attention, and was seen distinctly only with a red glass. The patient was discharged a week after operation, with a satisfactory state of single vision. Examinations after operation gave the following results :

	July 27.	August 8.	August 12.
-40°	-10°, 0	—	-6°, -2°
-30°	—	-6°, 0	—
-20°	—	0	-5°, +1°
-10°	—	0	—
0	0	0	0
+10°	—	—	0
+20°	—	0	0
+30°	+5°, -9°	+5°, -5°	+5°, 0

Without a red glass there was single vision, if the candle-flame were in the median line and approached from 3 feet to 6 inches. At the ordinary reading distance (8 to 12 inches), both eyes fixed the object.

CASE XI. *Paralytic Diplopia (Paralysis of the Rectus Externus) treated by Advancement of the Paretic and Tenotomy of the Antagonist Muscle.*—Mr. C., aged 37, came on 5th April, 1875, with complete paralysis of the external rectus muscle of the right eye. The diplopia was typical, as follows :

	-30°	-20°	-10°	0	+10°	+20°
+XX	—	+12°	—	+25°	—	+40°
+X	—	—	+18°	—	+20°	—
0	—	+15°, -1°	+18½°, -1°	+20°, -1°	+30°	+39°
-X	—	—	+20°	—	+31°	—
-XX	—	+15°	—	+27°	—	+45°

The paralysis ceased slowly and spontaneously. The resolvents, Heurteloups, and electricity, which were ordered, had no remarkable influence on the disease. There was no defect of motility remaining; but a strong convergence, in consequence of contraction of the antagonist muscle. Examinations made half a year after the commencement of the paralysis showed, on October 9th, +10°, 0: +35°; 0, 0: +32°; -10°, 0: +30°; and on November 27th, 0, 0: +29°. On December 27th, 1875, I proceeded to operative correction, and first performed tenotomy of the right internal rectus muscle, with suture. Examinations gave the following results :

	Immediately before Operation.	Immediately after Operation.	After taking off the suture.	Dec. 28, 1875: Day after operation.	Dec. 29, 1875.	Dec. 30, 1875.	Jan. 2, 1876.
+20°, 0	+35°	—	—	+28°	—	—	—
0, 0	+29°	+25°	+20°	+26°, -2°	+26°, -2°	+25°	+26°
-20°, 0	+25°	—	—	+10°	+4°	+15°	+19°
-30°, 0	—	—	—	0	0	+10°	+7°
0, +XV	—	—	—	—	—	—	+24°, +2°
0, -XV	—	—	—	—	—	—	+30°, -4°

On January 3rd, 1876, strong advancement of the rectus externus was done. Subsequent examinations gave the following results :

	January 3, 1876.		January 4, 1876.		January 5.
	Immediately after Operation.	After Loosening upper of 3 Stitches.	Without Red Glass.	With Red Glass.	
+20°, 0	+10°, -20°	+10°, -5°	+10°, -3°	+11°, -3°	+11°, -5°
+10°, 0	—	—	+10°, -2°	+11°, -1°	—
0, 0	+5°, -5°	+4°, 0	0	+6°, -½°	+6°, -1°
-10°, 0	—	0	0	0	0
-20°, 0	—	-10°	-5°, 0	-5°, 0	-5°, +1°
0, +XV	—	—	+3°, +1°	+6°, +3°	+5°, +1°
0, -XV	—	—	+8°, -3°	—	+9°, -2°

Meanwhile, the adductor power of the diseased (right) eye had become even a little stronger than that of the other. Without a red glass, an object in the median line, slowly approached from 70 to 5 inches, is seen singly. Without a red glass and with Pour apparatus, the area of single vision reaches from 0 (or -5°, 0) to -20°, 0, and is larger in the superior part of the field. The case has been under observation from 1875 to the present time, and the good effect of the operation has been established. The patient, a lawyer's clerk, has been able to work at writing and reading, without asthenopia. His troubles, however, were not yet finished. Last year, paresis of the external rectus muscle of the left eye had appeared, and was cured by iodide of potassium. He now has single vision.

