The agar solution and the nutrient bouillon are now mixed and 990 c.c. of perfectly clear nutrient agar with a reaction of 1.5+ is the result.

The advantages are as follows: Calcined magnesia is insoluble in water, requires no coagulation, is porous and does not impede filtration. The preparation of double strength bouillon, separately, permits of more rapid filtration, especially when precipitates occur after standardizing. The use of 500 c.c. volumetric measuring-flasks, at 15 C., renders weighing unnecessary.

IMPROVED TECHNIC OF VENOPERITONEOSTOMY FOR RELIEF OF ASCITES*

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Believing that the operation of venoperitoneostomy is indicated in selected cases, in collaboration with my associate, Dr. H. A. L. Ryfkogel, I have devised the following manner of performing it, which we believe is more simple and is executed with greater facility than any method heretofore originated.†

An incision 8 inches long is made over the saphenous vein, beginning one-half inch distal to the saphenous opening in the fascia lata. Tributaries are ligated as close to the vein as possible to avoid clots. The saphenous vein is ligated and severed proximal to the ligature, lifted from its bed, and its lumen washed clear of blood with normal salt or Locke's solution, then covered with petrolatum. A silk ligature is tied very close to its cut end, to be utilized when the abdomen is opened. The vein is now ready for use and is left in its normal bed while its fellow of the opposite leg is treated similarly.

A second incision 2 inches long is made, extending from the proximal end of the incision which is over the saphenous vein, outward and upward; this second incision describes one-fourth the arc of a circle. Its object is to prevent a sharp kink in the saphenous vein when the latter is turned upward to be joined to the peritoneum.

Through a median incision the abdomen is opened low in the hypogastrium. A large vulsellum grasps the entire thickness of the abdominal wall at the edge of the incision. Care must be exercised to have the teeth of the instrument penetrate deep into the rectus, else the integument and peritoneum will slip together over the edge of the muscle. If this obtains, the muscle will force the vein into an irregular path when the operation is completed. The assistant makes traction on the vulsellum and the surgeon produces a minute opening through the peritoneum, transversalis and internal oblique muscles, and the aponeurosis of the external oblique. This opening is made from within outward and extends to the superficial fascia. It is made external to the deep epigastric artery and internal abdominal ring. Through the opening a uterine sound is introduced; when the sound reaches the superficial fascia, it is wormed through the fat with slight pressure and rotary movement until it gains access

to the outer end of the curved incision in the leg. When it protrudes, the silk which was previously tied to the free end of the vein is tied also to the sound. The sound is withdrawn, which results in the vein being drawn into the superficial fascia, through the muscles and into the peritoneal cavity. The vein is now seized with a pair of fine forceps which grasps only the adventitia, thus preventing retraction out of the abdominal cavity. The small fragment which the silk ligature has damaged at the end is cut away. The vein is cut with scissors, so as to make three equal flaps which include all the coats of its wall. These flaps are 1 cm. long. They are each fastened to the peritoneum by a single mattress suture of fine silk introduced by a small, round, curved, French needle. The vein of the opposite leg is anastomosed to the peritoneum in like manner.

The abdominal wall is closed as follows: A continuous No. 1 iodized catgut suture is introduced, which approximates the peritoneum and catches the great omentum in several places. Thus the latter is prevented from gaining access to the venoperitoneal anastomosis and there becoming adherent. Two silkworm tension-sutures are

Venoperitoneostomy for relief of ascites.

introduced, which include the remainder of the abdominal wall, and which are 1 inch from the edge of the wound. The muscles are allowed to fall into place, and the fascia is sutured with No. 2 iodized catgut. The superficial fascia is brought together to obliterate as nearly as possible all space with No. 1 iodized catgut. Closure of the skin is obtained by a subcuticular suture of silkworm gut. The incisions in the legs are closed with horsehair. All incisions are dressed with dry gauze.

As this method was developed on the cadaver, I desire in order to demonstrate its practicability on the living, to call attention to two cases in which it was practiced. The first patient was in the surgical clinic of Dr. Richard F. Tomlinson at the City and County Hospital, San Francisco. No difficulty was encountered, the operation being executed with much greater facility than could be done on the cadaver. The patient was in a deplorable condition and succumbed to the effects of the anesthesia the day following the operation. At autopsy, the lumen of both veins were entirely free from fibrin deposit.

