

THE PHOTOGRAPHIC NEWS.

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CONTENTS.

Photographing the Vocal Organs	PAGE
The Production of Vignetting Plates.....	225
Glass	225
By-the-Bye.—Inventors and Discoverers	226
Notes on Photography. By E. Howard Farmer	227
French Correspondence. By Leon Vidal.....	229
A New Danger	229
Tripod and Rod. By J. Davey	230

Notes	PAGE
Patent Intelligence	231
A Few Remarks on the Photographing of Children	234
Correspondence	235
Proceedings of Societies	236
Talk in the Studio.....	239
To Correspondents.....	240
The Every-Day Formulary	240

PHOTOGRAPHING THE VOCAL ORGANS.

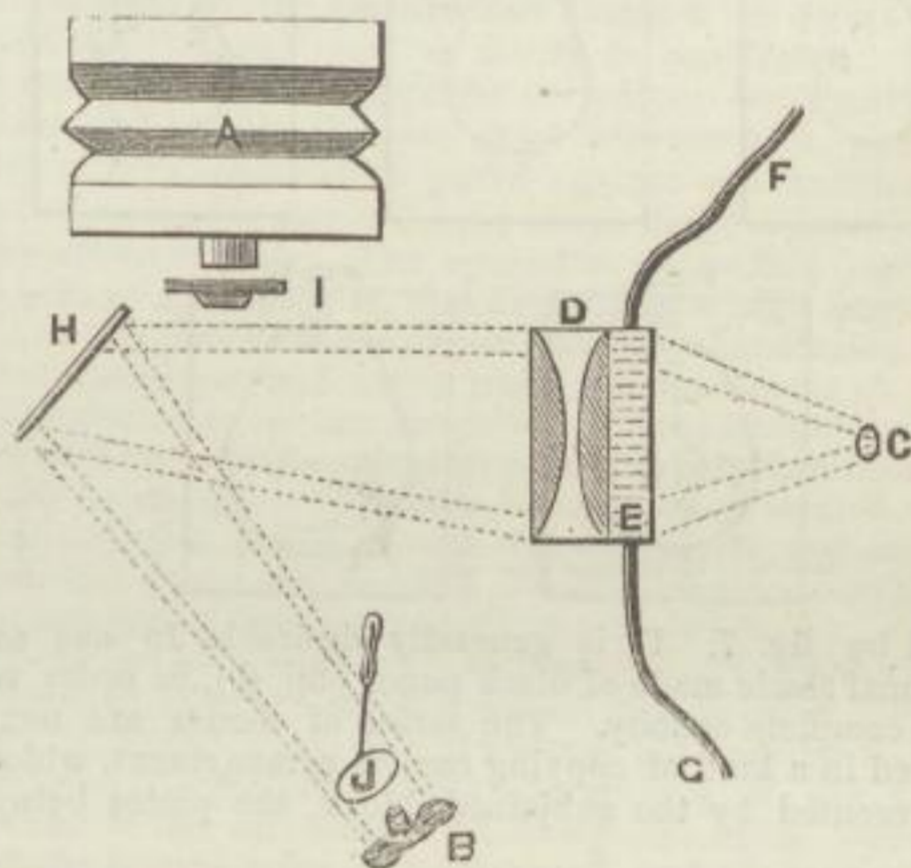
SUCH exceptionally difficult photographic problems as may occasionally present themselves, generally serve to call forth such patient and energetic efforts as to lead to a degree of success as was altogether un hoped for at the outset: a good illustration of this being afforded by the recent success attained in laryngeal photography. More than twenty years ago Czermak made some experiments on photographing the throat, direct sunlight being reflected into the mouth, and wet plates being used. Fairly good results were obtained, although far behind those which have been obtained during the past six months as a result of the labours of Trueman Wood, Cocking, Cadett, Lennox Browne, Behnke, and Ackworth. Those who were fortunate enough to be present at the recent meetings of the South London Society and the Parent Society, were much interested in learning how the difficulties incidental to laryngeal photography had been successfully overcome.

As regards the actual means finally adopted, Mr. Trueman Wood furnishes us with the following concise and clear description:—

In the arrangement actually adopted, the electric light was placed by the side of the camera, and a little in front of it. The rays were directed by means of a condenser upon a mirror immediately before the camera, and just above the lens, this mirror being set at an angle of 45°, so as to direct the light immediately upon the subject. The condenser was furnished on the side next the lamp with a water jacket, through which a current of water was kept flowing to prevent injury to the lens from the heat of the lamp. The rays from the mirror were received upon the small laryngoscopic mirror, placed, as before described, at the back of the throat. The image of the vocal organs formed in this mirror was reflected upon another small mirror fixed to the front of a drop shutter. The object of this was that the person whose organs were being photographed could see when the image was properly directed, so that it would be received by the camera lens. As soon as he saw reflected in the little mirror on the shutter the image which it was desired to photograph he gave a pre-arranged signal, and the exposure was made. It was hardly necessary to say that the focussing had been effected by means of a previous view of the organs. To obviate the necessity of getting the mirror properly arranged twice, in some of the later experiments arrangements were adopted by which a pair of stereoscopic lenses could be used, one lens serving as a finder, and the other producing the picture. For this purpose a temporary back had been fitted to the camera, one-half of which was fitted to receive a small dark slide, while the other half held a focussing screen, the camera being divided in two by the usual partition. The shutter was worked by a pneumatic arrangement, and was mounted on a separate stand from the camera, the same stand serving also to carry the condenser and the larger mirror. The short tube on which the shutter was

mounted was connected with the camera lens by means of a sleeve of black velvet.

The subjoined rough sketch in plan will render it quite easy for the reader to comprehend the arrangement of apparatus used.



- A.—Camera.
- B.—The vocal organs.
- C.—The electric arc.
- D.—Pair of condensers.
- E.—Water chamber.
- F, G.—Tubes for water supply and exit.
- H.—Plain mirror, for reflecting the beam of electric light towards the throat.
- I.—Shutter, to which is attached a small mirror in which the sitter may see his vocal organs reflected.
- J.—Laryngeal mirror, which serves not only to reflect light down the larynx, but also to reflect the image into the camera.

THE PRODUCTION OF VIGNETTING PLATES.

It is pretty generally recognized that the usual vignetting glasses, obtained by partially dissolving away the orange or ruby film from a piece of flashed ruby or flashed orange glass, are seldom quite satisfactory, the hydrofluoric acid generally being irregular in its action on the coloured surface-glass; and, moreover, the acid in question is so highly corrosive, as to be hardly a desirable reagent in the work-room of the photographer, a mere trace of its vapour being sufficient to rapidly obscure the surfaces of a photographic objective or other optical instrument. To