cidental, and not due to the obstetric procedures. He believed that they were, in the majority of cases, intrauterine, and he was drawn to that conclusion by statements made that fractures have been discovered at the time of birth, or shortly afterwards, in cases where the births have been very easy, and, in addition, by the statement of Dr. W. Reynolds Wilson in showing the tremendous power employed in podalic version in the case reported by him without injury to the bone.

He had tried his best with a number of fœtal femurs to break them by some such manipulation as Dr. Davis had resorted to. He had been unable in one of them to produce a fracture above the middle third. He had been able to produce a fracture at the middle third, and it was done by a pull and a twist at the same time. But in the case reported by him the fracture had occurred just below the trochanter, where the bone is thicker at the time of birth than the middle of the shaft, and where the strain would be possibly not as great as it would be either at the hip-joint or middle third; so he felt that Dr. Davis, with the strong hand and finger that he possesses, is unable to produce a fracture by his method of procedure.

In conclusion, he directed attention to the medico-legal aspect of the subject under discussion. He believed there was more than enough evidence that this fracture did not occur at birth, but previously, due to faulty process of ossification, and that it was a coincidence that forcible delivery was instituted.

Stated Meeting, December 3, 1900.

The President, DE FOREST WILLARD, M.D., in the Chair.

CHOLECYSTOSTOMY FOR OBSTRUCTION OF THE CYSTIC DUCT.

DR. HENRY R. WHARTON presented a woman, aged fifty-three years, who was admitted to the Presbyterian Hospital, January 23, with the history that for some years she had suffered with indigestion and intermittent attacks of jaundice, paroxysmal pain, chills and fever, which symptoms persisted, varying in

severity, up to the time of her admission to the hospital. Upon examination it was found that she was much emaciated, weighing only sixty-seven pounds, and was deeply jaundiced; the abdomen was moderately distended, and palpation showed that the liver dulness extended downward beyond the umbilicus.

The patient was etherized and an incision made, and the gall-bladder was exposed with some difficulty, as it was very much contracted, being not over three inches in length and three-fourths of an inch in diameter, and as it was overlaid by the hypertrophied liver. When it was exposed and palpated it was found to contain several stones. It was also adherent to the surrounding tissues. As it was found impossible to bring the gall-bladder up to the surface of the wound and suture it to the tissues of the abdominal wall, the intestines were carefully packed away from the bladder with sterilized gauze, which was held in place with retractors, so that a free exposure of the gall-bladder was obtained. The gall-bladder was then opened and several stones were removed, and at the upper part of the organ a large-sized stone was found, a portion of which was impacted in the cystic duct, the remaining portion protruding into the gall-bladder. This was removed with some difficulty. As it was found impossible to bring the edges of the gall-bladder up and suture them to the abdominal walls, the gauze packing was allowed to remain, and a large rubber drainage tube was introduced to the bottom of the wound, and the ends of the wound were closed with silkworm-gut sutures.

After the operation there was profuse discharge of bile from the wound, and the patient suffered from more or less persistent vomiting; the abdomen became markedly distended, the bowels remained constipated, and the patient presented decided symptoms of intestinal obstruction. The gauze packing was removed on the third day, and after this the symptoms of intestinal obstruction rapidly subsided, and the patient's condition became markedly improved. Bile continued to escape freely from the wound for several weeks, the patient's health improved, and at the end of four weeks the wound was firmly healed, and the passages showed that the bile was escaping by its normal route.

The patient was discharged from the hospital, April 14, in good condition. Examination of the patient, November 26, shows that she is well nourished, is in good condition, and weighs 100 pounds.

A COMPOUND FRACTURE OF THE RIGHT TIBIA AND FIBULA; GREAT CONTUSION OF THE LEG AND THIGH; COMPLICATED FRACTURE OF THE INTERNAL CONDYLE OF THE LEFT FEMUR.

