# *The Electric Fountain.*

By Arthur Lord.

*From Photographs by Frederic W. Darlington, E.E.*

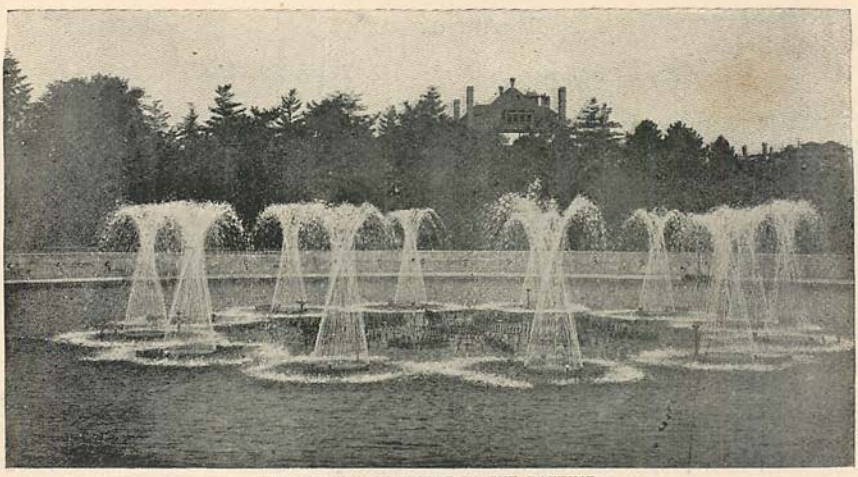
WHEN the magnificent electric fountain which now forms one of the potent attractions of Prospect Park, in Brooklyn, was first exhibited to the public last August, one of the New York reporters penned the following glowing words:—

"It was just after eight o'clock when a stream of light shot up from the dark, low-lying basin. Then all was dark again, until the water began playing from the bundles of plain-looking pipes in the centre. Slowly at first, then faster and faster and higher and higher leapt the streams, forming a beautiful cascade in the air. But the crowd had seen that before, and were just beginning to murmur, when the electrician began to play his part. A soft radiance shot up, and the mist changed into ghostly spectres, floating away in the air. Then it changed, softly and gradually, into delicate blues and greens, yellows and reds and crimsons, purple and lavender; and at each change the exclamations of surprise and delight were increased. The streams shot up for 50ft., and soft, fleecy veils of mist, tinted with the most beautiful colours of the rainbow, floated up against the dark sky."

Evidently this reporter was a poet, although he wrote in prose, and his description is about as near to the actual thing as could possibly be. Even the photographs with which we illustrate this article fail to tell the whole story of the wondrous colour effects of which the electric-illuminated fountain is capable, but they give a splendid idea of the various forms which can be made with thousands of jets of water, all working in unison under the hand of a skilful operator, and each a thing of beauty in itself. Imagine, for a moment, the beautiful "fan" shown on this page to be made up of myriad ribs of ever-changing hue, and you will have some idea of what an electric fountain really is.

It has been said that the electric fountain was originally conceived in the prolific mind of a theatrical manager, and that it served a good purpose in a crude form upon the stage. But this was only for a time. Artists and mechanics took it up and developed the idea, bringing it nearer to perfection, until, in 1893, it astonished and interested millions of people at the Columbian Exposition in Chicago. At the present time the fountain in Prospect Park, which was opened in August, 1897 — shown at the top of page 226—is the largest in the world, and, under the skilful direction of its designer, Mr. Frederic W. Darlington, an electrical engineer of Philadelphia, the possibilities of such a fountain have been displayed to a remarkable extent. It was Mr. Darlington, also, who first thought of photographing the night and day effects of the fountain while at work, and the beautiful results of his camera are shown in these pages.

THE FAN EFFECT PRODUCED BY THE ELECTRIC FOUNTAIN.

