Rupture and its radical cure : with a full description of the parts involved : also, of falling of the womb, varicocele, enlarged veins of the legs, piles, curved spine, spermatorrhea or nocturnal emissions from self-abuse, and its cure by pressure / by S.N. Marsh.

FOR PHYSICIANS AND THE PEOPLE.

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AND ITS

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ALSO, OF

FALLING OF THE WOMB,

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SPERMATORRHEA, OR NOCTURNAL EMISSIONS, FROM SELF-ABUSE, AND ITS CURE BY PRESSURE.

WITH PLATES.

BY S. N. MARSH.

Clergymen, Physicians, Editors, Post-Masters, and all others, are politely requested to make such use of this Tract as their estimate of its merits and their humanity may dictate.

All Orders must be addressed *post-paid* to MARSH & Co., 2½ *Maiden-Lane, New York*, and contain 25 cents.

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BY S. N. MARSH.

NEW YORK:
MARSH & CO., 2½ MAIDEN-LANE.
1853.

TO

PHYSICIANS

AND

LABORING MEN AND WOMEN,

THIS TRACT

IS

RESPECTFULLY AND SINCERELY

DEDICATED

BY

S. N. MARSH,

No. 2½ Maiden-Lane,

NEW YORK.

CONTENTS.

PREFACE.

THE object of this little book is to present to the reader a simple explanation of the new truss invented by the subscriber for the permanent cure of Rupture, and of the different kinds of apparatus manufactured and for sale by Marsh & Co., at their establishment, 2½ Maiden Lane, N. Y., for the relief and support of various other infirmities to which the human body is liable. The explanation of the four most frequent varieties of rupture, with the cuts descriptive of their peculiarities in nature and situation, is given, to aid the patient and his physician in a proper understanding of the object and correct method of applying his truss, and to produce that confidence in it, that must follow from an intelligent appreciation of its merits and the inventor's knowledge of the anatomical structure to which it is adapted, and the correctness of the principle upon which he ventures to assure them a cure will most certainly follow in a great proportion of cases. That every intelligent physician will approve of the explanation given in these pages, and consider them a great help towards a cure of his patient, the writer confidently believes, because the principle of cure depends upon the greatest and most universally operative law of the living body, viz.: the adhesive inflamation in the openings through which the rupture descends.

How far the instrument itself will subserve to the

incitement of the great principle to its constant action, and place both it and the support of the bowel in its natural cavity within the belly, under the patient's absolute control, must depend upon the appreciation of his efforts to explain it, and its mechanical principle, as well as the excellence of its construction. He will not affect to deny that he confidently anticipates a universal approbation of the article. Twenty-five years of unwearied attention to the manufacture of trusses, and a constantly increasing business in adapting them to individual peculiarities, with the universal approbation of this great improvement by all the New York surgeons, give him a confidence he could not otherwise possess. The old truss invented by his father has enjoyed as great a degree of confidence, to say the least of it, as that of any other manufacturer for that long period, and the proprietor hopes the present improvement will be admitted as the legitimate fruit of a close attention to the subject in all its complications. Whether it is to realize his anticipations, will depend very much upon the circulation of this little book, which he has therefore prepared at considerable pains and expense, for universal distribution to all post-paid applicants. The writer begs to apologize for using the editorial *we*, as an occasional variation, and more agreeable to his ear than the first person. It appears more appropriate in an unprofessional man.

All orders will be immediately supplied at the prices appended to the respective articles, upon enclosing the amount, either by express or any other method chosen by applicants. The trusses may, however, be had in most of the towns of the Union.

MARSH & Co.

2½ Maiden Lane.

THE

NATURE OF RUPTURE.

RUPTURE, or, as surgeons call it, *hernia*, is computed, from reliable authority, to exist in ten per cent. of mankind! The term is derived from a Greek word signifying *protruding from;* it is a descent of a greater or less portion of the bowel from its proper receptacle within the belly, through one of the natural openings on either side of the penis, or (most frequently in women) through an opening in the sheath of the upper part of the thigh ; sometimes in both sexes through the navel ; or, finally, through a rent made by the pressure of the bowels within the abdomen in any part of the membrane or muscles under the skin. These constitute the four varieties of rupture for which trusses are chiefly used. We will proceed to describe them in the order above named, for *that* is the proportion of their frequency.

Firstly, however, let us explain the natural construction of the parts as delineated in plate first. We will begin by stating, in the first place, that the wall of the belly at the groin, through which the most frequent variety of rupture passes, is composed of three layers precisely like the layers of an onion. The skin and fat are represented in the plate as entirely removed from the belly and from the upper part of the thighs, for rupture never breaks through the skin.

Directly beneath the fat under the skin, appears a whitish membranous sheath or envelope for the whole body and thighs, called by surgeons a fascia or scarf. It covers the muscles which steady and bend the body and move the

thighs, and keeps them firmly in their places: this is the first layer under the skin. Surgeons call it the *superficial fascia.*

Through this membrane, on each side of the penis which is here represented as cut off, are two natural openings or pointed slits, through which the blood-vessels of the testicles and their peculiar duct and nerve pass to and from the important gland they supply: through these slits the rupture passes. These vessels and their envelope are called collectively the cord. This cord passes up from the testicles covered with a cylindrical prolongation proceeding from the same membrane, and attached to the edges of the slit or opening, through another opening directly under it to a third one, two inches further towards each hip, but existing in a second membranous layer lying directly over the intestines. Thus, if a hole were made by the anatomist in the sheath enveloping the cord, and a probe passed through it two inches obliquely outwards, it would go through three openings into the cavity of the belly. These openings are connected by means of a cylindrical membranous canal, through which the bowel in the rupture passes into the scrotum or purse for the testicles. This is the *inguinal canal.*

The middle opening, or ring, is formed in a very dense and glistening tendinous structure, as stiff as a drum-head: it is attached to a great thin muscle lying under the first-described membrane, and intended by nature to aid, by the contraction of its fibres, in sustaining the body erect, and to bend the chest forward, and to assist in voiding urine and fæces, as well as to keep the belly from becoming relaxed, and letting the contents bag as it were, or become pendulous, as they will often do in weak people.

In the groin, this tendon is the middle layer or covering enclosing the bowels; it is attached, along its entire length, to the hard line of tendinous structure to be seen in the plate at the top of the thigh, and felt in the groin. This middle layer is the main guard against the most common variety of rupture; or what is called the "oblique" groin,

or "inguinal rupture." There is a slit in this tendon directly under the membrane first described, and the fibres of the tendon cross each other like one finger placed over the other, so as to oppose the descent of the bowel as much as possible. This is the *tendon of the external oblique muscle.*

This opening, or ring,* is indeed the most important of all the others by far : surgeons, generally indeed, do not notice the one we have first described, because it is so far inferior in the strength of its edges, as a preventer of rupture ; they view it merely as a mere starting point for the cylindrical envelope of the cord or extension of the first membrane, as it goes down to the testicles ; but of this directly, when we come to speak of some other diseases that resemble rupture, and require the careful discrimination of the truss-maker, as well as the surgeon ; for every one does not consult the surgeon before he comes to us, though it always gives us and him more satisfaction when he does so.

Through this outer ring the bowel protrudes in a ruptured person, and passes downwards to the testicle, covered by the envelope of the cord. [See the first and second plates for the natural structure, and the third one for the rupture when fully formed and protruding.] This is the most common variety of rupture, and is called the oblique groin or inguinal rupture.

The long muscle which divides the belly into two equal halves in the first plate, goes from the breast bone to the private parts, and subserves a similar purpose with the other muscles beneath, besides bending the body forwards.

But now let us show what is the nature of the structure when this superficial membrane and the tendinous expansion of the external oblique muscle, as surgeons call it, are dissected from the abdomen, and turned down over the thigh like a half-peeled orange. The reader will observe we have yet said nothing about the structure of the thigh as revealed in the plate, because that belongs to the rarer variety most

* As surgeons call this slit a ring, we shall henceforth adopt that term.

common in women, called Femoral, or thigh rupture. Of this anon.

In the second plate, the superficial fascia and the tendinous expansion of the *external* oblique muscle are turned down on the thigh, and reveal the *internal oblique muscle*, and a small portion of what is called the *transverse muscle*, below it. These two muscles are not tendinous in structure, but fleshy and fibrous ; they go over the inner ring, which is formed in the fascia or membrane to be seen below or under them, and apparent only when the anatomist opens the belly and pushes his probe through the outer ring. The uses of these muscles, are similar to the external muscle with its tendon ; and they help, by their contraction, to prevent the protrusion of the bowel through the inner ring.

The small slip or ribbon-like portion of muscle proceeding as a branch from the internal oblique muscle, as well as a small slip from the tendon where the thigh and the belly join, is that muscle which enables us to raise the testicle slightly when we will to do so ; it does not form a part of the canal connecting the two rings, being only a flat strip or ribbon-like muscle. It is seen in the second plate to pass downwards through the slit in the external oblique muscle, which is bent down with the fascia, and to pass downwards and expand over the cord and the immediate envelope of the testicle. The sheath of the muscle and cord are both laid open in this plate, to show the cord going to the testicle. The bowel cannot pass under the investing coat of the testicle ; such a rupture would be impossible, as that membrane is very tough and resisting, causing great agony in bad cases of swelled testicle, because of its resistance to swelling. This suspensory muscle of the testicle, called *cremaster*, from a Greek word signifying to suspend, because it suspends the testicle, is one chief covering to the bowel when it descends into the scrotum or purse, and helps to prevent its greater enlargement.

