by the graduations on the quadrant in their course around the bar, represented by the centre of the figure, while the radiating lines are the points at which it has been arrested in its course. Fig. 4 is the blank I use for recording the field of vision. These blanks are furnished with the instrument, either with gummed backs that they may be conveniently pasted in the note-book as desired, or in books of one hundred each with blank numbers for reference to the case-book.¹ The patient is seated before the instrument with the chin-rest so adjusted as to bring the eye to be examined an inch above the bar M, the inferior orbital ridge resting against the support for the holders which have been removed. The point of fixation for the macula lutea is now so arranged that the image of the perimeter head shall fall upon the blind optic nerve entrance. The field of vision in any of the meridians is now ascertained, if desired, for white or red, yellow, green, and blue, by placing these different coloured buttons in the slide and moving it out to the limit of the field; the point at which it is last seen being recorded in a corresponding point on the blank, 0° being to the left, which becomes for the left eye the temple field, but nasal field for the right eye. To discriminate it is only necessary to mark them right and left. The same blank may be used at succeeding consultations, by recording the field with different coloured ink or crayon, and the date at which it was taken in the same colour, in the margin. A map of the field is made by simply drawing an ink line through the limiting mark on the different meridians.

The field of vision can thus be accurately mapped out, and recorded in such a manner as to be rapidly and conveniently studied and compared with former or subsequent records. This apparatus presents the advantages of giving an accurate field with a satisfactory method of recording it, while it is not so cumbersome and unsightly as many of the instruments recommended for this purpose, and when not in use is easily removed and placed out of the way in its case, or it may be left adjusted without serious inconvenience when using the optometer for other purposes.

112 SOUTH SEVENTEENTH STREET, PHILADELPHIA.

ART. XX.—*Enormous Abscess of Kidney cured by Incision and Drainage.* By J. F. HEUSTIS, M.D., of Mobile, Ala.

THE following case is worthy of record on account of its recovery from a condition apparently hopeless; and the immediate and complete relief from great suffering afforded by the operation for evacuation of the pus.

¹ The complete instrument is furnished by Queen & Co., 924 Chestnut Street, Philadelphia.

The young man had been under medical treatment for some time before he came into my hands; though I had seen him in consultation, and concurred in the course of treatment pursued. At the time of my first seeing him he was anæmic and emaciated, and bore the appearance of constant suffering; and scarcely able to stand upright on account of the pain in his back. He was then passing large quantities of pus in his urine; and there was some fulness in the region of the left kidney. As the pus found a free escape by the ureter, bladder, and urethra, although rather a round-about one, it was considered sufficient to pursue medical treatment alone. About the middle of May, I was called upon to treat him. His condition had become rather worse, owing to the increased difficulty of getting rid of the pus, which would sometimes block up the urethra, and would escape with a spluttering noise, on account of the presence of gas from putrefaction. It soon became apparent to my mind that the mode of evacuation of the abscess was too devious and difficult. And as it was attended with suffering of the bladder, superadded to the actual disease of the kidney, the case was rapidly becoming hopeless. While debating whether it would not be better to make an opening in the loin, and give free vent to the offensive pus, it stopped flowing. With the cessation of the appearance of the pus in the urine, the pain in the back or loin increased; and the fulness or tumefaction increased also, so as to be more apparent. The patient had now become so reduced as to be unable to leave his bed, and hectic fever set in. There was no doubt about the cause of the increased gravity of the case. The ureter, which had been affording an outlet for the pus, had become closed, and the pus was accumulating at the site of its formation. This determined the doubt. An opening must be made to give a free, direct, and constant escape to the accumulated pus, or death was inevitable. I had had him under treatment at that time nearly a month, and it was the middle of June when this state of affairs was reached. Upon inspection there was an evident bulging of the left hypochondriac and lumbar region. The needle of a hypodermic syringe was run through the abdominal wall just below the last rib and outside of the erector spinæ mass where the bulging was most conspicuous. Immediately there began to flow through the tube of the needle a thin and horribly offensive pus. The needle was withdrawn, and a sharp-pointed knife thrust nearly through the thickness of the wall; and a director with slight pressure passed into the cavity of the abscess. The knife was run along the groove of the director and the opening enlarged sufficiently to allow the finger to be thrust in. A great quantity of thin fetid pus poured out, but as it was not caught in a vessel, exact quantity cannot be stated, though, from the length of time it was flowing, and the size of the stream, I thought it would amount to three pints. After it ceased to flow, an India-rubber drainage tube was inserted well into the cavity of the abscess, and made fast by threads tied around it, which were fixed with plaster to the skin. Through this tube carbolized warm water (one drachm of carbolic acid to the pint of water) was injected until all pus was washed out, and it came away clear. Through the tube, which remained in, there was a constant flow of thin, foul-smelling pus in large quantity for some time, but diminishing and becoming less offensive gradually. To prevent systemic poisoning, favour evacuation, and set up a more healthy action in the diseased kidney, the carbolized water was thrown in with a Davidson's syringe (the nozzle of which filled the tube snugly) several times every day until the outflow was clear, and free of all purulent contamination. On two

occasions, while the cavity was being washed out, a mass of sloughy substance of gelatinous consistence about as large as a finger protruded at the opening, and was drawn out. This occurred a short time after the operation, perhaps not more than a week or ten days. And up to this time, except that there was some improvement of appetite, there was very little to encourage a hope of recovery, the weakness and emaciation were so extreme. From this time the improvement was steady and remarkable. His appetite was fully restored, and there was a steady increase of flesh and strength. As his anæmia called for iron, he was given the muriated tincture, with a little honey and water to prevent constipation. It acted very well, and soon the hue of health began to tinge the cheeks. The pus became laudable, free from smell, and smaller and smaller in quantity. The incision healed until the tube was tightly inclosed, and water ceased to regurgitate by its side. The size of the cavity of the abscess, as shown by the quantity of fluid it would retain before the outflow began, was so reduced it would scarcely hold an ounce. The tube being in the way, and causing some pain, it was removed about six weeks after its first insertion. The injections were still kept up once a day, partly to insure the cleaning out of the cavity of the abscess, and partly to prevent the entire closure of the opening. But the opening continuing to contract until the small pipe of the syringe could scarcely enter, a smaller drainage tube was inserted and tied in, for fear of a complete closure and a possible return of trouble. On the 7th of August he came to my office, and it was then the small tube was inserted. He stated that within the last four days, a small quantity of pus, less than a teaspoonful, had occasionally shown itself in the urine; but he had not seen any for a day or two—that his urine was perfectly clear, and was passed freely and easily. After passing the last drainage tube to the depth of two inches, there was no appearance of pus after waiting several minutes. But he said there had continued to be some escape of a thick odourless matter, which necessitated his wearing a piece of cloth to protect his clothing. He has now (Aug. 19th, 1875) the appearance of good health, and has gained flesh to such an extent that his face has become full. He goes about without fatigue, and says he has no pain anywhere.

ART. XXI.—*Amputation of Clavicle and Scapula.* By THEO. J. YOUNG, M.D., of Titusville, Pa.

MAY 31, 1875, I was summoned to attend a child said to have been run over by a train of cars. Arriving at the house, probably within twenty minutes of the time of the occurrence, I found a little girl not yet two years old with the right arm severed from the body, and the tissues of the whole shoulder and breast fearfully mangled. Amidst all the noise and aimless crowding of a crazed multitude and the moanings of a sorrow-stricken family, the little victim of this sad accident alone appeared to be free from terror and suffering. Though its face was pale, and the pulse