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HEALTH & BEAUTY

BY

MADAME CAPLIN

HEALTH AND BEAUTY;

OR,

Corsets and Clothing,

CONSTRUCTED

IN ACCORDANCE WITH THE PHYSIOLOGICAL LAWS

OF THE

HUMAN BODY.

BY

MADAME ROXEY A. CAPLIN.

"Health is the base, and instruction the ornament, of education."—SPURZHEIM.

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OPINIONS OF THE PRESS.

"Madame Caplin has made the manufacture of Corsets a complete study, embracing at once the several designs of anatomy, geometry, drawing and mechanics. Every portion of her Articles is worked and modelled on the premises, and passes through her own hands; consequently the artist may be traced in all, and her system of measurement is at once perfect and infallible."—*Court Magazine, June*, 1843.

"Madame Caplin's Corsets.—It is rarely that anatomical principles are applied to the fashioning of any article of ladies' attire, and still more rarely that they are applied, as we are assured on competent female authority, with such complete success as in the ingenious and very elegant articles named at the head of this paragraph. Madame Caplin is here on a short visit, and we earnestly invite our fair friends to avail themselves of the brief opportunity for paying her a call."—*Manchester Chronicle, August* 29, 1846.

"It is not easy to convey an adequate idea of the pleasure to be derived by seeing Madame Caplin's specimens, and her admirable mode of measurement, and hearing her very instructive anatomical explanations. Our own friends are grateful to her, and we can, unreservedly, advise all ladies to give her a call."—*Liverpool Mercury, Nov.* 15, 1844.

"Madame Caplin has combined such means as have neither of these inconveniences, and which have met the approbation of the gentlemen to whom they have already been submitted; uniting flexibility and lightness, they afford a gentle support, while, on the other hand, by the combination of Geometrical lines, the corsets are made outwardly to the shape corresponding to the other side of the figure."—*Polytechnic Review, Feb.* 3, 1844.

"Madame Caplin has studied carefully, for many years, *the anatomy of the body*. This enables her to know *precisely* how to adapt her Corsets and Bodices to the human figure. She makes nothing at random; but adapts, in every case, what is worn on the body to the person who is to wear it. This knowledge of anatomy places her at the very top of her profession, for she can give ease *and* elegance united. How we could enlarge upon this, did space permit!

"That the Medical Profession approve the invention, is 'something.' That a Grand Medal, at the 'Exhibition of all Nations,' was awarded Madame Caplin, is 'something.' That she has a very large connection, is 'something.' But we go beyond all this. We have seen and *proved* the value of the invention; and this enables us to speak of it in terms of unqualified praise."—*Kidd's Own Journal, Jan.* 7, 1854.

"On a recent occasion" (see vol. iv., p. 368) "we penned an article on the still too prevalent custom of confining the female figure in a cruelly narrow prison of whalebone and steel; and we directed special attention to the unceasing efforts of Madame Caplin (Berners Street) to effect a reform in this matter. We dwelt at much length, too, on *the manner* in which this is effected; and showed how many thousands of lives were saved annually by the exercise of only a little common sense. Unfortunately, this last commodity is not the reigning 'fashion;' hence its banishment from society! We are pleased to see that Dr. Tilt quite takes our view of this great question, and that Madame Caplin's almost superhuman efforts to bring people to reason are not lost upon him. Philanthropists are not met with every day, and they deserve the encouragement of all good men and women—alas, how few!"—*Review of Dr. Tilt's Work, in Kidd's Own Journal, April*, 1854.

"We were also much gratified in inspecting the models and numerous inventions which were exhibited by Madame Caplin at the Great Exhibition, and where she received the only prize granted in the United Kingdom for adaptations of this kind. They are twenty-three in number, commencing with infancy, and following the different phases of woman's life up to old age. Among this collection are included corsets, belts, contractors, and supports of every description; but we now speak more particularly of the contracting belt, which we consider a great desideratum with regard to ease and comfort, as it embraces the whole of the lower part of the body, and can be regulated at will by the wearer. It is strictly anatomical in its construction. The front is composed of elastic, in which are inserted medicated plates, thus combining perfect support and elasticity."—*Ladies' Newspaper.*

"The perfect outline of the human body is so well delineated, that it proves at once the capability of that lady to adapt corsets to the most delicate figure, on scientific principles, which are the only ones adaptable to the human frame. We advise ladies to inspect the various inventions exhibited by Madame Caplin, and judge for themselves of the improvements made in this important department."—*Morning Post, July* 4, 1851.

"In this sense Madame Caplin's collection is well worthy of attention, as everything that mechanical art, directed by medical science, could do to render the corset consistent with health has there been brought into requisition, so as to render it an object not merely of fashionable but of sanitary interest."—*Daily News, Aug.* 4, 1851.

"The 'Hygienic' corset embraces every attainable advantage; and, were the principle more generally adopted, a great evil would be obviated. We commend the invention of Madame Caplin as an unprecedented exhibition of female skill."—*Globe, July* 22, 1851.

"Madame Caplin, 58, Berners Street, Anatomical Corset Manufacturer. Class 20, No. 32, and Class 10, No. 370.—In the useful article of female attire, known as the corset, but little general practical improvement appears to have been hitherto made: and it was in vain that we looked among the specimens of our continental neighbours, hitherto deemed the leaders of fashion in this article: but fashion, it would appear, is greatly at fault, aiming at the making, instead of preserving, a figure; a mode in which the undue and unnatural compression tends to produce pulmonary diseases and consequent shortening of life. The specimens exhibited by this artiste are constructed upon anatomical principles, with a view to effect the desideratum of adding elegance and grace to the human body, and rendering this article, usually one of discomfort, a really useful and beneficial support."—*Morning Advertiser, July* 17, 1851.

"Madame Caplin clearly proves that at all ages it is requisite to *protect the body from the weight of the under-clothing*. This appears to be her great argumentative point—and it seems to us to be by far the most rational suggestion we have ever heard upon the subject."—*Ladies' Newspaper, Sept.* 11, 1851.

CONTENTS.

CHAPTER V.

THE CORSET, ITS HISTORY, USE, AND ABUSE.

CHAPTER VI.

ON THE ADAPTATION OF THE CORSET TO THE BODY.

CHAPTER VII.

ON GESTATION.

CHAPTER VIII.

MIDDLE AGE, AND ITS REQUIREMENTS.

CHAPTER IX.

ON SPINAL DEFORMITIES.

CHAPTER X.

OLD AGE, WHAT CAN BE DONE TO SUSTAIN IT.

INTRODUCTION.

In an introduction to a work of the kind which we here present to the public, the reader will expect to find some clear definition of our purpose and a general outline of the principles which are to guide us throughout the whole of our labours; and this we may promise at the very outset. Our object is clear and definite, and we hope to make it plain to every one who will bestow a very limited attention to what we have written.

Clothing is not only a want of mankind, but it is one of those wants upon which people are disposed to bestow the greatest amount of consideration. In two ways the clothing is supposed to represent the wearer. The course Jersey frock and fustian jacket advertise the labourer, whilst the superfine cloth and elegant fit indicate the taste and habits of the gentleman; but it is not simply in these things that clothes are symbolical. The extreme of fashion generally indicates the fop, and however fine the materials and faultless the fit there is something stamped upon the individual that indicates a want of brain, and leads us to expect to find that frivolity of character which is generally associated with it. Now every one wishes to dress well, not simply that the clothing should be of good quality and the fashion unquestioned; but as they prefer pleasure to pain, so far they desire that the articles worn should be adapted to the body and afford all the protection and comfort that is derived from well-made articles of clothing.

There is one distinction between ours and all other books on dress that have come under our observation, and that is, that we are dealing with the necessary and not the ornamental part of clothing. Most authors have written upon the history of costume, or the absurdity or elegance of some particular fashion, or of the harmony of the colours and relation of the dress to the figure of the individual—have dealt only with the exterior. We, on the contrary, have commenced from within, have analysed the wants and noted the structure of all the internal organs, and then adapted the clothing that envelopes them in such a manner as not only to preserve the health but to impart the greatest benefit to the wearer.

The principal writers upon the subject of corsets have been medical men, who, great as is their knowledge of *their* part of the question, certainly know nothing of ours; and hence what they have written has been almost entirely without practical utility. If a corset maker wrote an essay upon any medical contrivance—say, for instance, the lancet or blister—we expect that she would meet with the derision of the whole faculty; and the medical practitioner must not be angry if he also should excite a smile when he speaks of things with which he also is unacquainted. That our readers may perfectly comprehend what we mean we insert here an extract from a medical work of the very highest authority, which contains at one view all the merits and demerits of this class of writers. The evils are all portrayed by a master hand, but there is not one hint that can be of the least service to the world by way of remedying it.

"In connection with the use of stays the usual mode of their construction requires some notice, whilst they are so made as to press downwards and together the lower ribs; to reduce the cavity of the chest, especially at its base; to press injuriously upon the heart, lungs, liver, stomach, and colon, and even partially to displace those vital organs;

they leave the upper region of the chest exposed—those very regions where tubercular consumption, bronchial and inflammatory diseases generally commence, or are most prone to attack—to the vicissitudes of season, weather, temperature, humidity, and external injury. These noxious and unnecessary articles of clothing—these mischievous appliances to the female form, useful only to conceal defects and make up deficiencies in appearance—are rendered still more injurious by the number of unyielding, or only partially yielding, supports with which they are constructed on every side. These are the whalebones in the back and sides, and steel in front, extending from nearly the top of the sternum almost to the pubes. The motions of the trunk and spine are thereby restrained, and the nutrition of the compressed parts impaired; but, irrespective of the displacement of vital and assimilative viscera that follows the amount of pressure, the metal support in front has an injurious effect which has been universally overlooked. However well it may be protected from contact with the surface, it acts as a conductor of animal warmth and of the electro-motive agency passing through the frame, it carries off by its polarization into the surrounding air, especially during humid states of the atmosphere, the electricity of the body, this agent being necessary to the due discharge of the nervous functions either in its electro-galvanic or magneto-electric state of manifestation. The injurious influence of stays on the female economy, as respects not only diseases of the spinal column but also the disorders of the uterine organs, is manifest to all who consider the subject."—Dr. Copeland's *Medical Dictionary*, p. 855.

We have selected the above extract from Dr. Copeland, because he is one of the most talented, learned, and judicious medical writers of this day, and one, too, whose work will be read for a long time to come, as his "Dictionary of Practical Medicine" is an elaborate digest of the whole circle of medical literature. But let every one adhere to their

own profession; for it is evident to us that the Doctor knows no more about stay-making than we do of Sanscrit.

We are quite agreed upon the point, that "the use of stays and their present mode of construction require some consideration;" but our consideration should be how to improve them. Improve them, the Doctor seems to say; why do away with them altogether. Pray do not hasten to your conclusion too rapidly, Sir. Supposing we adopted the same reasoning in reference to physic? We could say, and say truly, that it is nauseous to the palate, and upon the highest medical authority we might affirm that it is uncertain in its operation; but, more than this, whatever Dr. A. prescribes Dr. B. will condemn, and Drs. C. and D. will differ from both of them. Shall we then "throw physic to the dogs," knowing well, at the same time, that they will not take it? Nay, we know the profession too well; know that their skill, science, and experience will ever be invaluable to mankind; and know also that their only hope of maintaining their present honourable position before the public is by adapting their system to the wants of humanity. We cheerfully give all this to the faculty, and only ask in return to be measured by the same standard.

It never seems to have occurred to the Doctor that ladies must and will wear stays, in spite of all the medical men of Europe. The strong and perfect feel the benefit of using them, and to the weak and delicate or imperfect, they are absolutely indispensable; but when we say this, we mean corsets properly constructed; for if the construction be imperfect, the mistake will be equally as bad as the administration of a cathartic instead of a diaphoretic. Yes, says the practitioner, but then none but a quack would do such a thing. Precisely so; and no one who knew how to adapt a pair of corsets to the human figure would ever injure the body by trying to improve it. Only suppose that corset making has fallen into the hands of quacks—that is, of people who

do not understand their profession—and the whole question is answered.

But, says the Doctor again, they are "useful only to conceal defects and make up deficiencies in appearance." Well, that is something, at all events, considering how many defective people there are in the world. But, pardon us Doctor, that is not the only use they are of. Corsets, properly constructed, not only hide the deficiencies of Nature, but, by giving proper support where it is needed, enable her to correct them, and hence call back the figure to its normal position. This, we take it, is no little thing when so many people are imperfect.

What is said about the unyielding substance, and the whalebone and steel busk, can have no reference to us. We make no such corsets. Our busks are all electro-magnetic, or else protected by a non-conducting substance, and can therefore in no way injure the body—indeed, we never use a substance that is prejudicial to health.

Whilst upon this matter of objections, it may not be amiss to notice one more, originating however from another quarter. The staymakers say, "Oh, she was never brought up to the trade, and what should Madame Caplin know about it?" Now, it is perfectly true that we never served an apprenticeship to the trade; and if we had, the probability is that we should have done as the trade does—make corsets for the body to be fitted to, and not fitted the corset to the body. What we have brought to the trade is simply intelligence; the stitching was quite as good before we begun as it is now.

It may appear strange, that after so long a period since the ordinary corset had been condemned, that no substantial improvement had been made in its construction. But the reason of this evidently is, that the whole affair had been left entirely in the hands of working people —generally females of little or no education—who knew no more

of the structure and functions of the body than an unlettered philosophical instrument maker knows of the structure of the starry heavens. Hence the requirements of the internal organs were unknown, and the line of beauty on the external figure unperceived. The old assemblage of straight lines and angular shapes, which were brought together to make up one pair of stays, was no more adapted to the preservation of the health and the display of the beauty of the body, than they were to cover a round ball without creases. And hence the just condemnation which has been bestowed on them by the medical faculty.

One reason why we succeeded where all others had failed was, perhaps, because we not only took a scientific view of the body, but a geometrical measurement of it. It would be of no interest to the general reader to give the method by which we proceeded; it is enough for us to say, that by an elaborate calculation we succeeded in meeting all the requirements of the case, and hence the perfection of our inventions. Corset making with us becomes an art which requires a scientific education to pursue it.

The result of all this care and study was the formation of a figure, in some measure ideal, but still true to life, on which our corsets might be tried, and to which they might be adapted. The figure which we give in another part of this work is one of our first designs. It is a copy from nature, but such a copy as enables one to form a conception of the beauty of the human race when the end of nature has been attained, in giving the proper development to the body. This was our first triumph: we had succeeded in inventing a muscular envelope; which, whilst it gave freedom to the motions, afforded ample support to the yielding parts. All the rest of our adaptations are only modifications of this, rendered necessary by the various physical conformations presented to us.

CHAPTER I.

ON THE RELATION OF DRESS TO THE HUMAN FIGURE.

EVER since the cultivation of literature in Europe, and long perhaps before that time—for there were talkers before there were writers in the world—the absurdities of Fashion have formed a constant theme of declamation; but, after a careful review of what has been written upon this subject, we rise from the perusal of a number of learned and interesting books, without having in the whole course of our reading met with one single observation on the true principle of a scientific adaptation of the dress to the body. Nature has taken care to suit the external envelope to the internal organs of the frame—has made even the bones so yielding that the soft and delicate organs which are encased in them may have a free development; but the designers of dress have ever been interfering with her method; and, for this simple reason, because dressing has been an art in which the fashion and cost of the clothing have been the objects of display. Now, in our conception, there should be a science rather than an art of dressing, and that, too, founded upon certain principles of adaptation by which the external clothing shall display the full beauty of the naturally well-formed figure; and, in cases where nature has not bestowed a perfect form, the defect should be atoned for by supporting the weak organs, and restoring the figure according to our ideal of what it was intended that that particular body should be. Every one, we suppose, will admit that there is a natural standard of beauty; and that standard is what we are ever attempting to approximate to.

In all uncivilized countries mankind mutilate the body under the

absurd impression that they are adding to its beauty. The flat-headed Indian compresses the forehead, the Chinese ladies the foot, and the European ladies the waist; whilst other races either paint the eyebrows, dye the nails, distend the ears, or tattoo the face, under the same barbarous idea. Now, no mutilating of the body of this kind can do anything but injure and render it ugly. And, of all the customs that we have alluded to, there is none perhaps more injurious than that of compressing the chest and waist; and yet, from the absurd idea that fashion is displayed, or beauty augmented, this unnatural course is persisted in, and corsets are still worn that have as little relation to the human form as the stiff, boned, boarded, and leather stays which were worn three centuries ago.

It must also be borne in mind that if satire and invective could have cured the ladies of this custom, it would have been driven out of the world ages ago. The first English poet whose works have come down to us, has abused the ladies soundly for their extravagance in dress, fasting, and bleeding, to make themselves look pale, and *tightening their waists and breasts*, and dyeing their hair yellow. And a French moralist, writing in the middle of the fifteenth century, says, "Another evil is to the body. By detestable vanity ladies of rank now cause their robes to be made so low in the breast, and so open on the shoulders, that we may see nearly the whole bosom, and much of their shoulders and necks, and much below down their backs, and *so tight in the waist* that they can scarcely respire in them, and often suffer great pain by it." But neither the satire of the poet, the sober warning of the moralist, the preaching of the monks, who went through Europe exposing the abominations of the fashionable costume, nor even the pain occasioned by the unnatural compression, and the danger, to say nothing of the indelicacy, of leaving the chest exposed, could ever cure the evil, and for this simple reason—they only pointed out the wrong and left the right method of dressing undiscovered. We may take it for granted that people must and will dress elegantly if they have the means of doing so, and it is perfectly right that they should. We have no puritanical crusade to preach against display and elegance; but when health is sacrificed to fashion, and the grace and beauty of nature marred by a barbarous practice, which has come down to us from a time when physiology was unknown, and the true conditions of human well-being not understood, we may

Minerva.

perhaps merit the gratitude of some who are suffering ill-health or deformity, by pointing out the true principles upon which dress should be constructed, and all the evils attendant upon badly-formed clothing avoided.

To render our remarks upon this subject perfectly clear, we may premise that there are several kinds of beauty, each of which has its ideal standard. The temperaments are generally taken as the bases out of which those particular types are evolved; but, as a minute description of the temperaments belongs to the physiologist and phrenologist rather than to us, we are obliged to take some more general classification to illustrate our ideas.

Mr. Walker, in his elaborate work on Female Beauty, describes three several varieties, each of which is perfect in its kind. He arranges them under the heads of

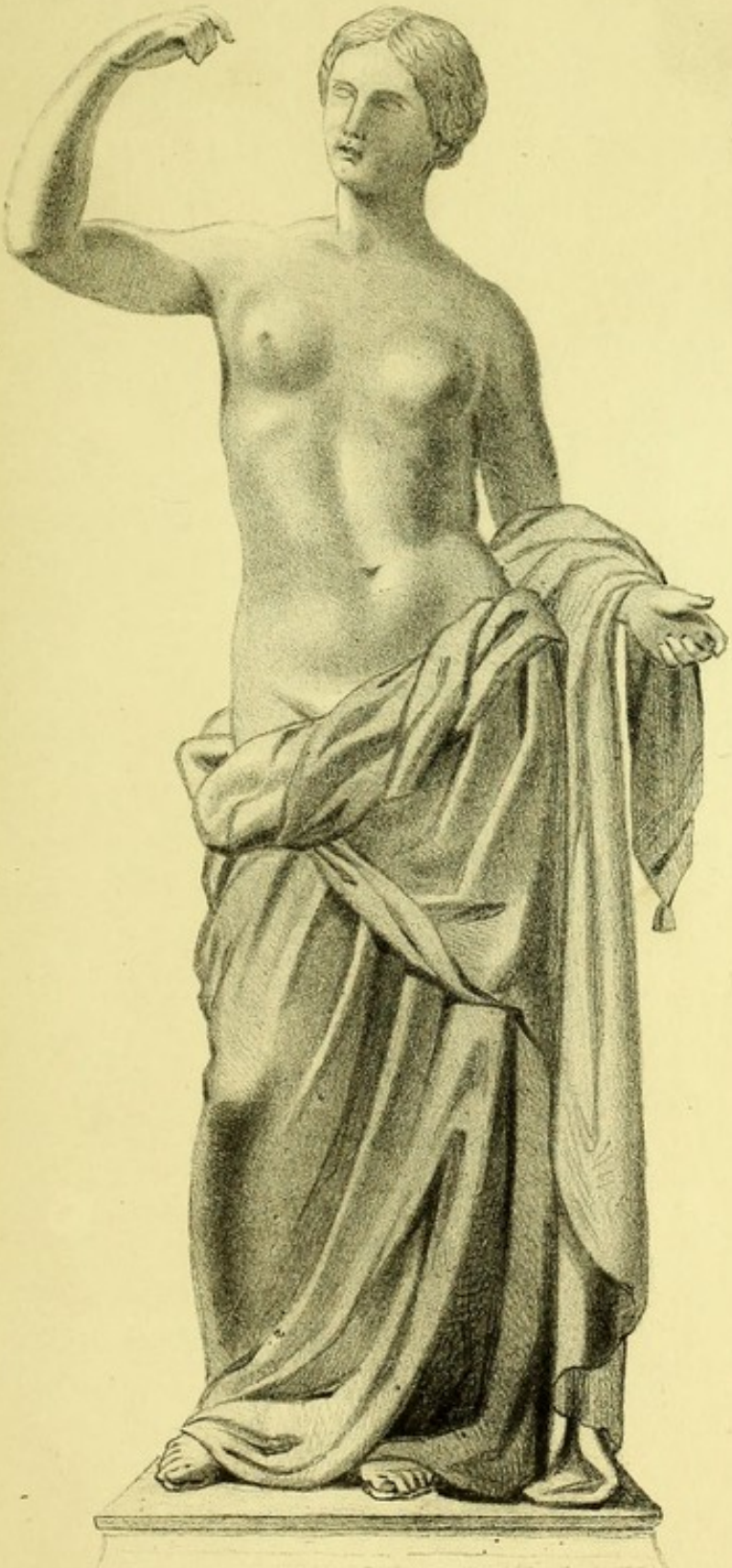
1. Intellectual beauty as shown in the statue of Minerva.
2. Nutritious beauty as shown in the statue of Venus.
3. Locomotive beauty as shown in the statue of Diana.