DR. WHARTON presented a man, aged twenty-five years, who was admitted to the Presbyterian Hospital on the night of May 25, 1900, having been injured by being caught between cars in a freight wreck. On examination it was found that he had sustained a compound fracture of the tibia and fibula of the right leg, with great contusion of the soft parts, and an injury of the right knee and a contusion of the right arm. When seen by the reporter, about twelve hours after the injury, he found a compound fracture of both bones of the leg in the middle third, and the knee was held in partial flexion and could not be extended. The leg and thigh were greatly swollen and tense, and the vitality of the soft parts seemed threatened.

The patient was anæsthetized, and free incisions were made at several points through the skin and deep fascia to relieve the tension, which were followed by the escape of a large amount of dark blood and serum. An examination of the injured knee showed that full extension of the leg was impossible, by reason of a fracture of the internal condyle of the femur, which appeared to be displaced downward into the joint, which caused locking of the joints in attempts at extension. As the vitality of the tissues of the leg and thigh seemed doubtful, and as attempts to reduce the fragment by manipulation were unavailing, it was decided at the time to postpone any operative treatment to reduce the fracture of the internal condyle. The compound fracture of the bones of the leg was dressed with a copious sterilized gauze dressing, and moulded binder's-board splints were applied to the leg and thigh to fix the fragments. A skiagraph was taken of the knee, and it was found that a mass of bone was wedged into the knee-joint. Three weeks after the injury, as the vitality of the tissues of the leg seemed assured, the patient was etherized, an incision was made over the inner portion of the knee-joint, and the seat of fracture of the internal condyle was exposed. It was then found that the internal condyle of the femur had been separated from the shaft of the bone, and had been so turned that the fractured surface of the bone was presenting in the joint, and the articular

surface was turned towards the fractured surface of the femur. The fragment was carefully removed, a large drainage tube was passed into the joint, the ligamentous structures were brought together by chromicized catgut sutures, and the wound was closed by sutures. The fragment removed consisted of a large portion of the internal condyle of the femur, and represented a mass of bone two and one-half inches in length and one and one-half inches in width. After the removal of the fragment the leg could be placed in the extended position without difficulty. The limb was then held in the extended position and a plaster-of-Paris dressing was applied to the foot, leg, and thigh.

The patient did well after the operation. The drainage tube was removed on the fourth day by trapping the plaster bandage, and the bandage was not removed for a month. The patient was discharged from the hospital on July 29, a little more than two months from his admission, walking with crutches, and at this time there was some motion at the knee-joint. The patient was again examined on November 12, and it was then found that he was able to walk with a cane and had regained a very fair range of motion in the knee-joint.

IMPERFORATE RECTUM.

DR. WHARTON presented a two months' old female infant, who, when three days of age, was admitted to the Children's Hospital, October 19, 1900, with the history that at birth the anus was normal in appearance, and it was only after twenty-four hours that it was noticed that no fæcal matter escaped, that the child suffered from pain, that the belly became distended, and persistent vomiting occurred.

Upon examination he found the belly hard and distended. Examination of the anus showed that a probe or the tip of the finger could be introduced to a distance of an inch, and when the child cried it seemed that bulging of the bowel could be detected anteriorly. The anus was enlarged by an incision backward and the tissues were carefully divided, and when the incision had reached a depth of one and three-fourths inches, a bulging mass, resembling the rectum, was exposed in the anterior portion of the wound; this was opened by a small incision, and it was found to be the vagina. A careful dissection posterior to this failed to expose the rectum. The bleeding was then arrested by

sutures and packing, and a left iliac colostomy was made. Upon opening the peritoneum a large quantity of thin pus gushed from the wound, and the small intestine which presented in the wound was injected. The small intestine was displaced, and the descending colon was brought up into the wound and sutured to its lower angle; gauze drains were next introduced from the upper portion of the wound into the peritoneal cavity for drainage. The colon was next opened and a free discharge of meconium occurred. Upon exploring the colon through the wound with the finger, it was found that the bowel terminated in a blind pouch about the region of the promontory of the sacrum.

The child improved after the operation, the vomiting ceased, and the abdominal distention disappeared. A certain amount of pus escaped by the way of the gauze drains; they were removed on the third day, and were not replaced. The upper portion of the colostomy wound was healed in a week, and the patient had satisfactory movements through the artificial anus. And now, a month after the operation, the child is taking nourishment well and is fairly well nourished.

