In concluding these remarkable researches, which have happily terminated so successfully, M. Moissan discusses very fully the question of the identity of the gas liberated at the positive pole with the element fluorine; and there can be no doubt that he has completely proved this identity, at the same time showing that fluorine occupies the place of honor as the most intensely active chemical element with which we are at present acquainted, and that it assumes its rightful position, theoretically destined for it, at the head of the group of halogens.

THE JAPANESE MIRROR.—II.

F. E. IVES.

(The Substance of Remarks at the Meeting of the INSTITUTE, held Wednesday, February 15, 1888.)

A few days ago I discovered, in a pawnbroker's window, a Japanese mirror, which is interesting because it is of exactly the same size, and has the same general appearance as that which I showed at the November meeting, but has the magical feature so very imperfectly developed as to make it evident that no intelligent effort was made by the workman to bring it out. The magical image is confused and imperfect, yet so similar in character to that produced by the other mirror as to leave no room for doubt that, although not intelligently developed, it results from substantially the same causes.

There are several peculiarities about this mirror which confirm the explanation that I gave; but it appears that that explanation was already known to some, and so well established as to require no further experimental demonstration. Prof. Wm. A. Anthony, whose lecture on electrical measurements you will remember, assured me that that explanation was made to him in 1881, by Duboscq, of Paris, who then manufactured imitations of the Japanese mirrors, and sold them as curiosities. I doubt if it ever appeared in any publication printed in the English language.

Now, what interests me most in this particular mirror, is the fact that it appears to have been made by a workman who tried to imitate and improve upon the productions of another, and nearly

destroyed the magical feature through his efforts to improve the appearance of the mirror. The design in relief at the back, although showing the same objects, is far more elaborate and detailed than that of the first mirror, and this very elaboration of design, so evidently intended to make the mirror more attractive to the eye, is calculated, both by its character and distribution, to produce the indistinctness which we see in the magical image. The first mirror has broad spaces between those figures which show plainest in the magical image, but this one has the corresponding parts filled up by figures representing clouds, details of foliage, etc., which support the tympanum of the mirror just where it ought not to be supported in order to have the grinding and polishing operations bring out the more important figures so that they will show distinctly in the reflection.

Still another Japanese mirror has been handed in, this evening, by Mr. Outerbridge. It has the same faults as my own, but in a far greater degree. The figures at the back are so closely crowded together that I doubt if any of them will be distinguishable in the reflection.

[A trial of this mirror showed that the magical feature was practically absent.]

REPORT OF THE COMMITTEE ON SCIENCE AND THE ARTS
ON THE CYCLOSTYLE AND DUPLICATING APPARATUS OF THE PENNSYLVANIA CYCLO-
STYLE COMPANY.

HALL OF THE FRANKLIN INSTITUTE,
PHILADELPHIA, December 1, 1887.

The Sub-Committee of the Committee on Science and the Arts, constituted by the FRANKLIN INSTITUTE of the State of Pennsylvania, to which was referred for examination the

CYCLOSTYLE AND DUPLICATING APPARATUS OF THE PENNSYLVANIA
CYCLOSTYLE COMPANY,

Report, That the cyclostyle is a species of stylus which perforates a specially-prepared paper, and makes of it a stencil; the stencil is stretched in a frame, and by passing an inked roller over the writing or drawing, a large number of copies can be produced. The details of the process are similar to the duplicating process of