The practical surgeon will observe a very considerable blood

vessel passing on the inner side of the internal ring, and of great importance to avoid when an operation is necessary for the strangulation of the bowel. To this we make no further allusion, for it is unnecessary in this popular explanation. If the bowel burst through the internal fascia by a rent, and do not insinuate itself into the internal ring, as it usually does more gradually, it is called a ventral rupture, or a direct rupture ; in this case, however, it still almost invariably appears at the external ring, because that is the only portion of the tendinous structure at the groin weak enough to admit it. This variety is, in appearance, like the most frequent or oblique groin rupture, with the exception of showing less obliquity, because it comes more directly forward—not following the oblique course of the canal.

By now referring again to the first plate, and looking at the oval slit in the thigh, through which a branched vein passes, and the two great blood-vessels of the thighs, partly visible behind it, the reader will see where the femoral or thigh rupture usually appears ; chiefly in females, because the opening and its sheath, through which these great blood-vessels pass to the thigh, is in their sex much more accessible to the intestinal protrusion, from the greater width and flare of the pelvis or bony cavity of the body, designed to facilitate child-bearing. This opening for the sheath of these blood-vessels we cannot show in the plate, for it opens directly upwards into the pelvis or bony basin of the body. It is the greater diameter of this bony cavity of the body that gives the breadth of the hips in woman. The frequency of the groin rupture in the male is, for a like reason, due to the greater size of the canal through which the cord passes ; a much smaller canal in the female, only giving passage to a small ligament to steady the womb and keep it from turning backwards ; still both sexes are occasionally liable to either variety of rupture, because both have the openings in the membranes and tendon and their connecting canal.

Where the thigh rupture exists, it is rather lower down

than the groin rupture, and has fewer coverings—generally only the skin and the superficial fascia of the thigh, which may be said to be a continuation of the one first described as investing the belly ; the junction of these membranes is at the meeting of the thigh and belly, where a very great strengthening of the two exists, called, from its first describer, Poupart's ligament.

We have now described the anatomy of the three chief varieties of rupture, and have yet only to speak of the umbilical or navel rupture. This is common in infants, as well as the groin rupture, and if carefully trussed, both will always be cured ; as the child grows, the opening will heal up : in corpulent women this variety of rupture often attains a great size, and demands much ingenuity to cause it to be retained by the best truss. The reader will recollect that the navel of the child performs, during gestation, the same office that the canal in the male does—allowing blood-vessels to pass. The mother's blood passes through it to the child, and the used blood back from the child to the mother : at birth, this is interrupted in consequence, but constitutional weakness in the infant, and much crying, causes the bowel to protrude before the opening becomes consolidated.

It may be thought irrelevant to my object to give any cautionary directions with regard to the mode of reducing rupture, or putting it back into the belly ; but I cannot, from my knowledge of the humanity of the medical profession, believe that the valuable suggestions derived from their instructions by myself, will be other than grateful to their feelings if extensively communicated in this tract.

On reflecting upon the uses of the membranes that envelope the body and thigh, and again recurring to the plate, it will be seen that they all meet in the groin, where the most frequent and troublesome varieties of rupture occur. The opening in the top of the thigh, as well as the one in front of it, where the thigh rupture appears, and also both the openings in the groin, may all be relaxed, even when they are grip-

ping tightly the protruded bowel, by a mere change of the position of the body ! This may allow the protruded bowel quietly to slip back into the belly, and save the person from a terrible operation.

By lying down, so that the weight of the superincumbent bowels is removed and prevented pressing on the portion of intestine already passed through the rings, and gripped by their edges, and then bending the thigh at the knee, and towards the other, whilst the legs are elevated and resting against the wall, the entire membranous structure at the groin is relaxed, and the grip of the ring on the bowel taken off, so that it can be gently pushed back by gathering the swelling like a piece of putty or dough, between the fingers.

Surgeons use the warm bath and give opium extensively for the same purpose ; often bleeding the patient to fainting, so as to relax the muscles and tendinous parts. How much better if this simple plan succeed ! The patient can then apply his truss, and is relieved for that time. It should always be tried ; children should be taught it in school.

The causes that predispose so many of the human family to rupture, undoubtedly exist in predisposition from similar formation of the walls of the belly to the peculiar race to which the patient belongs. Whole families have it, and others, equally numerous, are exempt. Severe and too early exertions after long-continued and exhausting sickness, greatly predispose to it. The openings are thereby relaxed, and the feeble body, demanding the sudden contraction of the muscles that encircle it, so as to keep it steady on the legs for the immediate execution of the movement intended, such as striking with an axe or trowel, walking, but above all, bending and lifting, or jumping, demands the necessity of a full breath for a stimulus to action. This requires the descent of the diaphragm, the great dividing and breathing muscle within the body, so as to enlarge the cavity where the lungs exist, and admit the increased quantity of air ; the intestines are thus compressed on all sides, except the very

place where the belly is weakest in the individual predisposed to rupture, and out comes the bowel, often with a rush ; there the truss must supply what the muscle and tendinous structures do not : the breach must be strengthened for the time, and healed if possible, or the patient will ever be a ruptured man.

Having now explained the natural structure involved in the disease, we shall give two plates showing its appearance when fully formed and requiring the support of a truss. Plate 3d shows the most frequent variety of rupture, or that which comes down from the belly through all three of the apertures described, figured in the 1st, and when "complete," as surgeons say, effects a lodgement in the scrotum or purse of the testicles, either on one or both sides, constituting single or double rupture. We would have the reader understand that the protruded bowel does not lie immediately in contact with the testicles, each of them having, in the adult, its own proper sack or investing membrane perfectly closed at the top. The bowel lies in front, and outside of this sack, covered first by the general investing sack of the bowels, which it pushes before it through all the holes, and then secondly by the muscle that raises the testicle ; these two are enclosed in that cylindrical portion of the first-described or superficial fascia, continued downwards from the edges of the external ring : these are its three sacks, and they lie directly under the skin, and it is there that the surgeon has to cut it open, so as to divide the edges of the rings when the rupture is strangled.

The three coverings generally prevent the enlargement of the bowel to a greater size than a hen's or goose's egg ; but it sometimes, in persons whose constitutional fibre is weak, becomes as large as a child's head. Gibbon, the historian, had one of enormous magnitude, being computed to contain nearly all the intestines, the belly being almost empty. Strange to say, nature, from the necessity of the case, accommodates all to the great exigency : the bowels in these

old and voluminous cases moving with more or less regularity, and the person living along in a very wretched and miserable way.

Nor yet are these great ruptures by any means the most dangerous ; because from their long-continued existence the openings become very lax and flabby, and do not grip the bowel so tightly as to obstruct its contents from passing through the intestine. Small ruptures in strong people, and especially those which are very suddenly formed from jumping, lifting, and other mechanical exertions, and from violent coughing, are by far most liable to sudden inflammation and strangulation, as surgeons call it ; rendering prompt measures necessary for their replacement within the belly. It will be observed, that the groin rupture shown in the third plate is rather of an oval form, going obliquely from the belly *above* the highest part of the thigh. It passes in that direction, and is of that shape, because it is obliged to enter at the *internal* ring or slit, and go through all three of the natural openings, connected as they are by their own peculiar membranous canal *within* the groin and under the skin and fascia, as well as that *without* the external ring, investing the cord.

When the rupture forces its way by a rent in the inner membrane, and then passes straight forward through the *external* ring into the cylinder, or muscle and membrane investing the cord, it is at first not of so oval a form, or in other words, the groin is not swollen so far outwards towards the hip ; the rupture, however, assuming nearly the same appearance when it finally passes into the purse in front of the testicle. This variety is what is called direct rupture, in contradistinction to oblique : it is often called ventral or belly rupture by surgeons. This term, however, would apply with more force to a rupture bursting through some other part of the belly.

Children are very liable to be ruptured immediately after birth. In such cases the sack of the testicle is not generally

closed, and the bowel finds a ready access to it through the relaxed ring. Such cases can be immediately trussed by a skillful selection and adaptation of a properly-constructed instrument ; nor should they be neglected for a single day. In this city I have known very young infants obliged to undergo the formidable operation for rupture. They are constantly liable to its great increase and strangulation from the fretfulness produced by the stoppage of the bowels ; they are alalways more irritable than other children from the constitutional feebleness that caused the rupture. I think I may say that every child, when carefully trussed with a simple truss, will get well before it can run, if its health is kept up by judicious feeding, and never allowing the rupture to descend, either asleep or awake. The truss should be so carefully made that the child can lie as well with it as without it.

In adults there is a very common and troublesome disease of the vein of the left testicle, called *varicocele*, from two Greek words signifying a vein and a tumor, that is often mistaken for a rupture, and a truss very improperly applied. It feels like a bundle of earthworms under the skin, and, for certain anatomical reasons, is always on the left side. Some persons contend that a truss is serviceable for varicocele ; but such an idea can never be entertained by any one whose knowledge is founded on the structure and functions of the veins ; for they are the only means of returning the blood to the heart from the testicles. Pressure, therefore, by a truss, must necessarily aggravate the disease, and give the patient greater distress.