In the first, the intellectual qualities predominate, and the figure is slight, yet capable of supporting great fatigue. The head is large in proportion to the body, and the intellectual powers seem to absorb the nutrition required for the growth of the physical organization. In the second, the trunk is larger and longer, the waist and hips broader, the lower limbs shorter, affording ample space for the development of all the vital organs. In the third, the trunk is shorter, the extremities longer and more powerful, the head smaller, and, generally speaking, the character more determined. He also gives the different mixtures of each of these temperaments, which give rise to the intermediate forms; it is enough for our purpose to observe, that no absolute standard of beauty can be fixed, each style having its own peculiar excellences, and that, therefore, before any adaptation of dress can be successfully constructed, the contour of the body should be carefully observed, and no attempt made to regulate its form by any preconceived standard of fashion which is based upon any but *that* particular type.

Taking, then, the perfect female figure as the groundwork of all our adaptations, our exertions are always directed to the preservation

of its specific beauties; or, in the event of any deviation, to its restoration, by gentle and gradual means, to the true ideal form which nature originally stamped upon it; or at least to the attainment of as near an approximation to it as possible. Were we to relate the numerous instances in which success, little short of miraculous, has attended our efforts, we should be accused of egotism, and perhaps even of exaggeration; but we profess nothing that we cannot perform, and we most solemnly assert, that we have never had a case in which our system has been fairly tried, and the use of our adaptations persevered in, without the desired end being attained in a greater or less degree. As the incarnation of all that is beautiful in woman, the Venus de Medicis is universally acknowledged the most perfect specimen of female loveliness and grace, and we have accordingly taken it as our model. Any description of this *chef-d'œuvre* of art would be superfluous, as the figure itself is to be found among the decorations of the palace and the cottage; and this fact alone is sufficient to prove its approximation to the ideal of beauty which is inherent in the human mind, and which pervades all classes of society. When we say that this figure is taken as our starting-point, it must be understood that we take it as if it were in an erect position—the *proportions*, not the *attitude*, being what we require. We mention this, because it has been remarked that the majority of the ancient statues are represented in a stooping posture, and that it is in reality the most graceful; consequently, that ladies should imitate this if they desire to possess equal elegance.

Now, grant that, for a momentary attitude, the slight bend of the body is exquisitely beautiful; but if we could suppose the Venus unable to alter that posture, and to be thus rigidly fixed in life, surely we should be justified in calling this a deformity As well might we consider the attitude of Diana (which, if my memory serves me rightly, is almost the only ancient *erect* figure,) to be perfectly natural, and not to be departed from. It will be recollected that she is represented with the right arm extended, and the head turned over the right shoulder, the left hand grasping the horns of a goat, and the weight of the body thrown on the left leg. This, however, is but a momentary position, and in contemplating this beautiful work of art the mind instinctively pictures the figure in a state of erect and majestic repose. So also



Venus

with the Venus—the proportions alone strike the eye, and the mind,

"Dazzled and drunk with beauty,"

immediately pictures that lovely figure in every attitude which the human form is capable of assuming. Disastrous results always follow a continued pressure on the vital organs, and a little reflection will prove that no such constrained position could be maintained for any length of time without producing injurious results.

The more striking distinctions between the perfect male and female form may be easily perceived. The bones of the female are lighter, softer, and more elegantly shaped than those of the male. The female head is smaller, the pelvis is broader and deeper, and the cavity of the acetabulum less deeply sunk than in man. The neck of the thigh-bone is shorter and more sloping in man than in woman, and in him, therefore, the basis of support is greater, and is more immediately in the centre of gravity. The femurs being further apart, and the knees closer in woman, diminishes the base of support, and imparts a peculiar rolling motion to her progression; hence, walking is more difficult in woman than in man, and cannot be so long continued. The stature of woman is about two or three inches below that of man, and her muscles are less projecting—partly because they are smaller and less powerful, and partly from their fatty covering, which contributes so much to the rounded and undulating outline of her form. The breast and haunches of the male and female are in inverse proportion—the chest being broad and the hips narrow in the former, the reverse in the latter; or, in other words, if a plumb-line be let fall from the points of the shoulders of both, the hips of the woman would project beyond the line, while those of the man would fall considerably within it. Again, when in a recumbent posture on the back, the breast of the man will be the highest part, but the pubes in the woman. The female loins are also the broadest, and the hollow of her back the greatest, in order that the due inclination may be given to the pelvis.

Every one of the particulars mentioned above must be taken into consideration in any attempt to adjust the dress to the body, so as to develop its beauty and proportions; and it must be borne in mind too, that it is that beauty and those proportions which all our efforts must

be directed to display. In making this assertion, we take everything into account which can be said to belong to the well-being of the body; more particularly health and comfort—for without health there can be no beauty. Young ladies sometimes imagine that there is something interesting in illness; but they forget that it is the melancholy interest which is bestowed upon the withered rose, and not the joyful pride which always accompanies cheerfulness and success.

What the reader may expect to find, therefore, in this book is, due consideration of all the conditions essential to health, and an effort to adapt all the clothing necessary to be worn to its conservation. This is with us the first condition; but next to this we direct the whole of our efforts to the embellishment of the person, and, taking into consideration the particular temperament that we have to deal with, give it that form and proportion which accord with the true ideal of its natural beauty. This, of course, requires that the form, the colour, and proportions should be adapted to every one specifically, and forbids our laying down any but the most general rules for the regulation of the common costume.

The various phases of life afford us the best order in which we may distribute what we have to say; and we shall therefore point out the proper method of dressing adapted to all ages, from the cradle to the grave.

Diana

CHAPTER II.

ON INFANCY, AND THE DRESSES ADAPTED TO THAT PERIOD OF LIFE.

To illustrate our peculiar views on this important subject we shall commence with the period when the infant is first ushered into this "breathing world," and trace its progress through the various stages of infancy, childhood, adolescence, womanhood, and old age; describing in our progress the evils arising from improper dressing and treatment, together with the means which have been found most efficacious in their prevention or remedy. It must be remembered that in the adaptation which we have invented, our object has not been so much the cure of malformation, as the prevention of its occurrence. Taking the perfection of female beauty as our standard, our inventions are for the purpose of preserving it in that condition where it exists; or should any deviation from that standard have taken place, our endeavours are directed to the restoration to the normal form. It is universally acknowledged that a good figure may be made a bad one by an injudicious mode of dressing; and if such be the case—if the human body will yield to injurious pressure, thereby producing deformity, an opposite course must produce opposite effects, and by a certain adaptation of means, an imperfect or declining figure be brought, if not into a state of absolute perfection, at least into one very closely approximating to it. We do not profess to perform impossibilities, but do confidently assert that in the course of a short time the method which we adopt, if fairly carried out, will do more for the promotion of health, elegance of figure, and prevention of disease, than all the medicine which may be administered

for the purpose. This is no idle boast; every day's experience proves its correctness, and there are scores of families now living who can and will, if necessary, testify to the truth of our assertion.

On the birth of the infant, after the process of ablution, the first thing necessary is to apply a bandage round the abdomen, for the purpose of preventing the protrusion of the umbilical cord, or navel-string. Here, in the very commencement, a serious error is frequently committed, a strong inelastic substance being tightly placed round the delicate body of the child, and a degree of pressure made on that part, regardless of the infant's previous state of existence. The bandage is also often made so broad as to press considerably on the ribs, and therefore, even at this early period, to contract the chest; the nurse rarely considering that the sole object of this investment is the prevention of umbilical protrusion, and that therefore pressure on that particular region is all that is necessary. The newly born child does not at first respire so much by means of the muscles of the chest, as by the action of the diaphragm, and any undue tightness of a bandage round the abdomen must therefore be extremely injurious.

All the clothes provided for the advent of the little stranger are made entirely on a false principle, and calculated to produce a baleful influence on its future development. In the first place, the nurse is particularly anxious that its little fat and mottled neck and shoulders should be exposed to the admiration of visitors, and she therefore pushes all the dressings of the child down on the arm, instead of allowing them to remain on the shoulder, which is their proper place; and when Baby is in full dress for the reception of company, this object is effected by means of charming red or blue ribbons passed under the sleeves and tied in a very pretty knot outside; conveying to a reflecting mind the idea of a lamb decorated with garlands before being sacrificed. Now, by this mode of procedure the baby's chest is exposed to cold, which its delicate organization is unable to bear, and cough or inflammation of the lungs may result; while at the same time the sleeves are made so tight round its little arms, and the operation of pinioning is so effectually performed, that the capillary circulation in the arms is obstructed, the poor infant's hands become blue and cold, and the nurse then wonders that her charge is so peevish. The legs also come in for their share of punishment,—a thick napkin being put on, totally prevent-

ing the kicking in which children so much delight, and which is so necessary for the strengthening of the muscles; while, to add to the misery of the little sufferer, this napkin is generally secured by pins, which, however carefully inserted, are very apt to tear its tender skin and produce a fit of screaming, the cause of which can only be discovered on the dress being entirely removed. The use of pins may therefore be justly called a "crying evil," and we hope they will soon be entirely superseded by loops and buttons, which are not open to the same objections, while at the same time they afford infinitely greater security. We may here also mention that napkins are generally worn too constantly, and their use continued too long; as the heat they occasion over the loins has a great tendency to relax the muscles of the back, and thus give rise to a yielding of the spinal column, which we shall presently have to describe.

The next ordeal through which our little friend has to pass, is the being constantly held in one position. Nearly all nurses carry the child on the left arm, rarely, if ever, changing to the right; and with the affectionate feeling inherent in every woman's breast, the nurse hugs the baby closely to her, thus keeping its right arm close to its chest, which is by this means pressed inward, thus diminishing its capacity, and at the same time throwing its body out of the centre of gravity. Add to this, that the child's head naturally sinks on the left shoulder, the muscles of the right side of the neck are elongated, those of the left side contracted, and an incipient distortion is the result. Mothers frequently, though unconsciously, aid this mischief by the habit of suckling exclusively on the left side—a practice which is not only injurious to themselves, but a remote cause of deformity to their little ones. Due caution should be observed also in washing and dressing the infant, and the head be so supported by the hand, as to obviate the danger of dislocation of the vertebræ.*

The clothing of new-born children should be light and warm, and so constructed as to admit of easy removal, as its frequent change is

* In washing the child care should be taken to have the water sufficiently warm, as if cold water be used the capillary circulation of the skin will be congested, the animal heat unduly lowered, the surface of the body will become blue and rigid, and the infant by its cries will vigorously protest against the cruel but mistaken kindness in which this practice originated.

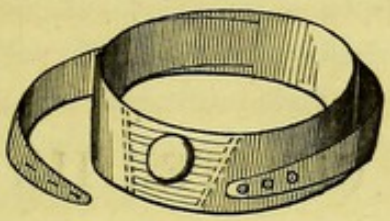
essential to health. Flannel being a bad conductor of heat, is one of the best materials of which the clothing can be composed, if it does not produce too much irritation of the skin, in which case the interposition of a little soft calico will be necessary. Long-clothes may be useful in the first instance, as conducive to the warmth of the lower extremities, but they should be discontinued as soon as the child evinces sufficient vigour to keep warm without them. The principal point to be attended to at this period, with regard to dress, is to leave the clothing so loose that the infant may have the fullest use of all its joints, and room for the development of its organs. The head should be covered only with a very thin cap, or better still, not covered at all, and the pillow on which it rests should not be so soft as to allow the head to sink in it, and thus promote perspiration.

We may incidentally mention, with regard to the sleeping of infants, that we consider the best position for repose to be lying on the back; for if the child lies on either side, the ribs will be forced inward by the pressure of the arm above; and if, as is too frequently the case, the baby be laid upon its stomach, and patted off to sleep, not only does it experience a difficulty in breathing, but the sternum is compressed, and the chest lessened in its dimensions, while in addition the diaphragm cannot descend into the abdominal cavity in consequence of the pressure on that portion of the body. We purposely abstain from any observations on the food or general treatment of infants, as that must always depend on the constitution; and on a variety of circumstances, which fall more properly within the regulation of the medical attendant, who alone is a competent judge, and whose decisions should always be implicitly obeyed.

From what we have advanced here, it will naturally occur to the reader that what is required in infantile clothing is warmth, freedom, and, where support is required, elasticity. To meet all such necessities, we have constructed an Umbilical Band, which affords sufficient umbilical pressure, and allows all the great organs of life to perform their natural functions. The construction is simple, and the elasticity so great, that the tender organs are never oppressed: thus, whilst we afford all needful support to the abdomen, the heart, lungs, liver, and stomach, are left perfectly free.

We repeat, then, that the baby must never be pressed and confined;

its little chest and shoulders must be covered, and every part, except the face, shielded from the cold. There are certain physiological reasons why



UMBILICAL CONTRACTING BELT.

the face should always be uncovered, not only because there should be no obstruction to the ingress and egress of air from the lungs, but there is a stimulus imparted to the breathing, and to the whole vital apparatus, by the action of light and heat upon the face ; and hence the exhilarating effect of cold water when applied to its surface.

CHAPTER III.

CLOTHING FROM THE AGE OF ONE TO TWELVE YEARS.

We will next suppose that Baby has been short-coated, and has attained sufficient muscular strength to preserve the erect position whilst sitting in its nurse's arms. Now is the time when its dress becomes a matter of very serious consideration, as the bones are now attaining something like solidity, and any deviation from the proper position of the body will day by day become more difficult to remedy. If the same influences of which I have before spoken be continued, the spine will even at this early age show symptoms of yielding; the natural curves of the vertebral column will be more or less distorted, the shoulders will present a rounded appearance, and the size and form of the chest have undergone injurious modification. The weight of the child by this time will become too great to permit of its constant carriage in the nurse's or the mother's arms, and it is therefore too frequently seated in a chair sufficiently high to enable it to reach the table. In front of the chair a bar is placed for the purpose of guarding against the possibility of a fall. The child is thus literally forced into a certain position, and its playthings being put before it, it will naturally reach forward to grasp them. Now mark the result. The roundness of the shoulders and projection of the scapula are increased by the forward motion of the baby's arms; and if heavy substances are given it to play with, their weight, at the end of these levers, adds to the injury, while the chest being pressed against the transverse bar is driven inwards, with a force proportioned to the infant's exertions; so that the more active and energetic the child, the greater is the injury done. All this

while the feet are resting on a board placed underneath them, the lower extremities being thus impeded in their movements, the head falls more and more forward, the muscles of the back are weakened and elongated, while those of the chest derive considerable strength from their constant exercise; the clavicles are unable to support the shoulders in their proper position, and therefore bend, or are forced from their natural situation; the cavity of the chest is diminished, and the foundation of numerous disorders is laid.

We cannot help in this place adverting to the habit so frequently adopted by nursery maids, of dragging the child by the arm during the process of teaching it to walk. The unhappy infant is consigned to the care of an inexperienced nursemaid, who, in her anxiety to pass a crossing, seizes the baby by the hand, and literally *drags* it across, regardless of the child's feet not touching the ground. The poor baby stumbles in its passage over the rough ground, and the nurse being engaged in preserving herself from the probability of being run over by the cabs or omnibuses which are constantly passing, rushes across, and at the end of her unnecessary journey beats the poor infant for its clumsiness. By this practice the shoulder of the child may be dislocated, or the clavicle broken, while the spine becomes completely distorted. The same thing will sometimes occur with boys who, when very young, are taken out for a walk by their parents. The father walks on with long and rapid strides, holding the child by the hand, and as he does not consider that his step is much longer than that of his offspring, he tells the child to "step out, like papa." The boy endeavours to obey, and the result is, that the pelvis becomes ricketty and deformed. The late lamented Thomas Hood, whose sagacity nothing escaped, has in one of his *Comic Annuals* given a good illustration of this subject, by a wood engraving entitled "A Step Father," in which he represents a poor child being dragged along in the manner I speak of.

Let us now suppose that the period has arrived for the education of the girl, who in her infancy has been subjected to the injurious influences against which we have endeavoured to warn our readers; and let us consider whether the course of education ordinarily pursued is calculated to correct or to increase the evils already described. It unfortunately often happens that precocity of mind is allied with physical weakness; and this may be accounted for by the fact, that in a child

brought up without the necessary exercise of the muscles, the blood so constantly forced from the heart is carried to the brain, which is thereby stimulated to undue exertion. Indications of extraordinary mental ability are thus engendered, and the delighted parents, solacing themselves with the belief that time will work wonders in their daughter's behalf, and that her mental powers will compensate for her physical debility, determine on sending her to boarding-school, in order that her mind may be properly cultivated—forgetful or ignorant of the wise maxim enunciated by the ancient philosopher, who truly said that a sound mind could only exist in a healthy body. Fond, though mistakenly fond as the mother may be, she cheerfully parts with her child, and consigns her to the care of strangers, at a period when all her efforts should have been directed to the repression of what we may truly call a morbid cerebral activity. THE BUSINESS OF A CHILD IS PLAY, and this is proved by its anxiety to relieve the monotony of study by a hearty laugh, or a healthy scamper through the fields. Believe me, that children should not be compelled to study, until the equilibrium between the body and mind has been perfectly established; and the instances in which an infant prodigy has in maturer years fulfilled the promise of its youth are few indeed. No! they have been like hot-house plants, forced to yield their blossoms before the time for flowering had arrived, and whilst their hardier but later neighbours are strong and healthy, these victims of early culture are falling into decay, and repaying the pains taken in their development by an early death.*

Arrived at school, let us now inquire into the method by which these latent energies and talents are to be matured. To do this effectually, it will be necessary to review the means and appliances which are brought to bear upon female education; and in doing this we are well aware that many ladies conducting such establishments are unremitting in their endeavours to promote the health and happiness of their pupils, and attribute many of the evils of that system to the extreme anxiety of parents to see their children eclipse their fellow students by the multiplicity and brilliancy of their acquirements. The

* "The mind ought never to be cultivated at the expense of the body. Physical education ought to precede that of the intellect, and then proceed simultaneously with it, without cultivating one faculty to the neglect of others; for health is the base, and instruction the ornament of education."—SPURZHEIM.

conductors of schools are therefore, from pecuniary motives, compelled to gratify the vanity of the parents, though their own feelings might prompt them to relax the discipline, and afford leisure for more healthful physical exercise. It is due to the accomplished members of the scholastic profession to say thus much, as we all know the difficulty—nay, the impossibility—of conforming to all the whims which are dictated by parental solicitude.

The first evil to be complained of in large educational establishments is the crowding together of a great number of children in small or insufficiently ventilated apartments. If a fresh supply of pure air be not constantly admitted, the carbon given off from the thirty or forty pairs of lungs accumulates, and is respired over and over again; the children become listless, and complain of headache and a sensation of tightness across the chest. Most adults are familiar with this feeling after sitting for some time in a crowded church or theatre; and it is so common in the latter place as to have acquired the title of "a playhouse headache." The dormitories of schools are also often insufficiently ventilated, in consequence of a very unnecessary apprehension of the ill effects of fresh air, which, if introduced freely and without draughts, never did, and never will do any injury. Children are also generally put two in a bed—a practice which we do not approve, but which cannot always be avoided. Where this is the case they should change sides every night; as, from their natural dislike to breathing in each other's faces, they will, if this be not attended to, contract the habit of always lying on the same side, and the weight of the arm above will compress the ribs in the manner which I have before described.

On rising in the morning, the young ladies are expected to be out of bed the moment the bell rings, and in a short time another imperative tinkle summons them to prayers in the school-room. The child is obliged to make her appearance at the wonted moment. Bills of pains and penalties are not only known in the outer world, but may be found also in a Ladies' Boarding School. Each drowsy pupil, in order to avoid the consequences of being too late, huddles on her clothes as rapidly as possible, and as for the corset, or bodice, which is supposed to be for the purpose of keeping its wearer erect, it is either not laced at all, or is laced in such an uneven manner that it had better not be worn at all. In our corsets all this is impossible; the fastening

is in *front*, and they can be put on in one minute, so that, if the time for a young lady's dressing be circumscribed, she will not be compelled to neglect the ornamental part of her toilet. By this means also deformity is avoided, and ease and comfort secured, as the corset can never fail to fit properly.

