

poses, such as sitting-rooms and the like. Then come, at a distance of sixty feet, and at the same distance from each other, three charity wards; the only difference between them and the octagon ward is that they are parallelograms in form. Crossing the lot, the nurses' home is reached, a large, square building, — from the basement to the top seven stories high. The lower floors are devoted to dining-rooms, parlors, library, lecture-room, etc., and the upper ones to bedrooms. There are, then, eleven buildings in process of construction, — eight actually under roof. It goes almost without saying that they are built in the best and strongest manner, with modern improvements, double ventilators, etc. Inside, the staircases are supported by iron pillars, and all the beams and girders are of the same material. The flooring and partitions are of lime, an imported French product, to which sand and cinders are added here. It is put up in large blocks, and the partitions in their present unfinished state resemble stone walls. The tiles, of the same material, for the ceiling and flooring are made so as to fit together between the iron beams and form an arch in themselves, leaving the ceiling and floor perfectly level. The buildings are all of brick, with black pointings, slate roofs, pinnacles, cupolas, and towers. The style selected is the so-called Queen Anne style, and the plan chosen seems to be a mixture of those of the Imperial Hospital of Leipzig, and St. Thomas's Hospital of London. It is hardly necessary to draw attention to the fact that for the exterior arrangements also the Johns Hopkins University is indebted to architectural designs already existing, both at home and abroad.

The surgical wards, waiting-rooms, and clinic will form a separate department, and it is suggested to form eventually a school of surgery. The graduates would then receive some such degree as Bachelor of Surgery, Master of Surgery, or Licentiate. If such a diploma should not confer the right to practice, that right could easily be obtained from the Medical and Chirurgical Faculty of Maryland. The domain of gynecology will probably be included in that of medicine.

As to the length of the medical and surgical courses, the American system of three years is for our country and our needs decidedly the best, and is the one most likely to be adopted by the Johns Hopkins University. That graduates who have studied but three years have a less variety of scientific knowledge than those who have studied five years at a German university, or seven at a French one, other things being equal, is self-evident. But after graduation, in either case, a decade will, as a rule, elapse before the graduate gets into regular practice. During this period, by occasional cases, by reading, and by hospital study, the American will learn much. And it is fair to assume that the Frenchman or German, with his brain more or less overloaded, as he comes fresh from his laureate, will in these ten years have forgotten much in the way of botany, mineralogy, comparative anatomy, zoölogy, and even physics (which branches, except the last named, Huxley says ought to be rigorously excluded); so that time, the great leveler, will put them all on even footing when the hour arrives to enter into the active duties of brisk practice.

Without doubt, the critic will say, there is a certain similarity between the Johns Hopkins University and other existing institutions, just as in writing we sometimes speak unconsciously the thoughts of others. How could it be otherwise? True, but enough has

been adduced to prove conclusively the conditions under which the new university comes into being. That it may be grand and great cannot perhaps be denied; that it is original cannot be pretended; that it will be a success as a flourishing university, with crowded lecture-rooms, the future alone will show. In its struggles for existence it will be armed with wealth and intellect sufficient to place it on a par with, but not above, other American universities and medical schools. The Johns Hopkins University will owe its existence and status directly to an immense fortune that has been in possession of the trustees since the testator's death. But from the realm of departed spirits come back to-day the weird strains of the lyre. Listen: the immortal bard no longer sings alone his "*Exegi monumentum ære perennius.*" It will¹ owe its intellectual standard to those very American universities, colleges, medical schools, and institutions of learning generally which from personal and selfish motives, too apparent to need further mention, have been ridiculed, as well as to the scientific attainments of the learned professions, especially that of medicine, which has been most unjustly sneered at by a minority so small as to be barely of sufficient consequence to remind that they owe everything to the very men they have sought to undervalue. Let the older institutions of education, then, welcome the Johns Hopkins University; let them take by the hand the child of their adoption, and invite her to march with them in the way of civilization and culture, to walk with them in the paths of knowledge, and to unite with them in the search for truth.

