able. Those I have been using were made (through the kindness of Dr. J. W. White) at the dental establishment of S. S. White, of this city, and have always proved satisfactory.

ARTICLE XIV.

OPERATION FOR THE RELIEF OF BURSAL SWELLING OF THE WRIST. By J. E. COPELAND, M.D., of Rectortown, Fauquier Co., Virginia.

MY object in this article is to invite attention to an operation for the relief of bursal swelling of the wrist, performed more than a third of a century ago by Mr. James Syme, which, perhaps, has not commanded the consideration which it merits, since it is not even alluded to in any of the works on surgery that I have examined.

The American Journal of the Medical Sciences for January, 1845, page 225, presents from the *London and Edinburgh Monthly Journal of Medical Science* for October, 1844, a report of the operation performed by Mr. Syme, in which he says: "There are few subjects of surgical practice that have occasioned more trouble and disappointment than morbid distension of the bursæ which accompany the flexor tendons of the forearm in their course under the annular ligament of the wrist towards the fingers." He refers to the usual treatment of this form of ganglion and its failure, and as the treatment of similar derangements in other parts of the body, is not attended with such negative results, the question, "What local peculiarity is concerned in causing the obstinacy of this particular case?" presents itself to Mr. Syme. He concludes "that the constriction caused by the annular ligament causes the effect in question, by preventing a portion of the bursal sac corresponding to the subjacent tendons from undergoing the healing process," and gives the following case in support of his conclusion:—

"Janet Preston, aged twenty, was admitted on the 13th of February, complaining of pain and weakness in her left hand. The wrist and palm of the hand were much swelled, but not discoloured, and pressure on the parts caused distinct fluctuation, with the jarring sensation that characterizes effusion into the bursal sheaths. She stated that pain had been first felt about two years before, and that for the last twelve months she had had hardly any use of the hand, in consequence of the swelling and weakness attending it.

"I made a free incision from the wrist into the palm of the hand, dividing the annular ligament. This gave vent to a quantity of glairy fluid, with many small flat cartilaginous-looking bodies, and exposed to view the flexor tendons, separated and surrounded by thickened bursal membrane. The cavity was filled with dry lint, supported by a bandage moderately compressing the hand and wrist. In the subsequent treatment care was taken to prevent protrusion of the tendons, by drawing the edges of the wound together, and applying a compress over the seat of the annular ligament. Not the slightest disagreeable symptom followed the operation, and three days after it the patient could sew, which she

had been prevented from doing for many months previously. In the course of a few weeks the wound healed, and the limb was in every respect perfectly sound."

I offer the following case of seventeen years' duration, in which I performed Mr. Syme's operation with a much better result than I had reason to anticipate, considering the long standing of the affection, and the extent and variety of treatment and attention which had been bestowed upon it.

CASE.—George Payne, a well-developed negro, æt. about 39, applied to me March 9, 1879, for "liniment" for the relief of pain in his wrist, forearm, and shoulder, caused by bursal swelling of the posterior portion of the wrist. He gives the following history: During the year 1861 he was engaged in making horseshoes and shoeing horses for the army. In the latter part of the same year he was compelled to abandon his occupation on account of severe pain over the trapezium near the base of the metacarpal bone of the thumb. The pain was increased by the use of the hand, and followed by weakness of the thumb. During the next six months the pain extended towards the ulnar side of the wrist, followed by weakness of the index and middle fingers, and swelling of the wrist, and by the close of the year 1862 the whole dorsum of the wrist was involved, rendering the hand almost useless. When he applied to me he could not support a pound weight on his hand nor close his fingers on an ordinary-sized broomstick, and could not approximate his thumb and index finger sufficiently to enable him to pick up a lead-pencil with them. The pain in his wrist, forearm, and shoulder was almost constant, with exacerbations at night and during stormy weather. The affected wrist measured $13\frac{1}{4}$ inches in circumference, the corresponding wrist of normal size measured $7\frac{3}{4}$ inches. There were two firm and hard protuberances over the styloid processes of the radius and of the ulna. On manipulating the parts between these protuberances, a sensation as of hard, movable bodies, impacted in fluid, was imparted to the fingers. He had applied tinc. iodine, preparations containing ammonia, and many ointments and other popular remedies. He was for some time under the treatment of the U. S. army surgeons, and had been heroically treated by a number of practitioners, by incisions, punctures, blisters, etc., as the cicatrices testify, and all without benefit.

I proposed Mr. Syme's operation, to which his consent was readily given. Accordingly, the next day (March 10th), I made an incision between the tendons of the extensor communis digitorum and the extensor carpi ulnaris muscles, the most available portion of the wrist, and cut down to the annular ligament which I divided. Imbedded in the substance of the enlarged wrist, along the incision, were a number of fibrous or cartilaginous bodies of different sizes, ranging from that of a flaxseed to a small cherry-stone, and of irregular shapes, depending perhaps upon their position, consistency, and the amount of pressure they sustained during their formation. The wrist was dressed antiseptically, a compress was applied over the divided annular ligament, to prevent, as in Mr. Syme's case, portrusion of the tendons.

On his return, on the 14th, he could pick up a pin with his thumb and index finger, and use his hand in other ways such as he had not been able to do for seventeen years. The pain had abated; he slept at night without an anodyne. The wound was kept open and treated upon general principles, until the end of the sixth week after the operation; when the affected

wrist was reduced to $8\frac{1}{4}$ inches in circumference. It was allowed to heal. Three and one-half months after the operation, he "made a whole hand" in the harvest field, raking and binding a swath of wheat for three consecutive days; and during the two years that have elapsed he has engaged in manual labour as a farm hand, suffering with scarcely any pain or other inconvenience. After excessive or long-continued exertion of the wrist, he says "it feels like giving out."

Prof. Gross in his *System of Surgery*, vol. i. p. 633, 5th ed., says this affection (chronic enlargement of the bursæ) is "often very obstinate and troublesome, resisting not unfrequently the best directed efforts of the surgeon for their removal," and recommends "sorbefacient applications, as iodine and hydrochlorate of ammonia, blisters, mercurial inunctions, and systematic compression," and when these measures fail, "thorough excision," with the precaution to avoid injury to the synovial membrane of the articulations, but he does not mention division of the annular ligament as a remedy in the enlargements under consideration. We make special reference to Prof. Gross' treatment of this affection, because he is universally regarded as high surgical authority.

A remarkable feature in my case is that the integrity of the articulations and muscles was so slightly impaired by the morbid condition surrounding them for so many years, as to regain much of their former strength and usefulness, and that too in a short time after being relieved from their bondage. The fact that the location of the trouble in the two cases was in different parts of the wrist—one on the anterior and the other on the posterior portion, and that both were relieved by dividing the annular ligament subjacent to the affected part, strengthens the theory advanced by Mr. Syme. That the result of this operation in these two cases far exceeds the prognosis by the ordinary treatment is evident, and should, we think, recommend it to the favourable attention of the profession, and, in the language of Mr. Syme, "the complete success of which encourages me to hope that the method pursued will be found to afford an effectual remedy for a complaint which has hitherto proved so troublesome."

ARTICLE XV.

AMPUTATION AT THE SHOULDER-JOINT. By L. McLANE TIFFANY, M.D., of Baltimore, Professor of Surgery in the University of Maryland.

WHILE amputation of the arm at the shoulder-joint is a very successful operation, indeed, probably the most successful of major amputations, yet a fatal case occurring under my care, from secondary hemorrhage, has caused me to think that possibly, certain dangers being recognized, the mortality may be still further decreased.