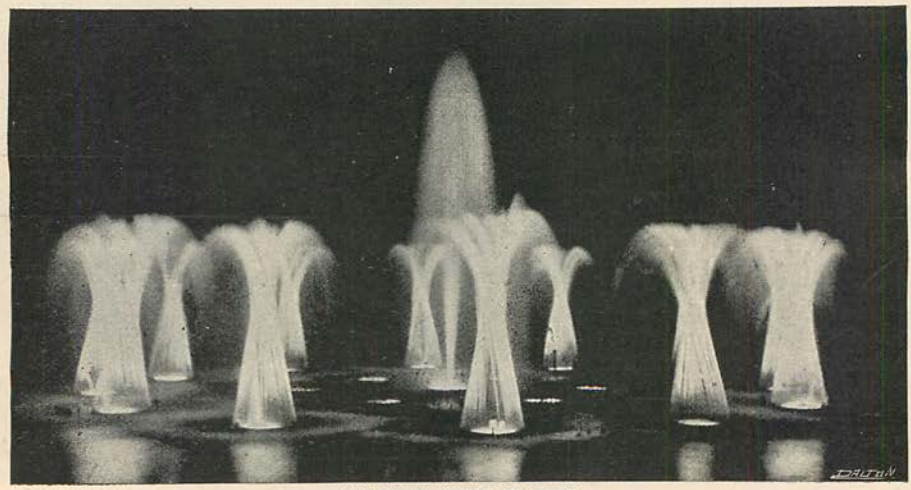


THE SHEAVES OF WHEAT IN THE DAYTIME.

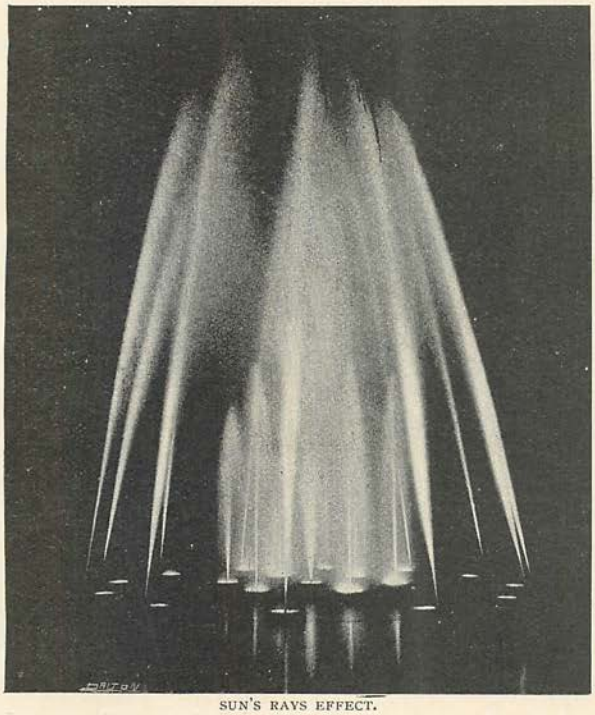
In the daytime the fountain is not at its best. It is night that brings out the beauties of the fountain, and if we compare the illustrations on this page, we may see the difference between the day and night effects. The first of these illustrations, showing the "Sheaves of Wheat" design, was from an instantaneous exposure in broad daylight. The second was from a half-minute exposure, and the photograph was taken in the light of the fountain itself. By closely examining the daylight photograph, it may be possible to distinguish the dozens of little nozzles on the outer rim of each of the circular funnels, which are very plainly shown in the "fan" illustration on the preceding page.

Mention of these funnels brings us to one of the main points in the construction of an electric fountain, because it is through these that the coloured lights are projected which illuminate the water and make it a thing of beauty, long to be remembered. In the Prospect Park fountain there are nineteen of these funnels arranged in two circles, with one funnel in the exact centre of the fountain. Each of these funnels is covered with glass, and from the centre of the middle funnel rises a small pipe which projects a central geyser jet high in the air. It is this "geyser" which we see in the centre of the "Sheaves of Wheat" design at night, and in the "Geyser at Night," which forms, to use a mixed metaphor, the backbone of the electrical displays.

It would take a long time, and would, perhaps, prove too technical, to enter into a complete description of all the funnels and the arrangement of the two thousand odd



SHEAVES OF WHEAT BY NIGHT.