"That which hath been is now; and that which is to be hath already been, and God requirereth that which is past."

MECHANICAL COMPRESSION IN ORCHITIS.

BY OCTAVIUS A. WHITE, M. D., NEW YORK.

WHATEVER is imperfect about the resources of art cannot remain, but must give place to every recognized improvement until perfection is attained. An inventor may zealously urge the importance of a cherished *eureka*, but the true value of the invention remains to be finally decided upon by a majority of those to whom its use is commended. In introducing, therefore, a novel treatment, a few preliminary remarks are necessary, setting forth what means to meet requirements are already at hand, what exigencies exist for something better, and, lastly, whether or not any one of these sufficiently fulfills the prime indications in view.

In the management of all affections of the male genital organs, acute or chronic, common or specific, idiopathic or traumatic, primary or secondary, necessity continually arises for the application of some form of mechanical support, combined with systematic and persistent pressure around the morbidly distended and

¹ The future tense is used because it will be three or four years yet before the hospital can be utilized for the reception of patients, and then a beginning will be made with only fifteen buildings. It is designed to receive four hundred patients. The space in the middle of the lot will be devoted to grass-plots, flower-beds, walks, benches for convalescents, etc., after the manner of many of our hospitals. We have already several large and well-appointed ones here, and with the new one the supply might perhaps exceed the demand. The floral display is evidently intended to be very fine, as in addition to the plots already mentioned there will be a green-house one hundred and fifty feet long on the hospital grounds. What the precise object of this is I am unable at the present time to state; being left in the dark as to whether the flowers will adorn the beds of sickness exclusively, or whether anything in the way of renown or pecuniary gain is also expected from a source which, though it may be æsthetic, can hardly be considered very lucrative.

suffering contents of the scrotum. Past experience has amply proved that compression, timely adopted and judiciously regulated, not only rapidly disperses swelling and induration, to which these glands are prone, but absolutely preserves their delicate stroma from ruinous inflammatory changes liable to occur during a period of protracted intumescence. Nor is this recourse of value alone to effect resolution of swelling during the various stages of active engorgement. Orchitis is far more commonly a consecutive than a primary affection, and the result of repeated trial has shown that hereditary involvement of the testes, from propagated inflammation along the deferent duct or from the prostate gland, can possibly be averted by an early resort to this positive procedure. Even when the epididymis is attacked by primary disease, which is rare, or the urethra has been specifically assailed, moderate compression with support about the pendulous scrotum has always proved an effectual prophylactic against extension of the disease, and a measure of certain relief to the suffering patient.

Mechanical compression around the testes when in a state of disease requires no champion at the present day to impress its importance. Attention to its expediency was no sooner directed by Fricke, of Germany, than the surgeons promptly recognized its value, and by the force of popular teaching this practice became permanently established wherever enlightened surgery is cultivated. So well established, indeed, is this mode of treatment that professional incapacity or culpable neglect may well be imputed whenever, in the management of affections of the testes, this salutary means of relief has been omitted. I further assert that when compression, with support, fails to improve the condition of an engorged testicle, the mode must be blamed, never the measure employed.

The act, however, of adjusting the imbricated dressing of Fricke to a diseased testicle is most commonly attended by great irritation and suffering on the part of the patient, and aggravated vexation and perplexity on that of the surgeon. All familiar with this method, so long in vogue, are well aware that the dressing adjusted to day must, without fail, be removed to-morrow, and renewed with reinforced degree of compression, in order to follow up, *pari passu*, any advantage gained, as the swelling notably diminishes after each first application. When this process comes to be repeated every twenty-four hours for several successive days, the tender integuments are fretted, and often so intense is the degree of irritation that the surgeon is compelled to desist his treatment, thus affording the disease time and opportunity to rekindle into activity. It is necessary, moreover, that the adhesive-plaster dressing should be applied in narrow strips and successively. These must be laid on circularly, belting the tumor and overlapping each other, and the very best directed efforts have continually failed to subject every part alike of the tumefied organ to an equal degree of compression.

