

## Pictures in Fireworks.

BY WILLIAM G. FITZGERALD.



From a Photo. by

1.—GIGANTIC WHEEL, STREAMS OF FIRE, AND FLIGHT OF ROCKETS.

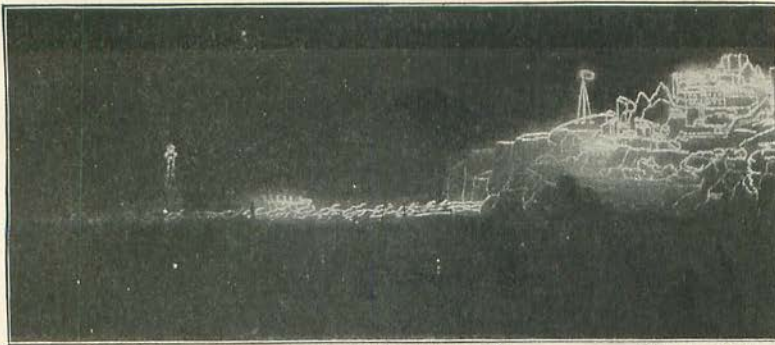
(C. T. Brock & Co.

**B**YOND all question, it is now correct to speak of the pyrotechnic "art." It is not proposed, however, to trace the evolution of fireworks in this article, but merely to reproduce a number of unique photographs, and give a few necessarily brief, but interesting, facts about each. A word is also very necessary about the photos. themselves. They were, all of them, actually taken solely by the light of the fireworks they depict. The very first photo. reproduced here (1) was specially taken for this article by Mr. Brock, than whom no one understands better the difficult art of firework photography by night. This illustration shows a great wheel of fire, with fiery streams and whirling rockets, which have been photographed with particularly brilliant effect.

It is not too much to say that the history of fireworks in general, and pyrotechnic pictures in particular, is merely the history of the famous firm of Messrs. C. T. Brock and Co. It is likewise pretty safe to assume that the vast majority of "the people" would

rather witness one of Brock's big set-pieces than inspect the rarest "old master" in the Uffizzi or the Louvre. Accordingly, these things are prepared on a colossal scale, the subjects chosen being cunningly devised, so as to appeal with peculiar force to the British race. Observe, for example, that unique firework picture, "Man the Lifeboat" (2), which is reproduced on the next page. In order to procure this photo. for us Mr. Brock stopped the mechanism of the great picture for about four seconds.

Amazing as it may seem, the original of this was 700ft. long, and covered an area of no less than 50,000 square feet. I don't know whether it would be correct to describe these as "living pictures"; certainly, they tell a thrilling story, and are instinct with life and motion during the brief minute and a half or so of their brilliant existence. The fiery sea in this particular picture is agitated in an extraordinary manner; the wailing wind is imitated by whistling rockets, and dazzling revolving lights throw their powerful beams from the stately lighthouse. The hapless vessel is vividly outlined in fire (it is not seen



From a Photo. by]

2.—"MAN THE LIFEBOAT."

[O. T. Brock &amp; Co.

in the photo., however, owing to "the light that failed"), and so is the village on the headland. The rocket apparatus is got to work, and the lifeboat moves in switch-back fashion along a tram-road about 300ft. long. Doubtless, this last sentence destroys the illusion; but we are privileged to peep behind the scenes. In this picture, real signal distress-rockets are used, and the regulation Lifeboat Association lights are burned.

An interesting fact in connection with these vast firework pictures is, that occasionally the original design is furnished by an artist of some standing. For example, when the Messrs. Brock produced the "Battle of Trafalgar," the original sketch was intrusted to Thomas Dutton, the well-known marine artist, who was paid about £35 for the rough outline. Dutton consulted the plans at Greenwich, and obtained the actual position of the ships from the British Museum. Furthermore, the exact signal given by Nelson was reproduced in fiery code flags: such is the craze for realism in these days!