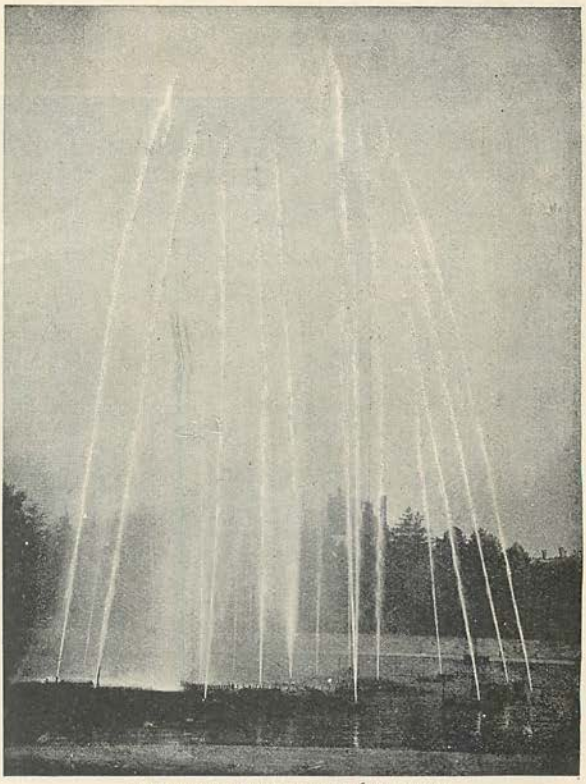
SUN'S RAYS EFFECT.

jets which make the different displays. Suffice it to say that the jets are so arranged as to form all manner of different designs—umbrella shapes, whirling designs, globular showers, criss-cross motions—in short, nearly everything under the sun. The very pretty "wheatsheaf" design is made by streams of water from sixty-eight nozzles in the funnel, and when nineteen of these sheafs are being made, it brings over a thousand streams of water into play.

The height of each stream is regulated by the operator, who is to be found underground. In a moment we shall pay him a visit. Meantime, let us look briefly at the illustrations on this page, which represent what might be called "the sun's rays" effect. The height of each of the nineteen streams of water is about 60ft., although this is not the limit which can be reached. Everything depends, of course, on the amount of pressure which projects the stream into the air. The two geysers shown on the following page were each over 75ft. in height.

To go beneath the fountain is to enter the realm of search-lights, switch-boards, coloured glasses, pumps, and every thing which makes a good electric plant. Two men are necessary to operate an electric fountain: one to manipulate the levers which govern the jets of water, and the other to govern the search-lights. The chief operator looks out of two or three windows, just above the surface of the water in the basin, and through these he can see the effects of each movement of levers or colours. In front of him is a row of levers, each of which controls the water to one set of fountain jets, a long board, on which are arranged a number of push-buttons, controlling the various combinations of colours; and each individual colour is controlled by a button of the same colour.

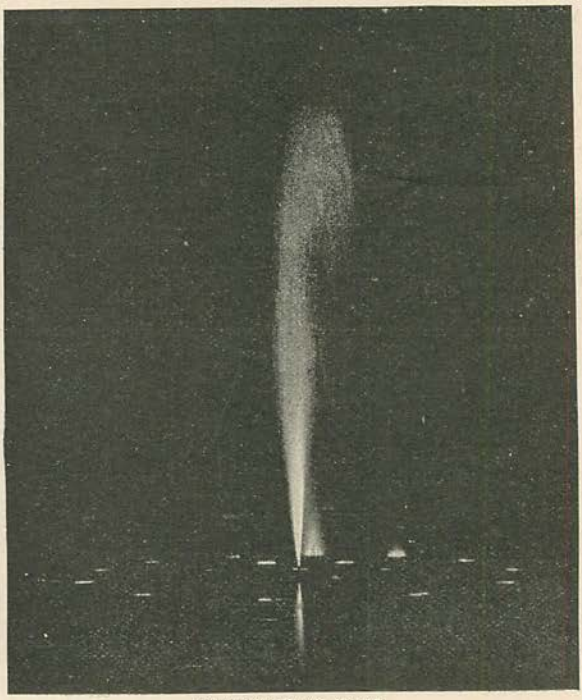
A compact description of the search-lights, and the buttons which operate the different coloured glasses, may here be quoted. The operator pulls the lever near him, and at the same time presses a



STREAMS OF WATER ABOUT 60FT. HIGH.