It has often occurred to us that it would be an excellent thing to have a competent dresser in every large establishment. Sufficient time should be allowed for the operation, the child be taught to stand in a proper position, and the whole toilet well arranged, so as to require no shifting, twitching, and shuffling, during the day. Not only the comfort, but the ability of the child to maintain a perfectly upright and natural position, will depend much upon the proper adaptation and arrangements of its clothing.

The next thing to complain of in Ladies' Schools is the length of time allotted at one period to study. The heaviness of the atmosphere just spoken of, and the rigid silence maintained, broken only by the voice of the teacher, or the apathetic drone of some lazily-repeated and imperfectly-known lesson, create a lassitude which induces the children to place themselves in all kinds of awkward positions, for the purpose of resting the muscles which keep the neck and spine erect. Being seated on forms without backs, the children cannot accomplish this by leaning backward, and they therefore place one or both elbows on the desk, and rest on them the weight of the head and trunk. Here the erroneous mode of dressing, which at this time is so generally adopted, seriously adds to the evils occasioned by this habit. When a girl is sent to school the mother insists on dressing her daughter in the same fashion and with the same materials as herself. Does the mother wear flounces, the child must also present an equal number of rows, ascending in terraced regularity from the hem of the dress to the waist. No matter that the mother may be a strong healthy woman, and her offspring weak and delicate—the same stuff must be used for the dress of one as for that of the other, and nearly the same number of widths be put in the skirt. The same mode of tying the petticoats round the waist is employed, in utter contempt of the fact, that the strong muscles of the mother will enable her to carry a weight with comparative impunity which would crush the tender frame of the child. This, combined with other causes, induces that poking of the head from which few young ladies

are free. The weight of the clothes is not supported on the clavicle, but upon the upper part of the arm itself, pinioning it to the side, and rendering it impossible to lift the hands above the head; and this inconvenience is increased by the dress not being sufficiently long in the side seam from the arm-pit to the waist. The sleeves are also invariably made too long on the shoulder and too tight in the arm-holes, causing the shoulders to become unnaturally large and heavy, while the arms and hands are prevented from receiving their proper nutriment. As the child grows the bones increase in size and weight, their nutrition being independent of motion; not so, however, with the muscles, which must be constantly kept in action to secure their due development. As will be at once seen, this action cannot be attained under the process of pinioning; the muscles will not grow in proportion to the bones, and will therefore soon become incapable of sustaining their weight. The girl, of course, stoops forward, the clavicles are bent, the scapulæ stick out, and the tops of the dress and the whole of the under-clothing coming underneath their points, lift them up and retain them in their unnatural position. Many parents have their children's dresses made so loose as to permit of the passage of the hand round the waist, between the body and the clothing, not remembering that without some point of support the clothes would fall off; but if the clothing were so constructed as to take the outline of the body, and the material suited to the age of the child, the weight of the upper part bearing on the shoulder, and the skirt on the hip, we should have the weight of the clothing distributed over the whole of the body, and not upon points only, while the bones and muscles would grow together in equal proportion. The following evils are occasioned by neglect of these precautions: Crane neck; round, protruding, and raised shoulders—one higher than the other; head twisted to one side to preserve the centre of gravity; double lateral curvature of the spine and distortion of pelvis; compression of the chest, with its concomitants, difficult breathing, constipated bowels, flushings of the face, red nose, and cutaneous eruptions. Strange that due allowance is not made by parents in estimating the relative muscular power of themselves and their children! It cannot be from ignorance, as nobody would start a two-year old colt for a race with a weight on his back equal to that carried by a full-grown horse, but would apportion the burden to his size and strength. Why should not

children be treated in a similarly sensible manner? This would certainly be the case if parents would abandon the habit of considering those things trifles which do not produce immediate deformity, forgetful that "trifles make perfection, and perfection is no trifle." In most cases of spinal deviation it will be found that the column yields on the right side, and the cause of this may be traced to a very early period. In infancy the child is taught to use the right hand in preference to the left; and when it can sit at table and use a knife and fork and spoon, it is corrected should it attempt to cut its meat with the left hand, or to employ it in raising the food to its lips. Now, in order to produce equilibrium of the body the muscles of both sides should receive an equal amount of exercise, and this can be accomplished by teaching the child to use both hands indiscriminately, which it would soon do with perfect facility. As the child grows up the right foot will always accompany the right hand, as may be seen by watching it pick a pin from the ground. The right foot will be advanced, the right arm stretched forward, and in stooping the body will be twisted, and the whole of its weight thrown upon the right leg. When fatigued with long standing it naturally rests itself on this side, the weight falling on the right foot, which loses its arched form and becomes elongated, while the length of the limb is sensibly diminished. I have seen cases in which the right leg has become much shorter than the left, entirely from persistence in this inelegant habit. A short time ago a child was brought to me whose foot was quite flattened, every vestige of its arches having been destroyed; and although not strictly within the sphere of my practice, I consented, at the entreaty of the mother, who is one of my patronesses, to try if the foot could be restored to its proper shape. A shoemaker was sent for to measure it for a pair of boots, and we purposely let him take the length of the left foot first. On proposing that he should try the right also, he said it was unnecessary, as one measure would do for both; but we persisted, and he found, to his surprise, that the right foot was fully half an inch longer than the other. On placing my finger under the sole of the foot, and pressing upwards, the arched form was restored, and the foot reduced to the same length as its fellow. Proper means were adopted, the child is now rapidly improving, and, I have no doubt, will ultimately recover. So much for the good that may be effected by the study of a simple law of mechanics.

CHAPTER IV.

CLOTHING FROM THE AGE OF TWELVE TO EIGHTEEN YEARS.

Having now discussed the more important matters relative to childhood, we may advance another stage with our subject, and take into consideration a few of the many important matters which pertain to the period of adolescence, which is the transition-state from childhood to womanhood. During the whole of this time all the vital functions are active in preparing for the growth and higher development of the body, whilst at the same time the bones are soft, the cartilages and ligatures yielding and easily bent, and any perversion of the growth which may now take place is likely to leave its impression on the frame for life.

During its progress through this equivocal state there is one thing above all others that youth requires, and that is absolute freedom. The exercises should be sufficient to bring all the organs of the body into action, and yet not so severe as to exhaust the energies or cause an undue development of some particular members.

Talking—not screaming—in the open air should be encouraged, that the lungs may be thoroughly inflated with fresh air; nor can this absolute freedom and proper healthy exercise ever take place unless the clothing be properly adapted to the undulating outline of the female form, so as to allow it to fall with ease into those elegant curves on which physical beauty depends. When these things are neglected, the young lady becomes dull and lifeless, the gait is inelegant, and the contour of the figure deranged. Parents and teachers should bear in mind that

to train a lady it is not necessary that she should be an invalid, and good bodily health will always be found favourable to every kind of intellectual culture.

Every one is aware that by proper education the intellectual faculties may be improved; but there are few who have ever reflected on the fact that the ugly might have been made handsome, and the deformed comely, if the body had received the same amount of culture which has been bestowed upon the mind. This, however, is the lowest aspect of physical training; for as the body is the organism through which the mind is manifested, the perfecting of that organism gives free scope to the exercise of the soul, and hence lays the basis of a higher life; but as this is an important subject we must make it plain.

Life is carried on by certain great functions, which we call Respiration, Digestion, Circulation, and Secretion, all of which proceed under the impulse of the involuntary nerves; all of them are, however, dependent upon the voluntary nerves and muscles for their proper operation. Breathing requires exercise, change of air and position; digestion demands the procuring and preparing of the food; circulation can only be brisk when the body is in motion: and all these motions are necessary to a proper and healthy secretion of the fluids and solids taken into the stomach. We may therefore say that life is dependent upon voluntary as well as involuntary motion for its existence, and above all it may be affirmed, that a healthy and sound body is never seen, unless there has been proper daily exercise. For, as every function that we have named must be maintained in order that there may be a state of perfect health, so also the whole congeries of organs must be exercised together, in order that there may be nothing superfluous, and nothing wanting, in the entire fabric.

If we take each part separately we shall arrive at the same result as if we speak of the whole together. No organ is of greater importance to life than the lungs; and hence it is necessary not only to breathe a pure atmosphere, but also that we take in enough of it at every respiration to inflate the whole chest. The lungs may be said to commence with the soft lining of the trachea, and to extend in two huge lobes down into the chest; and so thin and delicate is the substance of which they are composed, that enough of it is folded into a single thorax to cover one hundred and sixty square yards. This great extent of sur-

face has been given for the purpose of multiplying the air-cells, of which there are about six hundred millions, and their office is to take the oxygen from the atmosphere, vitalize the blood, and send it back to the heart, and from thence to every part of the body. Now, when the lungs are contracted by a compressed chest, two evils naturally result: in the first place, there is a low and feeble circulation, which is sure to induce weakness, languor, or idleness, for the brain and other organs are unable to fulfil their functions for the want of that stimulus which is essential to bodily and mental activity; but there is a second and more dangerous evil than this. The compression of the chest brings the thin membrane of the lungs into contact, and upon the slightest inflammation suppuration naturally takes place, and hence pulmonary consumption is established. Writers upon phthisis are at present speculating upon the cause of the frequency of this malady, and some of them find it in the moist condition of our atmosphere, others in the supposed hereditary scrofulous state of the blood; but if those gentlemen will only look at the common practice of diminishing the capacity of the chest by stooping, or the shortening of the spine, consequent, perhaps, upon ill-adapted clothing, they will find in this a much more frequent cause of premature death from diseased lungs than any other that might be named. Indeed, the full development of the capacity of the chest, is a matter of so much importance, that where this is not attended to, the subject may be said to be constantly liable to this grievous malady.

It is a sad reflection that this tendency to a contracted chest is more common amongst the middle and higher classes, in whose children we ought to witness the most perfect physical organizations, than it is amongst the poor. Children who are allowed to jump, play, and skip, or roll on the floor or flags, are much more likely to have robust bodily health, than those who are always "taken care of." The enemy of the poor child is neglect, that of the rich inactivity. The only exception to this statement will be found in the cases of those mechanics and artisans who are obliged to lean forward over their work, and whose hands are taught, by constantly practising one thing, to strike curves like compasses; but one glance at that pale and haggard face is enough to convince any one that nature takes ample vengeance for the crushing to which the vital organs are daily subjected. The poor child who is cooped up in the nursery and deprived of that freedom of action which

is essential to the growth of every organised being, can never be properly developed. The kitten plays and the lamb bounds and skips, but the "good child" is expected to be quiet, and then it is made a matter of wonder that it is sickly or deformed, when so much care has been taken of it.

It was Swedenborg, we believe, who was the first amongst the physiologists to show that the whole body breathed, and that, as a natural consequence, every organ respired in unison with the lungs; by carrying out this idea to the brain, its moral importance may be at once seen, for unless the lungs be properly inflated, and the respiration deep and perfect, no earnest and noble thought and generous and energetic action is possible. In cultivating the body, therefore, we are elevating the mind also, and are rendering a life great and admirable which would otherwise be dull, useless, and contemptible.

Our space forbids that we should discuss this question in reference to every organ of the body; but if there be any one part more than another which requires constant exercise, it is the skin. This membrane, which envelopes the whole body, performs functions of the highest physical and moral importance. If it be in any way obstructed, the internal organs are oppressed, and hence fever or inflammation results; and when there is any cutaneous eruption, the malady is not only prejudicial to health, but is also attended with an irritable temper, and too often with bad moral results. Now exercise, proper daily ablutions, friction, plenty of pure air, and the constant motion of the muscles, are all necessary for the purpose of keeping the skin in a perfectly healthy condition.

It will be perceived from these remarks, that we fix a very high standard for the development of the body. Ignorance and idleness are the sole causes of so much deformity and disease as it is our fate to witness; and hence it only requires the proper adaptation of the means to ensure a healthy, vigorous, and beautiful physical organization. It is not simply the original form so much as the culture, which gives beauty to humanity. The higher beauty, the beauty of soul, is never seen—no, not in the face of a Georgian, unless education has given its aroma to the original grace of the flower.

How, then, it will be asked, is this consummation to be attained? for all exercise is not alike beneficial; and, in addition to this, we do not

want a partial development. Ladies especially do not need the muscular energy of the mechanic. They do not indeed require to be made masculine at all. Our reply is, that, as we have two objects to accomplish, namely, the full and perfect culture of the well-formed, and the restoration of such as are only imperfectly developed, we must adapt our means to the end proposed, and exercise the body upon itself, as is done in running, walking, and swimming, for those only who require this training; but in all cases where there is deformity, or only partial evil, the curative means must be adapted to the restoration of the imperfect organs.

The importance of commencing the physical training of the child at a very early age will be rightly esteemed by all, who consider how much it has to learn during the first two years of its life; for it is in this period that all things emerge from chaos, and become defined by the senses, and their form, size, shape, and colour noted. Now, all who are acquainted with physiology, know perfectly well that the mind cannot be properly unfolded unless the organism through which it is manifested be in a healthy condition, so as to be enabled to register the impressions made upon it by external circumstances. "Forms arise before the eye, and sink again; sounds thrill upon the ear and vanish; the infant begins to give the bounds to forms, and to catch the sounds that float upon the air, and discriminate between them. * * * By innumerable attempts which comprise the first exercise of the limbs, the child learns to distinguish distance; thousands of experiments bring the gradual knowledge of surrounding things; and this, by the aid that is tendered to it by the nurse or mother, forms the first portion of the child's education."* Now, to aid this, the whole organic structure must be taken into consideration—the limbs, senses, lungs, stomach, and above all, the condition of the spine; for each and all of those organs must be in a perfectly healthy state, and must perform their functions properly, or the brain will not be in a condition to receive and retain the impressions transmitted to it.

Nature is always beneficent, and is ever striving to correct and amend the evils inflicted upon the body by the vicious habits which are almost universally indulged in. One portion of the community neglects the

* Woman's Educational Mission, p. 16.

skin, others breathe impure air, others are in the daily habit of taking either too little or too much food and drink, or that which is deleterious. It is the almost universal practice to educate only one hand, to sleep constantly upon one side, stand upon one leg, or bend and keep the body in some awkward position. Hence, in a long experience I have never found one person physically perfect, and conclude, therefore, that nine hundred and ninety-nine of every thousand people that we meet with are imperfectly developed. Here there is work for the teacher:

PRESENT FASHION.

he has to know what is required, and how and when to exercise the neglected parts, so as to ensure an equal distribution of the strength in every organ and member; for if this be attended to there will be no more hump-backs, crooked knees, or stiff joints, nor indeed right-handed and left-handed people; for as each limb receives an equal share of exercise, all will be alike under the command of the will; for this is indeed what is accomplished in physical education. No organ is created, but all are brought under the dominion of mind.

Amongst the causes, however, which produce spinal deviations in young ladies there is none that is more general than improper clothing. Fashion has superseded utility to such an extent amongst the rich, that the limbs of the young are contracted by their dress; and amongst the poor a want of skill in the adaptation of the materials to the form of the body is so common that it is a rare thing indeed to see any one who can be said to be properly clothed. We boast much, and we have reason to do so, of the superiority of the West over the East; but in the proper art of dressing, that is, in the adaptation of the materials worn to display the form and beauty of the body, we are far behind many of the rude nations of antiquity, and also of the partially civilised Asiatic races. Look at the figure on the opposite page, and then say if any dress can be more unnatural than the present costume.

The construction of the clothing, however, always a matter of the highest importance in every period of life, is more especially so during the time of its growth, and just before the body reaches maturity. Economy dictates the wearing of the clothes so long as they look well, and if they should become too small for the elder, that they should be passed on to the second and third, if need be, until they are worn out. The only objection to this is, that they may be said never to fit. It is true that our idea of the fitting or adaptation of clothes differs very much from that which is ordinarily prevalent. With us, it is necessary that they should not only look well, but they should also BE well suited to the requirements of the wearer. Now, it is well known that when the body ceases to grow the bones become fixed, and it is consequently more difficult to correct any deviation, or restore the figure to its normal state, after this period. It naturally follows, therefore, that the period of growth being that in which the body is more yielding, it is at that time more subject to deformity than at a later period of life. We must therefore insist that at this time there must be no cutting with strings or garters; no compression of the centre of the body by badly constructed corsets; no slipping off the clothes from the shoulders and resting on the arms; no contraction in any part of the whole costume, but absolute freedom of action for every organ and muscle.

With so many commands not to do, the gentle reader will naturally ask what she is to do, in order that her charge may be healthy and accom-

plished. To this we reply, that she must always adapt both teaching, exercise, and discipline to the nature and constitution of the child, that is, to the especial requirements of that particular child to which she may have to direct attention. In the first place, the school seats must be so constructed as to afford support to the back whenever the pupil needs to recline backwards. The seat and back also should be covered with cloth, and stuffed, so as to render them comfortable, and the pupils be allowed to rest occasionally. The teacher must always bear in mind that her object is to make her pupils proficient, and she cannot do this except their studies be made delightful to them. When the tuition is irksome, it will always be shunned if possible, and hated when it cannot be avoided. It is possible, we know, to drill a human being into a routine of mechanical movements, mental as well as bodily; but this is not education in the sense in which we use the term. There is no drawing out of the higher faculties of the soul, and consequently no love of wisdom imparted under such a system: neither walking, however, nor any other exercise of the body upon itself, can ever give all the movements necessary to a young person for the perfecting of the frame; and it was this conviction which led Dr. Caplin to invent the vast number of mechanical contrivances which make up his magnificent gymnasium. There is one apparatus, however, which we should recommend as indispensable for a family, and that is the *Pilaster*. This simple machine, which is at once compact and ornamental, supplies the means for fifteen different exercises, enabling us to expand the chest, or strengthen by exercise any member of the body that needs our aid. Nor is it possible to do this without some adaptation of mechanical means; and the more perfect the means, the more complete will be the success.

That the reader may have a clear conception of our meaning, we introduce here a short description of this apparatus from the "Lady's Newspaper." Take the first illustration of its use as a chest-expander. (See Fig. 1.)

The expansion of the chest is one of the first things to be attended to, in any efforts to improve the bodily health. Now, the thorax is composed of the spine posteriorly, and of the sternum, or breast-bone and ribs laterally. The ribs incline downward with the spine, and

hence, when we bend forward, the inclination is greater; and as a natural consequence, the capacity of the chest is diminished, and the ability to breathe freely suspended. To this we may attribute pallor, ill-health, and affections of the chest. All the bones are more or less under the command of the muscles, and in such a case as that which we are supposing, it is the weakness of the muscles of the back

Fig. 1.—Chest Expander.

that has caused the deformity; and, as a natural consequence, the exercise of those muscles will restore their healthy action, and with it, the figure to its natural position.

As a general rule, one arm is stronger than the other, and requires a separate exercise to restore the equilibrium; and this we attain by

moving the members in such a manner as shall act upon the part that needs our aid: We commence with the Bow Exercises.

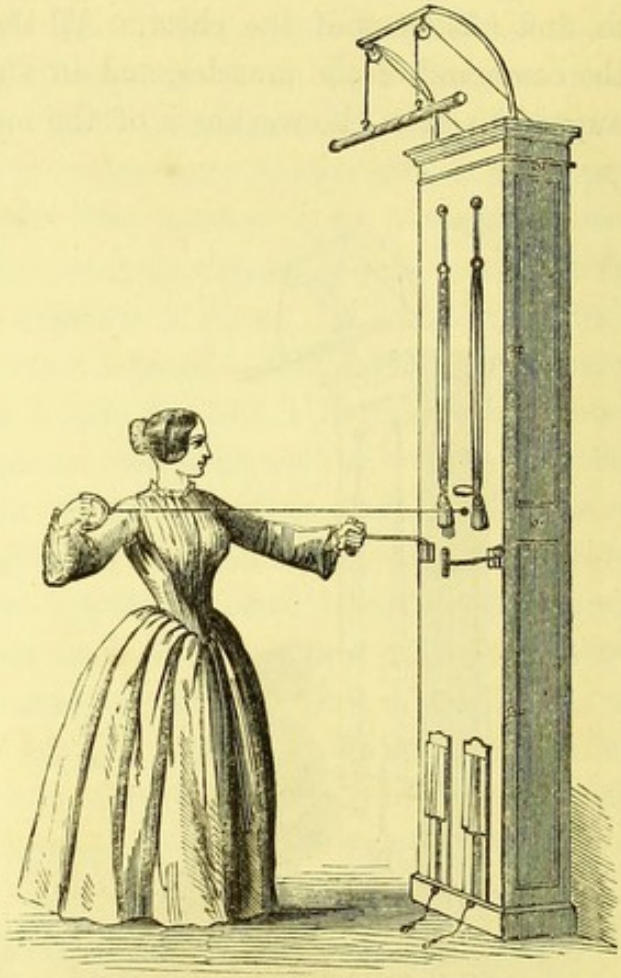


Fig. 2.—Bow, or Archery Exercise.