CASE XII. *Syphilitic Paralysis of the Left Obliquus Superior Muscle, with Myopic Divergence. Diplopia diminished by Antisyphilitic Treat-*

ment, and the remainder corrected by Prismatic Spectacles.—Mr. M., aged 48, with an old history of syphilitic infection, had an attack of diplopia, lasting for two days, about a year ago; and came with a fresh diplopia in February, 1880. He had been myopic from childhood (Snellen 1½ at 8 inches; with -8°, Snellen XXX at 15 feet). On February 11th, there was rather concomitant divergence, increasing upwards, combined with slight and recent paresis of the left obliquus superior. There was diplopia, crossed upwards, slightly homonymous downwards; the vertical distance increasing to the right lower part of the field. He was treated by mercury, iodide of potassium, and covering one eye by a dark glass. On May 28th, single vision was obtained in the upper part of the field; only a vertical distance of 3 to 4 in the middle part. It was now possible to take off the dark glass from the left eye, and to correct the remaining diplopia by means of a pair of concavo-prismatic spectacles. As the diplopia showed a vertical distance of about 3 degrees, and as a prism of 3 degrees (angle) gives a deflection of 1½ degrees, it was necessary to choose two prisms, each of 3 degrees; the angle of the prism before the right eye being turned downwards, and the other upwards. The prisms were combined with concave glasses of 12 inches, which the patient had usually previously worn. With these glasses he had single vision (including the lower part of the field, free use of the eyes in walking, etc.) After some weeks' single vision without prismatic glasses, the following table shows the results of the examinations :

	Feb. 13.	Feb. 20.	March 9.	April 13.	May 13.	May 28.
+20°, 0	-2°, +4°	-5°, +4½°	-4°, +6°	+1½°, +4°	0, +5°	-1°, +4°
+0, 0	-2°, +3°	-4½°, +3½°	-4°, +5°	-1½°, +4°	-½°, +5°	0, +3½°
-20°, 0	-2°, +2°	-5°, +1°	-4°, +4°	-1°, +3°	-½°, +4°	0, +3°
0, +XX	-6°, +2°	-6°, +1°	-5°, +4°	-3½°, +3°	-½°, +3°	0
0, -XX	+1°, +2°	+3°, +1°	+3°, +3°	+3½°, +4°	+3°, +4°	+2°, +4°
+20°, +XX	-5°, +3°	-5°, +1°	-3½°, +3½°	-3°, +1°	0, -3°	0
+20°, -XX	0, +4°	0, +3°	+½°, +5°	+3°, +4°	+2°, +5°	+3°, +5°
-20°, +XX	-5°, +1°	-7°, +2°	-6°, +4°	-4°, +4°	-1°, +4°	-½°, +3°
-20°, -XX	+2°, 0	0, +1°	0, -1°	—	+2°, +4°	+2°, +4°

CHART FOR MEASURING THE FIELD OF VISION.*

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THE medical aspect of ophthalmology has so rapidly developed during the last few years, especially in relation to cerebral diseases, that it is now deemed necessary to accurately test the field of vision in numerous cases where that course would not formerly have been adopted. In order to facilitate this process, and to enable clinical records to be taken with ease and accuracy, I have introduced a chart sixty centimetres square, which is divided into small squares of five centimetres each, a portion of these being tinted a pale grey colour. It is intended that each eye should be tested separately, at a distance of thirty centimetres from the chart, the patient being directed to keep the eye and the attention fixed upon a central spot coloured black, and one centimetre in diameter. From the latter, fine circles radiate with regularity, being separated from each other by a distance of two and a half degrees. The person who makes the examination is provided with a small metal pointer, the apex of which is precisely similar in size and colour to the central spot on the chart. This pointer should be placed upon the extreme margin of the chart, and slowly directed towards the centre till it is brought within the patient's range of vision. This should be done vertically, horizontally, and obliquely in each quarter of the chart, and the field should be carefully noted upon a smaller but similar chart, of which a good supply must be kept, so that one may be devoted to each patient. An accurate map of each individual field can thus be obtained, which should be retested at subsequent visits, when the slightest loss or gain in any direction will be at once noted. The chief merit of this method is its simplicity, so that a student can easily accomplish with it a considerable amount of useful and accurate work; and the reports which I have already received from several of my colleagues who hold ophthalmic appointments in large metropolitan hospitals, lead me to hope that clinical work may, in this direction, be much facilitated. It is not pretended that this chart can compete, in point of delicacy or range, with any of the admirable metal perimeters which have already been introduced, since these latter must of necessity include the extreme circumference of each field which cannot be gauged upon any flat surface; but perimeters are both cumbersome and costly, and, as this chart will be found sufficient for all practical purposes, I trust that it may meet a want which was, I think, very generally felt.

* The charts are published by Pickard and Curry, 195, Gr rutland Street, W.