The theory of compression in respect to glandular swellings has been long in advance of its mode of application, and ingenuity has been kept exercised to invent some method of accomplishing the object in a manner at once convenient to the surgeon and painless to the patient. Among the various devices put forth at different times to meet this intention, none have thus far proved superior to the air-bag of Dr. Hutchinson. The design of this contrivance was to enable the

surgeon to subject the parts *en masse* to such positive yet gentle compression as the exigency of each case demanded. But the bulk, weight, clumsiness, and liability to acquire and retain fetid odor so abundant about the region of the scrotum have always operated against its general use. Similar objections apply also to every other elastic or netted means intended to exert compression about the genitals for any length of time.

The announcement, therefore, of a new, safe, and painless method of instituting the desired amount of compression to effect resolution in engorged conditions of the testes should command favorable attention, not from sufferers alone, but also from surgeons, whose specialty induces a large share of genito-urinary cases to apply to them for relief.

The substitute which I have to propose, to carry out the above intention, will enable the surgeon to either moderate or intensify compression promptly and in accordance with his own sound views respecting the requirements in each particular case; and, while it never fails to accomplish the desired purpose with celerity and adequate firmness, the salutary aim is effected within the bounds of patience and toleration.

The instrument, as can be seen by reference to the subjoined wood cut, is shell-shaped, very light, and symmetrically molded to receive and accommodate within its cavity a swollen testicle, surrounded by its



scrotal integuments. The material of which it is composed is hardened rubber, special care being taken by the manufacturer to render the walls as thin and light as possible. About one third of the upper section of this shell is removed, leaving a preponderating portion of the base, which gives it the appearance of a scoop or dipper. The object of this configuration is of course apparent, and the peculiar shape selected has been found by experience to afford the very best mechanical support to the pendulous organ.

The cleft, which will be noticed, running down the front of the shield is intended to admit of free overlapping of the two thin edges. By this means ample provision is made for all necessary reinforcement of compression which is to be practiced during the management of a case.

In the fashioning of this splint special care has been taken to have that portion which is intended to surround the neck of the tumor smoothly everted, in order to insure against concentrated pressure, which might otherwise determine about the vessels of the cord when the shield is continuously worn.

The usual preliminary details to be observed in the act of applying compression to an enlarged testicle are

of course to be strictly observed. The patient must be placed in a recumbent posture sufficiently long to secure a certain amount of local depletion about the vessels of the part by gravitation. The affected testicle is separated from its sound fellow within the scrotum and fitted into a suitable-sized shield. At this juncture a narrow roll of bandage is cast around the upper part of the instrument, corresponding to the neck of the scrotal sac. This is to prevent the testicle from retreating upwards and outside the cavity in which it has just been placed. When this step of the process has been well effected, the surgeon has the testicle at his entire command, and can now subject it to any desired amount of compression by simply drawing upon the opposing lacing strings, which are immediately at hand.

Each shield is provided with a light elastic cord of sufficient length, by which the entire fixture can be suspended to the body with an ordinary figure-of-eight carried around the thigh and loins.

The mechanical difficulty of adjusting suitable compression to the pendulous scrotum will thus be found reduced to a very minimum by the very great simplicity of this device, and the apparatus, while inclosing the tender parts requiring treatment within its smooth and unyielding walls, safe from external violence and friction, can be habitually worn without personal inconvenience, and without attracting the least attention.

The rapidity, neatness, and comparative painlessness with which this fixture can be applied cannot fail to be favorably contrasted with the tedious, complicated, suffering, and uncleanly processes commonly employed, not one of which either surgical experience or mechanical skill can ever render more than tolerable. So rapidly, indeed, has reduction of swelling about these glands been effected by this means that it often becomes necessary, during its employment, to remove and readjust the shield twice instead of once in every twenty-four hours, — a convincing proof, surely, of its controlling power and comfortable accommodation.

