Those who believe that the hope of producing real and true portraits by photography rests in Galton's method of composite portraiture, will welcome the subjoined communication from that investigator - a communication which is important as distinctly formulating a defect in the older method of working, where undue emphasis was placed on uniformity in a single respect. In scientific matters, to distinctly formulate a need is often to find a means, and let us hope it will be so in the present instance.

In the following communication we have a distinct statement of what it is needed to do, and a suggestion towards the doing. Will our readers exercise their minds as to the problem?

Here is the text of Mr. Galton's communication: -

"I receive from time to time beautiful composite photographs made in America, and have not unfrequently received letters asking about possible or actual improvements in the process. In reply, I should like to be permitted the use of your columns to make a few remarks on the subject.

"A composite portrait is not the means of its components, but an aggregate of it, which is reduced in intensity of tint to that of one of the components. If it were a mean, its outlines would be sharp, but being an aggregate; they are not, only those shades or lines that are common to all the components are as intense, or as well defined, as they would be in an ordinary portrait, while ghosts and shades of other lines are distributed variously about. These ghosts are often too conspicuous. Those that affect the [natures?] are especially due either to differences in the relative breadth and width of the component faces, or to a want of symmetry in some of them which causes the straight line that passes as nearly as maybe along the eyebrows to be inclined to that which passes between the lips in the composites I have thus far made, I have merely attended to keeping the vertical distance between the eyes and the parting of the lips at exactly the same length in all cases, and to making the best fit of the remainder that each case severally admitted. It strikes me now that it would be well worth while to vary the whole procedure by attempting to approximate to a mean result, and in the following way. First, find by measuring the portraits about to be combined, the proportion that the distance between the pupils bears on the average of all of them to the vertical distance between the pupils of the eyes and the parting of the lips; then optically transform every component portrait into that same average proportion. Secondly, straighten every face that asymmetrical in the way above described, into a symmetrical one. Lastly, make the composite from the transformed portraits.
"I suspect that a pinhole camera would be found perfectly suitable for effecting these transformations, if the component portraits were not too small. A portrait of sufficient size could, by a single operation, be reduced by its means to any desired scale, both in breadth and in width, independently of each other, namely, by the ingenious device I saw lately in your columns, but cannot specify where, of replacing the pinhole by a vertical slit in one movable diaphragm, and an horizontal slit in another. The asymmetry could at the same time be remedied by so inclining the portrait to the optical axis of the camera as to foreshorten the side that was too long. Foreshortening is accompanied by no blur or image in a pinhole camera.

"["The sliding adjustments of the camera would have to be graduated, and each portrait measured carefully by laying a glass scale upon it, and using a low power lens. After this had been done, a table calculated once for all for the camera would tell at what graduations of distance and of inclination the portrait should be set, in order to obtain the desired result.

"The transformations I propose are small in amount. They are always made, and we unconsciously witness them, whenever the person at whom we are looking holds his face a little inclined from full-face view. But, small as they are, I think they are worth making. I have not now got my photographic things in working order, and am busied in other ways, so I speak for the most part theoretically; but not wholly so, as I have made some optical experiments which corroborate, so far as they go, the feasibility and advantage of what has just been said."

We will forward any letter intended for Mr. Galton.
COMPOSITE PORTRAITURE.
A COMMUNICATION FROM FRANCIS GALTON.

Those who believe that the hopes of producing real and true portraits by photography rest in Galton's method of composite portraiture, will welcome the subject of his communication from that investigator—a communication which is important as distinctly formulating a defect in the older method of working, where undue emphasis was placed on similarity in a single respect. In scientific matters, distinctly formulate a need is often to find a means, and let us hope it will be so in the present instance.

In the following communication we have a distinct statement of what it is needed to do, and a suggestion towards the doing. Will our readers exercise their minds on the problem?

Here is the text of Mr. Galton's communication:

"I received from time to time beautiful composite photographs made in America, and have not unexpectedly received letters asking about possible or actual improvements in the process. In reply, I should like to point out the use of your columns to make a few remarks on the subject.

"A composite portrait is not the mean of its components, but an aggregate of them, which is reduced in intensity to that of the component. If it were a mean in strictness would be sharp, but being an aggregate; they do not, only those shades or lines that are common to all the components are in the mean, or as well defined, as they were in the component, whilst others are distributed variously. These facts are often too conspicuous. Those that affect the likeness are especially due either to differences in the relative width of the component faces, or to want of symmetry in some of them which causes the straight line that passes as nearly as may be along the eyes to be inclined to that which passes between the lips. In the composition I have thus far made, I have usually tried to keep the vertical distance between the eyes and the parting of the lips as nearly as was possible, and to make the best fit of the resultant likeness, that is severally admitted. It strikes me that it would be well worth while to vary the whole procedure by attempting to approximate to a mean result, in the following way. First, by averaging the extremes along the line of the eyes, the distance between the pupils being on the average of all of us to the vertical distance between the pupils of the component, the parting of the lips; then optically transform very considerably the eyes and lips of one face, and to make the best fit of the resultant likeness, each case severally admitted. It strikes me that it would be well worth while to vary the whole procedure by attempting to approximate to a mean result, in the following way. First, by averaging the extremes along the line of the eyes, the distance between the pupils being on the average of all of us to the vertical distance between the pupils of the component, the parting of the lips; then optically transform very considerably the eyes and lips of one face, and to make the best fit of the resultant likeness, each case severally admitted. Lastly, how a composite figure was found perfectly suitable for effecting these transformations, if the component portraits were not too small. A portrait of sufficient size could, by a single operation, be obtained by its means to any desired scale, both in breadth and in width, independently of each other, namely, by the ingenious device I saw lately in your columns, but cannot specify where, of replacing the pinhole by a vertical slit in one movable phosphor, and an horizontal slit in another. The symmetry could at the same time be remedied by so inclining the portrait to the optical axis of the camera as to foreshorten the side that was too long. Foreshortening is accomplished by no other image in a pinhole camera. The sliding adjustments of the camera would have to be graduated, and each portrait measured carefully by laying a glass scale upon it, and using a low power lens. After this had been done, a table calculated once for all for the camera would tell at what graduated distances of mean and inclination the portrait should be set, in order to obtain the desired result.

"The transformations I propose are small in amount. They are always made, and we unconsciously witness them, whenever the person at whom we are looking side his face a little inclined from a full-face view. But, small as they are, I think they are worth making. I have not now got photographic things in working order, and am busy in other ways, so speak for the most part theoretically; but not wholly so, for I have shown some optical experiments which correspond, so far as they show, the possibility and advantage of what has just been said.

We will forward any letter intended for Mr. Galton.

MORE FROM DR. PIFFARD ON THE MAGNESIUM LIGHT.

The fact that in the form introduced by Dr. Piffard has in the course of a few months, become almost a recognized thing in the studio of every portrait photographer who makes a point of keeping well up to the times, and hundreds of workers have devised new arrangements in connection with the flash light; hence a further communication from Dr. Piffard carries with it considerable interest.

The following is from Anthony's Bulletin:

"The past six months have witnessed a remarkable development in the use of artificial illumination for photographic purposes. The Oldham powder and its various modifications and limitations, the writer's own method, and the photography, the popular method, have all been followed up, and, in the mean time, a new method has been added, namely, the flash-light method, which has been successfully carried out on the continent and in this country. A lighting, in England, was at first performed through an alcohol lamp, carried out the plan by using an ordinary powder lamp with a very limited extension, but this method has not been continued, and a new method of lighting by means of an electric lamp has been discovered in this country, and now also in France. The latter is more satisfactory, and has already been adopted by many photographers.