The above-mentioned artist also prepared the working drawings for the "Siege of Gibraltar," a fire-picture 500ft. in length. On this occasion the famous "turtle-decked" floating batteries were depicted, and the historical red-hot shot flew about in appalling volleys. Yet again, Mr. Harrison Weir, the

popular bird-artist, designed a picture in fireworks, entitled "A Lark Rising from a Bed of Violets." This was in 1877; the picture was 200ft. broad by 60ft. high, but was not, pyrotechnically speaking, conspicuously successful. In all

cases the subject must be simple and obvious. Much detail cannot be given; hence it is that famous land battles are impossible as firework pictures.

"Great historical conflagrations are also impossible," remarked Mr. Brock; "otherwise we would have reproduced long ago the fire at the Tower of London. We find it impracticable," he added, "to make *the* fire perfectly distinguishable from the ordinary fiery outlines."

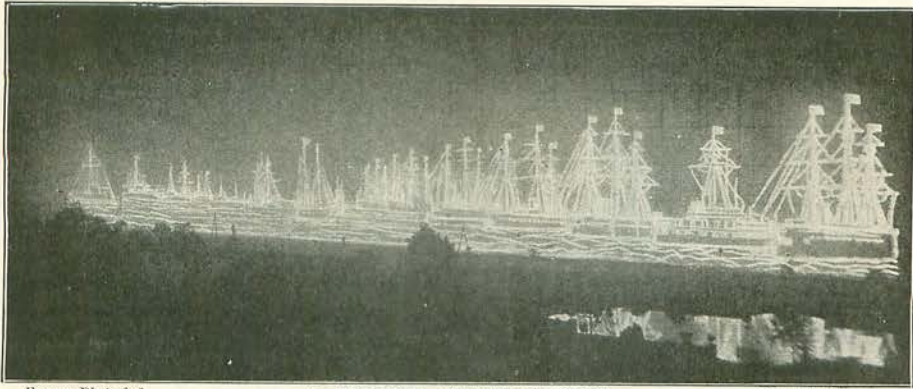
The next enormous set-piece, of which a photograph is reproduced here, is one called "The Avalanche" (3); and this also tells a stirring tale. From the right-hand side of the picture, one of the Swiss trains emerges from a tunnel, and passes swiftly along at the foot of towering mountains; needless to say, the prosaic tramway is again brought into requisition here. On the left is seen a beautiful fiery cascade tumbling over a sheer precipice. No sooner has the train vanished from sight, than a great rumbling is heard, and a terrific avalanche of fire thunders



From a Photo. by]

3.—THE AVALANCHE.

[Negretti &amp; Zambra.



From a Photo. by]

4.—THE NAVAL REVIEW AT SPITHEAD.

[Negretti & Zambra.

down from the mighty peaks, obliterating the *châlet* as well as the fair (and fiery) landscape. The Alps in this picture are 75ft. high; and the train passes along a full minute before the avalanche descends.

After thinking out a new piece in his mind, Mr. Brock consults his brother as to the mechanical part of it; and, later on, the staff artists give their advice and prepare drawings.

“The Naval Review at Spithead” (4) is a particularly successful photograph. That ancient Royal yacht, *Osborne*, is seen passing down between lines of mighty battleships.

This picture was 600ft. long and 100ft. high; it was photographed from the Royal box at the Crystal Palace, on September 8th, 1887.

“These big pictures in fireworks,” remarked Mr. Brock to me, “really date from the year of the Franco-Prussian War. The well-known historical incident of the blowing-up of the Bridge of Creil by the Germans was the very first subject selected. Next came Strasburg Cathedral, with

a fiery spire, no less than 150ft. in height. In those days it used to take thirty-two men about four hours to hoist one of the set-pieces, whereas, nowadays, four men can raise a firework picture to a height of 95ft. in little more than one minute.”

The original of the photograph here reproduced (5) is extremely beautiful, by reason of the lovely effects on the water. It represents a large number of Roman candles, fired in opposite directions, from an enormous raft, which was moored in the River Elbe, on the occasion of the Lubeck Exhibition. This huge raft cost £600 to construct.



5.—ROMAN CANDLES FIRED TRANSVERSELY FROM A HUGE RAFT.

From a Photo. by Julius Rogall, Lubeck.

It is impossible to dwell too emphatically upon the pains, and ingenuity, and enterprise manifested in the production of these colossal pictures. In the early days of the Chino-Japanese War, Mr. Brock foresaw that, sooner or later — when the “British of the Far East” succeeded in “drawing” their retiring opponents — a great pitched battle must inevitably take place. We all know that it *did* take place — at the mouth of the Yalu River.

