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DRESS AND HEALTH;

OR,

HOW TO BE STRONG.

A BOOK FOR LADIES.

REVISED AND ENLARGED EDITION, WITH TWENTY-NINE ILLUSTRATIONS.

MONTREAL :
JOHN DOUGALL & SON.
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PREFACE.

THE importance of the subject treated of in this volume is now universally acknowledged, although very few realize how large a proportion of the ill-health which afflicts civilized society has its source in the ordinary dress worn by women and children. Every woman, and especially every mother, should be in possession of the information contained in these pages. This volume contains, in the first place, a compilation of the opinions expressed by numerous European and American physicians with regard to the special evils produced by dress, these opinions being given in their own words; and in the second place, it points out the remedy for each evil, describing the improvements which may be made without attracting notice, and giving minute explanations, illustrated by cuts, of the way in which the Reform Undergarments are to be made. Each copy contains a pattern sheet, giving full size patterns of the most important garments of the Reform.

INTRODUCTION.

THE term "Dress Reform" used to suggest only notions of ugliness and impropriety; but within the last few years very different ideas have come to be associated with it. It is now generally known that the ordinary dress of women is exceedingly injurious, and, from its very nature, tends to produce many diseases and deformities, and the feeling is rapidly spreading that reform is not only very desirable, but an absolute duty, if women would not knowingly sin against their own bodies. Furthermore, it has been discovered that the most important changes requisite for health may be made without rendering the outside appearance at all conspicuous, and that therefore women may be healthfully clad without suffering martyrdom from transgression of social usages. The world is, however, as yet by no means awake to the very great importance of this subject. The natural conservatism of the race has combined with ignorance and prejudice to prevent a change, and it will be long before these powerful forces are entirely conquered.

It is, we believe, about thirty years since the first efforts at Dress Reform were made in the United States. At that time, certain brave women banded themselves together to wear a costume which, in their opinion, would remedy all defects, and which they no doubt hoped would soon be-

come universal. The changes they made, however, were far too radical to be accepted, and the reasons for these changes were not understood at all, so that the new costume not only failed to become general, but called down upon its supporters such a weight of opprobrium that for more than twenty years the cry of Dress Reform was unheard, except, perhaps, from fluent journalists who eagerly attacked the absurdities of each new fashion, while throwing equal scorn on strong-minded females who dared to differ from the rest of their sex in appearance. It has, however, as we have said, been discovered that women may in the main dress healthfully without attracting notice. The plan whereby this might be done was worked out a few years ago by a committee of Boston ladies, who then brought the matter to the attention of the public by a series of lectures delivered by four of the most eminent lady physicians of that city. From Boston the idea spread rapidly over the United States and Canada, and it has now taken firm root in the Old World, women in England and Scotland showing themselves far more ready to accept the change than their sisters on this side of the Atlantic. A curious turn of the weathercock of fashion, in favor of Princess dresses and union under-garments, has aided temporarily in the reform. Women everywhere are now enquiring into the matter with interest, and it is of the greatest importance that the principles of healthful clothing should be thoroughly understood, and that all should know exactly how and why the ordinary style is injurious.

It was to aid in this important work, by spreading the opinions of wise physicians and thinkers, that this volume

was originally prepared, and the unexpected cordiality with which it was received, both in Great Britain and the United States, showed that it met a special want. Since its first issue, however, years have passed, and the garments which in 1875 had just been invented have been elaborated and improved, and new writers have taken up the subject, so that in preparing a new edition it has been found advisable to recast the volume, with large additions and many new illustrations, a good deal of the matter which appeared in the former volume being entirely omitted. Five entirely new chapters have been added, including an important one on Children's Clothing, and one on Ladies' Health Associations. The addition of an appendix gives room for some important extracts that could not be placed in the body of the book. The extracts, of which the book is mainly composed, are taken from sources too numerous to mention, but for the special discussion of the new Reform, we are largely indebted to the lectures already referred to, delivered in Boston, in 1874, on, "Dress as it Affects the Health of Women," and published shortly after in a volume, edited by Mrs. Abba Gould Woolson.

MONTREAL, June 1, 1880.

I.

WHY THERE SHOULD BE A REFORM.

DRESS UNHEALTHFUL.

All physicians who have studied the subject of dress as it affects the health of women, have agreed in pointing out that some change is necessary. Remarks directed against tight lacing, for instance, are so familiar as to have become trite, and in this connection we need only quote the opinion of two competent authorities, one English and the other American. An English physician, Dr. J. Milner Fothergill, says of woman's dress:—

"It is usually hung from the hips and drags heavily upon the waist band, tightly encircling the abdomen and pressing down its contents. · · · · The pressure exerted by the combined action of stays and heavy skirts upon the contents of the abdomen and pelvis is most baneful, and displacement of the womb is one of the commonest consequences. *The dress arrangements of women are radically bad and need great reform.*"*

* "The Maintenance of Health," by J. Milner Fothergill, M.D., M.R.C.P.