This will bring into action all the muscles of the arm; but, in order to give the whole arm and shoulder full play, other exercises are requisite, especially those which appeal to the muscles of the back and lower extremities; for, as a general rule, it is not well to appeal to an isolated set of muscles only. In this case the rowing motion is desirable. (See Fig. 3.)

The sawing exercise is performed with the same handles as the rowing, the pupil only taking another position. The alternate pressure which this exercise causes upon the cartilages which separate the bones of the spine promotes its elasticity, and enables it to maintain the upright and natural position. (See Fig. 4.)

The feet and ankles are exercised by another set of motions, which we denominate treading. (See Fig. 5.)

To promote the general heat of the blood, and increase the whole vital action, there is nothing that equals the jumping exercise. (See Fig. 6.)

These are some of the important exercises which are performed upon

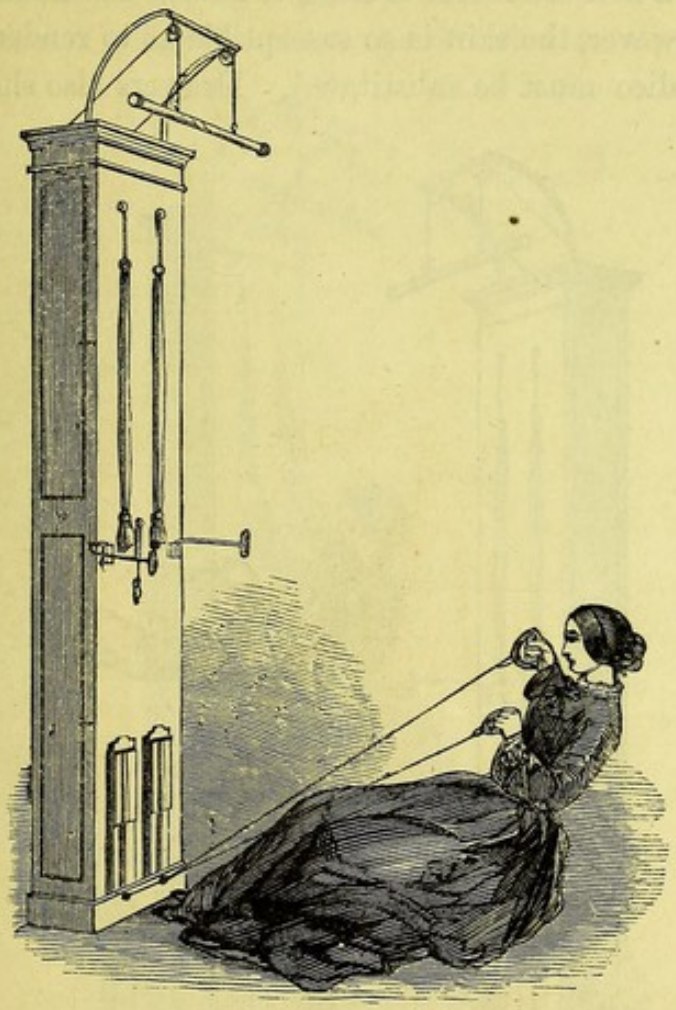


Fig. 3.—Rowing Position.

the Pilaster; but this is only one of scores of similar contrivances which Dr. Caplin has adapted to every age, sex, or weakness. A patient study of the human frame has enabled him to interpret the dictates of Nature, and to assist her in her efforts to impart health, strength, grace, and beauty to the whole system.*

Respecting the materials of which the clothing should be composed,

* A visit to the Royal Hygienic Gymnasium, 9, York Place, Portman Square, is respectfully solicited from all who desire further information on this matter.

pared with that of the girl. In the course of a few years he enjoys the superlative delight of adopting the clothes peculiar to his sex, and is accordingly released from the trammels he has been hitherto compelled to endure. His trousers fit closely over the hips, and are suspended by braces passing over the shoulders, and crossing on the back. His jacket and waistcoat are cut in such a manner that his arms can be allowed free and natural motion; no compression

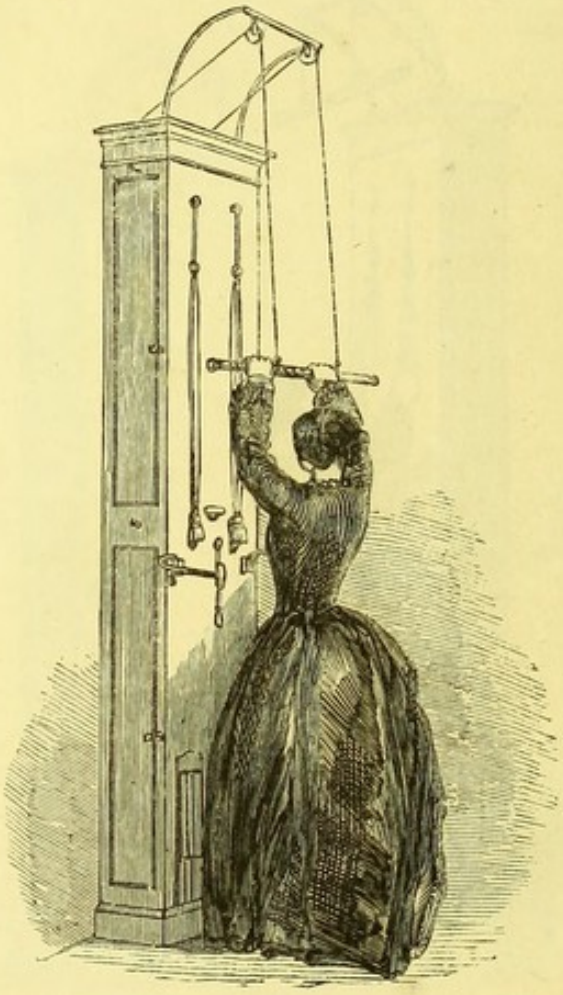


Fig. 6.—Jumping Position.

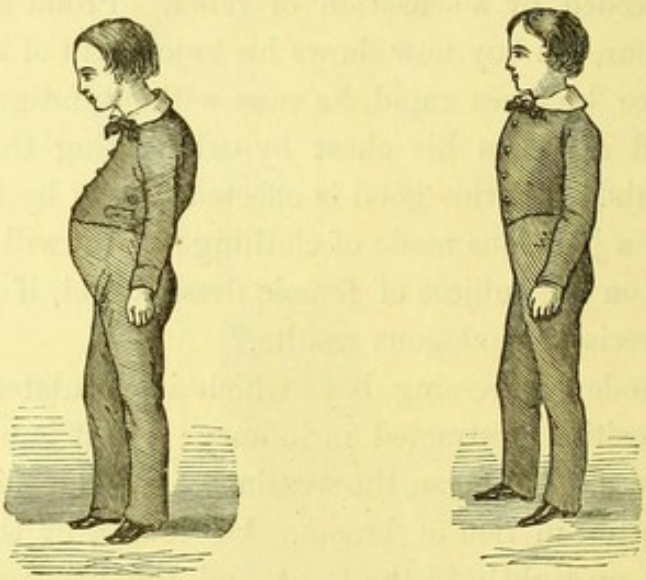
is made upon the chest, and he can therefore assume the erect position without any counteracting influence from the dress. When this change is made in the clothing, it will be found on careful admeasurement that the boy will immediately increase in height in a very perceptible manner, that his chest will become broader, his back narrower, his breathing less laborious, and his countenance redolent of health, in consequence of

the improved circulation. His arms, too, instead of falling in front of the body, will hang rather backwards, his head become more erect, and he will experience a sensation of comfort to which he has hitherto been a stranger. A feeling of unpleasant stiffness may be complained of on his assuming this manly attitude, and this arises from the muscles of the chest and back being brought more into action, and also to the back part of the intervertebral cartilages having become thickened, from his long habit of stooping. We frequently hear a remark of the same kind made by ladies on being first placed perfectly erect; but this stiffness is invariably succeeded by a sensation of relief. Proud in the consciousness of his vigour, the boy now shows his enjoyment of it by a thousand antics; his pace becomes rapid, he runs without fatigue, and when in the playground exercises his chest by exhilarating though frequently discordant shouts. All this good is effected simply by the change from an improper to a judicious mode of clothing; and it will be at once seen that our views on the subject of female dress would, if properly carried out, produce precisely analogous results.*

There is a mode of dressing boys which is calculated to perpetuate the stooping position contracted in infancy; but it is now, fortunately, falling into disuse. We mean the wearing of a little waistcoat, to which the trousers button in lieu of braces. Of course, by this, the trousers must be drawn up tightly in the front, and the pressure fall upon the back of the neck, thereby dragging the head and arms forward. Some years ago, I ordered a dress of this description for my own son, and when it was tried on, found that he stooped very much. I accordingly unbuttoned the front buttons which attached the trousers to the waist-

* Boys are, however, subject to an annoyance to which girls are comparatively strangers. The upper portion of the body is kept warm from the inordinate quantity of clothing, whilst the legs are left perfectly bare, and exposed to all the inclemency of the weather. I once had a beautiful boy brought by his mother into my room. Fascinated by the beauty of the dear child, I grasped his legs to shake them, as I believe most mothers would do, and was shocked to find them so blue and cold that he actually had no sensation there whatever. He wore a little bear-skin coat which kept the upper portions of the body at a temperature of 68° Fahrenheit, but, upon applying the thermometer to his dear little legs, it only indicated a heat of 42°. He looked ill, and had been taken to several medical men, who pronounced his liver out of order; but I thought that warm stockings might be useful, and accordingly recommended them, and in a few weeks had the satisfaction of hearing that the child's health was restored.

coat, and told him to stand upright, which he did, and I then perceived that a space was left of more than three inches between the garments, which had been taken at the expense of the thorax. I at once threw aside the waistcoat and adopted braces of my own invention, which have since been exhibited at the Crystal Palace, and which answered the purpose effectually, without impeding the freedom of the limbs. The same result has been experienced by all who have subsequently tried them, as they make up for want of power in the muscles of the back, and thereby assist in preserving the erect position.



FIGURES OF A BOY.

The above figures present no exaggeration of the effects of the clothing which we have referred to. The sketches are taken from life, and represent the same child in two different dresses. No mere verbal description can add to the impression which those illustrations are sure to produce.

CHAPTER V.

THE CORSET, ITS HISTORY, USE, AND ABUSE.

Of all articles of human attire there is none, perhaps, that has survived so much abuse as the corset. Introduced into common wear many centuries ago, it was met with the rebuke of the sober and the satire of the vivacious; always painful, and generally injurious, it has, nevertheless, outlived even the general condemnation of the faculty, and spite even of the doctor maintains ground. There must surely be some fascination in the article, or some latent conviction that, after all, it is a good thing, or it would have been banished out of the world long ago.

Now, we hope to reverse the dictum of Mr. Whitfield and other medical men, who contend that stays and corsets are bad things, and in the course of this chapter show that, properly constructed, corsets are, as articles of dress, the most useful and in every sense the most beneficial that can be constructed—that is, of course, when they are properly adapted to the body; for if, either through ignorance or a mistaken idea of fashion, the construction be faulty, and a compression of the chest ensue, why, then, undoubtedly it is far better to be without corsets altogether.

It is a matter of little consequence for us to inquire here why the female figure needs support more than that of the male. In a purely natural, or rather savage state, perhaps it does not; but in all times when beauty and comfort are studied, corsets will undoubtedly be worn, and there are many reasons why they should be. The delicacy of the intercostal muscles, the falling of the breasts, the spreading of the frame at a certain period of life, all call for support, and call for it too

in a manner that must be attended to. And to what purpose are the resources of our art, if they are not to supply the deficiencies imposed on Nature in consequence of our artificial state of living? Perfection of every kind is ideal, or rarely met with, and what the artist in dress has to do is to soften the natural excrescences, and give grace and beauty to the homely or imperfect, that they may approximate nearer to that which they ought to be. In a few rare instances this may be done without corsets, but in ninety-nine cases out of every hundred the well-adapted corset is indispensable.

MARGARET, WIFE OF LOUIS, KING OF FRANCE, A.D. 1234.

It is hardly possible to say at what particular period stays or corsets were first worn. TIGHT LACING is condemned by writers soon after the Conquest, indeed in the reign of William Rufus; but it does not follow that stays were necessarily worn at that time, and an inspection of a great number of ancient paintings and illuminations induces us to believe that they were not. In Strutt's "Antiquities," Plate XXXIV., there is a beautiful sketch of Queen Matilda, A.D. 1100, who is wearing

an elegant and naturally-fitting dress close to the body; and that this fashion continued for a long time may be seen from a figure given in Shaw's "Dresses of the Middle Ages"—that of Margaret, wife of St. Louis, King of France, A.D. 1234.

A glance at those figures will show at once that it is possible to compress the waist by lacing the dress too tight, as well as with stays. And it is possible—indeed to our mind certain—that corsets, such as those in present use, were not known at this period. A pious monk, however, has recorded two important facts relative to those dresses; the one is, that a fine lady in the habit of wearing them died, and as she had lived an ordinary life, her sins and merits fairly balanced in the scales of justice, until her clothes were thrown in, and then the fatal scale sunk loaded with her follies. The other lady meets her reward earlier, for a great knight, who was famous all over Europe, having obtained papa's consent, came for the purpose of marrying her, and, finding her very tight laced and unnaturally small in the waist, fell in love with her younger sister, who dressed in a more natural manner; and the lady, like many others, died a maid, the victim of her own vanity.

The first figure that we have met with, in which the corset may be fairly detected, is that of Constance, Queen of Castile, who, in 1372, married John of Gaunt, Duke of Lancaster. From this it would appear that the custom of wearing them is of foreign, and not native origin; and this impression will be further confirmed by a study of the pure English dresses of the period. Almost a century after this, the Duchess of Gloucester may be seen (See Strutt, Plate XLIV.) dressed in an elegant and natural manner without corsets. When, however, they were once adopted, it was only natural, following other fashions, that they should run into extremes; and hence the waist was not only compressed and rendered unnaturally small, but rose and fell with the caprice of the times. At one time close up to the breasts, and at another down to the hips, it ascended and descended with the whim of the age; but the corset, for good or ill, always held its ground. The fardingale came in and went out, with a thousand other fashions, but the corset remains; and we doubt not but it will, when properly adapted to the body, remain as long as there are sensible ladies left in the world to wear it.

We should like, above all things, to possess a museum of old stays, beginning with the first rude effort of the savage to support the body,

and passing on from the bodices of the middle ages down to those of our own time—the good, bad, and indifferent of all ages. Dr. Johnson defines stays, "*bodice*, a kind of stiff waistcoat, made of whalebone, worn by women;" but there were stays worn in England long before there was any whalebone to make them with, and they were consequently made, as they ever have been since, of different materials. The older corsets were generally made of canvas, duck, or jean, and were stiffened either with straw, cord, or what were then called "stay-sticks," that is, pieces of wood which were used then for the same purpose as whalebone and steel busks are now. Occasionally, however, leather, such as that worn for soles of shoes, was used, and formed a heavy casing for the body. Indeed, this was the case whatever material was adopted; the corset was a stiff, heavy, and unyielding envelope in which the body was confined, wanting alike in adaptation and elasticity.

There is something supremely ridiculous, to us, in the old sumptuary laws, which regulated the dress of every class of the community, the gravity with which the legislature fixes the width of a lappet or the dimensions of a ruff, and determines that no gallant shall walk the streets with the toes of his shoes more than half a yard long; but we are not aware that those sages ever dealt with the corset; what they, however, omitted, the medical faculty took up, and a controversy almost as edifying has been carried on between the doctors and the staymakers, each party being perfectly ignorant of the other's profession. A lady believes what she *feels*, and hence, practically, the staymakers triumphed, for the corset was still worn; but the facts upon which the medical man based his reasoning remained unanswered, for the other party, knowing nothing of physiology, made the stays with as little relation to the requirements of the body as before. This controversy, however, made one thing plain enough—the old corset could be tolerated no longer, and people began to look for something better. An attempt was made to meet this demand by machine woven and other kinds, called by the most strange and unintelligible names; but as they had all the disadvantages of the old corset, and were only better to look at, it was plain that they could not be the desideratum; neither was it possible that they ever should be, for the people who designed them were ignorant of the first principles upon which they should have proceeded, and not knowing what the body required, could not, as a matter of

course, adapt their productions to its necessities. Hence, however elegantly shaped or finely stitched they might be, they utterly failed in the object which they should have served. In this case the body was forced into the shape of the corset, instead of the corset being fitted to the shape of the body; there was, consequently, an infringement of the laws of Nature, and we all know that no one can violate her canon with impunity.

The true object of corsets ought to be to support the bones as they increase in size and weight, without obstructing the due development of the muscles by which they are moved. The artist in corsets will therefore anticipate every requirement through life, and adapt her contrivances to the ever varying wants of the body.

Against tight lacing, we, in common with all who have paid attention to the subject, earnestly protest. By a perseverance in this habit, the health is injured and the symmetry of the figure entirely destroyed. The stays in ordinary use are ill-constructed, and cannot be effectual in the promotion of the objects for which they are professedly designed, whether tightly laced or not. Let us suppose a young lady who has been in the habit of stooping, suddenly made aware of the injury to her general health occasioned by this practice, going to one of the numerous staymakers with which London abounds, in hopes that she may be able to purchase what will restore her to the erect position. Most of our readers are aware that this will be attempted by a strong steel, whalebone, or wooden busk passed down the front of the corset; that the stays will be strengthened by an immense number of springs and bones, placed without the least regard to the anatomical construction of the body; and that, moreover, *in order to give the necessary power of motion to the figure, pieces of elastic are fitted in at the back.* Now, by this arrangement, the lady who subjects herself to this machine may for a few days be kept erect by the pressure of the busk. As for grace or comfort, that is totally out of the question, as the busk presses too much upon the chest and abdomen to permit ease to be for one moment a matter of consideration, and in the course of a very short time the busk becomes the whole medium of support; it bends under the weight, and by its inward curvature presses on the very portion of the body whose free action is essential to health. In this case the stays only aggravate the evil; for, if she must stoop, it is better that she

CHAPTER VI.

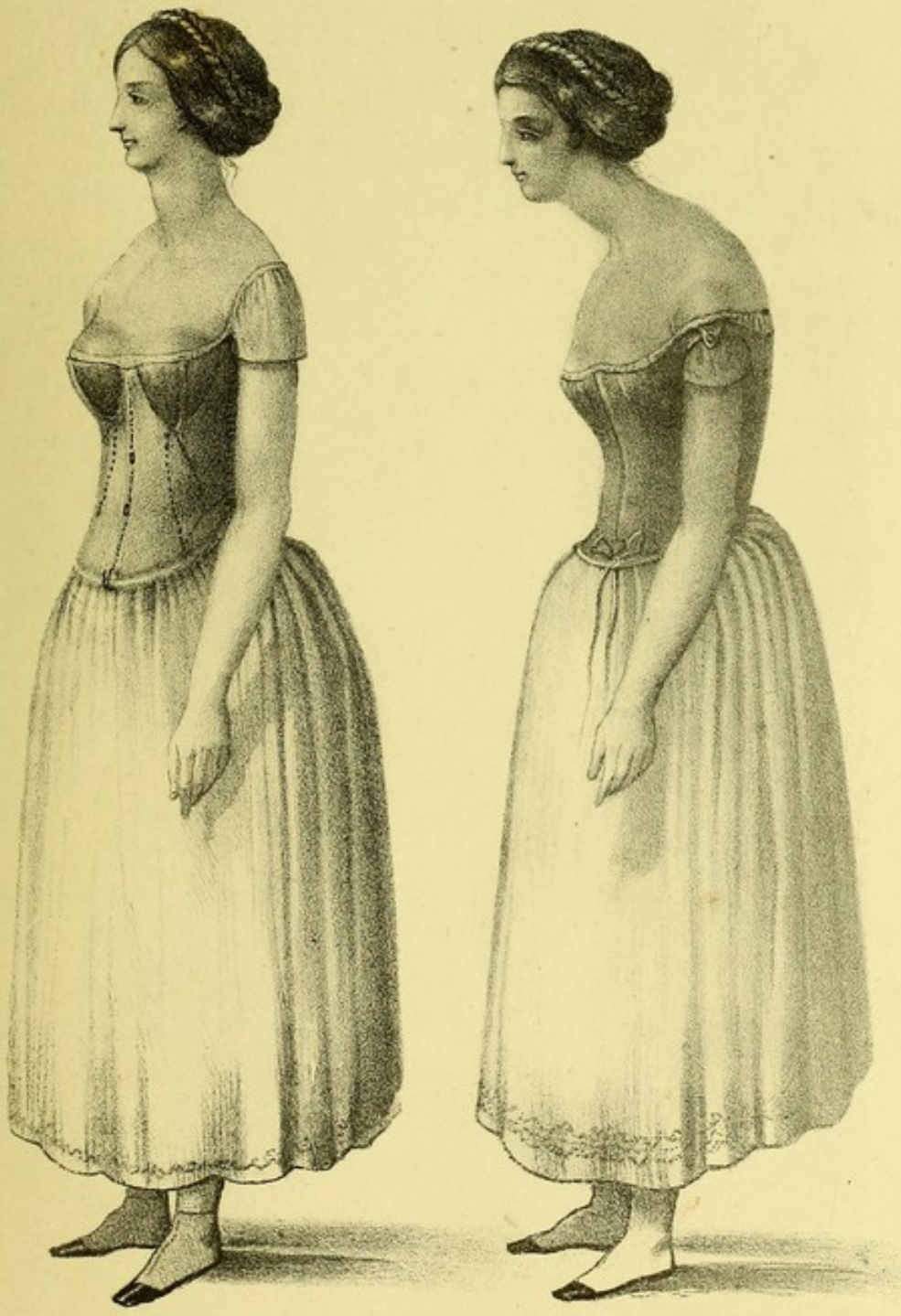
ON THE ADAPTATION OF THE CORSET TO THE BODY.