For many weeks before this decisive action was fought, the Messrs. Brock were collecting photographs and other data, preparatory to the production of a huge topical picture. "We thought," remarked Mr. Brock, "that the theatre of war would be Port Arthur, and we set to work accordingly. The moment details of the great engagement were telegraphed, however, we commenced altering the scene, and, ten days after the engagement, the "Battle of the Yalu River" was reproduced at the Crystal Palace: the picture was about 600ft. long."

"What does it actually cost," I asked, "to reproduce one of these great pictures in the very first instance?"

"About £350," replied Mr. Brock. "Subsequent reproductions," he added, "cost about £50 each."

I am here reminded that the great firm of Messrs. C. T. Brock and Co. have given exhibitions in all parts of the world. One of the greatest of these displays was that given in 1886 at Lisbon, on the occasion of the marriage of the Duke of Braganza. Some idea of the grandeur with which this event was celebrated may be gathered from the fact that the Portuguese Government placed at the disposal of the firm a fleet of thirteen vessels, comprising troop-ships, transports, and other warships, for the purposes of the display. For the firing of the shells alone, 580 mortars were re-

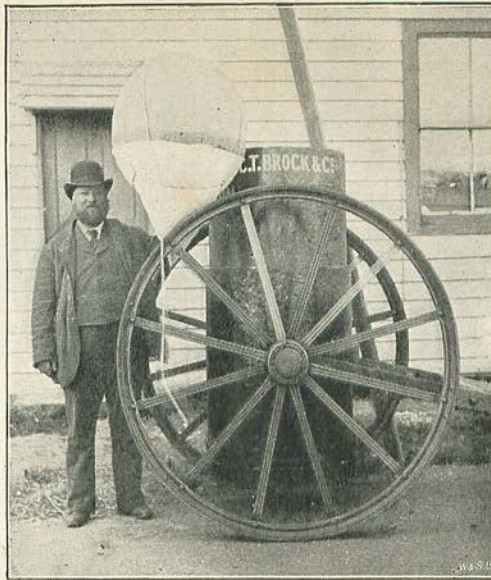
quired, and more than eighty tons of material were used.

Two years later the same Government gave an even larger display in honour of the visit of the King of Sweden. On this particular occasion something like £5,000 sterling vanished into smoke in the short space of two hours.

The accompanying illustration (6) shows one of the big mortars which were used at this display. This is the largest firework mortar in the world. The shell, which is also shown in the photograph, weighs

2¼ cwt. and measures over 6ft. in circumference. Mr. Brock himself tested this mortar and shell on the race-course at Croydon. The result of the experiment proved that the height attained by the shell is about 1,000ft., and the *débris* from it will cover an area of half a mile. It costs about £30 every time one of these shells is fired.

The "Bombardment of Canton" (7) is the next firework photo. reproduced here. Not the least interesting and peculiar feature of this photograph is the number of exploding



6.—THE LARGEST FIREWORK MORTAR IN THE WORLD, WITH ITS SHELL.

From a Photo. by A. E. Griffiths, South Norwood.