Prof. T. Gaillard Thomas, M.D., of the New York College of Physicians and Surgeons, who is perhaps the greatest authority in the United States on female diseases, says of the ordinary dress of woman:

"The dress adopted by the women of our times may be very graceful and becoming, it may possess the great advantages of developing the beauties of the figure and concealing its defects, but it certainly is conducive to the development of uterine diseases, and proves not merely a predisposing but an exciting cause of them. For the proper performance of the functions of respiration, an entire freedom of action should be given to the chest, and more especially is this needed at the base of the thorax, opposite the attachment of the important respiratory muscle, the diaphragm. The habit of contracting the body at the waist by tight clothing confines this part as if by splints, indeed accomplishes just what the surgeon does who bandages the chest for a fractured rib, with the intent of limiting thoracic and substituting abdominal respiration. As the diaphragm, thus fettered, contracts, all lateral expansion being prevented, it presses the intestines upon the movable uterus, and forces this organ down upon the floor of the pelvis or lays it across it. In addition to the force thus excited, a number of pounds, say five to ten, are bound around the contracted waist, and held up by the hips and the abdominal walls, which are rendered protuberant by the compression alluded to. The uterus is exposed to this downward pressure for fourteen hours out

of every twenty-four; at stated intervals being still further pressed upon by a distended stomach. · · · · An organ so easily and decidedly influenced as to position by such slight causes, must necessarily be affected by a constriction which, in autopsy, will sometimes be found to have left the impress of the ribs upon the liver, producing depressions corresponding to them."

To these forcible remarks we may add the testimony of Dr. George A. Baynes, formerly editor of the *Public Health Magazine*, Montreal, given in the introductory chapter which he furnished for a former edition of DRESS AND HEALTH. After pointing out some of the ways in which dress fails to meet the requirements of health, he says:—

"If under so wretched a distribution of the heat of the body, a woman escapes a score of such maladies as congestion of the brain, headache, neuralgia, torpid liver, dyspepsia and consumption, besides the numerous ills peculiar to the sex, it is either because she is uncommonly 'tough' or on account of a special interposition of Providence. The usual result is a chronic inflammation of all the internal organs of the pelvis and the lower portions of the abdomen. · · · · The many heavy skirts and under-garments which are hung about the waist, with no support from above, drag down the internal organs of the abdomen and cause them to press heavily upon the contents of the pelvis. After a time the slender ligaments which hold those organs in place give way, and various kinds of displacements and other derangements

occur. The constant pressure and unnatural heat to which the lower part of the back is subjected is one of the chief causes of the frequency of kidney diseases among women. This also is the source of 'weak back,' lumbago, pain in the side, and other evils too numerous to mention. · · · · The corset, with all its substitutes and subterfuges, tight belts, and every other device for compressing the waist or any other part of the body, should at once be abolished. They weaken the muscles; they weaken the lungs; they weaken the heart's action; they weaken the digestion; they weaken the bowels; in fact, they compress and weaken every vital organ in the body. Freedom of action must be secured for women to be healthy."

BURDENSOME.

Another reason for reform lies in the fact that the dress of the day is burdensome. Quite apart from the question of health, is it nothing that women should be weighed down and impeded in every way by heavy, uncomfortable garments which make life a continual weariness? Custom renders endurable the discomforts of dress, and even enables the victims to ignore them altogether, but nevertheless they are there. On this subject let us listen to the words of an earnest worker in the cause of Dress Reform, who has during the past twenty-five years induced hundreds of women to dress healthfully. Dr. Harriet N. Austin, of Dansville, N. Y., says of woman as ordinarily dressed:—

"Whatever she attempts to do or wherever she at-

tempts to go, her dress is always and everywhere an obstacle in the way of her successful accomplishment. Is she occupied in doing the work for a family and taking care of a house, there is not in the round of all her labors a single act which she performs which is not rendered more laborious, and which does not demand a greater expenditure of strength on her part, than would be the case if her *dress* were fitted to her necessities. Does she sweep her rooms, her *dress* is in the way. Does she make beds, her *dress* is in the way. Does she cook about a stove or fireplace, her *dress* is in the way. Does she wash or iron, her *dress* is in the way. Has she children to wait upon and attend, her *dress* interferes with the easiest performance of whatever she has to do for them. She cannot go up stairs without carrying her *dress* in her hands; she cannot stoop without lifting her *dress*, or having it unnecessarily soiled, and so adding to her toil. Has she occasion to go into the garden to gather vegetables, she must wait until the dew is all off in the morning, and then, in gathering them, she must carry her skirts under her arms, or in some way manage to get them *out* of the way, so that she shall not step on them, or have them interfere with her work. Does she work a little in the garden, at least two-thirds of the strength that she uses in doing so is expended on her *dress* rather than on her plants. Does she go for a ride or a drive, she is in danger of being tripped by her skirts, unless both hands are used in gathering them up. And when she is seated in the carriage, should any accident occur by which her life or limbs are endangered, the danger is increased tenfold

by the fact that her *dress* does not allow her freedom of motion. Does she go for a walk, she must confine herself to certain times and directions. For instance, she must avoid dew, rain, and mud, and there must be no fences to be climbed or irregular places to be overcome. Of course she can and does often go without reference to these obstacles, but the disadvantage at which she does so is perfectly obvious to every observer. And she cannot walk on the smoothest and evenest road without expending at least *four* times the amount of strength for walking a given distance, on account of her dress, which a man expends in walking the same distance."

Fashionable attire is not only burdensome when actually worn. To most this is the smallest part of the burden. The vast amount of work and thought and money involved in preparing and altering it is a very real burden to both rich and poor. From the nature of the case it takes precedence of almost all other work. Those who have money must still give the closest personal attention to every detail if they would avoid incongruity, while those who have not money must make up for it by health-destroying labor if they would avoid what they consider a badge of social inferiority, unfashionable attire. A reform which would substitute the simple for the complicated, the enduring for the transitory, would lift a heavy burden from the shoulders of women in every station in life.

UGLY.