In varicocele, when the person lies down for half an hour or so, the veins always empty themselves. In hernia, though this is often the case, it is not invariably so, as the rupture often has contracted adhesions ; and if it have not, the mouth of the slit through which it protrudes is so small, that assistance is necessary to push it back with the fingers ; but blood can pass readily when the patient lies down, through an opening, where the bowel cannot be returned into the belly.

Surgeons, therefore, avail themselves of this knowledge, and often recommend the patient to test the nature of the disease in this way : After the vein of the varicocele is thus emptied, the patient, *whilst lying down*, places his fingers, with moderately firm pressure, directly over the cord against the groin on that side ; then he is to get on his feet. The pressure prevents any of the contained blood from falling back into the vein when he arises, as that is more readily compressed than the artery, which, being smaller and stouter in its coats, and going directly by the side of the vein, continues under the influence of the heart's regular beat, and thus supplies the testicle with blood. This blood readily enters the vein *below* the pressure of the finger, because it is necessary it should return, and thus reproduces the varicocele, with its peculiar feel of earth-worms under the skin. The bowel, the reader will perceive, when it has slipped back into the belly, if the case be a rupture, cannot get past the continued pressure of the fingers to drop again into the scrotum or purse, and so the case is detected.

All these measures should be known to the practical truss-maker, because people are often very careless about consulting a surgeon, and the instrument maker is often severely blamed for an error he might have avoided, by care in acquiring the knowledge necessary to a conscientious discharge of his important duties. We have known trusses applied for abcesses forming within the tendinous structures of the body and back-bone, and pointing in the groin ; for hydrocele or dropsy of the scrotum, and for swelled testicle ; for buboes or swollen glands in the groin they have often been applied. All these errors are disgraceful to the artisan, and serve to bring discredit upon a most useful department of mechanical surgery.

When a rupture first appears in the inguinal canal or groin, particularly if it form gradually, it presents nothing more than a slight fullness of that side. Indeed the patient can better satisfy himself of its existence by feeling it, than look-

ing for the fullness. On coughing, which presses the bowels suddenly downwards, an impulse is given to it which is suddenly felt in the groin. This fullness may or may not gradually enlarge ; yet sooner or later, if the patient do not take the precaution to support the part with a truss, some false step, violent sneezing, or lifting, may cause a knuckle or loop of the intestine to descend into the external ring and into the scrotum, constituting the complete rupture, and subjecting him to the greatest danger from the strangulation of the loop of bowel, and the consequent stoppage of the evacuations. In ruptures that occur suddenly for the first time, the patient should lie down on his back ; put two or three pillows under his hips, and, bending the thighs, with the feet resting on the foot-board, and the thigh bent towards the other one opposite to that on which the rupture is apparent, gently grasp the swelling below with both hands, and work its contents towards the groin upwards and outwards. If after a while, say fifteen minutes or half an hour, he cannot get it back, he should get into a warm bath of 110 degrees, and lie there till he is faint ; working it up as before, or getting some gentle person to do it for him. If this will not answer, he should at once send for a physician or surgeon, as he is in too imminent danger to trifle with himself. At present, the practice of giving large doses of opium has almost rendered an operation unnecessary in recent cases of rupture. We repeat these directions because of their great importance.

If the bowel have been long in the scrotum and have contracted adhesions there, it cannot, of course, be put back into the belly ; neither can an ordinary truss be used; because its object is to keep the ring shut by its pressure, and that is permanently distended by the bowel. Persons thus situated, are always in danger from constipation of the bowels, and over-exertion in labor or walking ; all that can be done for their comfort and safety is to keep the bowels free, and to support the enlarged scrotum with a bag-truss or

suspensory bandage, fastened to a strap, encircling the body above the hip. [See the article on Varicocele.]

We give two plates, illustrative of complete rupture. The first is the oblique groin or inguinal rupture ; the second, the femoral or thigh rupture. The plates need no explanation ; they only show the external appearance. All the anatomy we have explained, is, of course, under the skin.

All the reader has to do to comprehend the umbilical or navel rupture, is merely to transfer mentally the swelling or protrusion, greater or lesser in size, to the navel, and to imagine it rather more circular than either of the others.

A ventral or belly rupture, from a sudden rent, may be suspected when a swelling suddenly originates anywhere in the belly after a violent exertion ; it will, most probably, be round. The event, however, is rare.

Femoral or thigh rupture, as well as that of the groin, is very often suspected from the sudden enlargement by congestion of their blood, of one of those little roundish and ovoid bodies, depicted in the right thigh of plate first : these are called glands, and frequently enlarge from irritable wounds of the thigh and foot, and sometimes from jumping. In such cases they exist, almost always in one of the glands that are situated lowest, and running *across* the thigh. for the lower tier of glands are always connected with the absorbents of the leg and thigh. When the enlargement originates from venereal disease, it is generally situated in one of the highest glands, or the upper tier in the groin, because these upper glands are connected with the absorbents of the penis, where the poisoned sore or chancre is usually situated. [See the plate.] The swelling in the case of a scratch or sore on the leg, or in venereal disease, may always be suspected to originate therefrom ; but when from jumping, it is much more difficult to determine, as rupture is also often produced by that exercise. If a sudden impulse on coughing is communicated to the finger placed over the enlargement, it is probably a rupture.

MARSH'S

NEW TRUSS FOR THE PERMANENT CURE OF RUPTURE.

With a knowledge of the fact, that one-tenth of the male population are afflicted with rupture, it can hardly excite surprise that the author should have been desirous of hastening the process which is the known method nature adopts, in effecting the occasional closure of the abdominal openings, when aided by a good ordinary truss. Whilst applying for years the favorite instrument invented by his late father, he occasionally observed a complete cure of a case that was of recent occurrence, and now and then even of a most hopeless one. As is known to all surgeons, this process consisted in the production and maintenance in the canal and its openings, of the adhesive inflammation; whereby the canal became glued together by the adhesion of its sides, and effectually kept the bowel from descending. It was evident enough that the only reason why these cases were not far more frequent was, that the bowel was not kept from descending, even for one minute of time—long enough to allow the consolidation of the tender incipient adhesions, so that they could resist the pressure on the bowel, when the truss was thoughtlessly removed, and the patient was on his feet. A great variety of methods were tried with trusses, consisting of more than one pad, so as mutually to aid in keeping out the bowel, and maintaining the adhesive inflammation by means of irritating pressure. More or less success attended the various trials, until the happy thought of the ring pad and its concentric adjunct, the ball, to maintain the irritation, occurred to him, and he instantly saw with delight the full consummation of all his efforts. It was evident enough, that no more efficient obstruction to the gut could be given, and a pad of no other shape be more immovable than an oval

ring an inch and a-half, or three quarters, attached to a good spring by a pinion and screw that would admit of its lying in any degree of obliquity over the canal, that might be required by individuals of varied fleshiness and anatomical proportion. The oval ring, by the resilient power of the skin and elastic serous and fatty tissues springing up within and around its circles, would effectually keep it in its place over the canal; and, moreover, maintain two separate and complete sectional pressures, as nearly as possible over the inner and outer opening of the canal. Then, whilst the bowel was effectually kept from entering the canal by such steady and equable pressure as the patient could bear, it was evident enough that a solid and ovoid pad attached to a smaller spring, and that attached in turn to the greater one and its ring pad, might be made to make pressure within the ring and directly over the canal, so as to excite inflammation, and the degree of that pressure and inflammation be completely governed by a screw, and regulated by the patient's knowledge of his ability to endure it. The complete adaptation and beautiful construction of this truss, has met the approbation of every practical surgeon who has examined it. Indeed, it is evident, by a mere glance at the plate, that it will answer the desired purpose.

A plate of the truss, as applied to the canal, is appended, and will answer equally well to explain the application of any of the other trusses that may be required. The writer makes it a special business to apply pads of a construction adapted to any emergency. It is well known that peculiarities of conformation render this necessary; and many cases admit of no other treatment than support—a cure being ont of the question—either because the intestine has acquired adhesion to the sack, or for the reason that the large size and long continuance of the rupture, has made the rings and their connecting canal so large, that they are, as it were, all turned into one large opening : *i. e*, both rings are dragged opposite each other, and that side of the belly has become

perfectly baggy and pendulous. Many of these cases require instruments adapted to the part; and to all such S. M. Marsh yields his undivided attention till successful. Instruments are made and sent to the most complicated cases, provided the description of the parts be accurately given, or what is better, a simple plaster cast of them sent. The following method should be adopted in giving the circumference of the body: The patient should stand erect against the wall, and then pass a piece of broad tape from directly over the base of the penis around the hips, letting it meet the other end at the starting place; cut it off and mark it with ink—*Pubic circumference.* Take another piece of similar tape and pass it directly round the body, beginning and ending at the navel; mark this—*Abdominal measurement.* State whether the rupture be reducible, or whether it can be made to disappear entirely on lying down. If not, and it remain permanently in the scrotum or bag, give the circumference of the scrotum also by a piece of tape: this will enable the maker to adapt the best support the case admits of. India rubber elastic net sacks are adapted to a circular truss, or to shoulder straps, and will yield a comfortable support in many cases now judged to be beyond aid.

Every variety of truss is kept constantly on hand. A large assortment of Marsh's old truss, so long esteemed by the farming and laboring population of our country, at low prices and of most excellent quality. In short, it is the pride of the author to have the business to which he has devoted his life fulfill the every want of humanity and science.