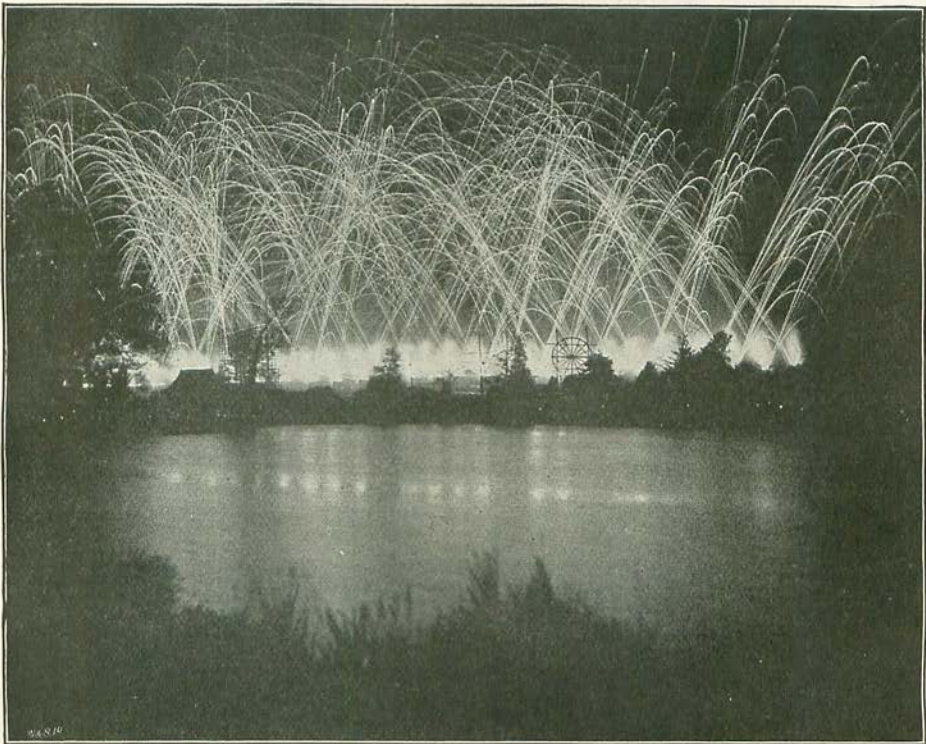
7.—THE BOMBARDMENT OF CANTON: SHELLS BEING EXCHANGED BETWEEN THE SHIPS AND THE FORTS.

From a Photo. by Negretti & Zambra.

shells, which are seen passing through the air, between the forts and the ships: altogether about 500 shells were exchanged. While this gigantic set-piece was going off, there were continual explosions in all parts of the bombarded city, as well as on the heights to the right. Joss-houses were hurled into the air from time to time, and the city was gradually diminished—literally to vanishing point. This same picture portrayed in lines of fire the scene in Canton and on the river, which was in progress during one of the Opium Wars between our country and China. Mr. Brock tells me it was designed from sketches actually taken during the operations. While

candle stars. This photograph was secured at the Sheffield Park display, the artist having his camera set up on the other side of the lake.

At the top of the next page is reproduced the magnificent greeting which was given to the Australians (9): the words were chosen by the noble Earl himself. This, as one may imagine, is not only a warm, but also a costly form of greeting. As a matter of fact, its cost was something like £20! The total length was 150ft., each letter being 4ft. high. Here it may be remarked that this huge pyrotechnic device required to be lighted in three or four



From a Photo. by

8.—GREAT FLIGHT OF OVER 2,000 ROMAN-CANDLE STARS.

[Hawkins, Brighton.]

the fire-picture was being shown, boats from the British warships were seen chasing and destroying the Chinese junks.

I pause here to speak of a certain notable display, which was given in honour of the Australian cricketers, in May, 1893, by the Earl of Sheffield. The weather was perfect—a very dark night, and not so much as a suspicion of rain. The display was given in Sheffield Park, on the shores of an ornamental lake. Here is shown a really beautiful photograph (8) of a great flight of 2,400 Roman-

different places at once. This was done by means of rockets.

Apparently, there is nothing that Messrs. Brock cannot portray in fireworks, from paintings by famous artists to comic cartoons, nursery rhymes, and fire-portraits.

It is a well-known fact that every Oriental potentate who comes to this country is, as a matter of course, taken to see the Crystal Palace fireworks. It also follows naturally that these great and impressionable people are—to put it mildly—utterly staggered by the



9.—THE EARL OF SHEFFIELD'S GREETING TO THE AUSTRALIAN CRICKETERS.  
From a Photo. by Hawkins, Brighton.

magnitude and beauty of the famous displays. The late Shah of Persia, who has witnessed Messrs. Brock's display on two separate occasions, was really quite overcome. He fired off his own portrait, whereupon his admiration knew no bounds; he could only wring Mr. Brock's hand dumbly. In July, 1891, the German Emperor was an interested spectator; and it is characteristic of that wonderful young man that, in conversing afterwards with Mr. Brock, he was able to tell the great pyrotechnist all about the chemicals and salts that were used in the various fireworks.