Under the conditions presented, the case seemed to be a hopeless one, and he was very much surprised upon seeing the case on the following day to find it doing well. The occurrence of a purulent peritonitis without rupture of the bowel was to him a matter of great interest in this case, and he regretted very much that no bacteriological examination was made of the pus which escaped from the abdominal cavity at the time of operation, to determine the nature of the infection.

INTERMITTENT INTESTINAL OBSTRUCTION DUE TO A BAND, SIMULATING APPENDICITIS.

DR. WHARTON further reported the case of a boy, aged nine years, who was admitted to the Children's Hospital, October 9, with the following history. Dr. Black, of Newcastle, Delaware, under whose care the patient had been before his admission, reports that for two years the patient had suffered from intermittent attacks of abdominal pain, referred to the right iliac fossa and radiating to the umbilicus. These attacks occurred at intervals of a few weeks or months, usually following the ingestion of indigestible food, and were so severe as to require the free use of morphia before he could be made comfortable, and the patient was

not completely relieved until the bowels were freely moved. There was no fever during the attacks, and after they had disappeared the boy seemed in good health, with the exception of the fact that there was some tenderness on pressure in the right iliac region.

Upon examination of the patient, the abdomen was found moderately distended, and a mass could be indistinctly located in the right iliac fossa, near the location of the appendix. The patient was kept in bed for a week and a careful watch kept, and during this time had two attacks of pain, the last one being very severe, and was only relieved by the administration of morphia and the use of an enema, which produced a movement of the bowels. From the symptoms presented, with the absence of fever, it was thought that the attacks were due either to chronic appendicitis,—a rare condition in childhood,—or to the presence of a band which caught either the appendix or the small intestine. The possibility of a calculus passing through the ureter was also considered, and the urine was examined after the attack for the presence of blood. The bladder was also examined for stone. An incision was made over the region of the appendix, and upon opening the peritoneal cavity and introducing the finger the appendix was located, and at the same time a band about three inches in length and one-eighth of an inch in width was discovered, which arose from the colon one and one-half inches above the origin of the appendix, and was attached to the pelvis near the point of exit of the iliac vessels. The appendix was long and contained several curves, and lay in contact with the band, but was not adherent to it. It was thickened, but presented no signs of acute inflammation. The band was divided, the appendix removed, and the wound closed. The patient after the operation presented no unfavorable symptoms, and was discharged from the hospital in three weeks, having had no further attacks of pain or obstruction of the bowel.

The symptoms presented in this case resembled those of intermittent intestinal obstruction by a band, but whether they were due to the appendix being caught by the band, or to the small intestine being obstructed by the band, is difficult to determine.

TREATMENT OF INTERMAXILLARY BONE IN CASES OF DOUBLE HARELIP.

DR. WHARTON presented, also, a child upon whom he had operated for the relief of double harelip, saying that in such cases he thought it always a difficult matter to determine just what to do with the intermaxillary bone or the tissues covering that bone. The usual procedure recommended is, if the intermaxillary bone is removed, to save the flap of soft tissues which covered it, and pare it down to make a V-shaped mass and include it between the upper part of the freshened lips in bringing the parts together. This he had seen done in many cases and had done it himself, but it has a tendency to make the nose flat. Some years ago he saw several cases operated upon by Dr. Ashhurst in which he simply saved the tissues, removed the intermaxillary bone, and allowed this flap to take any position which it naturally fell into; and in some of these cases the results were quite good, taking the place of the septum of the nose, making quite a respectable septum. Recently he had adopted this procedure in several cases and found quite satisfactory results.

DR. JOHN B. ROBERTS called attention to the fact that sometimes these mouths can be made to look a great deal better by taking a piece out of the lower lip, which is relatively too big and liable to lap over.

OPERATIVE TREATMENT OF CIRRHOSIS OF THE LIVER.

DR. CHARLES H. FRAZIER read a paper with the above title, for which see page 715.

DR. JOHN B. DEAVER said that he had seen a cure following simple tapping in the case of a man who had every indication of cirrhosis; he was frightfully distended. He could not breathe lying down, had been sitting up in his chair for several nights previous to the tapping. The man never had a recurrence after his tap and lived three or four years. He has since died, but did not die of any symptoms referable to the liver. He was an alcoholic as well as a specific case.