An argument which, with some, will count more strongly in favor of reform than either of the preceding, in these days of high art, is that a dress which "exaggerates the bust, humps the hips, pinches the waist, destroys freedom of motion, and obliterates curve of outline and sweep of fold by meaningless and redundant trimming," is simply ugly. Artists do not hesitate to condemn modern fashionable attire, and that in the most unsparing terms. Mrs. H. R. Haweis, an English authority on art, speaking of dress, says:—

"We expect it to be a work of art. Much money, representing much labor, is lavished upon every garment. When the silk weaver has spent his skill upon the production of even texture, delicate gloss and rare tints, only half the work is done. We cannot fling and fold the rich piece upon us after the simple fashion of our forefathers. We want it more to express than to hide us. A clever craftswoman must cut it to the approved shape, and sew it into form; it must be clothed upon with other and richer fabrics, which we call 'trimming,' until its original price is doubled. Every form is eagerly borrowed for these trimmings. Patterns old and new are exhausted to form attractive combinations—the Greek frieze, the Mediæval missal-border, the whole animal and vegetable kingdoms are laid under contribution—our very discontent with all there is, and our insatiable craving for novelty, is one of the diseases consequent on a certain repletion of variety. Raised work, indented work, tabs, fringes, frills—there is

no possible form of ornament that we have not tried and cast aside, so that a dress now claims to be considered as a work of art. Now, if dress be worth all this elaboration, if it intends to reach, as it evidently expects to do, the platform of a picture, or a poem, or a fine building, the art it adopts must be either good or bad. I believe the melancholy truth to be, that we can hardly find a modern dress which is not throughout in the worst taste, and opposed to the principles of all good art."*

THE EVIL AND THE REMEDY.

Thus we see that the principal charges brought against woman's dress are, that it is so injurious to the health as to cause many diseases; so inconvenient as to lay an actual burden on the wearer; so complicated as to tax every energy, and so ugly that it excites unsparing ridicule from the artist. In this volume we have to do principally with the charges of unhealthfulness, and we now proceed to consider the points made by the reformers more in detail, first giving Dr. Mary J. Studley's account of the rise of the reform :—

"For years gentleman physicians have been uttering their protests against the abuses which woman was heaping upon her body by means of her errors of dress. But what could they do more? They never had to wear the abominable gear, and of course they were incompetent to criticise or amend it in detail. They could only reiterate,

* "The Art of Beauty," New York, Harper Bros.

in a helpless way, what our gentleman professors in the Woman's Medical College used to say as often as a woman came to the clinical lecture to be examined for chest or other diseases which required her disrobing, 'Why will women tie so many miserable strings around their bodies?' Meanwhile, the world was moving, and it had come to see that a man doctor was not good for much unless he was a good nurse. So it finally came to think it possible that, since women were very good nurses without a medical education, they might be still better nurses with such an education, and the women began to go to Medical College. It only required one look at the internal mechanism of their bodies in the dissecting-room to show them the inevitable results of putting strings or bands or bones around these bodies; and so, little by little, out of their convictions, added to those of earnest, thinking women in Boston, there grew the Dress-Reform movement."*

* "What our Girls Ought to Know," M. L. Holbrook & Co., New York.

II

COMPRESSING AND DEPRESSING.

A lady who has been for many years at the head of a large educational institution in Canada recently expressed herself something in the following manner:—

"It is really distressing to see the bad figures of many of the young ladies that come to me. Their shoulders are high, their spines are crooked, and their waists are unnaturally small."

The young ladies so described were probably proud of their small waists, and quite unaware that what they considered a fine figure was considered by others a deformity. They were ignorant, utterly ignorant, of what might be the effect of this state of things upon their own health in future years, and upon the health of their children should they ever have any, and no one dared to tell them because it would not be considered proper for them to know. Now, people may differ as to the amount of knowledge which young girls ought to have concerning their own structure, but there can be no sort of doubt that mothers and teachers ought to study the subject, and that if they are unwilling to secure intelligent obedience to the laws of health, by imparting the necessary knowledge, they ought to secure it by using authority. In the present state

of things there is danger that each generation may grow up more feeble than the preceding one. Indeed, it is not too much to say that even now few women have any clear idea of what is meant by good health. They may know what it is to be free from special ailments, which require them to place themselves under a doctor's care, but the intense vitality which results from perfect health is a thing which they have no idea of.* Many causes, of course, combine to produce this low state of the system, but the quotations which we are about to make will show pretty plainly that the clothing as usually worn is a very prominent cause.

A CONTRAST.

Dr. Mary J. Safford Blake, who, while studying in Vienna, gave special attention to this matter, and who

* Dr. Harriet N. Austin, in a tract entitled "Health Dress," says:—"I am well aware that most women would not at all understand what I mean about the discomforts and injuriousness of their clothing. They think they are comfortable, and great pity it is that they do think so: for this is evidence that they have deadened their physical sensibilities. They little know the outrage they commit on their organisms. Would an American mother like to encase her little daughter's feet in Chinese shoes and keep them on her till they should cause no discomfort? She treats the child quite as cruelly when she encases her body in a baby band, pinning it closely and keeping it there till no suffering arises from it. And her own sensibilities should not be less acute than those of a child. A woman with bands hanging on her hips, and dress snug about the waist and chokingly tight at the throat, with heavily trimmed skirts dragging down the back, and numerous folds heating the lower part of the spine, and with tight shoes, ought to be in agony. She ought to be as miserable as a stalwart man would be in the same plight. And the fact that she can coolly and complacently assert that her clothing is perfectly easy and that she does not want anything more comfortable or convenient, is the most conclusive proof that she is altogether abnormal bodily, or else that she has not much idea of the grand uses to which her powers might be put.

has since confirmed her observations during an extensive practice in Boston, says in one of the lectures we have referred to in the introduction :—

