surprising effect was attained by the gradual dissolution of these national emblems into life-like portraits of the Queen, the Prince and Princess of Wales, and the Duke and Duchess of York.

Various Royal personages, when witnessing a firework display at the Crystal Palace, have become amateur pyrotechnists. The actual firing is done by simply pressing the prosaic button in the Royal Box, and electricity does the rest. The German Emperor fired the Falls of Niagara, and also on one occasion the great set piece portraying the Battle of the Nile; the Princess of Wales has ignited huge portraits of the Queen, the German Emperor, the Prince of Wales, the Shah, and other Royal personages, including herself; Li Hung Chang started the fuse attached to his own flaming image, which was flanked with the greeting, "We Wish Your Excellency a Long Life," inscribed in Chinese hieroglyphics. Li was immensely pleased with this result, and, with his characteristic inquisitiveness, desired full particulars regarding the various ingredients employed, and even extended a request to Mr. Brock that he should go to China to enlighten the retrograde Celestials as to the wonderful possibilities of fireworks. Messrs. Brock had the honour of carrying out the extensive illuminations and pyrotechnic display held at Balmoral, under the personal patronage of the Queen, in aid of the Crathie Church. Her Majesty even prolonged her stay in the grounds in order to witness the fireworks, and expressed herself as delighted with them.

One of the most extraordinary, yet at the same time beautiful, pyrotechnic spectacles is that produced with aquatic fireworks. The skimmers, or "water devils," dart hither and

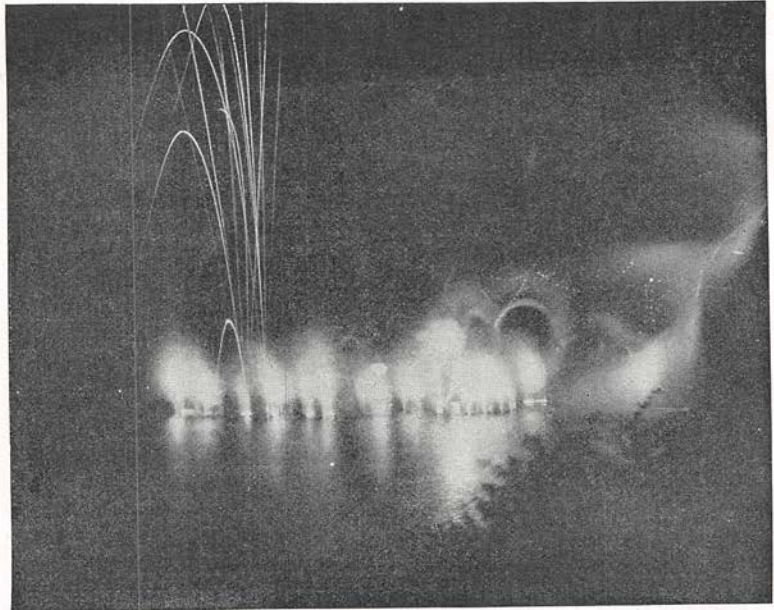


Photo by E. Hawkins & Co.,]

[Brighton.

FLIGHT OF ROMAN CANDLES FROM THE LAKE AT SHEFFIELD PARK, MAY 9, 1893.

thither along the surface of the water like flies, leaving in their wake a sparkling line of fire; the Chinese trees and waterlilies are simply floats in a stationary position, throwing a fountain of brightly coloured fire into the air, while the Roman candles eject their dazzling and multi-coloured stars in the same manner as if fired upon *terra firma* in the ordinary course. As will be seen from our illustration of such a unique display—reproduced through the courteous permission of the Earl of Sheffield—the sight is very pretty indeed, and is rendered more effective by the radiating reflections of the burning fireworks in the placid water.

To the Earl of Sheffield belongs the distinction of having given one of the most elaborate and costly private firework displays in this country. This notable event occurred at Sheffield Park in 1893, when the Earl, who has contributed so much to the development of Anglo-Australian cricket, organised the illuminations as a greeting to the Colonial Eleven, who contested their first engagement with the English cricketers at Sheffield Park. The programme included, among numerous other items, a huge pyrotechnic greeting, 150 feet in length, comprising the words, selected by the Earl himself, "Welcome, Australia. Best Good Wishes for Your Reception of Our Team in Australia." Then there was a tremendous flight of about 1,500



Roman candles, which alone cost over £30. The latter, viewed from across the lake, from which point our photograph was taken, was exceptionally striking.

