up in a number of blankets, and abundance of artificial heat applied. The foot of cot was well elevated. He soon recovered consciousness. The only medication consisted in strychnine, one-sixtieth of a grain hypodermatically every two hours. Six hours after the operation the saline solution was allowed to flow into the loose tissue, below the axilla on each side. Patient was in cold perspiration continually for six hours after the operation; the skin then became warm.

He was rational until near the end. Sixteen hours after operation he suffered considerable retching, and iced champagne was administered, giving some relief. He died about twenty-four hours after the operation. Considerable space has been given to detailing the technique to show that major operations can be carried out in field hospitals with almost the same precision as in other institutions.

CASE II. C. H., private, Eighth Pennsylvania Regiment of Infantry, U. S. V., admitted to Division Hospital August 7, 1898.

Diagnosis. — Appendicitis. Temperature 102°, pulse 100. Marked tenderness in region of appendix and extending through entire right iliac region. A large mass about the size of clenched fist could be felt. The patient was examined by Lieut-Col. A. C. Girard, Major Cooke and the consulting board — Majors Allers, Focht and Smith. The diagnosis was confirmed and an operation deemed inadvisable, and palliative treatment recommended. The patient was placed on liquid diet; morphine suppository and hot applications were employed to allay pain.

August 14th, on recommendation of the consulting board, the operation was performed. Operator, Maj. Wm. H. Devine, assisted by Majors Allers and Smith, and Acting Assistant Surgeon Eicher.

Operation. — An incision about three inches long, commencing about an inch above the middle of Poupart's ligament and extending upward towards the anterior superior spine of the ileum, revealed the centre of a circumscribed abscess. The appendix was found to be gangrenous, and contained several enteroliths resembling lemon seeds. The cavity was washed out with a gentle stream of hot water from fountain syringe, and then packed with iodoform gauze. At the end of a week discharge had slight odor, and the wound was cleansed daily with a solution of peroxide of hydrogen. Temperature and pulse remained nearly normal during convalescence. The patient was removed to his home three weeks after the operation. Antisepsis was conducted with same care as in previous operation.

Clinical Department.

VOLVULUS OF THE SIGMOID FLEXURE, THREE TIMES RELIEVED BY LAPAROTOMY.

BY EDWARD MILTON FOOTE, M.D., NEW YORK,
Surgeon to the Hospitals on Randall's Island.

THE following case is probably unique in the history of medicine. Edward Smith, aged twenty-two years, is a deaf-mute, and mentally imperfect. Nothing is known of his early history. Since he has been an inmate of the ward for male idiots on Randall's Island he has had a good appetite, which has been satisfied by the authorities with a diet composed largely of cereals.

Except for occasional periods of constipation, he has always been well.

January 28, 1898, the orderly noticed that his abdomen was unusually large. There was no vomiting nor pain, and no tenderness on palpation. The distention was due to gas. The following day it had increased, and peristaltic motion was visible through the thinned abdominal wall. A half ounce of castor-oil and an enema were given without effect.

January 30th the distention was still greater, but subjective symptoms were absent. Three drops of croton-oil failed to move the bowels. I first saw the patient that evening. It was not difficult to make out the correct diagnosis; indeed one fact alone was sufficient to establish it. The greater part of the distention of the abdomen, which then measured forty inches in circumference, was due to two great air spaces lying side by side in the central portion of the abdomen. They could be easily mapped out, as their percussion notes were slightly different, while from the deep tone

FIG. 1.

and the area covered it was plain that each air sac was as large as a distended stomach. The distention was of course due to the large intestine and almost certainly to a volvulus of the sigmoid flexure. A median incision below the umbilicus showed such to be the case. The sigmoid was twisted from the right forward to the left; that is, the descending limb lay anterior to the ascending. The twist was low down in the abdomen, and immediately above it was a great quantity of soft feces, at least a quart. Above this point the sigmoid rose in a loop, filling the space inside of the normal large intestine (see Fig. 1). It must have measured over three feet along its outer border, and was about five and one-half inches in diameter. It was necessary to puncture it with a trocar to allow some of the air to escape, before it could be drawn out through the incision. After the loop had been untwisted the fecal contents and gas were squeezed down into the rectum, at the same time that irrigation was carried on from below, until the bowel was empty.

In spite of the long duration of the obstruction there

was no peritonitis, but the wall of the sigmoid was infiltrated at the constriction, and for a short distance above it. There was also a partial rupture of the muscular fibres in an oblique direction, across the descending limb of the involved gut, close above the constriction. This rent and the puncture of the trocar were closed by fine silk stitches.

