the chair of pathological anatomy in Leipzig, and it is rumored that the faculty mean to offer it to Von Recklinghausen, who probably will decline it. Volkman, of Halle, has declined a call to Würzburg.

— Very readable medical letters from the seat of war (Turko-Russian) in *La France médicale*, beginning November 28, 1877.

— Mettenheimer reports a case of echinococcus of the heart. Symptoms were those of left-sided pneumonia complicated by convulsions, epileptic in character, during one of which the patient died. *Necropsy*. Lungs very hyperæmic; heart fatty along the course of coronary arteries; brain anæmic, cortex very dark gray. In the muscular substance of left heart three echinococci cysts; a fourth in the right ventricle. None elsewhere. Whether the epileptic attacks and the presence of the animal in the heart stood in causatory relation with the death is left an open question. — *Allg. med. Zeitung*, November 6, 1877.

— We have received a circular from the city Board of Health from which we make the following extracts: Whereas, diphtheria is a disease contagious and dangerous to the public health, and whereas it now exists in the city of Boston; therefore the Board of Health issues the following notice: That on and after January 1, 1878, the following provisions of Chapter 26 of the General Statutes will be strictly enforced:—

"Sect. 47. When a householder knows that a person within his family is taken sick of . . . any . . . disease dangerous to the public health, he shall immediately give notice thereof to the . . . board of health of the town in which he dwells. If he refuses or neglects to give such notice he shall forfeit a sum not exceeding one hundred dollars.

"Sect. 48. When a physician knows that any person whom he is called to visit is infected with . . . any disease dangerous to the public health he shall immediately give notice thereof to the . . . board of health of the town, and if he refuses or neglects to give such notice he shall forfeit for each offense a sum not less than fifty nor more than one hundred dollars."

MASSACHUSETTS GENERAL HOSPITAL.

SURGICAL CASES OF DR. WARREN.

Ruptured Perinæum. — The operation performed in the following cases was that known as Emmett's,¹ the prominent feature of which is the use of a limited number of deep sutures, buried in their whole extent, the first and second being so inserted as to secure the ends of the sphincter ani muscle. No rectal or vaginal sutures are ordinarily employed. The after-treatment is the same as here described.

CASE I. *Rupture through the Sphincter*. — M. D., twenty-seven years old, had suffered from complete rupture of the perinæum for six years. There was inability to retain feces, a movement following upon the first sensation of a desire to evacuate the bowels. No symptoms of uterine disorder existed, although a vaginal examination revealed complete retroflexion of the uterus.

¹ See JOURNAL, November 29, 1877, page 609.

The patient entered by appointment a few days after the catamenia had ceased. Rest in bed was enjoined for a day or two, and all fæcal accumulations were removed by the use of tincture of rhubarb followed by an enema on the morning of the operation. The patient, being etherized, was placed in the position for lithotomy; the vagina was then syringed out with a weak solution of carbolic acid, and the parts thoroughly cleaned and shaved. The surfaces to be brought together were denuded by a pair of curved scissors. Six deep sutures were taken, the lowest being below and not at the side of the angle of the wound, and thus passing through the full thickness of the end of the lacerated muscle; two superficial sutures were also taken. These being tightened and twisted, the ends of the muscle were brought effectually into apposition, the edge of the septum was pulled down to the inner margin of the anus, and, as could be determined by passing the forefinger into the vagina and holding the thumb on the perinæum, a broad perineal body was formed. The vagina was then syringed out, and the knees placed together and tied; no dressing was applied. Liquid diet was ordered. The urine was drawn with a catheter during the healing process. The wound was left to itself for forty-eight hours, but after that was syringed out daily with a weak solution of carbolic acid. Accumulations of wind in the rectum were relieved by frequent catheterization. Considerable tenesmus on the evening of the day of operation was relieved by opiates. During the first eight days there was some swelling, accompanied by fever; pus began to ooze from the tracts of the sutures, and the parts held by the upper one gave way, the wound gaping at the fourchette. For these reasons the sutures were left in longer than laid down by Emmett. On the twelfth day the two lower sutures were removed and the sphincter found to be united. The bowels were moved by castor-oil on the eighteenth day, the mass of hardened fæces having been softened down by enemata of small quantities of sweet-oil thrown in at intervals for two days previously. The remaining sutures were left in until the twenty-first day, when the place which had yielded had nearly healed by granulation. A short but thick perinæum and a reliable sphincter were the result.

CASE II. M. D., a stout French Canadian, thirty-six years old, was sent to me by Dr. E. H. Stevens, of Cambridge. She had suffered from incontinence of fæces for three years. Complete rupture was found, and in this case the dimples formed in the cicatricial tissue by the ends of the divided sphincter were well marked. The same method was carried out in all its details as described in the previous case. Seven deep sutures were taken. There was little or no swelling or tenderness beyond a slight cutaneous irritation from the secretions. The thermometer did not go above 100°. Accordingly, in pursuance of Emmett's directions, the bowels were moved at the end of a week, the perinæum being carefully supported by an attendant during the evacuation in this as well as the other cases, and the next day the sutures were removed, union being apparently perfect throughout. Four days later, the patient having been kept quiet and no movement having taken place in the mean time, an examination showed that an opening had formed in the centre of the perinæum, and a probe passed into it found its way into the rectum. This fistula, as it were, subsequently closed, and Dr. Stevens informs me that

an examination made three months after the operation showed a well-formed sphincter and a perinæum about an inch and a half thick. This patient nursed an infant throughout the treatment.