DR. WHARTON said that some years ago he did an abdominal section in a case of cirrhosis of the liver for Dr. Pepper, simply opening the abdomen and draining away the fluid; and this case

improved very much for a time. He lived six or eight months, but finally died. He was very comfortable, and did not require tapping after the incision.

DR. JOHN B. ROBERTS said that he had two patients under care for sometime upon whom he expected to perform this operation. He had waited because both cases had cirrhotic kidneys as well as cirrhotic liver, and had not been in good condition. One had evidences of œdema of the lungs, and appeared to be on the verge of delirium tremens when he first saw him. The jaundice was quite marked. In both cases the urine has been scanty in amount. He intended to simply make an incision big enough to get one or two fingers into the abdomen, smooth out the omentum, and with a long curved needle make sutures through the skin and muscles, and tie the catgut sutures on the outside. It seemed to him that the rapidity with which this operation could be finished, and the fact that one only needs a small incision, would enable one to do away with general anæsthesia. Cocaine infiltration of the site of incision would be sufficient. General anæsthesia is rather risky in cases of cirrhosis of liver and kidneys, hence this method would be desirable.

[Since the discussion, Dr. Roberts has operated upon the two cases mentioned by the small incision and cocaine anæsthesia.]

DR. FRAZIER said that he had hesitated writing up this case for publication when but thirteen months had elapsed since the operation had been performed, fearing that one might advance the criticism that the results obtained were those of operation *per se*. He thought, however, that the results had been such as to warrant one in attributing them to the nature of the operation itself. As to the technique, this is in every sense of the word simple, once the operator has decided upon his plan of procedure. He must decide, first, whether he will confine his operation to the immediate neighborhood of the wound; secondly, whether he will extend his operative field to the diaphragm, liver, and spleen, and, thirdly, whether he will employ drainage. Some operators scarify not only the peritoneal surface of the abdominal wall on either side of the wound, but in addition the adjacent surface of the liver and diaphragm and of the spleen and diaphragm, thereby exciting the formation of a greater number of adhesions.

He had been loath to carry out such an extensive operation

in this case, that is, an operation which subjected such an extensive surface of the delicate peritoneum to traumatism. He therefore omitted so much of the operation as has to do with liver, spleen, and diaphragm. In almost all cases hitherto reported a drainage tube has been inserted through an additional wound in the suprapubic region, and this has not been removed until there has been no further accumulation of fluid. He was convinced that this step in the operation should be omitted; that it in no way contributes to the result, and furnishes an additional risk, for there is constant danger of the peritoneal cavity becoming infected along the drainage-tube tract. He much preferred to resort to paracentesis, should the occasion demand it, during the period in which the collateral circulation is being established.

WRY-NECK.

DR. DE FOREST WILLARD presented several cases of torticollis; some operated upon by excision of the spinal accessory nerve; others by section of the sternocleidomastoid.

In one of the cases, three years of age, the contraction was noticed about a month after delivery by version. There had been no known hæmatoma of the sternomastoid; but it is probable that there had been an injury to the neck, or more probably to the spinal accessory during birth. The contraction was very marked, and the chin was rotated to the opposite side. The trapezius was also involved in the contraction. Section of the sternomastoid at the clavicle and sternum having failed to give relief, the child at two years of age was subjected to excision of an inch of the right spinal accessory, the nerve being reached anterior to the upper third of the muscle. Although the excision was a thorough one, the child, now one year afterwards, has no recognizable paralysis on the right side, the other muscles of the neck having assumed all necessary functions for complete movements of the head and neck; the rotation of the chin and the obliquity of the head have been almost entirely relieved, and the result is thoroughly satisfactory.

The securing of this result is undoubtedly largely due to the fact that after recovery from the operation the child was treated for several months with both active and passive gymnastic exercises of all the muscles of the neck.