The irrepresible Li was the very latest distinguished spectator of these pictures in fireworks; and, of course, he wanted to know all about them. "He himself fired the Chinese Greeting," remarked Mr. Brock. "The wording was: 'We Wish Your Excellency a

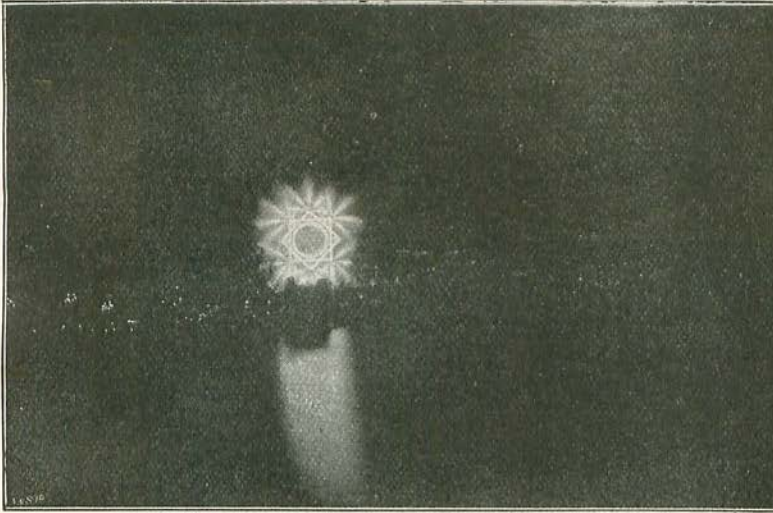
Long Life!' Li was, of course, highly delighted; but he was also very inquisitive as to who drew up the proper characters for us." The Chinese are said to have originated fireworks, but Li has no admiration for Celestial pyrotechnists. "You must come over to China in the tenth month," he said to Mr. Brock, gravely, "and give us some of your displays there."

Talking of firing off portraits reminds me of a number of inter-

esting things. Royalties frequently fire off each other's portraits at the Crystal Palace; and occasionally even the great set-pieces are let off by these exalted personages. "The Battle of the Nile" was fired by the German Emperor. Naturally, the results at such times are anxiously awaited by Mr. Brock himself, who controls the real switches; rarely, if ever, though, does anything go wrong. At the same time, an extraordinary incident did take place on one



10.—A SERIES OF HORIZONTAL WHEELS: SOME THROWING ROCKETS.  
From a Photo. by Hawkins, Brighton.



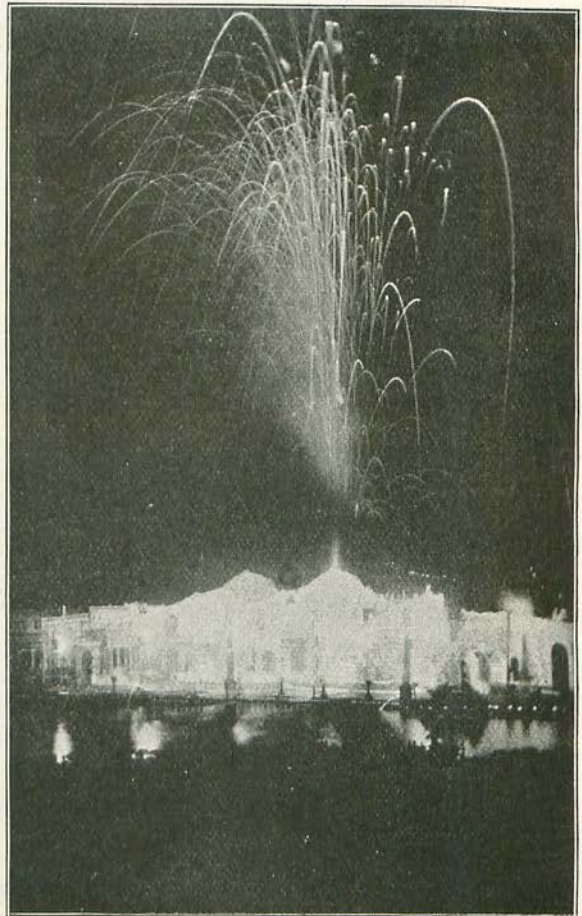
11.—GIGANTIC GEOMETRICAL DESIGN SEEN FROM ACROSS THE LAKE.  
From a Photo. by Hawkins, Brighton.

occasion. The portrait of a certain redoubtable and Royal warrior was to be fired off; and as His Royal Highness's familiar features flared out upon an admiring multitude, it was seen that he was depicted *with a green nose!* It might have been worse, however: it might have been red. Of course, mistakes like these are simply the result of using accidentally "lances" of the wrong colour. Or it may be, as in the above droll instance, that the portrait was evolved from a bouquet, and that one colour of the latter lingered too long.