"A woman, accompanied by her husband, came to consult me on one of the dreariest days of last winter. Her teeth chattered with the cold ; and you will not wonder at it, any more than I did, when I tell you that she had on cloth gaiter-boots, thin stockings, loose, light cotton drawers, two short skirts of flannel, a long one of water-proof, another of white cotton, an alpaca dress-skirt and an over-skirt. This made seven thicknesses, multiplied by plaits and folds, about the abdomen. Each of these skirts was attached to a double band ; and thus the torrid zone of the waist was encircled by fourteen layers. All this weight and pressure rested upon the hips and abdomen ; and the results were—what they must be, if this pressure has been long continued—a displacement of all the internal organs, for you cannot displace one without in some way interfering with another. Here was this woman, with nerves as sensitive as an aspen leaf to external influences, clad so that every breath of cold chilled her to the marrow, the neck and shoulders protected by furs, the hands and arms pinioned in a muff, the head weighted down by layers of false hair, and the legs almost bare ; while her husband, the personification of all that was vigorous in health, was enveloped as he told me, from head to foot in flannel. His every garment was so adjusted that it not only added to the heat generated by the body, but helped to retain it. I question whether

that hale, hearty man would not have suffered twinges of neuralgia or rheumatism had he been exposed, as his wife was, to the severity of our atmospheric changes.

AUSTRIAN EXPERIENCES.

"The soldiers of Austria were accustomed to retain their pantaloons about their hips by means of a leathern strap. Disease of the kidneys increased so alarmingly among them that especial attention was drawn to the subject; and it was decided that the closely buckled band about the loins was the cause of the evil. A decree then went forth making the adoption of suspenders imperative. It would have been wise if that imperial investigation had extended to the garments worn by women, and had led to a prohibition of the many bands and heavy weights that encircle and drag them down. The physical degeneracy of the mothers will leave its impress upon sons, as well as upon daughters; and in the end the national strength languishes under the weaknesses of inheritance.

"The vigor of manhood in Austria is squandered in military service, and this throws much manual labor upon women. In Vienna, you will see in early morning a rank and file of two hundred men and women awaiting the roll-call that shall apportion to each his or her labor for the day. Side by side with the men, women lay railroad iron, dig sewers, and carry up over steep ladders, on their heads or shoulders, brick and mortar for the laying of walls. Their dress, in length at least, is well adapted to the work assigned them; it reaches but little below the

knees, and is there usually met by long boots. You see at a glance that the broad peasant waist has never been crowded into corsets, and you rejoice in the belief that it is free from the inward distortions that bone and steel are known to produce. But a fearful accident occurred in Vienna while I was in the hospitals ; a brick block of houses fell, killing and mangling several women who were employed in building them. 'Now,' I thought, as I entered the pathological room where a *post-mortem* examination was to be held upon them, 'I shall once, at least, have an opportunity of seeing the internal organs of women normally adjusted.' To my utter astonishment, it was quite the reverse. In one case the liver had been completely cut in two, and was only held together by a calloused bit of tissue. Some ribs overlapped each other ; one had been found to pierce the liver, and almost without exception that organ was displaced below the ribs, instead of being on a line with them. The spleen, in some cases, was much enlarged ; in others, it was atrophied, and adherent to the peritoneal covering.* The womb, of

* Dr. Bock, a German physician, says of the stomach, the liver and the spleen :—" Interruptions of the activity of the three organs designated, must influence the supply of the building material, the origin of new and the destruction of old corpuscles—or the regenerating and purifying of the blood. Such interruptions are especially caused by the narrowing of the upper part of the abdomen through pressure or lacing, more particularly when that is done after eating, when those suffering organs require more space than usually. It is mainly *tight clothing* which tortures these organs. Besides this, a bending position of the body, especially in writing, and pressing the upper abdomen against the table, can prove injurious.

Most conspicuous are the consequences of compression by tight bands on the liver of women ; a very deep cross-streak in this organ is often produced by tight-laced corsets pressing the lower ribs deep into it. Such crippling often causes pleurisy, in consequence of liver

all internal organs the most easily displaced, owing to its floating position in the pelvis, and to the fact that it lies at the base, and is pressed upon by all above it, was in every instance more or less removed from a normal position.

"I acknowledge that these peasant women were overburdened by hard labor; but many of the abnormal conditions I saw were dependent simply upon this fact,—that heavily quilted or home-spun skirts had been worn from childhood; and that these had always rested upon the hips, with each band snugly drawn about the waist and tied by strings.

"It has been said that the injury caused by bands about the waist is obviated by wearing corsets beneath them. You need but a moment's reflection to see that this cannot be so. The pressure of the band helps to adjust the steels and bones more closely to the yielding portions of the body. As no support is given to the corsets at the shoulders, and the skirts are not attached to them, they can furnish no relief whatever to the weight of garments resting upon the hips, and they add greatly to the unremitting downward pressure upon the abdominal organs. Although these women did much hard work with nature so violated, still it stands to reason that they could

inflammation. In the stomach often, especially in young women, the round stomach ulcer is produced, which becomes, through its burning pain and occasional spasms, a most tormenting plague. The spleen, not so rarely as may be thought, is affected by similar improprieties of dress, and becomes inflamed, its functions being impaired for the formation of blood globules; the spleen may be squeezed down and out of its natural position, when it is called the wandering spleen."—*Translated.*

not have had the same amount of strength and endurance that a normally organized body would have given them. It is always observed how much earlier they grow old than the men of their own rank; and this waste of force, this friction upon self, with the various added burdens they bear, is no doubt the cause.

EFFECTS OF PRESSURE.