THE reader will have already observed that the reason why our corset differs from every other that has been offered to the public is, that we have taken a totally different view of the whole matter from any of our predecessors. Staymakers have studied fashion, and imagined that beauty consisted in following the *Magazine des Modes* as it came from Paris, and hence have carried the waist up to the breasts, or depressed it down on the hips, according to the whim of the time. We, on the other hand, have studied Nature—taken the human frame as our standard, and in all our labours have attempted to perfect that according to our ideal of its particular type of beauty: hence, instead of displaying fashion we display the human figure, and by giving freedom to every organ and support where it is needed, are enabled to impart all the advantages which can result from the addition of another muscular envelope to the figure. It was this adaptation which secured for us the approbation of the Report made by a special commission at the Athénée des Arts de Paris (sitting 10th April, 1848), on Madame Caplin's Hygienic Corsets:—

"Gentlemen,—The corset now under your consideration, invented and manufactured by Madame Caplin, of London, has been presented by her husband, Dr. Caplin, a corresponding member of the society, at present residing in London, and who, when amongst us, nearly twenty years ago, used to take an active part in our scientific work, and who frequently met with your approbation for the many communications he made to the society on objects of art.

"This corset, to which she has given the name of Hygienic, is totally different from the other corsets hitherto made, under two different points of view. But before entering into the details of its construction, we must say that, like many others, the principal object

Plate I



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of the inventor was to find a point of support for the superincumbent weight of the head, the superior limbs, and the organs of lactation and respiration, on that part of the body which, in consequence of the elements of strength that nature has accumulated around it, in adapting so perfectly the pelvis for the functions it is destined to perform, cannot suffer any irksome influence from pressure. Corsets may be considered as made of three contiguous parts, which we are about to describe separately, beginning from the bottom to the top.

" The first one, or the inferior part, surrounds the summit of the hips, and affords the point of support previously mentioned.

" The second part, or middle one, extends from the hip to the thorax, and is destined to confine the region of the abdomen, which contains those moveable organs that, from their nature, may be compressed without much inconvenience, for the purpose of producing the slender waist so much sought for fashion's sake, and which so many ladies will obtain at any price.

" The third, or superior part, is intended to envelope and support the thoracic region, and must produce but a very slight pressure, or else it would cause disastrous consequences, by impeding the respiration, and preventing the development of the organs to which Nature has confided the care of preparing the aliments intended for supplying the first food of man.

" The corset invented by Madame Caplin does not leave any apprehension of the danger we have alluded to in the above remarks; not only is the shape calculated so as not to permit any real pressure, but the inventor has found the means of providing for a particular flexibility, in replacing, in different parts in the width of the corset, the hard, unyielding material they are made of, by a very elastic tissue, disposed longitudinally, and maintained by bones of various lengths; by so doing she has obtained the following results—that the upper part of the corsets are dilatable under such a slight power as to allow a perfect freedom for the movements of inspiration and expiration, without, nevertheless, doing away with the principal end of this article of apparel, viz.—to sustain the weight of the thoracic organs, and to maintain the uprightness of the superior regions of the body.

" In addition to this improvement which characterizes the invention of Madame Caplin, we must notice another, which, although perhaps

less important in appearance, is deserving of attention; it is relative to the mode of lacing. Madame C., instead of lacing the corset all at once in one direction, and beginning from one extremity, commences the operation from the middle of the waist, upward and downward. This method allows the means of regulating the pressure, according as it may be requisite, to the different parts of the body on which the corset is applied, whilst by the ordinary process it must, as a matter of course, exert the same power in every part.

"The modifications we have related in the construction of an article so generally worn, and which has been much abused, have appeared important enough to the members of the commission you have named, to submit them to your notice, as improvements deserving your approbation; we therefore purpose, as conclusions of this report—

"First,—That a letter be addressed to Dr. Caplin, to congratulate him on the result his wife has obtained in the construction of her Corset, as also to encourage her in the pursuit of other improvements.

"Secondly,—That her invention be favourably mentioned in the printed annual report of the Society."

"This being the only reward which, according to the regulations of the institution, you are permitted to grant to any one of its members.

"The society unanimously adopt the above conclusions.

Signed by

"Dr. CARON.—Médecin de la préfecture de Police, et du bureau de Beinfaisance, du 4eme arrondissement.

"Auteur d'un appercu d'Hygiène, sur l'alimentation par le café au lait.

"Dr. GENEST.—Ancien chef de Clinique à l'Hotel Dieu; auteur des Leçons de Cliniques Médicales, sur la fièvre Typhoide.

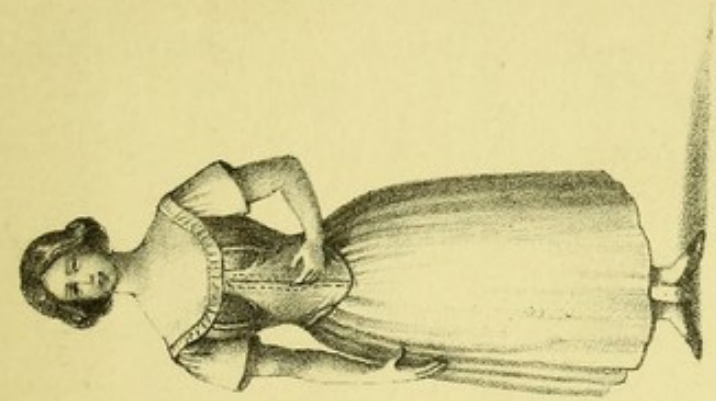
"Rédacteur de la Gazette Médicale, pour la Pathologie interne.

"Dr. RIBES.—Ancien Médecin du Roi par quartier-Médecin de l'Hotel Royal des Invalides."

N.B.—The copy of the above report, duly signed and sealed by the secretary of l'Athénée des Arts, Sciences, et Belles Lettres, de Paris, is to to be seen at Madame Caplin's Establishment, 58, Berners Street, London.

As an appendage to the above we may insert here the notice from the

Plate II.



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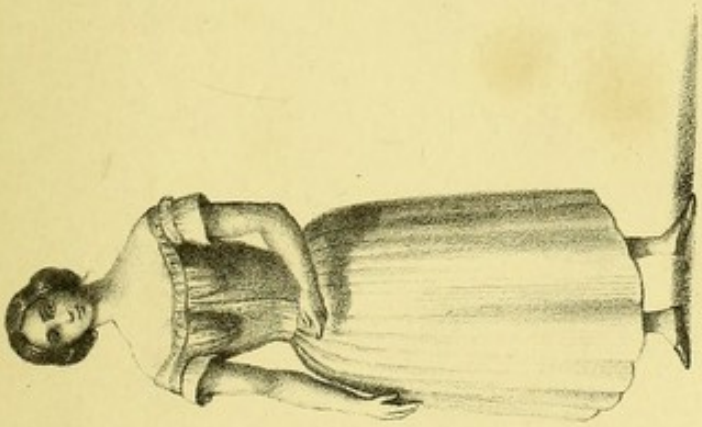

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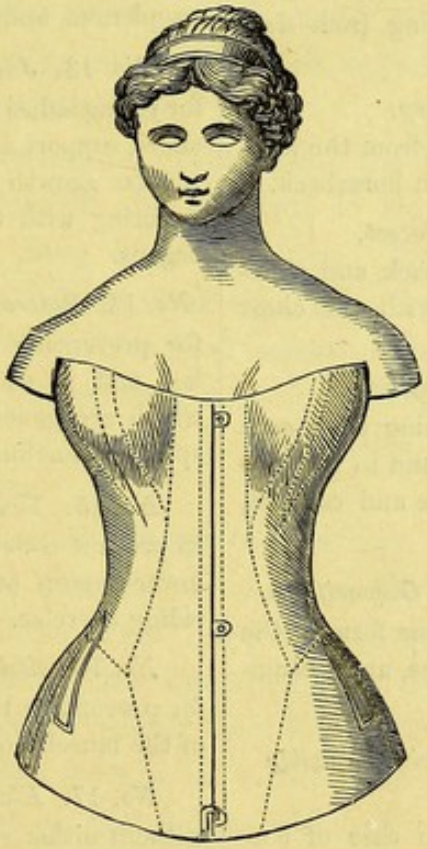
report of the Juries of the Great Exhibition of 1851, Sientific Department, Class X. See page 346. "Corsets ingeniously adapted for giving support to the trunk without confinement to the thorax."

As we have but one principle of adaptation to guide us, it will naturally follow that, properly speaking, we have only one corset, and that all the others are nothing more than modifications of this, rendered necessary by the great variety of bodily formations which are presented to us. And first, then, we have the plain Hygienic Corset for ordinary use. This is always made expressly for the wearer and adapted to her peculiar form. We here presume a state of healthy natural formation, and have therefore nothing to do but to preserve the true form as we find it. A glance at our illustration will show that the waist is put in the natural position—that is, across the abdomen, below the floating ribs, and just over the hips; by doing this we avoid all injurious effects, which are laid—and that truly—at the door of the ordinary corset, and by placing the waist in its natural position give not only a more beautiful but a more slender appearance.



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The first modification of this is in the elastic front, which is inserted for the purpose of affording an extra flexibility to the chest for ladies practising singing, or of delicate constitution; but as most of those adaptations will have to be mentioned in future chapters, we shall simply present a list of them here, as submitted to the Exhibition.

No. 1. *Hygienic Corset—Plain.*
For ordinary use.

No. 2. *Do. Elastic Front,*
affording an extra flexibility to the chest, for ladies practising singing, or of delicate constitution.

No. 3. *Do. Mechanical Front,*
put on and off instantaneously without assistance, and affording the means of relieving the chest or stomach without undressing.

No. 4. *Do. Self-Regulating Gestation,*
calculated to answer all the phases of pregnancy. Elastic and dilatable, affords support without pressure, and thereby preventing abortion, resulting from deficiency of muscular power.

No. 5. *Do. Riding,*
avoiding the inconvenience from the position of the body while on horseback.

No. 6. *Do. Semi-Corset,*
affording support to the back and abdomen, without interfering with the chest or bosom.

No. 7. *Do. Corporiform,*
for corpulent ladies, combining the means of fitting most accurately, and to improve the figure, while giving ease and comfort, by affording local support.

No. 8. *Do. Self-Adjusting Corporiform,*
yielding to, and following the form of the body in its various positions, and resuming its former shape.

No. 9. *Do. Corporiform, with Invisible Props,*
affording perfect support in case of corpulence combined with deficiency of physical power.

No. 10. *Do. Symmetrico-Restorator Corporiform,*
for restoring the appearance of the figure in case of slight distortion of the spine, or malposition of the shoulders.

No. 11. *Do. Invisible Spinal,*
intended for invalids, or persons predisposed to distortion of the spine; used with great advantage in the first stage of spinal complaint.

No. 12. *Original Elastic Bodice.*
Most valuable for infants, children, young ladies, and slight figures, affording the greatest amount of freedom of movement, and thereby promoting the development, suppleness, and grace of the body.

No. 13. *Juvenile Hygienic Corset,*
for young ladies growing too rapidly. They afford support and elasticity, directing the regular growth of the frame, without interfering with the free play of the vital organs.

No. 14. *Riverso-Tractor Hygienic Corset,*
for preventing children standing on one leg, and in such positions of the body which are generally the primary cause of spinal distortion.

No. 15. *Young Lady's Riding Belt,*
to prevent concussion taking place in the lower region of the spine during horse-riding exercise.

No. 16. *Abdominal Supporter Belt,*
for preventing the increase and relaxation of the muscles of the abdomen.

No. 17. *Elastic Compressing Belt,*
without either straps or lacing. A most valuable article in all incipient cases of abdominal weakness or relaxation.

No. 18. *Gestation Belt,*

combining support and elasticity, keeping up the centre of gravity, and making locomotion easy; it permits the wearer to take exercise to the last period of gestation.

No. 19. *Contracting Belt,*

superseding the bandages commonly used during confinement. Smooth, cool, regulated at pleasure by the wearer, affording constantly a gentle equal pressure, and susceptible of being worn without inconvenience until the figure is perfectly restored.

No. 20. *Dropsical Belt,*

to support the weight of the abdomen and prevent the filtration of the serous liquid into the cellulary tissues.

No. 21. *Medical Belt,*

for prevention and cure of bearing down and prolapsus uteri.

No. 22. *Dorso-Abdominal Supporter,*

to maintain the centre of gravity, thereby allowing locomotion and bodily exercise; adapted to all ages.

No. 23. *Invisible Scapula Contractor.*

Light, elastic, and worn underneath the clothes. This article expands and developes the capacity of the chest, prevents and corrects the stooping of the body, and the malposition of the shoulders.

In the construction of corsets we lay claim to several things as especially ours.

First. The invention of the hook in front, for the purpose of keeping the under clothing in its proper place. This was very soon pirated by others; and although the exact pattern could not be taken, in consequence of our patent, still a rough imitation sewed on to the front of the corset came into very general use.

Secondly. The insertion of elastic into the bodice, by which the corset was rendered flexible and yielding to those parts of the body where pressure would have been injurious. This also was imitated; but what rendered the imitation at once ridiculous and injurious, was the insertion of the elastic in the *back instead of the front* and side. The result, as a matter of course, was, that in attempting to imitate mine they spoiled their own corset—if, indeed, theirs could ever be said to have possessed any value.

Thirdly. No one that we are aware of except ourselves ever studied the human body for the purpose of adapting the corset to its requirements. Clever staymakers there have been in great abundance, so far as the stitching and padding are concerned; but they left the knowledge of anatomy and physiology where they found it, in the hands of the medical practitioners, and worked on without any consideration of the structure and functions of the organs which they were about to compress; and in this we stand perfectly alone. Those who copy everything else that we do let us alone in this, and make their corsets now

with as little regard to the anatomical structure of the body and the requirements of the vital organs, as if science had made no progress nor art any advancement. This is greatly to be regretted. We have no desire, neither have we the means, to manufacture corsets for all the women in the united kingdom; but common humanity makes us hope that we shall not always have to witness the suffering and deformity that it is our lot to behold at present.

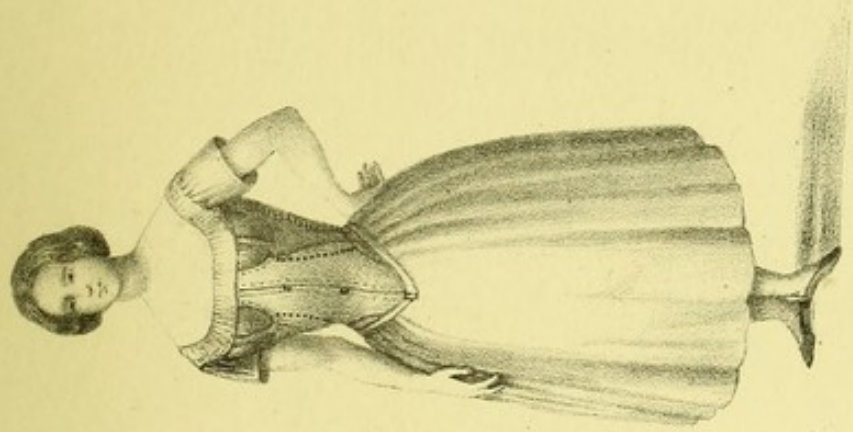
Although we have only spoken of the above, let no one suppose that this comprehends the whole that we have done to improve the corset, or that it in any way represents the special adaptations which we have made for the ever-varying wants that are presented to us. Let any one look upon the first hundred ladies that may be met with, and take notice of the different figures, from the most sylph-like form down to the absolutely deformed, and just think for a moment that we have to meet the wants of every one of them; to sustain the grace and elegance of one, and repair the deficiencies of another; prop up a dilapidated side, and compress the protruding shoulder; and to do this in every case without inflicting pain or interfering with the perfect parts of the system, and it will be at once perceived that scores of different adaptations and inventions are required to accomplish those various purposes.

The contrast between ours and the ordinary corset may be best seen by looking at Plate I., Figs. 1 and 2. In the first figure all the beauty and symmetry are preserved and displayed; in the second the head is poking forward, the chest is contracted, and all the great organs of life are suffering from the compression to which they are subjected; add to this, that the beauty is destroyed, and you may then, from the homeliness of the person and the failing health of the subject, form an idea of the evils resulting from an ill-fitting corset.

A still further illustration of this is given in Plate II. In Fig. 1 the shoulder is depressed, the side contracted, and the whole body thrown out of proportion; whilst her companion, wearing a corset adapted to the body, displays all the grace and elegance of a finely-developed figure. Reverse the attire. Let the deformed lady be properly supported, and in six months her figure will be equal to that of her companion.

An example of the ugly gait consequent upon the common style of dress is shown in Plate III., Fig. 1; and the same figure restored to

Plate III



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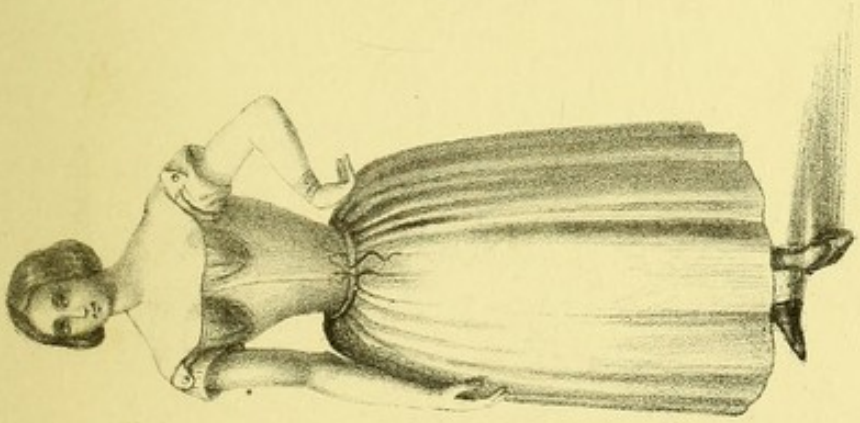

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its normal state by the aid of our corsets and mode of dressing, in Fig. 2. The symmetry, the ease and beauty imparted to the wearer, say more for our adaptations than any written description that we could pen.

In Plate IV. Fig. 1, we have a case of absolute deformity. The shoulders are raised and pushed forward, the neck bent, and the curvature of the spine actually commenced. A glance at Fig. 2, in her easy, upright, and graceful posture, shows how soon the body may be brought into an easy position by the use of our Corset and Reverso Contractor. The reader is requested to bear in mind, also, that none of these are sketches of the fancy, but real and veritable human beings—ladies who have come under our own observation, and been restored by our aid.

All who have laboured hard at any given purpose know that there is no joy like that of conquest, and no consolation so sweet as that which springs from success; and those who do succeed have a right to be proud of their triumph. What else shall repay us for the daily toil and nightly study, for going with the anatomist through the body, and, by calculating all its mechanical adaptations, discovering to a hair's-breadth the proper point of support? What, but the conviction that we have rendered a service to womankind for which thousands shall daily bless us.

Hitherto we have only spoken of the corset, and have avoided any allusion to the other articles of dress, which in many cases are equally faulty in their construction. Many ladies will say, and say truly, that they never lace tightly, but who, at the same time, make the dress so tight as to completely crush in the stays, and, in pressing the unyielding bodice of the dress upon the folded underclothing, produce more evil than a tight corset would. It becomes, therefore, a matter of some importance to arrange the whole of the underclothing upon such principles as shall give all the warmth and comfort necessary, and, at the same time, allow the natural and healthy action of every organ, whilst it displays the full beauty of the human form. We have for this purpose constructed a petticoat suspender which will be found to answer every purpose that can be desired.

A glance at the illustration below will give a good idea of the manner in which this purpose is accomplished. All the petticoats are united in one band, by which means an equal distribution of the whole weight

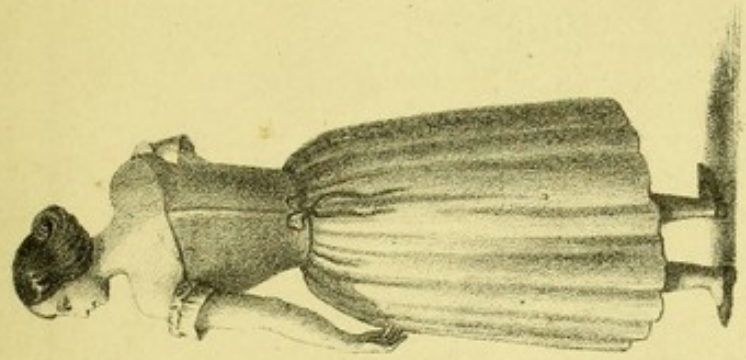
and fullness of the clothing is obtained, and the point of support being properly taken, the pressure is removed from the yielding portion of the body and thrown upon that which is able to bear it. The effect of this distribution of the clothing is shown in the accompanying figure, which, with the under clothing properly adjusted, displays all the grace and beauty of the form, and indicates the ease and comfort of the wearer.