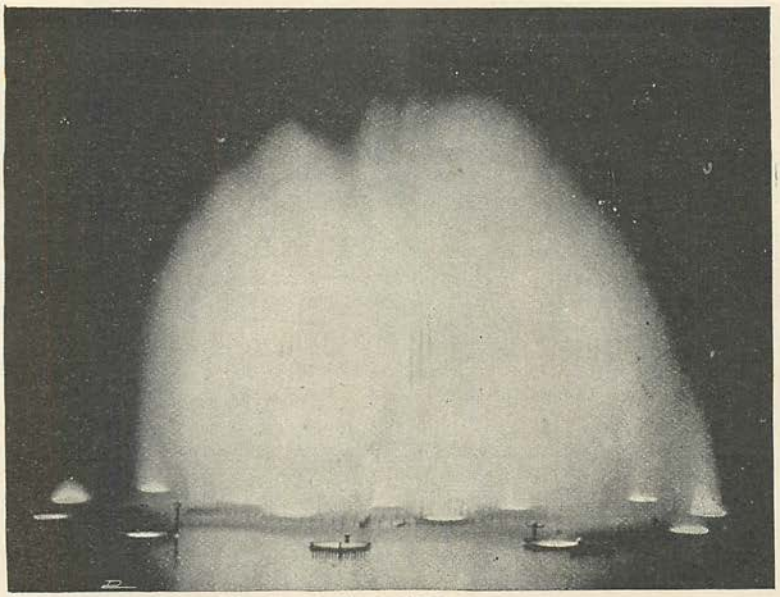
THE ELECTRIC FOUNTAIN IN PROSPECT PARK, BROOKLYN.

yellow button. Immediately there springs into the air a golden spout of water that returns to the pool changed to myriad drops of molten gold. Another button will be pressed, and, lo! the living column has become a vivid red and every drop is like a gem. Another lever is pulled, and a score of streams, playing toward the centre, spring into existence, followed by miniature geysers that assume every possible colour apparently. Umbrellas of spray appear as another lever is touched, and these are followed by curiously whirling jets that twist like snakes of fire.



THE GEYSER AT NIGHT.

Underground on every side are great bowls of fire that seem to be attached to the round globe of glass above by a solid white flame. These are the search-lights, and the globes above are the funnels through which are sent the rays of colour to illuminate the spouting jets overhead. Under these funnels are arranged on swinging frames the coloured and transparent rings that fit between the light and glass. When the operator touches a button all is released into a valve which pushes one of these fan-like transparencies over the light. A white button just below shuts off the air, and the fan returns to its place. One of these fans is opaque, so that



THE CASCADE.

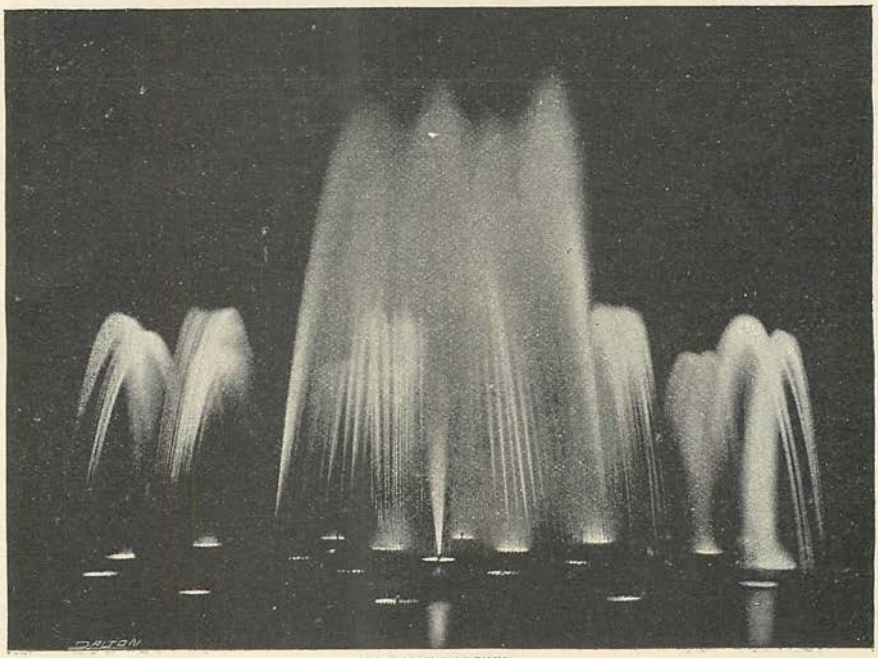
light may be shut off from any jet or any portion of the fountain.