"In my own country, the cases I have examined after death have been limited in number, but nearly every one seen has revealed the same sad history. Chiefly through the courtesy of other physicians, I have had the opportunity to be present at the autopsy of several unmarried women. They were of the class not compelled to labor unduly, so that most of the abnormal conditions of the generative organs could be rationally accounted for only by improper dress. Whenever it was possible, I enquired into the habits of life and the modes of dress of the subject. In one girl, aged twenty-two, whose waist after death was so slender that you might almost have spanned it with united fingers, there was an atrophied state of all the glandular organs. It seemed to me possible, and even probable, that this condition had its origin largely in a continuous pressure upon that life-endowing nervous centre, the *solar plexus*, and upon the central glandular organs.

"Recent experiments by a well-known physician of New York show conclusively that continual pressure brought to bear upon the stomach of animals causes their death more quickly than when applied to any other organ. The death of women occurring under the influence of

anæsthetics has in many instances been traced to impeded circulation resulting from tight clothes.

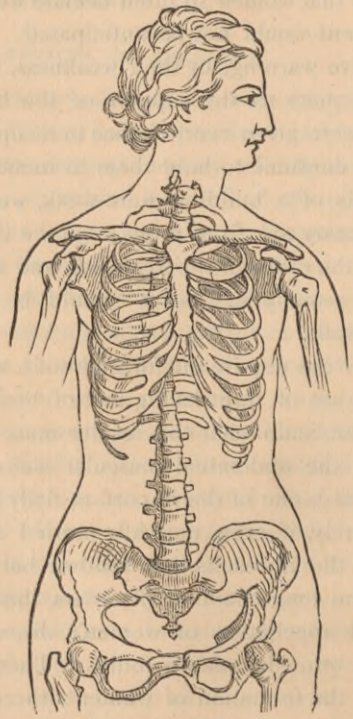
"However loosely corsets are worn, the steels and bones in them must adjust themselves to the various curves and depressions of the body, and must be felt, else the sure death that women so often declare would follow their abandonment would not be anticipated. As soon as the muscles give warning, by their weakness, that they are no longer adequate to the support of the body, it is high time they were given every chance to recuperate. Instead of this, we continue to hold them in immovable bondage. If the walls of a building were weak, we should expect only temporary aid from props; but we should seek diligently for the cause of the weakness, and then turn all our efforts to remedy it. So it should be with our own muscular walls.

"It does not require the foresight of a seer to diagnose a chronic case of tight lacing and of heavy skirts. You know in the main what the results must be; you know that when the abdominal muscular walls become inert, almost wasted, one of the important daily functions of the body is rarely, if ever, normally carried on. We might enumerate the ill results that follow; but these are only links in the long chain of disorders that have won the disgraceful appellation of women's diseases, when they should be termed women's follies. There has been no blunder in the formation of women: there would be harmony of action in each organ, and in the function assigned it, if nature were not defrauded of her rights from the cradle to the grave."

NATURE'S PACKING.

The following paragraphs, from the lecture of Dr. Caroline E. Hastings, require careful study. She says:—

"First, we will consider the bony frame-work of the

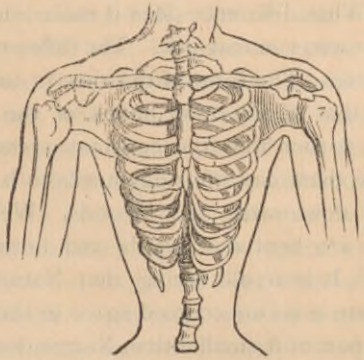


Natural Form of Ribs.

body. Some of the bones enclose cavities,—as for instance the ribs, which enclose the thoracic cavity; and

again the hip-bones, as they are familiarly called, which, with the lower part of the spine, form a cavity known as the pelvic cavity. Between these two cavities lies another, which has no bony walls, only walls of flesh.

"The thoracic cavity, as I have said, is formed by the ribs, twenty-four in number, twelve on each side, with the breast-bone in front, and the spinal column behind. To the spine the ribs are joined by strong ligaments; but they are finished out and attached to the breast-bone by



Fashionable Form of Ribs.

means of cartilage, with the exception of the two lower, which are attached only to the spine. As these are not attached to the breast-bone, they are called floating ribs. The cartilaginous attachments permit the cavity thus enclosed to be expanded to a great extent, provided their elasticity is not interfered with by some contrivance supposed to be an improvement upon the original plan.

When these cartilages become ossified, as they sometimes do, from disease or old age, the ribs are fixed in position, and the chest can no longer dilate. This is not considered an advantage, but a misfortune. The same result, if it follows the wearing of a garment, occasions no concern; but I can see little difference between the two evils. I believe that any lady, young or old, must experience serious injury when she interferes with one of Nature's wise designs by compressing these twenty-four ribs to such an extent that the cartilages in which they terminate cannot act. What difference does it make whether these ribs expand or not, you may ask. The difference between ease and disease. The form of the ribs is more readily changed than that of any other bones of the body; for their situation is such that the constant pressure of the clothing above them day after day needs to be but slight to bend them downwards and inwards. Well, you say, what if they are bent downwards and inwards? What harm is done? It is an old saying that Nature abhors a vacuum. There is no unoccupied space in the body; and to render any part of it smaller than Nature designed is to cause the organs occupying that part to diminish in size, or to crowd together one upon another. In either case, Nature's processes are sadly interrupted. It does not require any great pressure to lessen the capacity of the thoracic cavity, provided the process be begun in early life. Snugly fitting dresses worn from childhood till the age of eighteen or twenty will accomplish the result; but, as if to make assurance doubly sure, the mother buys a compress, which she clasps around the body of her little

girl while yet the bones are in their most yielding state. And no wonder the girl of sixteen or eighteen thinks she cannot live without her corsets. The muscles, never having been allowed to do the work of supporting the spinal column and abdominal organs, refuse to come up to the full measure required of them at a moment's notice, and, as a natural consequence, the young lady feels all she expresses when she says, 'It seems as though I should drop to pieces without my corsets.'