PETTICOAT SUSPENDER.

The Petticoat Suspender is a simple band of jean, cotille, or any other material that may be preferred, fastened to and forming a part of the corset. It has three rows of buttons, to which the petticoats are buttoned on. By this simple contrivance the weight of the clothing is not only thrown upon the parts that should support it, but, by removing the strings from the waist, it has a more slender appearance; and the petticoats, being properly suspended and thrown off the hips, there is no need for dress improvers, crinoline, or hoops, for the purpose of displaying the lower part of the dress.

The full advantage of the Petticoat Suspender can only be appreciated by a minute inspection of the article and a clear conception of

Plate IV



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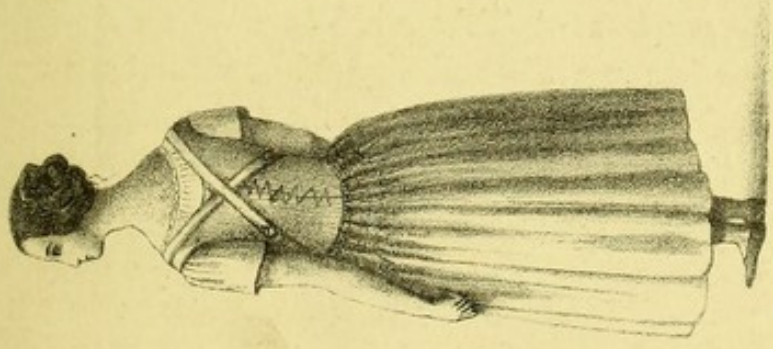

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its uses. When this is done, it will be seen that the two objects which we ever keep in view—utility and elegance—are fully realised. See how nicely the full *contour* of the figure is displayed; the beauty of all the undulating lines which throw an indescribable charm over the figure of Venus are here preserved. The motions are easy, the breathing natural, the carriage graceful; and as

"The rose, besides its beauty, is a cure,"

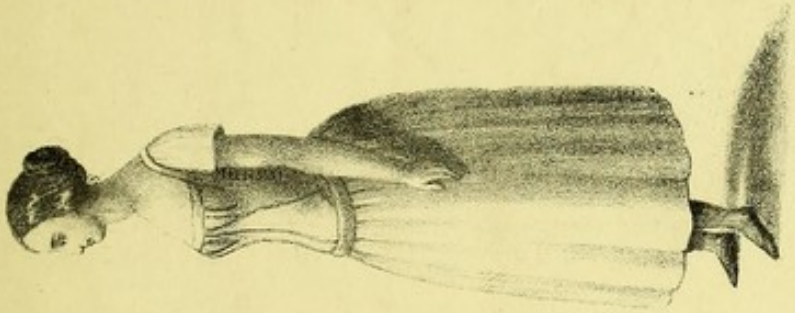
so the clothing here answers the double purpose of displaying the figure and preserving the health. We have in the course of a long and successful career invented many things. Our steel spring for the cap has been adopted by every civilized nation in the world; the hook at the bottom of the corset has met with a similar reception; and as for our Hygienic Corset, it is either pirated or attempted by almost every staymaker in London and Paris; and our band will share the same fate. Before this was written we kept the secret pretty well, and only allowed a few of our friends to possess it; but within six months after this is published it will be displayed and advertised in all directions, cut and twisted into every shape to make it look unlike ours; and we should not be surprised if some genius or other should turn it upside down, just to display her originality. Well, so be it; the only thing that we desire is, that those who use it will use it properly, and have the good taste and honesty to award the credit of the invention to the parties to whom it is due.

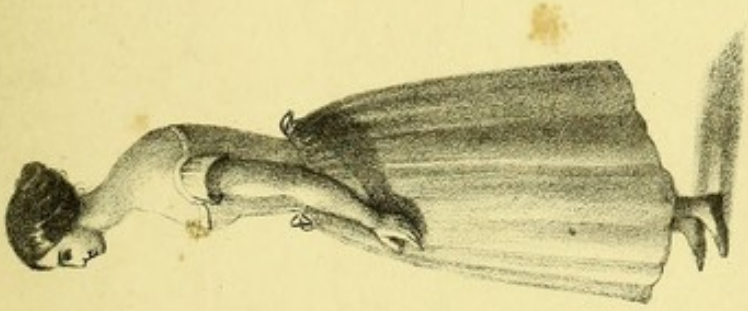
CHAPTER VII.

ON GESTATION.

Having spoken of the various phases of woman's life up to her maturity, in the preceding chapters, we have now to consider one of the most interesting of all the circumstances of her life, at once pleasing and endearing, when she is called upon to give birth to her offspring. In early life the distinction between the sexes was by no means marked: there was the same general outline, the same form and cast of features, the same feeling of isolation—each seemed to live for itself. As the softer passions, however, become developed, the man puts on that robust energy and daring which marks him out as the protector of the other sex; and his manly voice, the deepened tints upon his cheek, and the whole muscular system, show an excess of energy sufficient to qualify him for his position. At this period also a vast change takes place in the woman. The chest is expanded, the eye acquires a brilliancy peculiarly its own, and the frame takes that beautiful undulating form and proportion, which gives it its peculiar charm. The function of woman is now to be the preserver of the species, and the several stages of marriage, pregnancy, and maternity are the destiny which opens before her. It is through these that we have now to accompany her.

In discussing this period of her history, we must entirely set aside fashion and prejudice, and follow without reservation the laws which the Creator, in his beneficence, has stamped upon the frame. The putative mother should feel all the responsibility which attaches itself to the future life and happiness of her child, and ever study the condi-





tions necessary to its healthy and proper development. But unfortunately it too often happens that the mother is as little acquainted with the first principles of physiology as the child, and the consequence is long suffering and affliction to both parties.

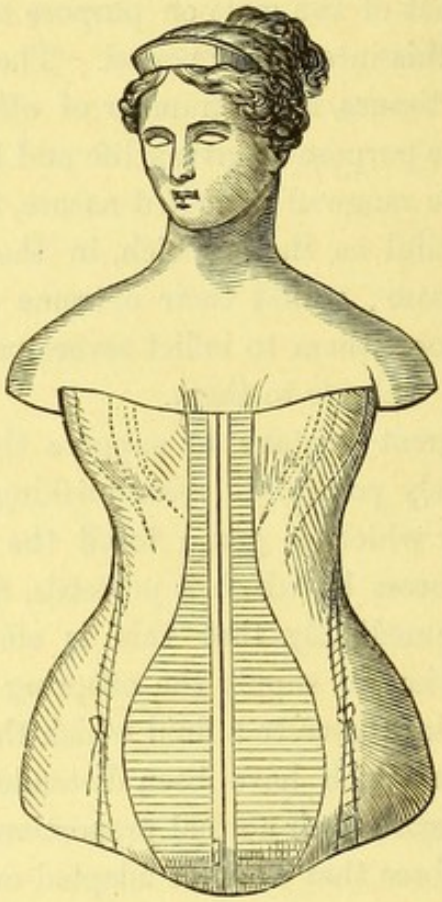
A minute study of the human frame shows us that the form of the female differs from that of the male on purpose that it may be adapted to the necessities of this interesting period. The breadth of the pelvis, the structure of the tissues, and a number of other phenomena, are all modified in her for the purpose of giving life and health to her progeny. Throughout the whole range of animated nature, there are no organisms so perfect and beautiful as those which, in their collected form, are adapted to this purpose; whilst their extreme delicacy renders them sensitive, and predisposes them to inflict severe pain on any who knowingly or otherwise do violence to them.

It is, however, a great mistake to suppose that there is anything dangerous or extremely painful in accomplishing the ends of nature. The natural elasticity which is given to all the organs concerned, the slow and beautiful process by which it proceeds, all prepare for the last and final effort. Immediately that this is effected, another set of organs come into action to supply the offspring with nutrition. The mammary glands begin to secrete a fluid which they have never yielded before, and the organs which have been distended during the previous nine months resume again their normal proportions, and it is to this ebb and flow of the vital force that we have adapted our Gestation Corset.

It will perhaps have occurred to the reader that the conditions which we have to meet in this matter have been neither few nor trifling. The great distension of the abdomen which must necessarily have taken place has severely tried the muscles which form its walls, and this evil is in too many cases aggravated by the use of corsets that, instead of supporting the body, add to the stress already upon it. The ordinary stays have an elastic steel busk, which, on being leaned upon, bends over the stomach and pushes down the contents of the abdomen, causing an additional burden upon a part already weakened. The result of this is a stretching of the whole envelope in such a manner as to endanger the figure for life, and lay the foundation for varicose veins, prolapsus uteri, and other complaints to which ladies are too often subject.

Our Gestation Corset, of which we here present an illustration, is

specially adapted to the condition of the body during pregnancy. It will be perceived at once, that it is nothing more than a modification of our Hygienic Corset, adapted to the special condition of the body.



GESTATION CORSET.

Two separate phenomena present themselves in the study of this case. The development of the abdomen is taking place from below, upwards, so that the viscera are pushed out of their normal position, and in consequence of this, the skin and other ligaments yield, in an enormous degree; and to this should be added the fact, that the weight of the body is tending constantly downwards, and hence we have two powers to overcome.

The most casual observer will, by bearing those two considerations in mind, perceive that what is required will be the elasticity of the upper and central portions of the corset, and the contraction of that part

which supports the lower abdomen. In accomplishing this, we aid Nature in the performance of her operations; when less than this is done, we either labour in vain, or else inflict a positive injury.

The reason why the ordinary stays are so injurious may be demonstrated by tying a piece of thread tightly round the finger. Immediately that this is done, the circulation of the blood is impeded, and the finger becomes blue and painful, and this simply because an unyielding substance is pressing upon it. Now, although the waist is more pliable than the finger, it does not follow that the pressure is less injurious; but, on the contrary, as the organs which are deposited there are of greater importance to the health and strength of the body, so any undue pressure is sure to cause the most grievous injury. This injury is inflicted in consequence of its interference with the circulation of the blood, upon the proper action of which all that concerns our well-being depends.

It is generally known that the circulation of the blood takes place through two sets of vessels, the arteries and veins. The former come from the heart, and are employed in distributing the vital fluid over every part of the system, until they terminate in the capillaries, or vessels small as a hair, which are distributed over the whole of the internal and external surfaces of the body. When its vitality has been exhausted the colour of the blood is changed from a bright red into a very dark hue, and it is then taken up by the other set of vessels, and carried back again to the heart and lungs, to undergo another process of purification. Any interruption of this circulation by a pressure upon the soft pipes through which the fluid is carried, must, as a natural consequence, lower the natural action of the organs, and, by increasing the sensibility, give rise to pain and disease. Hence the headache, the giddiness, dullness, depression, and languor, the numbness of the extremities, the enlarged veins, and other painful sensations which too often accompany gestation; and when all these have passed away with parturition, it too frequently happens that the figure is spoiled for life. Now every one of the evils here spoken of may be avoided. Nature in her beneficence has given to every organ the inherent power to perform its functions without pain; and the organs of reproduction are no exception to this rule. There is no reason why the muscles should become soft, flabby, and relaxed, the pelvis diseased, and the figure spoilt, except it

be in the want of adapting the external conditions of the body to the requirements of Nature.

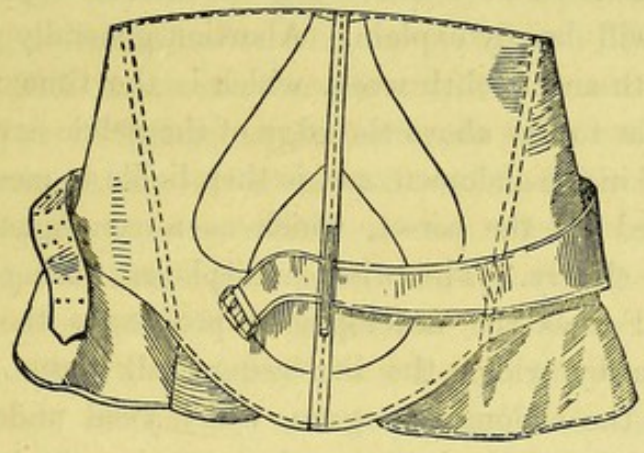
In mentioning the above facts we desire above all things to impress it upon the mind of the reader that we have exaggerated nothing, as many ladies can unfortunately testify. We have, however, only pointed out the evil for the purpose of suggesting the remedy, which is to have the corsets specially adapted to every occasion in life. Any verbal description, however, would, in a great measure, be inadequate to a proper understanding of the matter: to be fully comprehended the thing must be shown, and it is for this purpose that we have added to our ordinary show-room an anatomical gallery, containing the most perfect and beautiful set of preparations ever exhibited. It is here that we are enabled to demonstrate what the real changes are which take place in the figure during the whole period of gestation—to point out the particular parts which have to sustain the burden, and the manner in which our external adaptations give support to the internal organs. It is here that we always take the sufferer, that she may see with her own eyes what it is that afflicts her.

From what has been already advanced, it will naturally follow that the manner of constructing the corset must differ with every individual case. A young, slight-built mother with her first child will require a very different adaptation from a lady who is the mother of several children and been subject to painful labour, and has perhaps met with some accident, or is suffering from some disorder or infirmity, in whom the muscular relaxation is great, the bulk heavy, and the abdomen pendulous. It must be obvious, at first sight, that particular adaptations are necessary to meet her case, and that no rule, except that of giving support where support is needed, can be followed here. And this indeed is the principle we adopt, and hence our invariable success.

Hitherto we have considered GESTATION only; it remains now to follow the consequences which result from it. Those ladies who have already passed through the ordeal know by experience what the discomforts are that result from the old routine of bandages; how imperfect, clumsy, heavy, and heating they are: they know the inconvenience of pins, how often they require regulating, and upon the whole how loose, shifting, and disagreeable they are. But if it was only the discomfort of the moment, it might be easily borne, and would be of little consequence.

The ordinary evil that follows is the spreading of the figure, which never should, and indeed never would, happen if proper care had been exercised. What is wanting is a regular and progressive compression, with an even, cool, and smooth surface; and if this be given during the inflammatory process, the muscular fibres will return again to their normal position, and resume their original firmness and solidity. Nor will this process cause the least injury to the particular parts under consideration, nor to the general health of the mother; for the muscles having again attained their state of health, will be prepared to repeat the same process without injury.

Every condition mentioned above has been met by our



CONTRACTING BELT,

which is a perfect mould for the restoration of the figure. It is smooth, cool, elastic, and accomplishes every end which we had in view. The construction of this article has perhaps caused us more thought, care, and anxiety than any invention which we have ever submitted to the public; but it is a consolation to feel that we have attained the most absolute success. Our Belt has now been in extensive use for a long time, and the fact that it has won the patronage of the first medical authorities of the land, and been adopted by the highest *personages of the empire*, is a guarantee of its utility. It is indeed one of those boons for which mothers have long sighed.

The nature of our work, which is designed for THE PUBLIC, compels us to exclude much that is interesting and important to the afflicted mother, as being unsuited to our pages. The reader must not, however, suppose that those matters have been neglected by us. We have,

indeed, carefully studied every form of uterine disorder and deformity, and have special adaptations for EVERY PERIOD AND FOR EVERY COMPLAINT that woman is peculiarly liable to. The pathology of those stages in her life belongs to the physician; but the special insight into what should give her relief or restore the figure is our business, and where medicine either fails or is useless our work begins.

There is one other matter connected with this subject that we intend to mention, and that is *Abortion*—a thing which may be reckoned amongst the accidents of life, since it generally arises from some external cause. Among the numerous causes, however, of this accident, related in the works dedicated to this special subject, there is one which, although common, is unnoticed—*the tendency of the corset to press downwards!* This fact we will briefly explain. Abortion generally takes place between the eighth and twelfth week, which is the time when the fœtus is increased so as to rise above the edge of the pelvic cavity, and begins to elevate itself in the abdomen, and is then liable to meet with external obstacles created by the corset, which as a consequence compresses the body more closely. The wisdom displayed during these changes is manifest. For as the development progresses there is an extraordinary action by which the increasing bulk goes on, moving in every direction the abdominal organs, which yield under the pressure. The natural weight of the intestines is overcome, the habitual connection is destroyed, and the locality of the viscera changed; while at the same time the muscles are elongated, and the integuments distended. It is unwise to tamper with, or to attempt to interpose or interrupt these sanatory proceedings; for in the operations of Nature, as well as in the productions of man, there are limits to the special power applied for a given purpose. In the marvellous arrangements of fœtal gestation there is no waste of power, but every process is calculated with unerring certainty, and definite proportions regulate the amount of strength required; therefore any foreign agent which would prevent the abdomen from expanding must be a cause of pain, suffering, and disappointment to the incipient mother; and if she survives the trial, she may be left the remainder of her life permanently injured. It is a very simple problem to comprehend why these results are induced; for if the resisting agent is greater than the organic power supplied by Nature, the latter succumbs, and the consequences we have indicated

must follow. The vital power inherent in the organs of gestation tends to push upwards, and if a greater resistance prevents its development by pressing it on all sides, it must distend the parts where there is the least antagonism; we have, therefore, a frequent cause of miscarriage in the injudicious application of ill-fitting corsets! And we would impress on the minds of our readers, that corsets are always injurious during the period of gestation, unless they are constructed on sound scientific principles, and capable of being accommodated to the various changes contemplated.

As a matter of experience it is admitted that pressure on the chest interferes with the great vital processes of respiration and circulation, even under the ordinary states of health: how great then must be the injury sustained during gestation under such circumstances! Whatever affects the mother's health must exert a deleterious influence on her future offspring; and as ill-fitting corsets not only induce these sad consequences, but press on the abdomen and tend to displace its important contents, they cause complex suffering to her, whose health and mental calmness are important conditions to the child's future health.

It is a very pleasant task to point out errors when we have the power to prevent their recurrence, and a long experience based on an accurate knowledge of the subject has qualified us for this task. We have had mothers to consult us whose sufferings were very great prior to their doing so, and who have expressed to us, in language of the warmest gratitude, the ease and comfort they have derived from our adaptations. Various have been their exclamations, such as "There is a magical difference in the ease I now feel. How can I sufficiently thank you, dear madame?" Others have declared that the corset had metamorphosed them completely; for instead of a restlessness and constant discomfort, they had experienced an immunity from all inconvenience. What, then, it may be asked, is the peculiarity of our corset? We answer, that it is made on such accurate scientific *data*, that it fits the body and chest of each individual; that, to quote the words of a medical gentleman when speaking of it—"*Madame, your corset is more like a new layer of muscles than an artificial extraneous article of dress!*" And this is practically the case.

For example, in the instance of the expectant mother, it must be important to give her support without any undue pressure in any

part, and at the same time to insure the perfect exercise of the vital organs.

In our corset the wearer can breathe freely, and the pulsation of her heart is not the least interfered with, whilst the various motions of the body can be performed without any extra exertion or fatigue. If she take a walk, she derives important support from the closely-fitting corset; and when she reclines, the elastic nature of the materials and their accurate adaptation prevent every kind of inconvenience; for at the advanced stages of this interesting period, when it is imperative for the comfort and health of both mother and child that the corset should be enlarged, this is effected by a simple contrivance, by which an increased space can be obtained at the will and pleasure of the wearer, without in any way rendering it less valuable as a support, or less efficient in preserving the figure, whilst a perfectly free action of the whole body is the result. A provision is therefore made for every exigency; so that, under every circumstance, there is effected the great desiderata of perfect ease, freedom, and safety.

It is always gratifying to have one's labour appreciated, and in maturing the corset, so important to the mother, we have had no small share of the public approbation awarded us. It has cost us many years to bring it to its present state of comparative perfection, but we have succeeded at last. To realize this, we had to note many instances of failure in others, evidently the result of ignorance of the structure of the body to which it was to be applied—they were mere "fancy sketches," compared with our more rigid copy from Nature!

CHAPTER VIII.

MIDDLE LIFE.

In speaking of the middle age of woman there are a few things which must be taken into consideration, in reference to her anatomical construction, which influence the whole that we have to say in relation to the peculiar support which she will require in that particular period called "middle life;" for unless this conception be fully realised it will not be perceived why we have gone out of our way to invent certain things which are specially adapted to this time of life.