Should at any time this appliance threaten to cause pain during the absence of the surgeon by inflammation gaining ground and giving rise to undue constriction, the dressing can be relaxed by the patient himself with promptness and ease.

It must be an exceptional case that will complain of pain either during or after the proper adjustment of this neat and gentle mode of applying compression to these glands; indeed, the patient is shortly relieved of all sense of aching, weight, and throbbing, which may have been primarily urgent, by the close adaptation of the dressing, and a degree of comfort is soon experienced not attained by any other means.

The prominent features of this scrotal shield, support, and compressor are remarkable lightness, the weight not exceeding eight grammes; great readiness and facility of application; consummate command afforded the surgeon over the degree and duration of direct pressure to the testicles, either singly or collectively; uniformity, firmness, and general diffusion of compression; entire painlessness attending and during its application or removal, even though the scrotal sac be well covered by hair; and, finally, perfect cleanliness, the fixture being so conveniently taken off and washed.

In cases of varicocele and indolent sarcocoele, upon which this instrument has been kept steadily applied, the relief has been speedy and highly satisfactory. Pending the necessary course of treatment in distress-

ing cases of neuralgia of the testes, I invariably employ it, and with most happy effect. When no other covering could possibly be borne upon the irritable organ, this has not only afforded protection and ease, but has enabled the patient to go about unrestrained in the open air, and attend to his ordinary avocations.

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LITHOLAPAXY.

BY EDWARD T. CASWELL, A. M., M. D.

As every instance in which a new operation is successfully performed tends to establish still more strongly its claims upon the profession, I place this case on record. It affords one more proof that the procedure brought forward by Dr. Bigelow has been a contribution of positive value to surgical science. The case was reported in brief at the last meeting of the Rhode Island Medical Society.

J. L., aged seventy-one, had suffered for three or four months with pain referred to the penis, frequency and scalding in micturition, and stoppage of the stream. An examination showed the presence of a small calculus, and on November 10, 1879, four days after the examination, I proceeded to perform litholapaxy at the home of the patient, in the country.

I found the urethra capacious, being able to pass without difficulty No. 30 (French) of Van Buren's sounds. The prostate gland was considerably enlarged, the bladder sufficiently roomy. The first crushing was done with Bigelow's lithotrite, but subsequently, for the purpose of comparing the two instruments, I used Keyes's modified lithotrite. Bigelow's evacuating apparatus was also used, although it had not the modifications recently introduced.

I first attempted to pass the straight tube No. 30, but as I did not succeed it was withdrawn, and No. 29 curved was passed. Through this a few fragments were evacuated, but as it did not seem satisfactory I withdrew the tube and made another and successful attempt to introduce the straight one, No. 30. Quite an abundance of débris now passed, and I continued to use this tube, although with each introduction the same difficulty was experienced, and to this is to be ascribed a large part of the time consumed in the operation. The crushings and evacuations were repeated four or five times, and at last I failed to find any further evidence of stone with the searcher.

Many of the fragments were quite large. One, which was removed early in the operation, and which was by far the largest, measured five eighths by three eighths by two eighths of an inch, and weighed ten grains. It showed a nucleus perfectly imbedded in a complete portion of the shell. This piece was drawn into the eye of the tube in such a fortunate manner that it presented a perfectly smooth surface to the urethral walls, and was removed without inflicting the slightest injury upon the urethra. Another nucleus was found entire in the contents of the bottle, showing that there were two stones. The nucleus was pure uric acid, and the shell contained about two per cent. of phosphatic salts, the remainder being uric acid. The whole amount evacuated weighed, when dried, ninety-eight grains, and the time occupied in the operation was about two hours and a half. There may seem to be a great disproportion between the time employed and the amount