"Within this thoracic cavity of which I have been speaking are contained the vital organs,—viz., the lungs and heart,—called vital because an entire suspension of their functions for a few minutes will result in death.

"The lungs, which are the essential organs of respiration, are composed of tubes, blood-vessels, and air-cells; and these are held together by a thin connective tissue. The tubes are branches of the trachea or wind-pipe. These branches divide again and again, as a tree divides into branches and twigs, till they become too minute to be seen with the naked eye. At the utmost extremity of each of these twigs may be seen little bladders or air-cells, which receive the air as it comes through the tubes. It is estimated that there are 600,000,000 of these air-cells in one pair of lungs. The blood-vessels coming from the heart divide and subdivide, and finally form a net-work around each one of the air-cells. All the blood in the body passes through the lungs once in five minutes, to be oxygenized. The oxygen is taken with every breath into these air-cells, and is given off to the blood through the membranes of the air-cells and the blood-vessels. The

blood in turn gives up its carbon, and that which upon entering the lungs was a purplish hue becomes a bright cherry color. Thus vitalized, it is returned to the left side of the heart, to be sent out all over the body, carrying life and health to every part. Situated between the lungs is that hollow muscular organ, the heart; and below them is the liver, the greater part of which lies upon the right side, and extends downward, in its normal position, to about the lower border of the tenth rib. The diaphragm is the internal breathing muscle; and it acts a very important part in the process of respiration. It is attached in front to the lower portion of the breast-bone; on either side, to the inner surfaces of the cartilages and bony portions of six or seven lower ribs; and behind, to that part of the spinal column known as the lumbar region.

"Now, as to the action of the diaphragm, it modifies to a great extent the size of the chest above it, and the position of the thoracic and abdominal viscera below. During inspiration, the cavity of the chest enlarges in a vertical direction nearly two inches, and the greater part of this increase is due to the descent of the diaphragm. I have been thus minute in this description for a reason that will appear later.

SUSPENSION OF RESPIRATION.

"Let us compress the chest by putting a bandage around the ribs; draw it tight, and what is the effect? You can hardly find breath to say, 'Oh! I cannot breathe;' you grow red in the face; the head seems ready to burst. What is the trouble? Why, you have so

compressed the lungs that the air cannot pass into the air-cells, and you are in a state of asphyxia, and this means a suspension of the respiratory process.

"Let us look for a moment at the result of such a suspension when it becomes entire. You will remember about the network of blood-vessels surrounding the air-cells. A complete suspension of respiration causes a retardation or stoppage of the circulation through this network. Now the blood, arrested in the lungs, ceases to reach the heart in sufficient quantities to support the action of that organ, and the phenomena of life are suspended. In order that the blood may pass through the pulmonary veins into the left heart, it must be changed from venous to arterial blood; that is, the blood which is charged with carbonic acid upon arriving at the lungs must give off this poison, and at the same instant receive the oxygen, which has been brought into the air-cells in the air we have inhaled. But the pressure we have applied has prevented this change from venous to arterial blood, by cutting off the supply of oxygen; the blood cannot return to the left side of the heart, and the lungs cannot receive any more from the right side of the heart; neither can the right heart receive any further supply from the veins which usually empty their contents into it; and consequently we have a state of congestion all over the system. If this pressure should be kept up from two to five minutes, death would be the result.

"The chest of a pugilist was so much compressed by an attempt to take a plaster cast of his body in one piece that all action of the muscles of respiration was prevented.

As he was unable to speak, the danger of death became imminent; but his situation was discovered in time, and his life saved.

"I have been describing the consequence of a complete suspension of respiration, which is death in from two to five minutes. Has it occurred to you that there is one article of woman's dress so constructed that, when clasped around the waist, it applies this pressure,—not to the extent of instant death indeed, but yet to such an extent that those who wear it live at a dying rate? The corset is the name of this instrument of human torture.

"Just here, perhaps, you are recalling the position of the lungs, and saying that corsets do not encroach upon the region occupied by those organs, and therefore cannot compress them, and that all my charges fall to the ground. Not so fast, my dear girl! Please to recall the diaphragm, and its attachments to the lower part of the breast-bone and to the inner surfaces of five or six lower ribs, and then tell me if the pressure applied by corsets does not fall directly over this region.

"For a complete filling of the air-cells, the cavity of the chest must be enlarged, in order to accommodate an increased expansion of the lungs; and I have shown you that this increase in the size of the cavity is due, in a great measure, to the depression of the diaphragm. Now, if you have compressed the ribs and cartilages so much that they cannot act, the diaphragm remains nearly or quite motionless, the cavity is smaller than is requisite for a complete filling of all the air-cells, a part of the blood

is not oxygenized, and the system suffers just in proportion to the amount of carbonic acid retained in the blood.

"'But I do not wear my corsets too tight,' every lady is ready to answer. I never yet have been able to find a woman who did, if we accept her own statement; and yet physicians are constantly called upon to treat diseases which are aggravated, if not caused, by wearing corsets. Nature is long suffering, and for a time yields her rights so quietly that we do not realize how we are imposing upon her. But a day of reckoning will surely come, perhaps too late. You do not wear your corsets too tight, you say. Tell me, then, why they unclasp with a snap, and why you involuntarily take a long, deep breath when you unclasp them?

"If you will allow me, I will explain why you take that long, deep breath. All day the blood has been seeking to enter the blood-vessels of the lungs in a greater quantity than they were able to receive on account of the pressure upon them. Now the pressure is off; and the blood, no longer obstructed, rushes into the network of blood-vessels surrounding the air-cells, and instantly there is a call for oxygen to take the place of the carbonic acid contained in it. Involuntarily we answer this call with a deep breath, and a complete filling of the air-cells. In a moment equilibrium is restored; the blood flows into the lungs more steadily, and an easy respiration is then sufficient to supply the demand for oxygen.