Middle age is that period which dates from the completion of the whole organic structure, and continues until the decline of the innate force, and hence may be called the autumn of life. The change, however, takes place so gradually that it is scarcely perceived, and when protracted, as it may be by proper care and favourable circumstances, the middle life of woman is never without its charms, and the freedom and polish of maternity are often more admirable than the evanescent glory of an earlier period. This is the time, too, more than any other, when woman can and ought to enjoy the comforts of life. The changes, however, that take place in the constitution are of the greatest importance, involving the complete revolution of the whole of the vital forces. A new direction is given to the course of the natural law; and according to the care which is taken, so will the determination of the result be, either to elegance or deformity in the declining days. Naturally, there is a deposition of fat in the cellular tissues, which gives the particular appearance which the French call *embonpoint*, which simply means that the nutrition which has hitherto gone to the development

of the figure is now employed in the accumulation of adipose matter beneath the cuticle. When, however, the overtaxed membrane gives way, the tissues relax, and the muscular fibres losing their tenacity, fail to maintain their normal position. Then is the time to aid Nature by the judicious application of another layer of muscles, which shall support the former in the performance of their functions. It is not mere pressure that is demanded, for this will too frequently increase the evil, and it often happens that middle age is burdened with infirmities in consequence of the compression to which the waist has been subject in youth; and hence that enormous distension of the abdomen with which some females are troubled. The uterus and other internal organs will, from sympathy, be affected also, and this will give rise to numerous painful disorders in the region of the pelvis. But we have already spoken of the evil of tight-lacing, and need not recur to it again here; we appeal to the experience of every lady who may read this, whether much that we have said has not fallen under her own observation. The extreme disfigurement to which the human body is liable may be seen by a reference to certain nations and races, in whom the deformity is great; and although the picture is rather calculated to inspire disgust than any other feeling, still it is well to exhibit it as an advertisement of how far the frame may be mutilated through ignorance or misconception.

Having stated the fact, that women need support at particular periods of life, and given the reason why it is so, we may attribute to this cause the common practice of seeking, by the use of stays, to sustain the figure. Before the introduction of cloth amongst them, the American Indians used the fine bark of the white birch-tree for the purpose, enveloping the body in it. Now they use narrow bands of calico, which being wound round and round the body, in imitation of the manner in which a bandage is applied by surgeons to a swollen limb, they in this way compress and sustain the abdomen. If it be asked why those poor mothers of the wild woods-men have adopted this custom, it will be found in the want of Nature, which has spoken through their organization, and demanded support. And where this aid is not rendered, women become proverbially ugly in middle life, as is the case with many of the African and Asiatic races, whose breasts hang down to an inordinate length, and whose bodies become deformed and decrepit at

forty, and in many cases at a much earlier period. This premature decay of the figure may, without doubt, be attributed to the neglect of suitable hygienic means, for in early life those females are in no way deformed.

Many travellers have spoken of the large and pendulous mammæ of the females of certain barbarous tribes, particularly in Africa. There is no original difference in these cases. The Hottentots and Negresses, previously to child-bearing, have bosoms as finely formed as any women; but after this, the breasts become very loose and flaccid, so that they can turn them over or under the shoulder, and suckle their infants on their backs. This practice, and that of long-continued suckling, probably tends to increase the elongation.

Bruce says of the Shangallas, that, "after a few days, when the child has gathered strength, the mother carries it in the same cloth upon her back, and gives it suck with her breast, which she throws over her shoulder; this part being of such a length as, in some cases, to reach almost to the knees."

Captain Tuckey also notices the "pendent flaccidity of bosom" belonging to some of the African women.

Dr. Sommerville also says that the breasts of the Hottentot women, "after one or two births, are flaccid, wrinkled, and pendulous, hanging down sometimes to the groins, like bags suspended from the neck."

Cuvier, Barrow, Ulloa, and others, have noticed the same thing, not only in the African but in other races.

The same thing has also been observed in some European females, who, from slovenly habits, have neglected to give the necessary support to the parts in question. Lithgow, in his "Rare Adventures and paineful Peregrinations," p. 433, says, "I saw in Ireland's noth parts, women travayling the way or toyling at home, carry their infants about their neckes, and laying the dugges over their shoulders, give sucke to the babes behind their backes, without taking them in their armes: such kind of breasts, me thinketh, were very fit to be made money-bags for East or West Indian merchants, being more than half a yard long, and as well wrought as any tanner in the like charge could ever mollifie such leather."

It is true that Englishwomen are not subject, to the same extent as those females are, to this falling of the breasts; still there is in all

women a tendency in those parts to give way, and in many cases, if support be not applied, the bosom becomes unsightly. In ladies who have a predisposition to corpulency it becomes too full, whilst in others it seems to wither away altogether; in those spare people, also, the figure becomes flat and unsightly, whilst in the fat the abdomen becomes pendulous, and if there be no organic disease, there is what is called a falling abroad of the figure, which gives an appearance of premature old age. Women have always more fat in the cellular tissues than men, and it is this that gives that softness and those undulating lines to the form, which ever attract the admiration of mankind. Hence her flesh is naturally yielding, is easily compressed, and when the muscular fibre is weakened by child-bearing, the weight of the bones, or the advance of age, the softer portions of the body become flaccid, and the whole assume another form. In early life, when the circulation is brisk and the nervous system energetic, one can appreciate the exclamation of Gray—

"No stubborn stays her yielding waist embrace."

But when she has passed the meridian of life, or has just arrived at that period, we imagine that no poet would like to have his wife's figure become unsightly. It may be, and indeed is, impossible to bring back again the buoyant elasticity of youth, to pour the life's current through the heart with the same freshness at forty that it rushed on with at eighteen, when eager, gushing, and hopeful life gave intensity and animation to every fibre of the whole body. There is something gay and beautiful in youth, when the eye is bright with joy, and the brow unwrinkled with care; but there is a deeper charm in middle life, when the faculties have all been matured and perfected—a difference as real and as appreciable as is seen between the ripe and golden fruit of autumn and the silver blossom of the early spring. We may even pursue the simile further; for, as the tree has exhausted its internal force to bring forth its leaves, its blossom, and then mature the mellow fruit, and requires the hand of the gardener to prop up the bending branches that are ready to break with their own profusion—even so is it when the summer of life fades into the autumn; the vital stimulus which has hitherto sustained the frame gives indications of exhaustion, the fibres become relaxed and the muscles flabby; the bones and the

ligaments will in the mean time, from the same cause, have become changed, and the whole body will need the sustaining care which intelligence, aided by art and science, can impart to it, propping up the weakened parts, and enabling them to maintain their normal position.

From what has been already said, the reader may perceive the wonderful influence which cultivation has upon the human body. Properly speaking, there is no difference in the organization of the Englishwoman and the Hottentot; there is the same assemblage of bones, the same combination of muscles, the same organic structure in the one as in the other. The only difference is that our women are living under more favourable circumstances, and hence the deformity, which is almost universal amongst the Africans, is rare with us. The tendency, however, may be discovered everywhere, and should always be anticipated in providing for the elegance and comfort of middle life.

But here we imagine an intelligent friend inquiring how this is to be attained; for many call upon us in a state of utter incredulity, and tell us that they have merely looked in to satisfy the desire of some friend. When this happens, we are generally told that they have tried every party without success, adding, perhaps, that they have a stock of corsets collected from the first houses in France, Germany, Italy, and England, and that the whole were perfectly useless; and this is no doubt correct. The material of which they are composed may be of the very best manufacture, and the stitching be faultless; but, for want of proper knowledge of the structure and requirements of the body, all the efforts have been in vain.

The principles on which our corsets for middle age are constructed are precisely the same as those which have been laid down in a previous chapter. Due attention is paid to the particular figure presented to us, and the state and requirement of every organ having been perceived, our adaptations are made to the physiological and pathological conditions of that particular individual. Without this, all proper fitting of the corset is ridiculous; for, to pretend to fit a form that has neither been seen nor described, is simply to trifle with the common sense of mankind. The human body is a wonderful congeries of organs, each of which requires due care in its development and preservation, in order that the whole may work harmoniously together. And the corset-maker who cannot perceive the requirements of those organs in their

growth, maturity and decline, has not yet learnt the first lesson upon which all success in her art must be based. At the particular period treated of in this chapter, the common sense of every one will suggest that it is the weak and yielding parts that require support, and that this must be done in such a manner as to give elasticity to the envelope and ease to the wearer; and when this is perceived, it only requires sufficient mechanical genius to ensure an adaptation which shall preserve the figure and be conducive to the general health. Half an hour spent in our anatomical gallery will convince any lady or medical man, not only that all this can be, but that it is done by us every day, and that numbers treading the down-hill of life are grateful to us for the ease and comfort which we have been enabled to give them.

If we have been earnest in our condemnation of dressing in an unnatural manner in the earlier periods of life, we would, if possible, lay a stronger emphasis upon our warning in middle age. At this time nature will have lost much of the vigour with which she repaired and renovated the system. The waist can no longer bear the cutting with strings and violent compression to which it is too often subject in the heyday of fashion. It is natural that ladies should desire to retain as long as possible the charm of beauty and the appearance of youth; but it should always be kept in mind that, to do this, *Nature must be obeyed.* Art may, and often does aid her, but nothing can ever compensate for the native vigour of the system when unimpaired by disease, and free from the oppression of fashion and habit.

At this period, no lady who values her health, comfort, and appearance, will be without our abdominal supporter.

It is well known to physiologists, that the loss which females sustain at what is called the turn of life is amply compensated for in another direction. The reason why the constitution assumes a new character is because there is an increase of blood thrown into the system; and if the organic laws have not been violated, there is an absolute gain of physical power when the transcient disturbances to which she has hitherto been subject have ceased; it is at this time also that the mental powers acquire their most substantial solidity. During the early part of life there was little or no difference in the strength of constitution afforded to the two sexes; but if the health of the female has been

properly cared for, after the age of forty-five years she has a decided advantage over the man. It is really surprising what toil some women will endure, and how superior they often are to their married partners in middle age. Food, dress, tastes, and habits, have all no doubt an influence upon the general health; but it is a fact, that must be clear to every one who has studied human nature, that he who was the protector in early life is the object of solicitude at a later period, and is often grateful for an able nurse in an affectionate wife. It is not necessary that we should descend to particulars in this matter; what we wish to impress upon the reader is, that in the decline of life, when age lays its hand upon the constitution, nature deals less gently with the male than the female.

We have already spoken of the aid which we can give to the corpulent lady in the decline of life. Let not those, however, who suffer from the opposite evil suppose that there is no aid for them. The stooping of the body, or the straight inelegant appearance which characterizes the lady who is what is generally termed "thin," may be as easily corrected. We forbear saying much upon this subject; but those who know precisely how the bones should be clothed can easily supply the appearance of what nature has denied, and if they cannot give the freshness of youth, they can at least impart the external proportions of mature life; but this is a matter to be accomplished, not written about.

We are often asked why it is that ladies are not so strong and healthy now as they were in former times. Our reply is, our grandmothers did not cut the waist with an unyielding ligature, and by dividing the abdomen induce those diseases which always accompany premature old age. Let those who value life and dread a premature death be careful how they dress.

CHAPTER IX.

ON SPINAL DEFORMITIES.

PATHOLOGICAL disquisitions form no portion of the task which we have allotted ourselves to perform; we must however speak cursorily of some things, the full description of which belongs more properly to the anatomist and surgeon, because, if we avoided the matter entirely, we should be unable to show the reasonableness of many of our adaptations, and the special cases in which they should be employed. Besides this, it must be borne in mind that our labours are confined to ladies and children, and that even with them we never pretend to take the place of the medical adviser. Medicine is not our vocation; but, when medical men seek us, then we can give to the body that support necessary to enable it to regain the erect position.

We cannot insist too often, nor too strongly, upon the necessity of early and proper exercise. To use the language of an accomplished writer: "If the days of childhood were devoted to the goddess Hygeia, and the perceptive faculties allowed to exercise themselves by observing the wonders of art and the beauties of nature, then civilization would add to all positive blessings, and a higher advantage co-existing with rude good health. It is true, that if these views were generally entertained, there would be less work for all kinds of medical professors, and they might exclaim, 'Othello's occupation's gone.'"

But the world would be spared much suffering and vast inconvenience. Physical health is one of the greatest sources of happiness to

the child. Its value may be estimated by watching the gambols of well-informed children, with cheeks in which the rose and lily blend most harmoniously, giving brightness to their laughing, happy-looking eyes, as they throw their pliant bodies and vigorous limbs into the most graceful attitudes whilst bounding over the greensward, like young gazelles, positively intoxicated with the joys of mere physical existence! or watch them pursuing with agility the gay butterfly, or gathering wild flowers; every sense has its full measure of enjoyment, and the stock of health thus daily laying up is a treasury of "inexhaustible pleasure."

Unhappily there are but few parents and teachers who have ever formed any definite conception of the importance of proper early training, and that simply because they never understood its importance; nor is it possible that they ever should, until they have some knowledge of the structure and functions of the body which they have to train and develope. We propose therefore, in this chapter, to give some general idea of the structure and functions of the spine, as well as a brief description of some of the curvatures to which it is subject.

The distinctive character of man is the erect posture. No other animal enjoys a physical conformation which will enable him to permanently assume this majestic attitude, although there are several in whom it may be maintained for a short time. The head of the human being is comparatively heavier than the trunk, and this, added to the weight of the viscera in front, would naturally induce a stooping forward, were there no especial means provided for its prevention. The necessary appliances are, however, afforded in the following manner. The spine, on the top of which the head is articulated, is a highly-flexible column, capable of moving in any direction which may be necessary, and during its movements forming a series of elegant curves, so truly described by the ancients as the serpentine line of beauty; these curves also serving to keep the head within a line drawn from the top of the head to the ground, called the centre of gravity. Were it not for this provision, the erect position could not be maintained for even a short period. In erecting a column, the builder will take care to make the base broader than the apex; but the contrary is the case in the human figure. The want of this peculiar elasticity is the reason

why artists have never succeeded in constructing statues which would stand without a pedestal, and such would also be the case in the human conformation were it not for the action of the muscles by which the spine is supported.

As we have already described, the clavicles or collar-bones exercise considerable influence in expanding the shoulders and chest; and this is an essential provision, for the purpose of counteracting the traction of the pectoral muscles, or those of the chest, whose tendency is to pull the shoulders forward, and by their action diminish the size of the thoracic cavity. The clavicles, however, would form but an insufficient means of accomplishing this end, were it not for the muscles of the back, which, *when properly developed by exercise*, neutralize the action of those of the chest, and keep the shoulders properly expanded. We lay a stress upon the necessity of exercise, for it must be remarked, that *the greater its amount the greater the waste of substance, and the greater the quantity of blood carried to the wasting organ for its repair; while, provided the exercise has been moderately taken and properly conducted, the greater will be the strength of the muscles thus thrown into action.* For the preservation of the erect position no less than five layers of powerful muscles are placed along the spine, many of them taking their origin from the back of the head, and being inserted into various processes of the vertebral column; and it is by their action, combined with the elasticity of the spine and its cartilages, that we are enabled to stand upright, and to perform all the varied movements of which the human form is capable. The power of the muscles is so accurately balanced, that, provided all be in a normal condition, no difficulty is experienced in maintaining the erect attitude for a very considerable time. The spine has also natural curves, which act as springs to diminish the concussions which the brain would receive in walking were it not for those curves and the elasticity of the intervertebral cartilages. To use a familiar simile, we may liken the head to that of a hammer, which is placed on a *straight* stick or handle. Every one knows that the surest way to fasten the head is to knock the handle on the ground, as the concussion drives it further in; so that, if the human head were carried on a straight support, similar concussions would be caused to the brain and other vital organs, to their serious if

not fatal injury. Of course, extra muscular strength is required to support the increase of weight caused by those curves; and this is effected by an extra stress on the muscles of the back. "The waving line of the column arising from a series of alternate curves in opposite directions is altogether peculiar to man; it allows a proper distribution of the weight with respect to the centre of gravity, the line of which, carried through the entire trunk, must fall within the entire space covered by the feet, or *by one foot when we support the body by one only.* As this line passes through all the curves, motion is allowed in the upper regions without impairing the general equilibrium."*

The portions of the spine situated in the region of the neck and loins are those most likely to yield at an early period of life; the reason of which is, that these parts are kept in the erect position merely by the action of the muscles. The neck has to support the weight of the head, while the lumbar vertebræ bear that of the thoracic and abdominal viscera. In early infancy, the muscles of the neck and back are totally inadequate for the performance of their functions, as, from not having been brought into action, they have not acquired sufficient strength; and we therefore find that the head of a newly-born child will always have a tendency to fall forward, or from side to side, unless supported by the protecting arm of the nurse or mother. It is usually said that gentlemen are unwilling to handle a newly-born infant; and this cannot be a matter of wonder, since they probably fear the dislocation of the poor baby's neck, which certainly might occur under their generally uncouth nursing; while the muscles of the back and loins being also, from the same cause, in a very weak state, yield from the superincumbent pressure, and the infant becomes hunched up, as it is commonly called, on the unskilful nurse's arm. Of course, as the child stoops forward, the arms hang beyond the centre of gravity, the shoulders are consequently more rounded, the strain on the muscles of the back considerably increased, and, if this influence were suffered to continue, a permanent deformity would be the necessary result.

Nor is deformity of the spine the only consequence of this forward tendency of the head, when unsupported by the due action of the muscles of the back. As will be seen by an examination of the models in my museum, which have been constructed for the express purpose of

* Laurence's Lectures on Man, p. 105.

illustrating this important point, when the head falls forward the spine becomes bent, the intervertebral cartilages thinned on the inner portion of the vertebral column by the pressure, and the ribs are forced into a totally different position than that ordained by Nature. Instead of standing out at a considerable angle from the spine, and thus affording free scope for the action of the heart and lungs, which are the organs essential to existence, the chest falls downwards, pressing on the abdominal cavity, the ends of the ribs are brought into closer approximation, the sternum or chest-bone is forced inwards, and the cavity of the chest considerably diminished. In addition to this, the contents of the abdomen are prevented from acting properly, as the space is encroached upon by the organs of the thorax, which are pressed downwards by the drooping of the ribs.

Now in respiration a constant alternate motion takes place between the chest and abdominal cavity which we may as well explain here, as many ladies think that so long as the chest remains free from pressure the abdomen may be tightened without danger or inconvenience. The division between the chest and abdomen is formed by a strong muscle called the diaphragm or midriff, which is nearly circular in form, and is attached in front, under the cartilages of the breast-bone along the sides, to the cartilages of the six lower ribs, whilst at the back it is firmly fixed to the first lumbar vertebra. It occupies an oblique position in the centre of the body, rising into the thoracic cavity during expiration; and, as we inspire, it is pressed downward into the abdominal cavity, materially assisting digestion by its action. Of course, as the diaphragm descends the capacity of the chest becomes enlarged to a considerable extent, while at the same time the abdomen is pushed outwards to make room for the inflation of the lungs. The intercostal muscles, or those between the ribs, also exert a very considerable influence in raising the ribs during inspiration, and thus increasing the size of the thoracic cavity; and if these be prevented from performing their natural functions, breathing must be carried on solely by the action of the diaphragm, as we find to be the case in almost every instance of consumption or thoracic disease.*

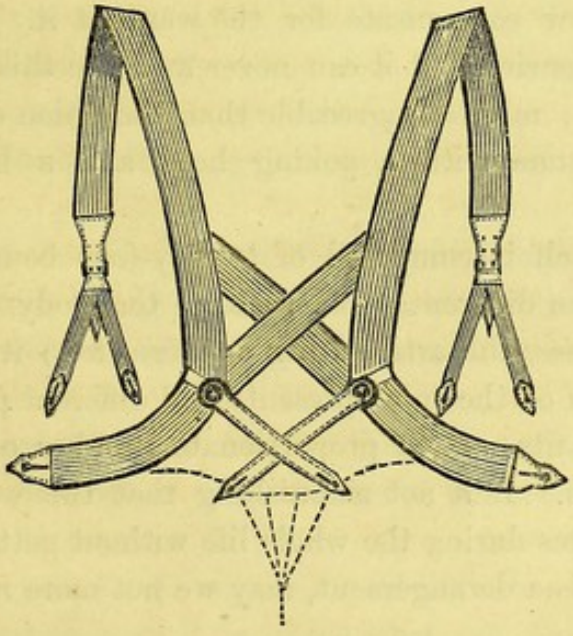
* We have often been asked if we can do nothing for gentlemen, who are almost as apt to stoop as ladies are; and our reply has been the invention of a pair of braces, which every gentleman who has tried declares to be excellent. They give support to

It has been frequently asserted that deformity of the spine is usually the result of disease, but this is contradicted by experience; and we do not feel disposed to concur with any fallacy, simply out of deference to the authorities by whom it is promulgated or supported; for, so far from deformity being occasioned by disease, disease is ordinarily the result of deformity. In our museum we have a specimen of deformity of the spine of the most serious and extraordinary character, on a close inspection of which it will be seen that the bones themselves are in a perfectly healthy condition, although one side of the intervertebral cartilages have given way in consequence of absorption.

"It must be borne in mind that children have few *chronic* diseases, and that consequently those with which they are affected must be *acute*. It must also be remarked that acute diseases are detected by immediate symptoms, the first of which is pain—a child never losing its appetite and becoming dull, without some organic disease or eruptive fever making its appearance in a few days; for the alleviation or cure of which prompt remedies are required.