FALLING OF THE WOMB.

ITS CAUSES, ANATOMY AND SYMPTOMS.

MARSH'S

UTERO-ABDOMINAL SUPPORTER.

From exhaustion of the constitutional powers consequent on early marriage and child-bearing, and domestic care and confinement, falling of the womb is an evil of as great frequency of occurrence in woman, as rupture and varicocele in men. Indeed, it may be said to run parallel to those diseases, and to be the chief cause of that lassitude and early decay of the life-powers so observable in our countrywomen. It is not my object to go into detail on its causes and treatment. That has been rendered needless by the many valuable essays of those who are far better adapted to the duty. Enough, however, must be said of its causes and symptoms, to give the unprofessional reader some idea of the value of properly-adapted instrumental support, if she would avail herself of what her natural instincts assure her, is the best method to effect a cure, viz., to take sufficient exercise to enable her to desire and digest enough wholesome food, to replace the blood lost by the exhausting discharges attendant on the disease.

Whatever tends to exhaust the nervous system, whether tight lacing, late hours, excessive dancing in unventilated rooms, sleeping on feathers in close chambers, irregular meals and bad cooking, excessive attachment to the pleasures of matrimony—all these will prove powerful predisposing causes, and often bring on the disease without any more immediate exciting cause : even single women often have it. But when we come to consider, in addition to all these

causes, a badly-managed accouchement, the extreme difficulty of getting faithful servants, and too early attempts to resume the exhausting duties of domestic life, before the womb has resumed its natural weight and size, it need excite little surprise that the disease should prove a terrible scourge to our countrywomen.

A very slight degree of prolapsus will often cause in nervously excitable persons, a great number of very distressing symptoms ; whilst it requires a much greater displacement to seriously annoy those of stronger fibre and less impressionable nerves. It is very singular that this should not be apparent to so many persons, who have no sympathy for what they often call mere nervousness. Surely, when we consider the wonderful functions of the womb, and its sudden and often dreadfully-painful call to evacuate its contents, together with the new call upon the system for those nameless anxieties that often accompany an accouchement, it is hardly to be wondered at that a feeble woman should become greatly susceptible from so important a matter as the displacement of the womb from its natural position, and the consequent drag that the enlarged organ must exert upon its ligaments and nerves, with their extensive sympathies with every other organ of the body.

The womb is but slightly sustained, if at all, by what are called its ligaments, as they are not attached *above* its most superior part, but into its sides ; they are devoted to the conveying of its tubes from the ovaria or egg beds, and to sustain it in its central position. Two of these ligaments go forward to the pubes through a canal similar to the one described in the male as giving transit to the cords, and are inserted into the pubic bone ; they prevent the organ from retroverting when the bladder is distended, as that organ is situated before the womb ; the lower bowel being also often distended, calls upon the two broad ligaments stretching crosswise in the pelvis or bony basin of the body, to prevent the womb from anteversion, or pitching forwards. Both

these conditions, however, as well as prolapsus, are often consequent upon exhaustion of the life-powers from confinement and too early rising, aided by temporary distension of the bladder and bowel, as well as during gestation ; from the increased weight of the organ and its contents, aided by the aforesaid conditions.

It is not possible nor desirable in this place to explain at length the causes and treatment of these affections. Prolapsus, or falling of the organ, being the far more frequent condition, is that for which we have adapted our improved supporter as an aid towards a cure.

The principal support of the womb below, is the vagina or passage that leads to and encircles its neck ; which projects into it for a half or three quarters of an inch. The vagina is attached at this height all round it, with the exception of a third of its posterior circle, into which it is much higher in its attachment. The extensive mucous surface of this lower passage, possesses its own peculiar liabilities to exhausting discharges ; these relax and weaken its power to sustain the womb, which is consequently allowed to settle downwards ; its neck lodging upon the lower part of the circumference of the vagina, now operates as a mechanical irritant, and increases the discharge already existing there ; and thus the local weakness receives an important aid for the increase of the disease. Besides even this, the uterus itself has its own internal diseases, being lined with the same mucous membrane ; moreover, its neck within the passage leading to its cavity, is is lined with glands that are very liable to white discharges, similar to those of the vagina : these are often aggravated by a thousand causes connected with her every day life, alternately elevating and depressing in character. This affection, however, demands surgical treatnent.

The loss of tone affecting the whole body, produces a assitude that incites to quiet ; the intestines often become onstipated, and their contents accumulating, their increased

weight causes them to drag upon their ligaments within the body, which suspend them in loops from the back bone. These become relaxed, and let the bowels fall directly upon the womb and bladder, pressing the former down on the vagina and the lower bowel, and retroverting the bladder it presses against both—so that there is a constant disposition for the contents of the belly to escape from the two passages, and the patient is in a very miserable condition.

Important nerves, connecting sympathetically all the internal organs, are deranged in their functions of associating them in their just relations, and the appetite, sleep and respiration suffer ; the monthly periods either become too scanty from the profuse white discharge taking in a measure, their place—or else too profuse from the flabby and relaxed condition of the internal lining of the womb, and the patient finally gets congestion of the liver and piles, and eventually a hectic cough, and is at last a confirmed invalid. She is often supposed consumptive, when there is not the slightest real symptom of that disease in the case—all being the legitimate consequence of prolapsus of the womb.

The womb, indeed, is the microcosm of woman's entire nature, and instantly responds to every sympathy of her heart and every error of life, consequent upon her social position.

How dreadful the frightful consequences of abortion on our female population ! Let any one look at the enormous increase of still births, as shown in the City Inspector's report, remembering that those only that attain nearly the full period are registered, and he will become satisfied that some dreadful cause is secretly at work to produce so sickening a result. It is the constitutional feebleness of the uterine system, and prolapsus and debility accompanying the earlier periods of gestation following frequent abortions, that produce these still births. But the author must not forget his business purpose : the involuntary betrayal into the enumer

ation of the causes, originated from the consciousness that even the best mechanical support is but a poor substitute for the equalizing influence on the forces of the human body, of all the harmonies of our present existence ; and the author scorns the idea of presenting his instrument as a cure-all. Medical men devoted to the philosophical practice of their profession, always deprecate the necessity of mechanical support for the uterus ; but in every aggravated case they are forced to adopt it, because the displacement of the womb produces such a rapid increase of all the symptoms attendant upon it, that the patient becomes unmanageable in any other way.

It used to be customary to recommend them constantly to lie down, and thus to check the immediate increase of the prolapsus ; but this, it was soon found, acted most perniciously on the mind and appetite. The action of the lungs being reduced to its minimum, so little food was required to supply the waste, that the body demanded and received no new supply of material. Increased breathing and food must precede all earnest efforts of nature to repair her chronic affections.

Now, the point of this enumeration of the evils attendant upon prolapsus is this : So long as this great depression of the vital force exists, the patient has no disposition for exercise ; indeed, a few steps often utterly exhaust her,—when, if the bowels were properly sustained, and the womb assisted to maintain its position, the patient could be advantageously treated by the means of service in other exhausting complaints—tonics, diet, exercise, &c. Whatever may be said against mechanical support, every day's experience adds to the conviction of every thinking man, of its importance. Indeed, the practical operation of a well-constructed supporter, is to put the patient on her feet. Thousands using it are now assisting themselves and their families, who would otherwise be as good as bed-ridden.

When the womb is prolapsed, the patient experiences great

weariness in the loins and a constant dragging sensation, with pain in the thighs and back, loss of appetite, and disgust at objects that formerly pleased ; pains and cramps in the legs, irregular sleep, confusion of ideas, head-ache, and often profuse white or colored discharge—in short, all the symptoms of lassitude and nervous exhaustion that one may so easily imagine should characterize the great centre of life-giving—of creative power. The woman, instead of an elastic step, and an eye speaking love and maternity, becomes a mere thing of life—dragging out an existence distasteful to herself and all around her. By a strange instinct of nature, that looks for and responds to perfection in his mate, even the sympathy of man is denied her. We know, from conversation with medical men whose humanitary feelings are ever active, that such patients are instinctively avoided.

To aid them in restoring health, and to render their patients susceptible to other treatment, we have spent much time in improving the utero-abdominal supporter.

There are some points connected with the one we now offer, to which we would direct the careful attention of the profession. Firstly, of the abdominal or front pad—the one designed to hold up the intestines and prevent their settling down on the womb.

Upon looking at the contour of the pubes and inguinal regions, and the distribution of the mass of intestines beneath these divisions of the abdomen, it will be sufficiently evident that pressure directed in front only, could not possibly give the comfortable and effectual support that follows its application to either groin. When thus applied, the two points of pressure from the front pads pressing upwards and inwards, concentrate their action at the region of the navel ; that is to say, they lift the bowels upwards directly towards the diaphragm and the spinal column, where the ligaments which suspend their coils are attached. The two pads being united in front by a broad gum-elastic band, gives them adaptiveness to the skin and pliability over the pubes, where most uncom-

fortable pressure is made by the single pad so commonly in use.

The back pads being also two in number, and situated on each side of the spine, prevent similar pressure on the projecting vertebræ, whilst they furnish double points for the support of the spring encircling the pelvis.

