

the invisible fluid a means of practical illumination, could also devise the means whereby its dangers would be overcome or at least reduced to the minimum. It is suggested that the wires he covered with a thick coating of insulating material, and while this would undoubtedly be a protection, it would be no better than, if so good as, putting them out of sight, underground. Neither wires nor poles are an ornament to a street, and when the former become very numerous, as they inevitably must in large cities, they subject the populace to another danger, namely, breaking from or breaking down the poles during a storm.

Life is the first consideration, and it would seem that corporations might arrange it so that those who give them their corporate existence should in turn be protected in the possession and enjoyment of a natural existence.

A CALL FOR AID.

WE ARE in receipt of an appeal for assistance addressed to the people of the land, and signed by the President and Secretary of the Board of Trade, but it is without date or any statement as to the place or people who need the help which is called for. We suppose from the wording of the application that it hails from Hailey, Idaho; and as our sympathies are aroused on behalf of the sufferers from the conflagration in that city, we cheerfully respond and state to the benevolent public that, although assistance was at first declined, any help they may see fit to afford will be gladly accepted by the stricken people whose needs are much greater than supposed. A committee consisting of W. B. Farr, chairman; George H. Parsons, R. W. Berry and R. H. Plughoff have been appointed to receive contributions and to them all communications on this matter should be addressed. We hope Hailey will receive all the assistance needed in this dire extremity.

ANOTHER WONDER.

THE developments of science in this age are truly wonderful. By the transmission of sound over long distances, friends who are far apart can, by means of the telephone, converse with each other. Now it appears that light can be similarly conveyed. This new process enables people not only to speak with each other when widely separated, but to

carry on the conversation virtually face to face, by the aid of what is termed electro-photography.

By means of this newly discovered power of electricity, images at a great distance can be thrown upon a prepared plate, and if it be the face of one speaking, not only the features are exhibited, but every changing expression of the countenance can be noted. A description of this latest marvel appeared recently in *Centralblatt für Electrotechnik*, and was reproduced in the July number of the *Electrical Engineer*, published in New York.

The inventor is Mr. Korzel, a comparatively young man of South Germany. A representative of the paper first named was present by invitation when the apparatus was tested. The explanations were given and the experiments conducted in the presence also of a distinguished circle of scientists.

As the foundation for the apparatus the ordinary house telephone is used. Above the diaphragm apparatus there is a lens, similar to the objective of a photographic camera, and above this a translucent glass plate in a frame. At the right and left of the objective are two incandescent lamps with silvered mirror reflectors. The lamps are lighted by a specially constructed battery.

The objective serves for taking the picture of the person using the telephone, while the incandescent lamps illuminate the face. Upon the glass plate above is thrown the image of the person using a corresponding instrument at the other end of the line.

The apparatus is called the photoscope, and regarding the internal construction of it, Mr. Korzel said:

"In it there is a changing of light vibrations into electric vibrations, similar to what takes place in the microphone in sound waves."

The inventor found in brom-gelatin a substance which, in connection with the well known property of selenium, makes possible the transmission of light.

Mr. Korzel further explained that the image of the speaker was "collected" by the bromide of selenium gelatine, and, at the same instant, by means of a specially constructed lens system, was thrown upon the translucent glass plate of the other telephone. All this was done by means of the same conducting wire through which the speech was transmitted.

The experiments, which were extremely interesting, followed the

explanation of the character of the apparatus. The article from which these facts are gleaned says:

"Herr Korzel, without the knowledge of the postal authorities, connected his photoscope to a telephone, and had the central office connect him with a business friend in Potsdam, who likewise was provided with a photoscope. The moment the Potsdamer stepped to the apparatus, the ground glass plate showed an excellent portrait of him, which, when compared with his photograph, was easily identified. It was extremely interesting to observe the movements of the speaker in Potsdam. According to the course the conversation took, we noticed now a nodding; now a violent shaking of the head; now an assenting smile, and then a dissenting earnestness of the whole face. The picture appeared like a photograph endowed with life.

"To assure us of the genuineness of the apparatus, we were asked to stand, one after another, in the space lighted by the lamps, and the gentleman at the other end, as the separate men stepped up to the telephone, gave such characteristics of each, as the face, style of beard, spectacles, hair, etc., with such exactness, that a preconceived deception was absolutely not to be thought of.

"Now, of course, it is not to be imagined that the transmission of images is confined to the face. We were simply astounded as we saw on the glass plate, although of course a reduced one, the image of a newspaper, and, from the comparatively great distance that we stood, could read at the top very distinctly the title and date."

The possibilities of science are boundless, and the future development of this new discovery cannot now be estimated. Taking the foregoing facts as a basis, it may be reasonably anticipated that people located in different parts of the globe will, at no distant date, not only be able to look upon correct presentments of the faces of their friends while conversing with them by the aid of electricity, but also to peruse the contents of leading newspapers without waiting for the arrival of the mails. It is evidently within the range of possibility for public journals to be held up at a photoscope near the place of publication, a miniature copy be taken at any desired point, and the matter read by the aid of magnifiers. Then why could not such an invention be used in the identification of criminals who make their escape and are captured? To make sure that the right man is secured, he could be conveyed to a photoscope in one part of the country, and identified by those familiar with his features in another. If this wonderful instrument had been developed and in full use a