"But when you see a lively, active child becoming dull and slow,

the back, keep the shoulders in their proper position, and are most comfortable to wear; but, as this is a *ladies' book*, we do nothing more than present an illustration to show their constructiou.



BRACES.

abandoning his favourite games, losing his activity and appetite, looking serious and pensive, without being able to assign any reason for it; when days pass over in the same condition without his complaining of any pains, but getting more sullen and morose, looking pale and languid, anxiety appearing on his face, seeking for rest, leaning on the objects around him, taking all sorts of awkward positions, and seeming to crawl rather than to walk, you have the forerunners of deformity. If, then, immediate means are not adopted you soon see what is called a shoulder growing out—the head projecting forward, stooping of the body, standing on one leg, &c. When this second set of symptoms appears, depend upon it that the spine is already crooked. It generally happens that the first stage of deformity is only detected some years after its origin, and when the curve has attained a certain degree. Then the pressure which takes place causes the deformity to increase with great rapidity, the organs are in danger of injury, and unless immediate measures are adopted the consequences may be fatal."*

Another injurious result of the poking forward of the head is the contraction of the trachea or windpipe, and the consequent alteration and deterioration of the voice. Shakespere says that a soft voice is "an excellent thing in woman;" and with that opinion most of our readers will cordially concur. But a sweet, sonorous, and delightful voice can never proceed from a contracted chest and a cramped larynx; nor can any external show compensate for the want of it. Dress may hide many other deficiencies, but it can never mitigate this. And we know of nothing that is more disagreeable than the union of a pleasing face and elegant costume with a poking head and a hoarse discordant voice.

"The spine itself is composed of twenty-four bones, each of them possessing fourteen different parts, such as the body, the spinous and transverse processes, the articulating surfaces, &c.; it results that the bony construction of the spine presents 336 different parts, without the cartilages, ligaments, and a proportionate number of muscles, blood-vessels and nerves. Is it not astonishing that this wonderful piece of mechanism operates during the whole life without getting out of order? and, when there is a derangement, may we not more reasonably refer it

* Dr. Caplin's Lectures on Deformities of the Spine, 1849.

to its complicated structure than to the presence in the body of some hereditary or other disease?

"There are four kinds of spinal deformity:—the *cyphose*, or outward curvature; the *lordose*, or inward curvature; the *scoliose*, or lateral curvature; and *compound*, viz. with torsion of the spine on its axis, and abnormal protrusions of various kinds.

"The first is accompanied by morbid symptoms, and frequently terminates in *ankylosis*, or the union of several bones into one, by which the solidity of the spine is restored. When the distortion is not great, this in general cures the disease, and leaves the vital functions unimpaired.

"The second and third curvatures are those which begin in the simplest way, and if neglected assume the most formidable character. It is generally manifested on the right side, and may frequently be traced to the habit of lying upon and using the right members exclusively. When the deformity increases, the capacity of the chest must be diminished and its functions impaired, and the heart, lungs, and other vital organs injured; and to this crushing may be attributed the loss of health, general debility, and organic disease.

"Now there are no deformities of the spine, whatever may be the primary causes, without five different organs being concerned.

"First, the *fibro-cartilages;* that elastic substance interposed between each vertebra, on the regularity of which depends the normal direction of the spine. When, by any cause, that substance loses its natural form, the vertebræ are thrown out of their place.

"Second, the *bones;* which deviate, protrude, and recede in different ways.

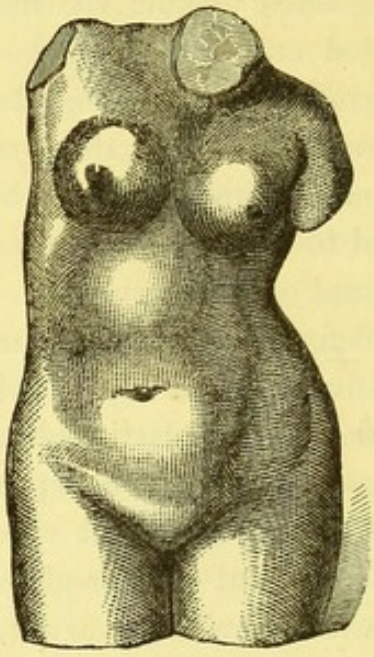
"Third, the *ligaments;* which become stretched on one side and relaxed on the other, losing their firmness and power.

"Fourth, the *muscles;* which always present their antagonist relaxed or contracted.

"Fifth, the *tendons;* which, under the same influence, are changed in their direction, and act as new vehicles to the distortion."—*Abridged from Dr. Caplin's Lectures.*

Having, then, taken into consideration the cause and nature of the deformity, the next thing will be to see what can be done in order to restore the proper equilibrium of the body.

Let us suppose that the Venus was unable to rise from this position; it will be evident to any one, that what we want to find here is a point of support, from which the body may be elevated towards the erect attitude; and this we shall discover in the hip or pelvis, from which the deviation has taken place. It was this discovery that led to the invention of our INVISIBLE CRUTCH, by which the body may be elevated a full inch the very first day that it is worn, and when the organs have attained some strength in that posture the frame may be again raised, and this process be repeated until the normal position has been fully attained and the cure is complete. And all this, be it observed, may be attained without lying on the back or chest, constant confinement, pain, or inconvenience—not even the derangement of the dress. The



VENUS.

support is as invisible as it is efficient, and affords nothing but pleasure and comfort to the wearer.

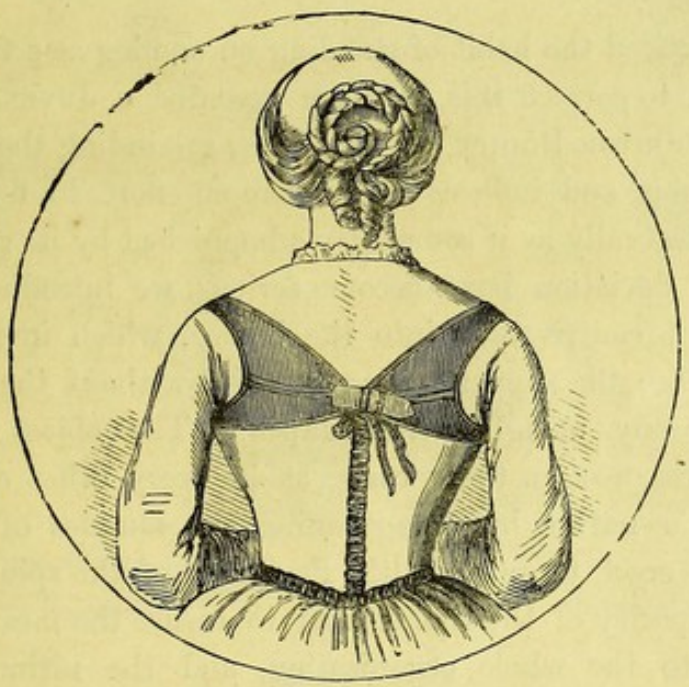
All our adaptations are constructed upon the same principle.

The poking of the head is remedied by our PATENT COLLAR FOR THE NECK, which fits under the chin, and supports it in its natural position. It is worn without any pressure. The elastic nature of the substance allows of perfect free motion of the neck.

In connection with the subject, we may mention, that when the head is held on one side, this is occasioned by the tension of the *sterno-cleido-*

mastoideus muscle of the affected side, and the laxity of the corresponding muscle on the opposite side. This is also remedied by a similar contrivance, which is now extensively patronized.

It is worthy of remark, that the distortion of the neck is often complicated, with roundness of the shoulders, in consequence of the violent contraction of the pectoral muscles, which are not properly counterbalanced by the muscles of the back. To remedy this, we have invented a SCAPULA CONTRACTOR, which may be worn either inside or outside the dress, without being noticed as anything singularly conspicuous.



SCAPULA CONTRACTOR.

This SCAPULA CONTRACTOR may be worn with or without the patent neck collar, according to the nature of the case; and when both are required, they can be united by a simple contrivance. They invariably tend to check the distortion, which first suggested their absolute necessity. The SCAPULA CONTRACTOR would be of great advantage in schools, to prevent the constant bending of the head forward, and is therefore adopted as an essential part of the dress of a young lady at the age when such habits are likely to be formed, as then even the slightest deviation would be effectually avoided. For these advantages, either to prevent or correct those habits, it has been strongly recom-

mended by the medical profession, as the shoulders are by its use drawn backwards, the clavicles straightened, the chest enlarged; whilst, by the erect position it insures, the abdominal functions are normally performed. These results are effected by means of an elastic substance, arranged with a perfect regard to anatomical data, and, as a consequence, have never yet failed in their desired object.

The use of art is to give support where it is needed, and that the material of which it is constructed should act for the weaker muscles, and have as nearly as possible the contractibility of these organs which they are designed to assist. If the muscles are weak the support should be strong.

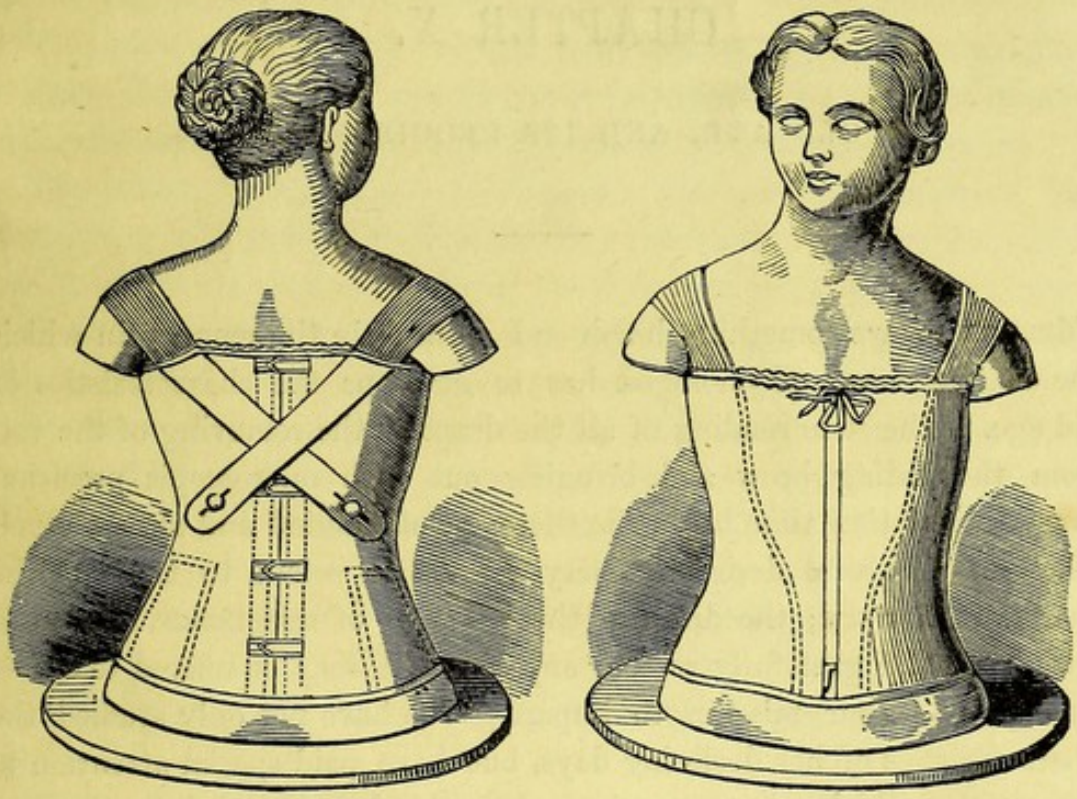
We have noticed the habit of standing on one leg as a frequent cause of distortion: to correct this, we have invented a JUVENILE REVERSO-TRACTOR, or MONITOR BODICE, which acts by reminding the child of that injudicious habit, and induces it to make an effort to discontinue the practice, as effectually as if constantly admonished by its parents.

Should the deviation have become serious, we introduce by various means different contrivances into the bodice, which invisibly support the failing side; the support being supplied without the injurious aid of springs or any unsightly mechanism. The object designed by the REVERSO-TRACTOR in these cases, as in every other of our inventions, is to aid nature by strengthening the muscles of the back, to keep the body erect, to preserve the flexibility of the spine and ribs, to enlarge the capacity of the thorax, and to insure the means of healthy development to the whole organization, and the ultimate strength, beauty, and symmetry of the body.

In all matters relating to the spine, we cannot too often repeat the old adage—prevention is better than cure; and hence, in all cases when there is the least tendency to stooping or roundness of the shoulders, aid should be immediately sought; and even this, trifling as it may appear, ought to be prevented. In our registered CHILD'S BODICE this has been provided for by placing the braces in such a manner, and making them of such materials, that they prevent the slightest tendency of the shoulders to depart from their normal position.

Another thing which we have secured in this bodice is, that it shall always fit. In the ordinary fastening, in the hurry of dressing, or through the carelessness of the servant, it is often drawn unevenly

together; but in ours this cannot happen. Instead of laces we employ hooks and eyes, which are placed on a straight line, and are arranged so as to be adapted to the varying size of the body, and will not remain fastened out of their place: they also keep the whole weight of the clothing equally balanced.



CHILD'S BODICE.

So far as our space and the nature of the subject will permit we have discussed this question in relation to the spine. In a work which we are now preparing for the press we shall consider the question of the relation of the whole of the clothing to the bodily health, and shall then have to say much more upon this subject. At present we can only add—live according to nature: study her dictates, and she will reward you with good health and natural beauty.

CHAPTER X.

OLD AGE, AND ITS REQUIREMENTS.

THERE is always something harsh and painful in the manner in which the anatomist and physiologist has to develope the characteristics of old age. The rude rending of all the drapery, the removing of the veil from the fading brow and bringing out with microscopic precision every furrow that time has made there, seems unkind and almost cruel. There is a natural desire in every woman to retain to the last the charms of her sex; the dread of the isolation of age makes her battle with time and gratefully receive any aid that may be offered to her—this aid it is our mission to impart. We have not only studied the characteristics of her declining days, but have paid special attention to the support which nature requires when she has passed into the sere and yellow leaf. To us there is something unkind and ungrateful in the contempt bestowed upon the epithet "old woman." We love and venerate those who have battled nobly with the storms of life, and as they draw near to the "land of promise" the exhaustion of earth seems only to ripen them for the skies, and although we are in the course of our vocation obliged to look closely upon the skin, and even beneath it to the shrunk and contracted muscles and shrivelled vessels, we never forget that that failing body is the temple of a noble soul, and requires to be treated kindly, almost reverently.

"In the third age of woman," says Walker, "generally extending from forty to above sixty, the physical form does not suddenly deteriorate; and, as has often been observed when premature infirmities or misfortunes, the exercise of an unfavourable profession, or a wrong employment of

life have not hastened old age, preserve many of the charms of the preceding one.

At this period, in well-constituted women, the fat being absorbed with less activity, is accumulated in the cellular tissue under the skin and elsewhere; and this effaces any imperfections of the skin, round the outlines anew, and again restores an air of youth and freshness. Hence this period is called "the age of return."

This plumpness, though juvenile lightness and freshness be wanting, sustains the form and sometimes confers a majestic air, which in women otherwise favourably organised still interests for a number of years.

The shape is no longer so elegant; the articulations have less elasticity; the muscles are more feeble; the movements are less light; and in plump women we observe those broken motions, and in others that stiffness which mark the walk or the dance at that age. The alteration of the voice which occurs at this period is well known.

When women pass happily from the third to the fourth age, their constitution, as every one must have observed, changes entirely; it becomes stronger, and nature abandons to individual life all the rest of existence.

Beauty now begins to fade, form and shape disappear, the plumpness which supported the reliefs has abandoned them, sinkings are visibly multiplied, the skin has lost its polish, colour and freshness depart for ever.

Those changes of time begin by the abdomen, which loses its polish and its firmness, the hemispheres of the bosom no longer sustain themselves, the clavicles project, the neck becomes meagre, all the reliefs are effaced; and all the forms are altered from roundness and softness to angularity.

That which amidst these ruins still survives for a long time, is the entireness of the hair, the placidity or firmness of the look, the air of sentiment, the amiable expression of countenance, and in women of refined mind and great accomplishments, pleasing manners and charming graces, which almost make us forget youth and beauty.

But as every object of nature must utterly decay, this downward tendency goes on. The want of vital energy in the limbs is followed by a diminished activity of the senses and impaired vigour of the brain and all the internal functions. As a consequence of this the volume of

the whole body is reduced, the softness of the flesh and skin departs. The hair participates in the same changes, and turns grey or falls off. The cornea of the eye is rendered flatter, so that its power of reflecting the rays of light that come from near objects is diminished. The vision of distant objects, however, is still preserved, and the convex glasses supply the imperfection of the organ.

The arteries are not exempt from the general decay ; the larger trunks are dilated, their coats are more or less converted into a substance of cartilagenous or bony hardness, and assume a brittle texture. The process of ossification in the smaller tubes reduces their calibre. The capillaries are greatly diminished in number. This change affects the organs of every description. The same parts which exhibit innumerable blood vessels in the growing body, possess now but few and scattered ramifications. The veins are enlarged and varicose.

The muscles also are changed—fat is deposited amongst their fibres, and the tendonous parts increase in their proportion. They feel, however, at this time, soft and relaxed.

The bones receive an undue deposition of earthy matter, lose their cohesion, break very easily, and unite after fracture very slowly and imperfectly. The cartilages become brittle, and in many instances are ossified ; the ligaments are rendered harder, but are less capable of resisting extension.

The organs of motion lose their vitality in an equal degree with those of sensation and volition. The movements are slow, tremulous, and uncertain. The erector muscles of the trunk can no longer support it in an erect posture ; hence the body is bent forward, and the legs fail in giving their proper support. The intervertebral fibro-cartilages are compressed and reduced in size, and the stature consequently experiences a real diminution.

Such is the description given by physiologists of advanced age. It is our business to soften down those excrescences, to prop up the reclining figure, and retain to the last the appearance of middle life.

Before we advert to the nature of our adaptations for this period of life, we must draw a distinction between age and "premature old age." The former is the decline of nature, which must always take place, whilst the latter is the result of disease or improper habits. What we mean by improper habits is such, for instance, as tight lacing or the wearing of an

ill-constructed corset. When this pernicious practice is persevered in for any length of time, decrepitude is sure to set in early. The unnatural pressure to which the internal viscera have been subject has cramped and reduced their energy; and, the resources being exhausted, nothing remains but gloom and misery: when, however, proper care has been exercised in early and middle life, old age may be rendered cheerful and lovely. Nature has made a due provision for all circumstances, and provided the sustaining nutrition for advanced age. This was accomplished in the "change of life;" and, as we before remarked, nothing but its premature exhaustion can render declining life painful. What different ideas are suggested to the mind on meeting with an elderly person whose gentle life is the centre of a family's tender care and affection, blessed and cherished by the circle of her friends: or to see a woman still in middle age, bed-ridden, anxious, desponding, and wretched; oppressed by the recollection of her early habits, when, by irrational dressing, her lungs were deprived of their proper supply of air, the stomach was compressed, and digestion and circulation impeded; and now to mark the result in the debilitated constitution which is broken down with suffering, is a contrast as great and as painful as it is possible to meet with.

It is difficult to convey in writing a proper idea of what we can do for sufferers of this kind. Cases vary so much that no general principles, except those already laid down in preceding chapters, can ever be applied. But of our success thousands of witnesses are now living. Many who were confined to their bed or room have, through the support which they have received by our adaptations, been enabled to take a moderate amount of exercise, and to enjoy a state of comfort to which they had been for years strangers. They were returning to a second childhood; and as in the earlier stages of life we had to sustain the debilitated or yielding part, so in the decline of the body we perform the same duties. In some cases a simple bandage is all that is required, in others a more complicated contrivance, such as our invisible supports; but in all cases, even the most desperate, we can afford relief, and can give that relief too in many cases in which medicine is useless or positively injurious. This is the reason why we always have the patronage of medical men. We never meddle with physic; but, when this is inappropriate, practitioners are always glad to refer to us.

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Madame Caplin's Anatomical and Physiological Gallery, for Ladies only.

Madame Caplin has, during a number of years, been collecting Specimens for the purpose of forming a Gallery, which should be especially devoted to the instruction of ladies in a knowledge of Anatomy and Physiology. Her purpose being now amply accomplished, she is in the habit of giving weekly explanations to those ladies who choose to avail themselves of the opportunity of visiting her, and thus affording them the means of becoming acquainted with the structure and functions of the human body and the laws of life and health, which we believe is not offered to them elsewhere.

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It is hardly necessary to say, that the greatest care has been taken in the selection of the Specimens which are collected in this Gallery, so that whilst nothing is admitted that can offend the most sensitive, nothing is omitted that is necessary to be seen by the class of visitors who patronise this establishment. The well-being of the mother and her offspring often depend on a knowledge of the laws which govern the human organism, and it is precisely that knowledge which Madame Caplin desires to impart in her Physiological Gallery.

As a work of art, Madame Caplin's Venus, prepared especially for her by the celebrated artist M. Guy, of Paris, stands unrivalled; and the whole *ensemble* will impart a lesson on the means of preserving life, health, and beauty, such as nothing but the organs of life, the most wonderful of all the works of the Creator, can teach.

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