Another case presented was one which had refused operation, in which the deformity had increased rapidly, so that there was marked distortion of the cervical vertebræ, with rotation. The transverse processes could be plainly felt, and the distortion of the neck had naturally produced lateral curvature of the spine. The case, which was of neurotic origin, could not be benefited except by a division of the spinal accessory, and probably of the high cervical nerves. As this has been refused, the case was being tentatively treated by strong head and foot extension in the horizontal position.

Another case was of the intermittent variety and of nerve origin. When the boy was placed upon the table for operation, the contraction, which had been confined to the sternomastoid, was found to be so entirely relieved by the anæsthetic that the operation was postponed, and he was put upon a course of neck gymnastics together with tonics, iron, strychnia, gelsemium, etc., with entire disappearance of the affection. Education in neck gymnastics was insisted upon as one of the most essential points in the cure.

Other cases of both open and subcutaneous division of muscles were also exhibited.

In his remarks Dr. Willard said: Simple cases of torticollis are so simple that a surgeon is very liable to be too hopeful in his prognosis when he first examines a complicated case. In wry-neck the differences in form, grade, and curability are most remarkable. A simple contracture of the sternomastoid may often be relieved by gelsemium or other medicinal agents; or, if permanent, by simple myotomy and gymnastics, and a perfect result secured. On the other hand, in a spastic case, or one of nerve origin, every muscle of the neck, and even the shape of the vertebræ, may be so involved that all forms of medical and surgical treatment will fail to cure. He knew of no more satisfactory results than those secured in simple cases, and he had met with few more troublesome ones than those encountered in complicated torticollis. A consideration of the causes of wry-neck shows that it is not strange that this variation exists. A simple inflammatory cause may be transient, or it may become permanent; a neurotic cause may be severe for a time, but it may be relieved by the improvement of the general condition; a continuous nerve irritation may, and usually will, prove most stubborn. Let the surgeon

therefore be wary in his prognosis until he has watched the progress of the case. Even a simple contraction of the sternomastoid continued for years may not only give asymmetry of face and eyebrow, but also of jaw, cranium, and spinal column, and many cases of lateral curvature of the spine are traceable to wry-neck.

Great care must be taken that a case of cervical spinal caries be not mistaken for a case of torticollis, especially when there is marked rigidity and fixation in an old case. Abscess of the glands, traumatism, rheumatism, myalgia, etc., must be carefully eliminated.

In the treatment of wry-neck, myotomy is usually delayed too long, and the permanent changes above alluded to then prevent a perfect cure. As to the question of open or subcutaneous section of the muscles, present aseptic methods favor the open section as the more certain procedure, except in simple forms in females. In former years, when he always operated subcutaneously, he fortunately never had an accident, but such accidents had occurred to the most capable surgeons. One case he remembered in the practice of a most skilful operator, where the top of the pleura was wounded and fatal septic pleurisy followed. The neighborhood of the great vessels at the top of the sternum always renders one anxious. If the deeper sternal and clavicular fibres are implicated, the open plan is always the best. When a contraction is of long standing, real muscle-fibre shortening has occurred; and open section of the mastoid insertion also is often necessary, the scar from which can be concealed in the hair. When complicated cases are encountered, the most serious difficulties arise. If only the sternomastoid and trapezius are affected, the spinal accessory is probably alone at fault. This nerve may be reached high up by an incision along the anterior border of the sternomastoid, or it can be reached from the posterior border. He usually preferred the former route. The nerve passes along the transverse process of the atlas, and can usually be found as it leaves the digastric muscle and passes to the posterior border of the sternomastoid a little above the level of the hyoid. Paralysis of the trapezius and the sternomastoid, more or less complete, will of course follow, but in the majority of cases this is of advantage in restoring the equilibrium of the head.

Stretching of the nerve so seldom accomplished anything permanent in his past experience, that he now always excised a large portion, an inch or more, if the nerve can be drawn out.

The complicated mechanical apparatus described in books is practically useless in any case, whether of tonic or clonic spasm. After operation, a simple cap made with circular and oblique bandages to the head is the most satisfactory. To this can be attached two elastic straps passing one in front and the other behind the shoulder, and fastened to a closely fitting waist or corset. Later, a circular occipitofrontal strap with buckle and two straps passing over the top of the head can be retained in place, from which an elastic strap can be attached to a corset or plaster-of-Paris chest-band.