The perineal pad has its peculiar excellence in the cleft and diverging straps that attach it to the front ones, and requires only a glance at the plate to see the great superiority such an arrangement must possess over any other plan. In short, we believe that the instrument only requires to be estimated on its intrinsic merits, to meet the universal acceptance of the profession.

The plate shows its application and enough of its construction to aid in forming an idea of its adaptation to the condition of the bowels we have ventured to point out, as we find it admitted by all who have made the disease a subject of study. To those who have hitherto been opposed to mechanical appliances for this disease, we would simply say, read the best authors on obstetrics, examine your patients' actual condition, and we hope you will find our instrument a valuable adjunct to your other treatment.

The utero-abdominal supporter was invented by Dr. Edward H. Dixon, who published an essay and plate on the subject in Dr. Webster's United States Journal, published in this city in 1832; since that period, a great variety of improvements have been made. The best evidence we can present of the excellence of our own suggestion may be found in the fact, that the inventor now authorises us to say that he uses our instrument to the exclusion of his own, reserving its use for cases of complete procidentia. Indeed it was originally designed for that purpose exclusively for a patient of the Doctors, when it fell under the observation of the late Dr. Amos G. Hull, in whose workroom the first instrument was made by Dr. Dixon.

MARSH'S

IMPROVED ELASTIC SUSPENDER

SHOULDER-BRACE.

It is very evident to the poorest observer, that many children differ essentially in the bony framework of their bodies from the very commencement of life. Some have remarkably full chests, and often, even in early infancy, carry themselves like little men and women. Such, it will always be observed, have their lips and finger ends rosy with blood ; their eyes sparkle, as it were, and are not glazed and shiny, like consumptives ; blue veins are not to be seen distinctly in their temples, because these show debility of the tissues both of the veins and skin ; they are thin, and readily show the dark-colored and sluggishly-moving blood. Persons who have originated from such beginnings, are always poor breathers and digesters of food ; the white tissues, as surgeons say, are sufficiently supplied with albumen, but the red tissues or muscular parts lack azote, which is a more highly-animalized material ; azote is produced by breathing.

It always happens in these weakly children, that the earthy matter or lime of the bones is deficient, and they bend, causing curved spines and collar-bones. The collar-bones are designed to keep the shoulders back and at their proper distance. If they bend from debility of their bony structure, the shoulders invade the breast-bone, and the person becomes round-shouldered. Now, the same arguments apply to the

use of mechanical means to keep the shoulders apart, as to prolapsus of the womb. With a properly-constructed brace the patient feels able to exercise ; without it, he does not, of course, because it fatigues him to draw a full breath. It greatly aids in hastening his recovery ; for increased breathing and digestion is to give the material necessary for the cure. In the sedentary pursuits of young persons, particularly females that sew, nothing can be more serviceable than a well-constructed shoulder-brace. The body is sustained, and every function better performed ; breathing governs them all ; and it is absurd to suppose the person can draw as full a breath if she has each time to raise the almost leaden weight of the super-incumbent shoulders, and the dragging arms unavoidably approximated whilst using the needle, and holding her work. Let any one stand erect and throw back his shoulders, and then take a full breath ; he will soon perceive the difference in the volume of air expelled in such a position, and after equally as determined an effort, when the arms are approximated and the spine bent.

If such results follow the brace when applied to the collar-bone, how much more necessary must it be, when a feeble constitution and too early confinement to those shocking relics of a barbarous age—the school-bench without a back, or the equally cruel sampler or patchwork, that often disgraces the mother's intelligence in the nursery—gives the spinal column an unsightly curvature, and often a permanent deformity by the absorption of one side of a vertebra ? In such cases, any aid that can assist the lungs is to be called in. In actual ulceration of the vertebræ, vertical supports are used, resting upon pads adapted to the projecting hip or share-bone. They are kept in place by a slight belt encircling the body ; and in bad cases there is a corresponding pad under the armpit. These, however, are only necessary in those cases where the spinal column is seriously impaired by tubercular or scrofulous disease of the bones. In such cases, our improved apparatus will be found of unspeakable importance. Many an unfor-

tunate child might be restored with comparatively little deformity, if the use of this instrument was adopted early enough to allow free exercise in the open air, and nourishing food, instead of the barbarous issue, and low diet, and confinement. S. N. M. expresses these sentiments freely, for he knows them to be held, nay, he has derived his conviction from the first surgeons of our country. But here a caution may be needful to such as are not familiar with the great difference in the instruments for spinal curvature. Every proposition that in any way cripples the action of the lungs must be prejudicial to the wearer. There is on sale in this city a complete coat of mail, or rather, a machine to incase the entire chest, with jointed plates of brass! It is called a supporter, and has been used in many cases of scrofulous affections of the vertebræ, attended with actual hectic! Can there be a more shocking illustration of the necessity of popular instruction? What are the lungs made for? Are they not to give life and life-blood to the frame? Can the tender, sickly, scrofulous child be supposed to endure such manacles to its feeble breathing muscles without dreadful injury? Why, it amounts to this: Put a weight upon the chest, and hoop it with unyielding metal, and then command nature to resist the oppression, and to increase the required supply of air in spite of it! There should be no obstruction, however slight, to the free elevation of the anterior part of the chest—we mean the shoulder-blades at the base of the neck, the breast-bone, and the ribs; for that is the only process by which air can enter the lungs, and without renewed and increased quantities of air, the process of healing can never go on, tubercular or scrofulous matter can never be absorbed—nor new bone deposited to heal the cavity in the bones of the spine.

The appendage of suspenders to the shoulder-brace for the adult, will be found in no way to oppress the lungs, for their point of action is concentrated at the top of the spine; they are not adapted to the instrument for spinal diseases.

VARICOCELE: ITS CAUSES.—SUSPENSORY BANDAGES.

WHENEVER we attempt to explain the causes of disease, we are compelled to speak of the loss of tone or power of contraction in the blood-vessels of the part in which the disease exists. A loss of tone in the ligaments suspending the bowels to the back-bone, lets them settle down so low that they slip through an opening in the tendons, designed for the transmission of the cord in the male, and the round ligament of the womb in the female ; the tone or power of contractility of the tendon in which the opening exists has also been impaired, or it would not permit the bowel to pass. In varicocele, (a term derived from a Latin and a Greek word signifying a vein and a tumor,) the vein appointed to carry back the blood from the left testicle loses its tone, and it becomes distended with blood, thus forcing its valves apart, so that what feeble power is left it, cannot raise the blood, and the gorged vein becomes convoluted on itself like a bundle of earth-worms in the scrotum or bag containing the testicles.

The reason why the left testicle is almost always the only one affected, is because the vein, unlike that of the right one, is not inserted at an acute and favorable angle into the great ascending vein of the body, so that the blood can pass easily into it, but opens its mouth into another vein situated at right angles with this great vein ; thus it finds a difficulty in entering it, and produces varicocele by its weight.

This disease is usually brought on by too much exercise on foot or by severe labor, or venereal excess or self-abuse. All these impair the tone of the veins, and prevent the return of the blood to the heart from the testicle, where it has been used for the production of semen.

The secretion of that important gland being thus impaired and diminished, all the immediate consequences do not at

once appear; the greater number of these persons, at least one-third of the male human family in city life, being still capable of procreating their species, although not in their intended perfection.

The sympathetic affections of the body and mind, are often of a very serious character ; more especially in those cases wherein the habits of excess and self-abuse that originally produced the disease are continued. Great weariness in the loins and weakness in the knees, pains in the breast, confusion of ideas and incapacity to attend to business, disinclination for society and disgust with themselves, attend the disease. In some cases a perfect monomania on the subject of imagined loss of virility exists, and the patient demands of the surgeon a radical cure, even at the cost of removing the testicle. This, however, is unnecessary. Those cases which are too far advanced to be cured by the mechanical means of support and compression, with cold water baths to the part, may be cured by several operations of greater or less severity. A very beautiful and perfectly safe method, so far as the life of the patient or the integrity of the gland is concerned, has been extensively practiced by Dr. Dixon of this city, the editor of the Scalpel. It consists in carefully excluding the excretory duct of the testicle, and then passing two hare-lip pins under the affected veins, thus enclosing them between the pins and the skin, and compressing them by means of a simple mechanical contrivance, to increase the pressure. A few weeks will then effect a cure of severe cases that embitter the patient's life. The support and compression of the entire scrotum, by means of a well-constructed silk and India-rubber net purse attached to an appropriate strap, will suffice in a great majority of cases, with the use of cold water and attention to the bowels, in effecting great alleviation, and render an operation unnecessary. Such an instrument of admirable construction we have imported from France, where they are made with more attention to their object of fitness and compression, than the more careless article hitherto in use in this

country. We feel confident that the approbation of the profession and all who require them, will follow the use of the very beautiful article we present, at a price so reasonable that all may use it.

VARICOSE OR ENLARGED AND KNOTTED VEINS IN THE LEGS.