PALPITATION OF THE HEART.

"But I have hinted at diseases produced and aggra-

vated by this continued pressure. For instance, the obstruction of pulmonary circulation may and does cause enlargement of the left ventricle of the heart, as well as congestion of the brain, liver, and kidneys.

"Nearly a year ago a young lady complained to me that she was troubled with palpitation of the heart, at times quite seriously so. A glance was sufficient to show me that she wore corsets, and that they were drawn to the last fraction of an inch. I told her she was injuring herself; and, that I might prove it, induced her to let me measure the corsets as she was wearing then. I found they measured just twenty-two inches. I then put the tape-measure around her waist, and, holding it loosely between thumb and finger, asked her to fill her lungs. She did so, and the measure drew out to twenty-six inches. So you can readily see that she was sacrificing health to a fancied style of beauty. I am sorry to say that she would not change her habit, and I have since known this same young lady to get another to hook her corsets for her, because they were so small that she could not possibly bring them together.

"I am very glad to be able to give you an instance which proves, on the other hand, that there is still some sense left among women. A young lady came to me quite out of health, and with symptoms of weakness of the lungs. Among other remedies I prescribed the leaving off of corsets, which advice she was willing to receive and adopt. She became very much better; and I believe the greater part of the improvement was due to the giving up of corsets, aided by a few weeks in the country, where

the lungs were at liberty to take in God's sweet air without hinderance. About six months after, she wished to attend a wedding reception, and thought she would put on the corsets, just for the evening. To use her own words, she was in agony till she could get home and take them off, thus proving that women do not take to corsets naturally.

"But why, if we leave the lungs free to act well their part, need we remove the weight of clothing from the hips? This brings us to consider the pelvic cavity and its contents. This cavity is formed by the union of the two bones called in familiar language hip-bones with each other in front, and with the lower part of the spinal column behind. In the lower part of this cavity are situated the bladder and the uterus or womb. Above these organs are twenty-five feet of intestines lying loosely in the abdominal cavity, with no great amount of support from above. These lower organs are joined together by the folding over and around of the membrane called peritoneum, so that whatever displaces one will affect the others to a certain extent. There are some ligaments which hold them in position, but they will yield if too great or too long-continued pressure be exerted from above downwards. In this way some of the diseases peculiar to woman are brought about.

"When the weight of clothing is supported only by the hips, it has a tendency to press down the intestines, and their weight must then fall upon the organs below. These, in their turn, are forced to yield. One of the rules for treatment of diseases of this nature laid down in the books is, 'Remove all weight from the hips.'

THE PANIER OR BUSTLE.

"In the region which this article of dress covers, the kidneys are situated; and just below them, upon either side, large bundles of nerves make their exit from the spinal cord, and pass downward to the lower extremities. Any continued pressure over this region will tend to cause either a dormant condition of these nerves, or perhaps an irritation which will result in pain and lameness. A young lady of my acquaintance—who, because it is the fashion, feels herself obliged to wear one of these deformities—always suffers a severe pain in the hip as a penalty, and yet she must wear it when she goes out, for 'how she would look without it!'"

DIO LEWIS ON CORSETS.

Dr. Dio Lewis, in his "Chats with Girls," says:—

"Every one of us lives in proportion to our breathing. If we breathe strong, we live strong; if our breath is weak, our life is weak. The quantity of air we take into our lungs is the measure of our life. Now, go with me to a ball-room. Here we are. Notice that couple; they are now dancing. Watch them. When they stop, observe their breathing. There, he has taken one deep breath, filling all the lower part of his lungs, and now his breathing is quiet. But notice her breathing. See how the upper part of her chest works up and down. Watch her ten minutes; that panting and pumping will go on.

"What do you suppose is the reason for this difference? Do you suppose the Creator made a woman's lungs so

deficient in size that she has to work that way to get her breath? Among young children there is no difference in the breathing of boys and girls. If we visit a farm where persons of both sexes are engaged in out-door labor, with the same freedom of dress, we shall not find the women breathing in that peculiar way.

"No; the working and pumping of that chest are owing to her dress. The lower part of the lungs is the large part. There is where most of the breathing should be done. There is where the man does most of his breathing. But she has so squeezed and contracted the lower part of her lungs that very little breath can get down there, so that the small upper end of the lungs is compelled to do most of her breathing. It is that little upper end which is working away so hard under the ribs now. When a lady dances, runs, or goes up stairs, she suffers thumping of the heart and labored breathing, not because the original constitution of her breathing apparatus was faulty, but because she so compresses the lower, larger part of her lungs that she is like a person who has but a single lung to breathe with. There is a lack of breathing-room, and of course the breathing is labored. With knife on corset-string, every woman should cry out, 'Give me liberty or give me death!'

"Perfect freedom for lungs, heart, liver and stomach is indispensable to good respiration, circulation and digestion. Without such freedom, living is not living, but dying.

"You think the corset may be worn so loose that it will not do harm. If worn so loose as not to interfere

with respiration when you lean forward in needle-work, then it will make the form look badly. A corset to look well must be worn snug and trim. And then you think the corset is important as a skirt-supporter. It certainly may be of service in this way, but it is not half so good a skirt-supporter as a pair of common gentleman's suspenders. No, girls, the corset is bad, and only bad. It is not only a great enemy to health, but it is the great destroyer of female grace and beauty. A rigid stiffness in the centre of the body makes all the movements of the entire body stiff and ungraceful. As to the matter of beauty, it's a question between the Creator and the dressmaker. I take sides with the Creator; some folks take the other side."