The most important part of the after-treatment consists in the long-continued use of muscular gymnastics of the neck, with stretching, massage, etc. This is most helpful of all things in giving relief.

Neurectomy of the spinal accessory has not received abroad the attention which it deserves, but, following the lead of American surgery, Continental surgeons are wisely turning their attention not only to this operation, but also to resection of the cervical nerves.

When the deep muscles on both sides are affected, medicinal and hygienic measures are usually more effective than operative. Naturally, if the true cause, as in complicated cases, lies in the cephalic or spinal centres, a complete cure will not be obtained. Faulty diagnosis as to the muscles involved is probably the most frequent cause of error.

If the splenius is affected on one side, the face is rotated in that direction, while a spasm of the sternomastoid alone rotates the chin to the opposite side. Unfortunately, the complexity of the muscles involved, and oftentimes the long continuance of the contraction, has so distorted the cervical vertebræ that a complete rectification is impossible; therefore an early operation before these bony changes occur is advisable.

In the still persistent cases after section of the spinal accessory nerve, the spinal nerves should be divided. The second and third cervical spinal segments supply the sternomastoid, trapezius, and scaleni muscles, and both the second and third nerves emerge from the canal above the second spinous process. The incision to reach them, therefore, must be high up, as the distance to the foramen magnum is but short. The posterior divisions of the second and third can be reached either by transverse or by longitudinal inci-

sion, preferably the former, extending from the median line two and one-half to three inches. The trapezius must of course be cut across. The second cervical nerve, the great occipital, will probably be first seen, and may be traced through the complexus muscle, which may be divided so that an entire section of the nerve may be made back to its emergence from the spine. The first nerve lies beneath the vertebral artery, and is close to the atlas. The third cervical lies below the second cervical spine. The search for these nerves is a troublesome one.

When the rotary muscles are affected, this high division of the cervical nerve is helpful; but it must be remembered that rotation of the head may occur without involvement of these rotary muscles, especially if the splenius of one side is affected, and the sternomastoid on the other. There are many varieties of this rotary deviation dependent not only upon the muscles involved on the one side, but especially in the complicated cases, where both sides are included.

These cases of nerve origin indicate, of course, either spinal or cerebral involvement, and are therefore to be treated essentially as neuroses, whether the spasms be tonic or clonic. When the head is thrown directly backward, it is probable that both trapezii are involved. He summed up his views in the following conclusions:

(1) Wry-neck is due to such a variety of causes that the prognosis should be guarded until the actual cause is discovered.

(2) Early open section of the sternal and clavicular insertions of the sternomastoid muscle is in simple cases curative, provided the operation is followed by continued neck-muscle gymnastics. Additional section of the mastoid insertion is necessary in more severe contractions.

(3) Early operation will prevent bony distortion and resultant lateral curvature of the spine.

(4) In cases of neurotic origin, resection of the spinal accessory nerve is most helpful, and, in still more complicated cases, section of the upper cervical nerves is to be recommended.

Dr. John B. Deaver asked Dr Willard if he had had occasion to resort to muscle-splitting in these cases. He operated on a lady sometime since who is said to have had torticollis for a number of years. She had no distortion of the cervical vertebræ in the shape of curvature, but had a very decided shortening of

the affected sternomastoid. He could not convince himself that the operation for the spinal accessory nerve would suffice. Therefore he exposed the muscle, split it obliquely in the central part and sewed the split ends of the muscle together. The woman secured a perfect result and remains perfectly well.

He had had occasion to do likewise in flexion of the fingers, in consequence of contraction of the deep flexors of the forearm. He had one young woman who could not extend the fingers, but by splitting all the muscles and stitching them that woman has now as good function of that hand as she has in the other hand. He never had occasion to resort to muscle-splitting in a case of torticollis except the one reported.

DR. WHARTON said that in a recent case he split the sternal tendon of the sternomastoid and lengthened the tendon by splitting, then dividing it, and then did an oblique section of the clavicular attachment of the muscle. In this case the result was very satisfactory.