Next to varicocele in frequency, is a similar condition of the veins of the legs. This occurs in persons who have been debilitated from disease of a tedious character, but more especially in such as have been afflicted with disease of the liver, producing hardness of that gland, and consequent pressure upon and obstruction of its numerous great veins. Obstruction existing there, in so large a portion of the internal venous system, its influence must necessarily be felt upon the flabby and relaxed coats of the veins of the legs, with more certainty and greater effect than even in varicocele, because the column of blood resting upon them and their relaxed valves is much greater—viz., the additional length of the entire thigh and leg—above the affected part. This often, however, comprises the entire veins of one or both legs, often extending above the knee and as high as the groin. In pregnant women the affection is common, from the pressure of the womb and its contents directly upon the great venous trunks in which all the veins of the legs concentrate, as they mount over the edge of the pelvis or bony basin of the body ; upon this edge, the womb compresses the two great ascending veins, one from each leg, and often causes most threatening and formidable *varices*, as surgeons call them ; the whole tissue connecting the muscles, arteries, and veins of the legs, becomes dropsical, because the watery parts of the blood, constituting by far its larger portion, as it is that which ena-

bles the solid parts to circulate, transudes through the pores of the vessels into the general connecting tissue of the limb.

Whenever the patient gets upon her feet this is much increased ; and if, through their great distension, any branch of a vein, however small, should burst, not only alarming bleeding might occur, but it would prove impossible for the dropsical and debilitated part, continually congested with blood, to heal : thus a permanent ulcer would occur, and the patient ever after have a great liability to its increase ; or even if did unite, it would, on the occurrence of debilitating disease or fever, re-open, and give such lasting trouble that even amputation might become necessary to preserve life, from the exhausting drain on the system : it has, indeed, often been done for varicose ulcers in the hospitals of this city.

To support the column of blood and prevent these evils, the LACED STOCKING, made of netted India-rubber, and fitting the limb almost like the natural skin, is presented to the profession and the afflicted. None can do amiss in using it, for it is the device of profound surgical skill, and is universally approved by all surgeons of intelligence throughout the world ; observe, it is not the invention of the author, by any means, having for some time been known to surgeons ; the troublesome and elaborate bandage had long been its only substitute, before that beneficent gift of Heaven, the India-rubber plant, and the art of weaving its juices into threads second only in elasticity to the natural skin—became known to man. Nothing can exceed the adaptation of this beautiful substance to every purpose of elastic mechanical support ; wherever the muscles or skin are debilitated, there it comes in play ; it is, as it were, another skin.

The great excellence of the imported article now offered, consists in the perfection of its workmanship—the elasticity being beautifully preserved, whilst the India-rubber thread is coated with flax thread, and the meshes are perfectly distinct, allowing the natural transpiration of the skin to pass off freely, and thus preserving the part from the relaxing effect of re-

tained perspiration. The lace is permeable to air, and the tone of the veins preserved by free exposure to air and the mechanical aid afforded the relaxed skin. Indeed it may be said with propriety to be the best substitute for the support of the natural skin.

We also have bandages of slighter compressing power, adapted to individual portions of the limb, as the knee and ankle, but that for the entire lower limb is far more often used : it will not answer to encircle a limb with much pressure, unless we begin at the toes, and continue it regularly above the diseased part over every inch of the skin. Every one knows that a ligature placed round the leg or arm, will prevent the return of blood by the veins, and if not removed the limb would become dropsical. Hence the necessity of great care in manufacturing the laced stocking, so that it will produce the most agreeable and equal pressure.

PROLAPSUS ANI ; OR, FALLING OF THE LOWER BOWEL.

Either original predisposition, or long-continued exhausting discharges from the mucous membrane of the bowels, or from other sickness, the great circular muscle that closes it becomes relaxed and weakened and allows that portion of the membrane lining the lower bowel or rectum, as surgeons call it, to fall down through the anus or outlet for one or more inches ; then it is partially gripped by the spasmodic contraction of its circular muscle, and when thus constricted it is very much in the same condition as the prolapsed knuckle of the bowel in rupture. It is not called a rupture, because no part is ruptured for its prolapsion ; it only falls through its natural outlet like the inverted finger of a glove. Several ingenious operations have been performed with success for this distressing displacement, but a much more agreeable re-

medy will be found in regulating the bowels, and in cold water, avoiding all stimulating drinks.

Pressure, however, if judiciously applied, will so far alleviate the condition, with those precautions, together with some slight astringent wash, as a solution of alum or tannin, that nature will gradually assume her rights, and the great sphincter muscle be restored to its natural condition. A jet of cold water being made to play against this part by a bent tube attached to a faucet where there is a head of water like our Croton, every morning and evening, will cure many of these cases. We have also this tube on sale.

S. N. Marsh has adapted pressure by means of a truss as well as a bandage to this part. It will be found a great comfort ; and in cases of women, who are extremely averse to surgical interference in that part of the body, a comforting resource to herself as well as her surgeon.

HÆMORRHOIDS OR PILES.

These tumors, caused, like varicocele, by the dilated veins of the lower bowel, gripped as in its prolapsus, are often so serious an annoyance as to embitter the whole life, and incapacitate the afflicted person from usefulness. The moment he gets upon his feet in the morning his misery begins, and every step sends the blood to the tumors, which are constricted by the sphincter or closing muscle, and he often has to lie down during the day and apply cold water, and push them back with the fingers. After a time, the system becomes so debilitated, that tubercles may form in the lungs, and throw the individual into a hopeless decline. They often become as large in bulk as a hen's egg, and when thickened and ulcerated, never disappear without a severe surgical operation.

Pressure and cold water have a similar result in many

cases as in prolapsus. When they are internal, a silver or hard wood ovoid ball may be introduced, and sustained by a suitable truss or bandage with great comfort, and in many cases with the comfortable hope of a cure. The new application of nitric acid, when applied by a competent surgical hand, will cure the worst cases that present themselves. Several severe cases have been reported by Dr. Dixon, in his Scalpel, as effectually cured by this process, and we should advise all those who have given pressure a fair trial to adopt it. In pregnancy, these tumors are apt to be greatly increased from the pressure of the enlarged womb, on the ascending or hæmorrhoidal veins of the bowel. In these cases the recumbent position during a portion of the day will generally relieve, and cold water will prove a great comfort.

A variety of apparatus is kept on hand for this affection. A plain statement of the case, with the circumference of the abdomen taken by a tape, as in the rupture at the groin, will enable S. N. M. to adapt such pressure as the case may require.

SPERMATORRHEA ; OR, NOCTURNAL SEMINAL EMISSIONS.—A NEW METHOD OF CURE.

It would really seem, from an estimate of the results of mechanical pressure on these regions of the body, the seat of exhausting discharges and consequent relaxation of their blood-vessels and ducts for the discharge of the secreted fluids, that healthy contractility in the various parts is the result, or rather the reaction against mechanical pressure. Is it theorising too far to say, that atmospheric pressure and the healthful contractility of the skin, proves that tone is the antagonism of a healthful contractile reaction against both? Expose but a small surface of the skin under an exhausted cupping-glass, and the tone is instantly gone, and the vessels

fill with blood. The nerve power that controls the contractility of a part is increased by heat which invites the blood to it, and diminished by cold, which contracts and drives it out. This cold, then, causes pressure. Now it is admitted, that when the distressing affection of spermatorrhea exists, an increased amount of blood goes to that part of the urethra nearest the bladder. This causes irritability of the part where the mouths of the two ducts open when they arrive in the urethra from the seminal vesicles into which the semen is deposited at the base of the bladder.

It unfortunately happens that the influence of the mind in lascivious thoughts has the power of sending an increase of blood to the genital organs, and thus the difficulty is perpetuated. The spinal nerves control the action of the erectile tissues, and when the patient lies on his back, the liability is increased, and in very irritable persons even a dream soon becomes unnecessary for these exhausting emissions, and the patient becomes so debilitated in mind and body as almost to become a lunatic. Nothing can be more pitiable than the mental and bodily imbecility of these persons. So morbidly sensitive do they become, that in a short time they are unwilling to communicate their case to a surgeon, and go rapidly downward into a condition often beyond the power of medical skill to relieve. There are cases that undoubtedly require the application of the nitrate of silver or other stimulating local agents, to reproduce the lost tone of the seminal ducts, more especially if the nervous system has been long affected ; but if the individual be willing to carry out perseveringly the required directions for his general health, pressure will undoubtdedly give the diseased action so great a check, that the constitution will react with most gratifying speed. It is no uncommon thing for two months to elapse without an emission on the first application of the instrument. In accepting the agency for the instrument for pressure, Marsh & Co. wish it distinctly understood, that they do it upon its acknowledged merits as the invention of a surgeon of high

professional standing in this city, and to keep it out of the hands of that rapacious empiricism that is so ready to appropriate the labors of others. Every order must enclose $15, with a description of the symptoms, mode of life, occupation, &c. In return, the instrument will be sent with full directions for use, a medical and dietetic letter of advice by the inventor, and such medicines as the case may require. Marsh & Co. cheerfully consent to this arrangement, because these cases are almost universally neglected, from the unwillingness of the patient to consult a surgeon, till the health and prospects of the individual are forever destroyed.

They confidently believe that such a course will meet the approbation of the profession, and that it is more desirable that such advice should emanate from a professional source of high character, than the unprincipled creatures who are ever ready to fleece the unfortunate. Marsh & Co. are responsible for money transmitted and attested by the postmaster, and for the transmission of the advice, instrument, and medicines, in any manner desired by the person who directs the order. Letters for this instrument only, must be addressed to "Medicus," care of Marsh & Co., box 3121 New York Post Office. All succeeding letters must contain five dollars ; but these will generally prove unnecessary, as the first will be comprehensive enough for all the purposes of dietetics, and the explanation and adjustment of the instrument, and contain full directions for the medicines. This is necessary, in order that they may meet the eye only, and receive immediate attention by the inventor. No other agent will be appointed in the country, so that Marsh & Co. are only responsible for instruments ordered of them.