We next show a series of horizontal wheels revolving with gorgeous effect (10); some of them are throwing up superb rockets of various hues to a height of 400ft. or 500ft. This photograph was taken during the Sheffield Park display, as also was the following one (11), which will be found reproduced at the top of this page, and which shows very perfectly a monstrous square piece, measuring about 60ft. I must here acknowledge gratefully the kindness of Lord Sheffield, whose courteous letter, giving us permission to reproduce these photos., is before me as I write.

I am here reminded of another extraordinary instance of Mr. Brock's interesting work. Last year an exhibition was given before the

Iron and Steel Institute, at the Crystal Palace. On this occasion there were shown, in fire, a first-class modern locomotive of the London and North-Western Railway, and also one of the very earliest of Stephenson's engines. All the parts were working. In the case of the primitive engine, a special artist was sent to Darlington to make



12.—THE ERUPTION OF VESUVIUS AND DESTRUCTION OF POMPEII.  
From a Photograph.

original sketches there of one of the great inventor's "Puffing Billies."

We are indebted for the illustration on preceding page (12) to Messrs. James Pain and Sons, the pyrotechnists; it depicts the ever-popular "Eruption of Vesuvius." This photograph was taken at the Alexandra Palace; and the set-

was also constructed in such a way that the crater itself slowly collapsed. Of course, the "property" city had to be rebuilt almost immediately, as the spectacle was presented three times a week, at a cost of £200 on each occasion.

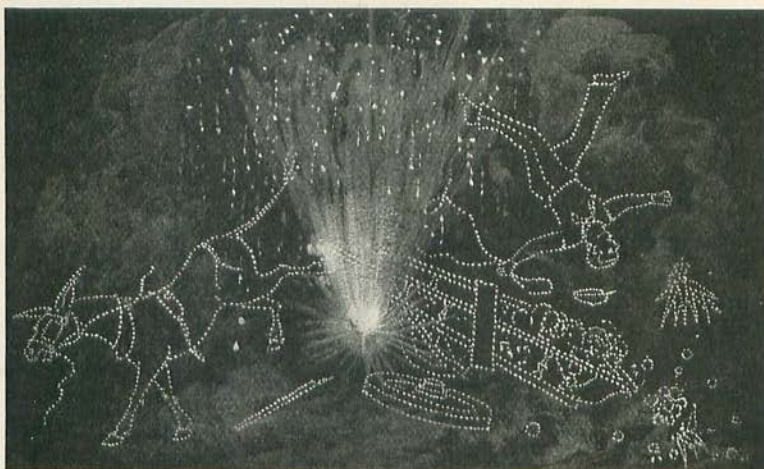
Comical pieces are, of course, very popular at all times. Observe this coster



13.—COMING FROM COVENT GARDEN.

piece was produced on an open-air stage, 450ft. long. The mountain was 52ft. high, and was constructed of sheet-iron and wood. There was a regular built-up city of Pompeii, with palaces, baths, and the like; and the way it was gradually obliterated by the lava streams and explosions was as interesting as it was ingenious. Streams of gold fire represented the lava, and as these reached certain points of the doomed city, they caused terrific explosions, which demolished certain buildings. The mountain

and his barrow (13)—which, by the way, is a real barrow. This set-piece was also shown by Messrs. Pain; it measures 15ft. by 7ft., and contains two fixed levers—one at the coster's feet and the other near the donkey's hind-quarters. After progressing peacefully, if rather hilariously, for about 200ft., the trouble commences, which is shown in the second illustration (14). There is a terrific explosion, and one lever causes the fiery donkey to kick up, while the other brings utter destruction to the barrow and its contents.



14.—THE ACCIDENT.