DR. WILLARD said that he had employed muscle-splitting with success in just such cases as Dr. Deaver speaks of in the forearm. It acts admirably in contraction of the flexors, the section being made high in the forearm instead of cutting off the origins of the muscles at the elbow. He had never used it for torticollis. It would seem to him that any case that would be benefited by such a section would also be benefited by simple myotomy, open or subcutaneous, of the sternal and clavicular attachments of the sternomastoid. He saw no objection, however, to the operation, and it might be safer because the muscle could be lifted out and the section need not be made as near to the root of the neck in the proximity of the great vessels. At the base of the neck we are liable to meet with accidents more than any other part.

PLASTER OF PARIS AS AN IMMEDIATE DRESSING AFTER FRACTURE OF THE LEG.

DR. WILLIAM G. PORTER presented two boys, brought from the hospital to illustrate the application of a dressing which he had been using for a long time in the treatment of fractures of the leg. He demonstrated this dressing before the Academy a few years ago. It is a plaster-of-Paris dressing which is applied in the following way. The limb is first carefully set under ether if necessary, firmly held in position, and a flannel roller bandage

carefully applied from the roots of the toes to above the knee-joint about the junction of the middle and lower thirds of the thigh. A block tin tape is then placed on the front of the limb, moulded accurately to it and held in position. The plaster-of-Paris bandages are then applied in the ordinary way, and are at once cut through with a sharp knife on the block tin tape as a guide, which is then removed and an ordinary muslin roller bandage applied over all to secure the dressing. He had used this dressing for the last fifteen years as a routine dressing in all cases of fracture of the leg, applied at once as soon as he took charge of the case. There is no preliminary treatment by a fracture-box or any other appliance. If there are blebs, either serous or sanguineous, they are evacuated and boric ointment, or some similar application, used. If the case is seen early and the dressing is promptly applied, there is, as a rule, no inflammatory swelling such as usually follows such fractures when treated in a fracture-box; and even should inflammatory swelling appear, the plaster having been split down yields, and there is no danger of strangulation, as there would be in a fixed and immovable plaster dressing. These two boys illustrate both the immediate application of the dressing and one of them its application to a case in which there was great contusion, the formation of blebs, and danger of the formation of a compound fracture by sloughing of the integuments. With this dressing a patient can occupy any position in bed which is most comfortable for him. He can sit up in a chair; can walk on crutches, and frequently, by means of it, can attend to his business during the whole time of the treatment of his fracture. If there is much contusion, the block tin tape is applied directly to the skin under the flannel bandage. If not, it is applied, as described, outside of it, and on the following day the cotton roller is removed and the folds of the flannel bandage are cut through with a pair of scissors, the limb inspected, any applications which may be needed made to it and the cotton roller reapplied. Any one who has been compelled to lie with his limb in a fracture-box for weeks must appreciate the advantages of this dressing.

Dr. John B. Deaver said that since Dr. Porter made his first communication to this Academy, they had practically put it into effect in the German Hospital. They scarcely know what a fracture-box looks like. They put them up as Dr. Porter has in-

dicated immediately upon their being received in the hospital. It is especially applicable to children. In cases developing delirium tremens and traumatic delirium it is particularly good. The precaution of following out Dr. Porter's instructions of cutting down is essential, so as to avoid gangrene, which is known to occur. He had had quite warm discussions with his house doctors as to putting a limb up in plaster which was greatly swollen. The next day he would find that the patient was in splendid condition, much more so than before he was dressed. That was their experience in the majority of cases; of course, there are exceptional cases. They do not confine it to simple fractures, but extend it to compound fractures; and all know that it relieves anxiety and makes the convalescence a pleasant one in comparison with our former mode of treatment with the fracture-box.

DR. WILLARD said that in his experience there was no plan of treatment of fractures in children that is at all comparable with the proper application of plaster. In fractures of the thigh it is essential to fix the hip-joint, carrying the dressing from thorax to toes. A child then cannot displace his limb; you can move him about, carry him up-stairs and out-doors with perfect satisfaction and without any danger of disturbing the fragments. When properly used, this plan of treatment secures absolute rest to the fragments, maintains thorough apposition, and yields the very best results.