N.B.—Should there be any delicacy in ordering the instrument, the patient may avoid the necessity of communicating his name by substituting a supposititious signature;—the money may, of course, be enclosed without the postmaster knowing the contents of the letter.

The instrument may be sent either by mail or express, as it is sealed up in a package. It would, however, come cheaper by express.

SEYMOUR'S GALVANIC SUPPORTER.

MARSH & CO., AGENTS.

MARSH & Co. are also agents for this simple and beautiful combination for conveying a constant current of electricity through the spinal nerves and the pelvic viscera. In a comprehensive and admirable hand-book on Galvanism and its application as a remedial agent in diseases of the womb, Dr. C. H. Cleveland, an accomplished physician, late of Waterbury, Vermont, remarks :

"During the past ten years the writer has been actively engaged in the practice of his profession in the country; and being so situated that all classes of cases fell under his notice and professional care, he was early led to form the opinion that the only reason why more than three-fourths of his patients (except during the prevalence of an epidemic,) were females, must be owing to the influence the female organs of reproduction exert upon the health of that class of persons. This opinion induced him to review all that he had read on the subject, and to feel an *especial* interest in those cases of disease which were obviously *caused*, or *modified* by derangements of the uterine functions, or disease of the uterus and appendages ; and, perhaps, also led to his seeing more than the proportion of such cases which usually come under the care of a country physician.

"At the time he entered the practice of medicine, the power of *Galvanism*, as a curative agent, was attracting a large share of the attention of the profession in Europe, and as he examined the Periodical Medical literature of the Old World, he became convinced that *if we could apply this agent in the proper manner*, it would prove a very valuable auxiliary to the ordinary methods of treatment.

"Electrical and Electro-Magnetic, and Galvano-Magnetic

Apparatuses, in various forms and modifications were tried, with sometimes satisfactory, but more frequently with very *un*satisfactory, results; and after a persevering trial of them had been made, as far as the *practice* was concerned, the matter was allowed to rest. Not so, however, in regard to reading and investigation. The pelvic organs, either from their being *without* the usual course or direct influence from medicines, or because the diseases from which they suffered had in a measure *paralyzed* them,—through the sluggish manner in which the blood circulated through their vessels, or because the *congestion* and hypertrophy induced so much pressure upon the few nerves which are distributed through that region,—and thus interfered with the due passage of the nervous influence along those nerves, it was found that in those cases when the powers of the general system were most impaired and least capable of enduring the effects of large doses of medicine, that the greatest amount of general medication was demanded, ere the pelvic organs would appear to be influenced by such remedies.

"Hence, doubtless, one great cause of the intractable character of such diseases, and the great need that some *local* means should be devised by which these organs could be roused from their inactive condition without producing derangement or disease in other parts of the system; and hence, also, the great advantage that many practitioners have derived from local counter-irritation in conjunction with their general treatment.

"As galvanism had proved the most powerful and efficient agent in rousing palsied limbs and muscles and nerves in other parts of the system, it was, even while not used, still looked to as the proper agent to produce the desired effect; and when, a few months since, the writer was shown *Seymour's Galvanic Abdominal Supporter*, he was fully satisfied that a new and valuable method of generating and applying this vivifying element had been devised, and he at once determined to make a trial of it. After a short but very satis-

factory trial of the Supporter, the writer became so much pleased with the results obtained, that he connected himself with the firm of H. Seymour & Co. in the manufacture and sale of the Supporter and other instruments, and has now prepared this little compilation, which he designs only for the use of the Scientific Practitioner, as a short and necessarily imperfect exposition of the opinions and experience of those who have tested the value of *Galvanism* as a curative agent, and also as an explanation of a part of the value and power of the Supporter,—the diseases in which it will be found useful, and the manner in which it is to be applied and used."

Marsh & Co. will send the "Hand-Book" gratis to all post-paid applicants. A constant supply of the instruments kept on hand. The measurements to be taken and sent by letter, as directed for groin rupture.

PALMER'S PATENT LEG.

MARSH & CO., AGENTS.

B. FRANK PALMER, inventor and manufacturer, 376 Chestnut-street, Philadelphia ; Messrs. Palmer & Co., proprietors and manufacturers for New England and New York, Burt's Building, Springfield, Mass. ; B. F. Palmer, A. S. Currier, E. D. Hudson, M.D.

This limb is composed of the lightest materials compatible with strength and durability. The joints, by novel contrivance of elastic cords, performing the office of muscles and tendons, allow of an easy, graceful motion, that by a little practice is soon made to correspond with the other limb, and so natural a gait is in a short time acquired, that the loss of the real leg would hardly be suspected.

It differs radically from all other artificial limbs, both in its mechanism and external appearance, being adapted to every

form of amputation, and successfully applied to the shortest and tenderest stumps. If amputation be below the knee, and the joint anchylosed, or too short to retain the use of the joint, perfect action is given by an artificial joint without elongating the thigh perceptibly. The peculiar characteristics of this limb, are life-like elasticity and flexibility, excessive lightness, durability, adaptability, and perfection of exterior appearance.

It possesses the true principle of VENTILATION, allowing *currents of air* to pass to the stump without sacrificing other *more important properties!*

"PALMER'S ARTIFICIAL LEG, as now improved, is superior to any other ever constructed, and merits for science and humanity the highest testimonial of the Institute"—(GOLD MEDAL).—*Last Report of the* AMERICAN INSTITUTE, *New York*, 1852.

"Mr. Palmer having already received two first premiums at former exhibitions, as well as the *Scott Legacy Medal*, from the Committee on Science and the Arts, the Committee do not deem any further award necessary, while at the same time they consider the deposit still fully sustains its position as the *best form* of Artificial Leg known."—*Franklin Institute, Philadelphia, Exhibition, Oct.*, 1852.

I have examined, carefully, the artificial Leg invented by Mr. B. Frank Palmer, of this country. Its construction is simple, and its execution is beautiful; and what is most important, those who have the misfortune to require a substitute for the natural limb, and the good fortune to possess it, all concur in bearing practical testimony to its superiority in comfort and utility.

VALENTINE MOTT,
Professor of Surgery in the New York University.
New York, January 29, 1851.

From the Scalpel.

THE success of this extraordinary piece of mechanism in carrying off the gold medal at the World's Fair of London, and the testimonials of praise from all the most distinguished surgeons of that city, is unprecedented in the history of Orthopedic mechanism. With the highest deference for their opinions, and the most thorough conviction of its great excellence, derived from the numerous certificates of those who use them, we have nevertheless examined with care the principles upon which it is constructed. When the courteous and gentlemanly Dr. Hudson (one of the partners) had fully explained to us the mechanism, we were at no loss to understand the *surprising harmony of its action with the sound limb.* In the best of those hitherto made, any one possessing the most moderate perception could not fail to detect the artificial nature of the motion. Indeed, in almost every one of them there is a necessity for so marked an effort in planting the artificial limb, and swinging the body and the sound one around before taking another step, that nothing short of a grand "spring halt" is the consequence. In the Palmer Leg, on the contrary, we have the joints so constructed, that the foot may be as noiselessly placed on the floor as the natural limb : whilst the toes, the ankle, and the knee-joint seem to give almost a sensitive consent to their natural succession of action, quite surprising and incredible to those who have not seen them in actual use. Even whilst holding the limb between the thumb and forefinger by the socket for the reception of the remaining part of the thigh, and placing the foot upon the carpet, no sooner does the doctor raise the limb than the acute observer sees the unfailing principle, and he is only inclined to question the solidity of its structure. On this point nothing is desirable that is not fully attained : whilst the perfect naturalness and high finish of the limb take away all repulsiveness in its appearance. It is a triumph of mechanical skill of which our country may be proud, and places the profession and the unfortunate under the highest

obligation to the mechanic arts. We shall not fail to recommend the use of the limb to all who may require it.

EDWARD H. DIXON, M.D.,
Editor of the Scalpel, and operating and consulting Surgeon.
42 *Fifth Avenue, New York.*

I have seen several of the Artificial Legs Manufactured by Messrs. Palmer & Co., in use, and consider them superior to any with which I am acquainted.

WILLARD PARKER, M.D.,
Professor of Surgery in the College of Physicians and Surgeons, New York.
New York, January 29, 1851.

Philadelphia, March 27, 1851.

I have examined with great care, the Artificial Leg invented by Mr. B. F. Palmer, and do not hesitate to recommend it in the *strongest terms.*

It has been used by several of my patients and with entire satisfaction.

THOS. D. MUTTER, M.D.,
Professor of Surgery in the Jefferson College, Philadelphia.

I have examined, carefully, the Artificial Leg invented by Mr. Palmer, and have formed a very favorable opinion of its construction. I have also advised my patients to obtain it.