The accompanying illustration represents a design to which the inventor has given the fanciful name of the "Cascade." It will be noticed that nearly all the centre funnels are in use, and are so regulated as to make a fairly perfect arc in the sky. The so-called "Flaming Torches" shows that the mere abstention from using one or more of the funnels completely revolutionizes the design, and this constant variation in design is accentuated by the sometimes bewildering alterations of colour.

The illustration entitled "Ribbons of Light" shows how the magnificent columns of water may be made to lean inward, over the funnels of light, and to play toward the central geyser. Each column is illuminated in different colours, and the whole, when skilfully handled, may be made to represent a maypole with its gay and whirling ribbons.

The "Beehives at Night" is but a variation of the "Sheaves of Wheat" design, each beehive being but a sheaf of wheat with the top cut off. This diminution is caused, of course, by a lessening of pressure.

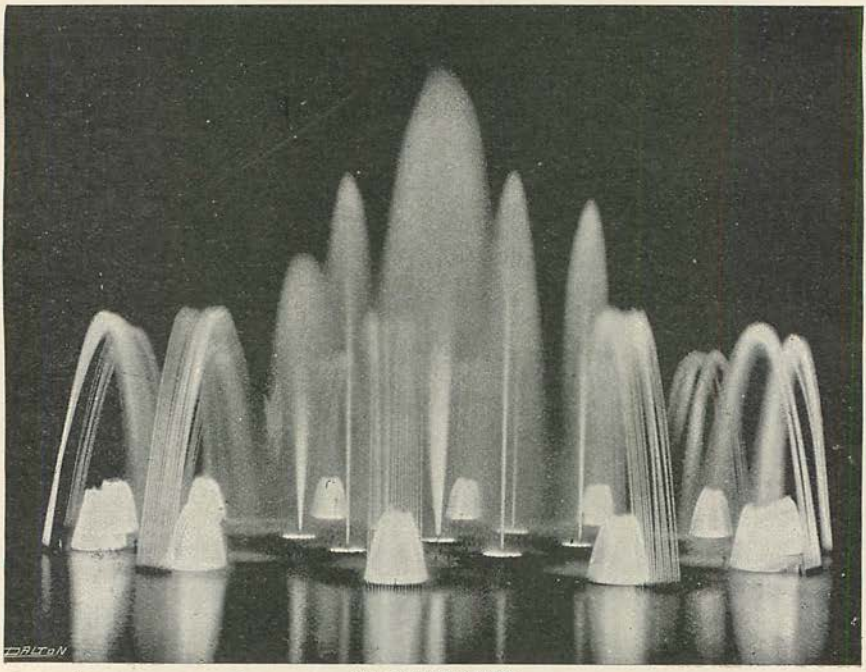
Many cities are building electric fountains



FLAMING TORCHES.

RIBBONS OF LIGHT.

as a summer attraction for their inhabitants. The cost varies, naturally, with the quality of the fountain. That in Prospect Park cost $24,500, or nearly £5,000. Others have been built for £200. Railway companies are finding it of benefit to erect these fountains in their parks, or in co-operating with cities, by supplying the power to run the fountains. A valuable return comes to them through the increased traffic, and in several cases a fountain has been made to pay for itself in a season.



BEE-HIVES AT NIGHT.