CASE III. S. E., a middle-aged woman, applied for relief from a cystocele forming a protuberance at the vulva the size of a hen's egg. The sphincter was uninjured; there was also a short margin of cutaneous perinæum, but the perineal body was absent, the subcutaneous portion being sundered, and the inside of the skin being consequently in contact with the rectal wall. The parts were pared as in operation for a new perinæum, but the line of denudation was continued on the posterior wall of the vagina to within an inch and a half of the extremity of Douglas's cul-de-sac. Four deep sutures were taken in the perinæum, and the long strip of vaginal wound was brought together by superficial sutures. This operation was performed in imitation of that described usually as posterior colporrhaphy. The posterior wall pressed so firmly against the anterior wall that it was with some slight difficulty that the finger could be introduced. It was thought best, therefore, to leave a catheter in the bladder, and a soft rubber one, hardened at the urethral part by collodion, was inserted. The bowels were moved on the sixteenth day; the catheter was withdrawn on the seventeenth day, and the external sutures were taken out at the end of three weeks; an interval of two weeks was allowed to pass before the vaginal sutures were removed. Union was perfect throughout. The patient was seen some months after the operation, and the new perinæum was found to hold up the cystocele most effectually.

CASE IV. Mrs. G., twenty-six years of age, had a complete rupture for four years. The edge of the septum was a little higher up than in the other cases, showing that a portion of the lower edge of the rectum was included in the rent. She had an operation done a few months ago without the slightest benefit. She had complete incontinence, and a feeling as if the parts were "dropping out" whenever she walked. The catamenia were profuse. The same operation was performed as in the first and second cases, with the addition of two rectal and a number of vaginal sutures. The after-treatment was the same. There was no pain, or swelling, or fever during the week. On the eighth day a desire to evacuate the bowels was accompanied by oozing of softened fæces from the rectum. Enemata and castor-oil were administered, and a very large amount of fæcal matter came away, several movements taking place during the next forty-eight hours. A few days later a fistulous opening was found, as in the second case, communicating with the rectum. This increased in size until, at the end of three weeks, the sphincter was torn apart. The vaginal edge of the wound, as well as the upper part of the perineal surface, had united firmly.

In two other cases at which I assisted the result was similar to that which followed this last operation. A third case, known to me, operated upon by this method, was perfectly successful.

It may be said of this operation that it succeeds in restoring the parts to a shape accurately resembling the normal condition. The tension of the lower stitches is, however, great, no matter how much care may have been taken in the adjustment. The edge of the septum, which has been dragged down to

the new outlet, is subjected to considerable strain, which is greatly increased by accumulations of air or fæces in the rectum or by swelling of the parts. There is great danger, therefore, that the lower stitch will tear through, the septum retract, and an opening form through which fæces will bore until an opening is made in the floor of the perinæum between, usually, the second and third stitches. If the sphincter has firmly united this tract may close up, as in the second case, by granulation, but the danger is that it will be gradually torn apart, as in the fourth case. It is important to stretch the fibres of the sphincter previous to bringing them together. This cannot be done by the ordinary method of dilating the anus, as the muscle no longer encircles it, but lies at its posterior border extended in a nearly straight line. Its terminal points can be distinctly made out by the dimples formed in the cicatricial tissue where the two are adherent to one another. A slight irritation of the muscle will cause it to contract and the dimples to deepen. To stretch such a muscle it must be seized by the thumb and forefinger of each hand and "pulled" (as one would molasses candy).

This operation, apart from one weak point, seems to fulfill admirably the indications required, and when successful restores the parts more nearly to the normal condition than any other method which I have seen. The same element of weakness is found in all methods, whose differences consist merely in variations of the form of stitch used, namely, the presence of a freshly united wound (whether linear or puckered) at the lower end of the anterior wall of the rectum. As the bowel at this point takes a backward curve towards the anal orifice the anterior wall becomes, as it were, the floor of the rectum, and is obliged to sustain the pressure of the accumulating mass of fæces. The parts are placed upon the stretch, the septum tears away from the circular stitch, retracts, and the fæces, following the direction of the long axis of the rectum, which is also the direction of least resistance, emerge through the perinæum between the second and third stitches. In other methods, where the perineal body formed has not the thickness of Emmett's, and the rectal wound extends higher up, the fæces escape into the vagina. The difficulty consists, not in getting the sphincter to unite, but in keeping it from being torn asunder. Could we by a plastic manœuvre do away altogether with the rectal wound we should have a problem nearly as simple as the formation of a perinæum when the sphincter has not been ruptured. This, perhaps, might be accomplished by dissecting up from within outwards a flap of mucous membrane from the posterior wall of the vagina, which being folded over (as in turning out one side of a hat lining) would elongate the septum and bring a continuous mucous surface to the point previously occupied by the rectal wound. The flap might easily be so continued laterally as to uncover the ends of the sphincter, which, the remaining lateral surfaces having been denuded, could be brought together over the flap. This, if sufficiently long, would then be found projecting from the newly formed anus, and could be stitched to its *external* margin. There would be no wound in the rectum, and thus the greatest obstacle to success would be overcome.