W. GIBSON, M.D.,
Professor of Surgery in the University of Pennsylvania.
Philadelphia, January 23, 1851

THIRTY GOLD AND SILVER MEDALS (or "*first*" *premiums*) have been awarded the inventor and proprietors in the UNITED STATES ; also the great PRIZE MEDAL of the WORLD'S

EXHIBITION in London, 1851, where "Palmer's Patent" was declared to be the "*best Artificial Limb ever presented.*"

AN AMERICAN TRIUMPH OVER THIRTY *different kinds of Artificial Limbs on* EXHIBITION, FROM THE BEST AND MOST EMINENT ARTISTS IN LONDON, PARIS, AND OTHER PORTIONS OF EUROPE; AND DETERMINED BY FOUR OF THE MOST EMINENT SURGEONS OF *the world*, viz.:

MR. WM. LAWRENCE, F.R.S., *Pres't Royal College of Surgeons.*
MR. JOSEPH H. GREEN, F.R.S., *College of Surgeons.*
MR. PHILIP, *An Eminent Artist.*
} *of London.*

M. ROUX, *Chief Surgeon for forty years in the Hôtel Dieu; and*
M. LALLEMAND, *Member Royal Inst.*
} *of Paris.*

THOS. CHADBOURNE, M.D., *United States.*

JURORS.

This limb can be obtained only at 376 Chestnut-street, Philadelphia, except by persons residing in *New England* or *New York*, who should apply to Messrs. Palmer & Co., Springfield, Mass., or Marsh & Co., 2½ Maiden-lane, New York.

A liberal reward will be paid to any person who will furnish evidence of infringement of the patent.

Apply by letter before coming for a limb, to avoid great detention.

PALMER & CO.

SURGEONS' SPLINTS,

AND IMPROVED APPARATUS FOR FRACTURES.

MARSH & CO., AGENTS.

THESE SPLINTS, composed of alternate thin layers of wood and Gutta Percha, are in the form of light, firm, elastic, and durable cases or coverings, fitted to the part for which they are designed. To adapt them to the limbs of individuals differing in form or size, the Splints may be made sufficiently flexible by immersing them, for a few minutes, in steam or hot water, and they will again harden and become unyielding as before, as soon as cold. There is connected with the Splints apparatus to maintain any required position of the joints, and for permanent extension in Fractures of the Thigh

Conditions other than Fractures requiring Splints.—These are sprains, inflamed joints, rheumatism, and wounds, either incised, contused, or lacerated, extending to muscles, tendons, or joints. To describe all these cases particularly would exceed my limits, and is not necessary. These splints are well adapted to all such cases, and there can be no doubt that the advantages of mechanical support have been strangely overlooked, since motion and the separation of divided parts are in all cases the principal obstacles to union.

In cellular and muscular structures this especially holds true—*perfect apposition or contact, and perfect rest in the healthy constitution, are the only conditions required for union by first intention.* If means to diminish inflammatory action

are required, as washes or wet applications, it is because there exists partial disorganization in consequence of contusions, or too much heat is excited by improper dressings or other applications, or excessive general excitement or feverish action exists in the system.

Incised wounds of the knee or other joints, which are justly regarded with terror, and are in a high degree dangerous if neglected, heal with the same, or perhaps I should say almost the same certainty as wounds of other parts, if the conditions above stated are strictly complied with.

The splints having received the approbation of the profession, as practically adapted to every complication of fracture and other serious injury of the soft parts, the firm of Marsh & Co. would suggest to surgeons the great propriety of furnishing themselves with so valuable an adjunct in assisting the recovery of their patients, and themselves with a strong additional aid in defense of their professional characters against suits for malpractice, which have so often of late abused the public confidence in the surgical profession. Upon more than one occasion the jury has been most unfavorably influenced by the fact, that a domestic substitute has been adopted in place of a more comprehensive and efficient apparatus. The extemporaneous suggestions of even the most admirable genius, are but ill adapted to combat the ungenerous resolves of ignorance and selfishness. The cheapness of these admirable splints, will, it is hoped, prove a great inducement to the profession to possess them.

These instruments will be sold at the following prices :

Arm and Forearm Splints, consisting of 2 shoulder Splints, each - - - -	$0 75	$1 50
6 Arm do. - - - - - -	0 25	1 50
3 Pair Forearm do. - - - - -	0 75	2 25
2 " Ulnar do. - - - - -	0 75	1 50
1 Set Elbow-Joint Fixtures - - -		1 25
The set - - - - -		$8 00

Thigh and leg :		
1 Single Extension Splint for thigh, and Double Inclined Plane for leg and thigh, with flexible Splints, different sizes -		17 00
The set, 1 and 2, for arm, thigh and leg -		$25 00
Double-jointed Extension Apparatus for the thigh, in either the flexed or extended position, with flexible Splints - -	20 00	
Jointed Apparatus and flexible side Splints for the leg, do. - - - - -	12 00	
Together - - - -		$30 00
Three pairs longitudinal Half-Boots :		
No. 1, each Splint - - - - -	1 50	
2, do. - - - - -	2 00	
3, do. - - - - -	2 50	
The set, 3 pairs - - - -		$12 00
The set, 1, 3 and 4, for arm, thigh and leg -		50 00

From the Scalpel.

We have received from Dr. Welsh a complete set of this most scientific and satisfactory apparatus.

If we have occasion to revere the surgical science of England, France, and America, and to bow with reverence to their great teachers, what shall we say of the genius of our own countrymen, in applying the great practical principles they develop to the casualties of mechanic and rural life? The first tells us the great physiological principles which should guide us in attempting to save a limb, and the cautions to be observed ere we pronounce it incurable ; the second gives us almost a living substitute from the work-bench ! Scarcely have we been able to realize the wonder of the Palmer Leg, when Dr. Welsh spreads before us for every conceivable variety of fracture, the most beautiful and comprehensive apparatus that ever delighted the eye of the

conservative surgeon, or the practical mechanic. The truth is, we lack words to express our admiration of it. Extremely light, wonderfully simple, and adaptive, capable of elongation and shortening to any required extent, for every limb in the body—knee-caps, and elbow-joints, wrists, ribs, sternum, clavicles, and every other part, are kept in any required position, and accessible in a moment by loosing a single strap, whilst the inexpressible comfort of a change of position, even to mounting on crutches, is immediately attainable. All is as beautifully made, and as simple in its uses and adaptation as a gentleman's toilette case. A single box, one foot by two, contains the whole, and a beautiful and highly creditable essay on fractures, and some complete drawings of the mode of application, render the whole affair a most acceptable present, for which we return Dr. Welsh our hearty thanks and congratulations. Many a limb will be saved by it from the amputating knife, when it is thoroughly known throughout our country.

EDWARD H. DIXON, M.D.,
Editor of the Scalpel, and operating and consulting Surgeon.
42 *Fifth Avenue, New York.*

The apparatus is manufactured by Welsh & Co., Lakeville, (Salisbury,) Connecticut, who will cheerfully supply all information relating to its use.

MISCELLANEOUS INSTRUMENTS.

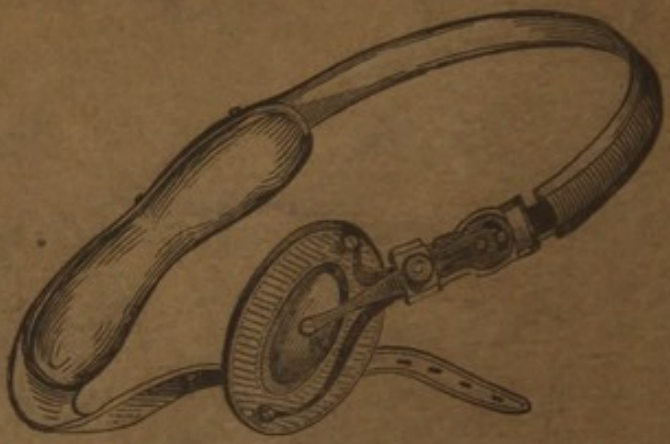
Marsh & Co. supply every variety of apparatus for supporting the limbs and uterus, such as Scarpa's Shoe, with ankle and leg supporters for children who have been operated on for club feet, or in whom it is judged expedient to avoid that operation by well-selected and approved mechanical support.

Elastic Riding-Belts, of various patterns and prices.

Gum-Elastic Urinals, to adjust to the person (male or female) in cases of incontinence of urine from paralysis or vesico-vaginal fistula.

Pessaries, (a new kind,) to be inflated after they are adjusted. This contrivance is one of unspeakable importance and comfort in those dreadful cases, so generally beyond the help of the surgeon, in which there is an ulcerated communication, either between the vagina and bladder in woman, or on the bladder side of the urethra, in cases of bad stricture in the male, between the urethra and the skin. These unfortunate persons, without this or similar contrivance, would necessarily be cut off from society, and confined to their chambers, as the former have no control whatever over the contents of the bladder, and the latter but a very partial command of it. The instrument is a complete receptacle for the urine, sitting so tightly to the skin as to receive it without any leakage. It requires no measurement to obtain it, but a simple description of the case by letter: it will at once be understood, on its receipt, by the person requiring it.

Every other instrument not strictly surgical in character, will be immediately furnished upon sending a description and measurement of the affection and person for whom the apparatus is desired; such measurement to be taken by the physician or surgeon in attendance, and sent to Marsh & Co., 2½ Maiden-lane. In short, it will be the pride and pleasure of the firm to render themselves necessary to the profession and to humanity throughout the country. All letters will be answered instanter.



MARSH'S RADICAL CURE TRUSS.

MARSH'S IMPROVED UTERO-ABDOMINAL SUPPORTER.