The patient made an uninterrupted recovery. Twice during his convalescence he developed slight fever, and once vomiting, due, apparently, to constipation. These symptoms were relieved by the prompt use of small doses of calomel. He continued in good health until June 6, 1898, when the former obstructive symptoms recurred. Through the courtesy of Dr. Ely the patient was placed in my charge. As the abdominal distention was much less than previously, an attempt was made to reduce the volvulus bimanually. The patient was chloroformed, and one of the house staff, a young woman with a very small hand, introduced her hand and forearm into the rectum, while an attempt was made to untwist the loop from the surface of the abdomen. As she could not get her finger past the constriction, nothing could be accomplished in this manner. No incontinence followed this anal dilatation. An incision to the left of the median line was made and the sigmoid was untwisted without difficulty. It was twisted in the same direction as before. It was my intention to stitch the bowel to the parietal peritoneum in such a way as to prevent the recurrence of the volvulus, but the great length of the loop, which, when spread out on the abdomen, followed the whole course of the large intestine, seemed to imply that any suture of the sigmoid in the wound already made would be without effect, on account of the long leverage of the whole loop of sigmoid. As the condition of the patient was not particularly good, no radical cure was attempted. His abdomen was therefore closed and stimulants were administered.

The patient made a good recovery, vomiting once or twice. He poked his fingers under the plaster-of-Paris dressing, and produced a mural abscess which was slow in healing. No hernia followed, however.

Nothing further was noted until the morning of January 1, 1899, when after a period of constipation the patient developed a temperature of 103°, with moderate abdominal distention. There was a spasm of the left rectus muscle, and a distinct tumor below the umbilicus to the left of the median line. There was no vomiting, and no pain nor tenderness on palpation. Active purgation and enemata produced several fluid stools on the day following, but the tumor remained, and I was asked by Dr. Ford, who was then in charge of the service, to see the patient, with a view to determining the advisability of operation. Though the signs of obstruction were less marked than on the previous occasions, they seemed to make the diagnosis of volvulus sufficiently certain, and in the light of the past history it was decided to reopen the abdomen. The sigmoid flexure had twisted as before, from right to left, but it contained only a moderate amount of gas, and little fecal matter. The ascending and descending limbs of the bowel were adherent by fresh fibrin, at the point of crossing. There were also old adhesions to the omentum from both of the previous scars. No gas could be squeezed past the twist, and as the bowel at its crossing was already showing inflammatory changes it was evident that relief by means other than operative could not have been obtained.

A second incision was made as for an appendicitis, and the descending portion of the sigmoid flexure was stretched smoothly across the lower part of the abdominal cavity and stitched to the parietal peritoneum close to the anterior superior spine of the right ilium. It was hoped in this way to prevent a recurrence of the volvulus.

The patient made an uninterrupted recovery, and thus far has had no recurrence of his trouble; but the elapsed time is, of course, too short to permit of an estimate of the success of the operation.

SURGICAL SECTION OF THE SUFFOLK DISTRICT MEDICAL SOCIETY.

PAUL THORNDIKE, M.D., SECRETARY.

(Concluded from No. 9, p. 211.)

REGULAR Meeting, Wednesday, December 7, 1898, Dr. J. W. ELLIOT in the chair.

DR. BEACH read a paper entitled

RESECTION OF THE ELBOW-JOINT.

This young man about four years ago had an abscess which involved the elbow-joint; it was opened in three or four different places for the removal of dead bone, the whole process lasting about nine months. The elbow became firmly ankylosed at a point midway between flexion and extension. There was also paralysis of the little finger and ring finger and serious interference with the nutrition of the parts supplied by the ulnar nerve, as will be seen by the atrophy of the interossei muscles, which still persists. He has very little sensation in the two inner fingers now, but it is improving. The ulnar nerve was bound firmly to the bone by the cicatrix. I show him to-night because of his rapid recovery (three weeks) from complete excision, with good control of flexion, extension and rotation.

COMPOUND FRACTURE OF THE COCCYX.

The next case is a rather interesting one of compound-comminuted fracture of the coccyx. The patient, a man, fell sixty-five feet and struck upon the end of the spine, producing that injury and no other. The bone was comminuted, and there was a small wound opening to the bone which was enlarged and all fragments removed. He made a complete recovery in a month. In view of the neuralgia which is so apt to be associated with simple fractures, and is such a cause of invalidism in women and others who have had injuries of the kind, it is a question whether or not the complete excision of the bone soon after the injury is not a safer proceeding, though it may be more radical, than waiting for neuralgias to develop, and then to attempt cure by excision—an operation notably unsuccessful.

STONE IN THE BLADDER; NUCLEUS A FOREIGN BODY.

Another case is one of stone in the bladder. A young man while standing on a hay wagon was thrown down suddenly so that he sat upon one of the stakes that project upward into the hay. The stake entered the rectum through the anus, and passing forward perforated the bladder, carrying with it a piece of his trousers and a piece of his shirt. This occurred in June. The piece of trousers was removed by his physician at the time and the wound healed in the course