The British public is never loth to applaud humour, and it is safe to assert that few devices at the Crystal Palace are more appreciated than the living comic fireworks. By this novel innovation one is able to witness a bicycle race; the village blacksmith engaged in shoeing a horse; the pretty maiden milking her cow; a tight-rope performance *à la* Blondin; or a hornpipe competition—all reproduced with natural movements. One of the most popular set pieces of this description was a huge contrivance representing the British Lion. By his apparent inanimation in the first picture, the question naturally arose, "Is he asleep?" though the interrogation was rendered superfluous by the ominous appearance of the animal's left eyelid. All doubts were soon dispelled, for the eyelid began to wink knowingly, while the hitherto quiet tail lashed about in a furious manner that

boded ill to anyone who might be rash enough to attempt to twist it. They say a lion gives vent to a deafening roar when he awakes, but in this particular instance it was the spectators who roared most enthusiastically. Few humorous contrivances have provoked such mirth as this did, a circumstance due, no doubt, to the political events of that time, when President Kruger was experimenting with the Lion's tail.

As an evidence of the fact that pyrotechny has become a fine art worthy of the attention of artists, it may be mentioned that an extremely effective and colossal set piece fired at the Crystal Palace last May-day was designed by Mr. Walter Crane. It was a cartoon depicting the Angel of Liberty joining hands with representatives of Labour. The coloured fires employed in this set piece were specially invented for the occasion by the pyrotechnists. In order to depict this elaborate design on so large a scale no less than 60,000 lances and five miles of quick match were utilised.

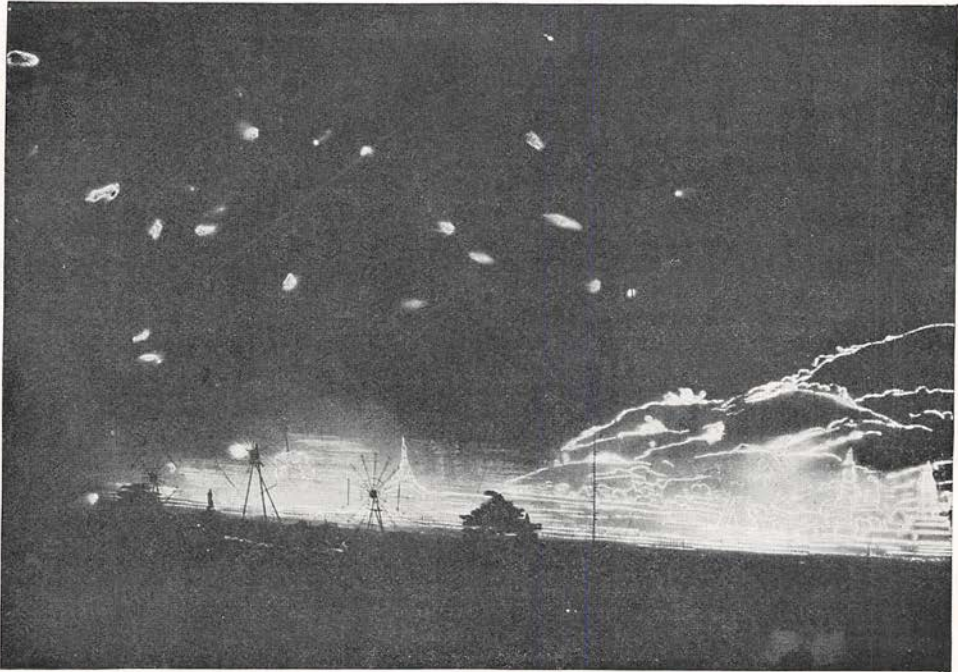


Photo by]

THE BOMBARDMENT OF CANTON.

[Negretti & Zambra.