* Read before the Section on Surgery of the San Francisco County Medical Society, Aug. 13, 1911.

† A historical review of the subject, together with the bibliography, has been omitted, owing to the lack of space. The unabridged article appears in the author's reprints.

The second patient was operated on by Dr. Edward R. Bryant in his clinic in San Francisco. Dr. Bryant employed our method with adroitness. He elected to anastomose only one saphenous vein to the peritoneum. The patient is reported several weeks after operation to be feeling well, with no accumulation of ascitic fluid.

SUMMARY

The advantages of this technic may be summarized as follows:

1. The curved incision in the upper part of the thigh prevents kinking of the vein.
2. This method of anastomosis makes it possible to have the sutures at a sufficient distance from the lumen of the vein to prevent any obstruction or obliteration of it.
3. The subcutaneous transplantation of the vein reduces the formation of cicatricial tissue about it to a minimum.
4. Anchoring the omentum prevents its contact with the anastomosis.

1820 Sutter Street.

A NEW APPENDICEAL CRUSHING AND CUTTING FORCEPS

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This forceps has longitudinal serrations which crush the tissue of the appendix to a paper-like thinness,

Appendiceal crushing and cutting forceps.

removing all fecal matter from the portion crushed. A sliding knife-blade, buried in the point of one blade of the forceps, rises along the center as the ring between the forceps handle is pulled on, causing it to cut clean, leaving the appendix stump sealed ready for invagination. The part of the appendix which is removed is also sealed at the cut surface, preventing leakage of any fecal matter on the wound surface or sponges. The forceps first *crushes* and then *cuts*. It has also been used in removal of ovary and tube, as it leaves a clean incision, which is usually whipped over with a line of sutures.

Work and Credit.—A surgeon has great opportunities to do good, particularly if he doesn't care who gets the credit for it. To fight for credit is a dreadful waste of energy. As Joseph Leidy said, "It doesn't make any real difference who discovered a thing; the important thing is that it has been discovered."—DaCosta in *Ohio State Medical Journal*.

EXTERNAL DISLOCATION OF THE KNEE

ROYALE HAMILTON FOWLER, M.D.

BROOKLYN

Dislocation at the tibiofemoral joint is rare, constituting about 1 per cent. of all cases. External dislocation occurs in 5 per cent. of these injuries in this location. It is rare in its complete form. When complete the dislocation is usually compound. The following case was incomplete:

Dec. 30, 1910: Mr. H. L. L., aged 40, a strike-breaker, was pulled from a wagon, a distance of 3½ feet. He landed on his feet, fell to the ground and was unable to rise. He was taken at once to the Methodist Episcopal Hospital. Examination revealed a left extremity in flexion and some abduction. The

External dislocation of the knee.

outer portion of the head of the tibia was prominent on the outer side; the inner tibial tuberosity was in contact with the external condyle of the femur. The internal condyle of the femur was proportionately prominent. There was slight external rotation of the lower limb, and the patella was displaced outward. Voluntary motion was of course abolished. A fracture of the external tuberosity of the tibia was recognized; x-ray showed this involved the joint. Reduction was easily accomplished, under ether anesthesia, by traction and direct pressure on the ends of the bones and a plaster cast applied. Ten days later the man died of lobar pneumonia; there had been no disturbance of circulation in the affected limb. The following points of interest are taken from the autopsy record: There was consolidation of the left lung from base to apex in a state of gray hepatization. The lower extremity of the left side showed no circulatory disturbance. On opening the knee-joint an effusion of blood was apparent. The outer half of the head of the tibia was the seat of a comminuted fracture. The external lateral ligament was torn across, the anterior completely torn, the internal only partially ruptured. The anterior crucial ligaments were torn, the posterior were intact. The main popliteal vessels and nerves were not injured.

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Pharmaceutical Abbreviations.—In writing prescriptions physicians should exercise the greatest care and best judgment as to abbreviations, since great harm may result from misinterpretations. Such an abbreviation as "Hyd. Chlor." could mean calomel, corrosive sublimate or chloral hydrate; "Acid. Hydroc." could be either prussic acid or hydrochloric acid; "Aq. Chlor.," either chlorin water or chloroform water; and "Sod. Sulph." might be sodium sulphite, sodium sulphate or sodium sulphid.—S. F. Hale in the *Mask*.