

The Secretaries of the Royal Society advertise for claimants for the sum of four thousand pounds to be given away for the encouragement of research. Any photographic experimentalist, therefore, who thinks his work deserving of his country, should apply before the end of December next. This makes the fifth annual grant, and a report will now be made showing what the country has gained in return for the twenty thousand pounds expended. So far, no very great discovery or invention seems to have resulted from this uncalled-for generosity on the part of Government.

Many have been the attempts, more or less successful, to apply photography to surveying, but we recently heard of a happy application of the art made by Captain M'Callum, R.E., when employed upon such work in the Malay Peninsula. In making trigonometrical surveys, it is sometimes difficult to mark the various points sufficiently well to recognize them hereafter, for although they may appear plain enough on a map or plan, and be very obvious as soon as discovered, such spots want a lot of finding in a wild landscape. In Scotland, Wales, and other hilly districts some high peak is usually chosen for the purpose, and a cairn of stones marks for miles around whence the observations have been made. But the surveyor has not bare country to deal with always, and sometimes Nature makes a mark that at a distance might well be taken for a trigonometrical point. In the Malay Peninsula, therefore, Captain M'Callum resorted to the clever plan of photographing his survey stations, and marking upon the landscape pictures such information as would lead to their ready identification.

M. Izard recommends the following plan of stripping photographic films from glass. Make a solution of rubber in benzole, and coat your negative with it; when dry, apply a film of collodion, yet another of rubber, and finally, another of collodion. A narrow strip of black paper is then cemented to the margin of the plate all round, and this, when the film is dry and is stripped with a penknife, makes a suitable frame.

It seems that the Balloon Society has had enough of London fogs, and is resolved to get rid of them altogether. This is good news indeed. The help of the President of the Chemical Society and of the Photographic Society of Great Britain has been invoked, and the whole thing may now be regarded as good as accomplished. The London fogs are to be vanquished before even the North Pole is discovered, so that when Commander Cheyne and his comrades depart, they will have the satisfaction of leaving behind a bright and exhilarating winter for our use.

By the bye, the only dissentient voice at the foggy debate appears to have been Mr. Henderson's, who, as he practically put it, "failed to see what part, so far as actual aid is concerned, photography could play in the matter." Mr. Henderson evidently thought photographers had quite enough fogged negatives, without going up in a balloon to get more.

Topics of the Day.

DEVELOPMENT OF GELATINE PLATES.

BY W. T. WILKINSON.

My own experience, working the gelatine process side by side with wet collodion, and by a careful and wide examination of the work of others in gelatine, has confirmed the belief (or certainty) that even leaving quick exposures out of question, as good results can be got on gelatine as by the wet process, even when working it in its most sensitive and favorable condition, so that when the immense advantage of shorter exposure is considered and allowed its full value, not the slightest doubt exists, that for commercial photography, the gelatine process is the best; but (and there is a "but") to get the highest quality of result from gelatine it is in the highest degree necessary that careful and intelligent manipulation be resorted to, remembering, when examining the beautiful thin negative, that what gelatine lacks in visual thickness it makes up for in non-actinic vigour, and also that it is a process of only about three years' (general) use, and is constantly being improved both in quality of result and ease of working, whilst the wet collodion is thirty years old, and is practically in the same condition as when first introduced, proof of which can be seen by a perusal of my paper read before the South London Society in 1876, entitled, "Archer's Process."

This being so, it now remains to consider the best means of working gelatine plates so as to get the best results possible.

We will begin with the ferrous oxalate developer; after a long series of experiments under every conceivable condition, I am obliged to come to the conclusion that in no case can the best results possible be got that the gelatine plate is capable of giving when ferrous oxalate is used as the developer of the latent image. This conclusion has not been arrived at hastily, but after careful comparative experiment, the gravest fault being the impossibility of getting detail in the high lights, especially discernible when masses of white drapery have to be rendered.*

Ferrous oxalate being wanting, we will proceed to consider the best method of using the alkaline pyrogallie.

A careful perusal of the instructions sent out by the different makers for use with their plates exhibits a considerable amount of ingenuity in framing a developing solution that shall be (apparently) different from that recommended by a rival; but when reduced to paper, side by side, it will be found that practically all are very nearly alike.

Some makers aver that pyrogallie is best kept in a dry state, and dissolved as required, recommending the operator either to weigh out in small quantities, or to guess the amount for each plate. Both these plans are bad in principle: in the first instance, pyrogallie is difficult to weigh out in small quantities with any degree of certainty; and in the next place, by no amount of practice can the proper amount be guessed to give absolute certainty; besides which, a bottle of pyrogallie once opened deteriorates as rapidly dry as in aqueous solution, while there is the chance of introducing dirt when opening in the dark room.

Leaving the pyrogallie, we will consider the restrainer and accelerator. Some makers direct the mixture of ammonia and bromide to be used in drops, others in much larger quantities. The dropping plan is very uncertain, as by such a very little over, the plate is ruined.

Careful consideration of the above points is fully met by the formula published by Mr. B. J. Edwards. This formula is suited for all kinds of gelatine plates. The pyrogallie keeps well; in fact, I have some now, three months old, which gives as good a negative as a freshly prepared solution. There is all the requisite latitude, besides absolute certainty as to result.

* This, it must be remembered, is but the personal opinion of the writer.
—Ed. P.N.