THE BELLE AND THE BELLOWS.

Charles Reade, the novelist, in one of his recent stories, entitled "A Simpleton," gives a striking scene where the sensible doctor who figures in the tale is called in to attend the heroine with whom he is in love. It is as follows:—

. . . . . .

"The examination was concluded.

"Dr. Staines looked at Rosa, and then at her father. The agony in that aged face, and the love that agony implied, won him, and it was to the parent he turned to give his verdict.

"'The hemorrhage is from the lungs—'

"Lusignan interrupted him: 'From the lungs!' cried he, in dismay.

"'Yes; a slight congestion of the lungs.'

"'But not incurable! Oh! not incurable, doctor!'

"'Heaven forbid! It is curable—easily—by removing the cause.'

"'And what is the cause?'

"'The cause?'—He hesitated, and looked rather uneasy—'Well, the cause, sir, is——tight stays.'

"The tranquillity of the meeting was instantly disturbed. 'Tight stays! Me!' cried Rosa. 'Why I am the loosest girl in England. Look, papa!' And without any apparent effort, she drew herself in, and poked her little fist between her sash and her gown. 'There!'

"Dr. Staines smiled sadly and a little sarcastically; he was evidently shy of encountering the lady in this argument; but he was more at his ease with her father; so he turned towards him and lectured him freely.

"'That is wonderful, sir; and the first four or five female patients that favored me with it, made me disbelieve my other senses; but Miss Lusignan is now about the thirtieth who has shown me that marvellous feat, with a calm countenance that belies the Herculean effort. Nature has her everyday miracles: a boa-constrictor, diameter seventeen inches, can swallow a buffalo; a woman, with her stays bisecting her almost, and lacerating her skin, can yet for one moment make herself seem slack, to deceive a juvenile physician. The snake is the miracle of expansion; the woman is the prodigy of contraction.'

"'Highly grateful for the comparison!' said Rosa. 'Women and snakes!'

"Dr. Staines blushed, and looked uncomfortable. 'I

did not mean to be offensive; it certainly was a very clumsy comparison.'

"'What does that matter?' said Mr. Lusignan, impatiently. 'Be quiet, Rosa, and let Dr. Staines and me talk sense.'

"'Oh! then I am nobody in the business!' said this wise young lady.

"'You are everybody,' said Dr. Staines, soothingly. 'But,' suggested he, obsequiously, 'if you don't mind, I would rather explain my views to your father—on this one subject.'

"'And a pretty subject it is.'

"Dr. Staines then invited Mr. Lusignan to his lodgings, and promised to explain the matter anatomically. 'Meantime,' said he, 'would you be good enough to put your hands to my waist, as I did to the patient's.'

"Mr. Lusignan complied, and the patient began to titter directly, to put them out of countenance.

"'Please observe what takes place when I draw a full breath. Now apply the same test to the patient. Breathe your best, please, Miss Lusignan.'

"The patient put on a face full of saucy mutiny.

"'To oblige us both.'

"'Oh! how tiresome!'

"'I am aware it is rather laborious,' said Staines, a little dryly; 'but, to oblige your father!'

"'Oh, anything to oblige papa,' said she, spitefully. 'There!—And I do hope it will be the last—la! no; I don't hope that, neither.'

"Dr. Staines politely ignored her little attempts to

interrupt the argument. 'You found, sir, that the muscles of my waist, and my intercostal ribs themselves, rose and fell with each inhalation, and exhalation, of air by the lungs.'

"'I did; but my daughter's waist was like dead wood, and so were her lower ribs.'

"At this volunteer statement, Rose colored to her temples. 'Thanks, papa! Pack me off to London, and sell me for a big doll!'

"'In other words,' said the lecturer, mild and pertinacious, 'with us the lungs have room to blow, and the whole bony frame expands elastic with them, like the woodwork of a blacksmith's bellows: but with this patient, and many of her sex, that noble and divinely-framed bellows is crippled and confined by a powerful machine of human construction; so it works lamely and feebly: consequently too little air, and of course too little oxygen, passes through that spongy organ whose very life is air. Now mark the special result in this case; being otherwise healthy and vigorous, our patient's system sends into the lungs more blood than that one crippled organ can deal with; a small quantity becomes extravasated at odd times; it accumulates, and would become dangerous: then Nature, strengthened by sleep, and by some hours' relief from the diabolical engine, makes an effort, and flings it off: that is why the hemorrhage comes in the morning, and why she is better for it, feeling neither faint nor sick, but relieved of a weight. This, sir, is the *rationale* of the complaint! and it is to you I must look for the cure. To judge from my other

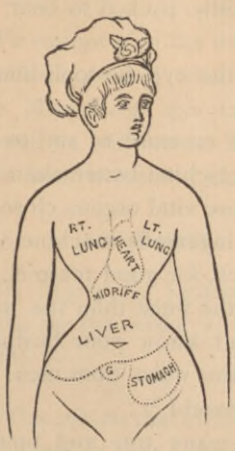
female patients, and from the few words Miss Lusignan has let fall, I fear we must not count on any very hearty co-operation from her; but you are her father, and have great authority; I conjure you to use it to the full, as you once used it—to my sorrow—in this very room. I am forgetting my character. I was asked here only as her physician. Good-evening.'

"As he seemed in no hurry to repeat his visit, Mr. Lusignan called on him, and said, politely, he had hoped to receive another call ere this. 'Personally,' said he, 'I was much struck with your observations; but my daughter is afraid she will catch cold if she leaves off her corset, and that, you know, might be very serious.'

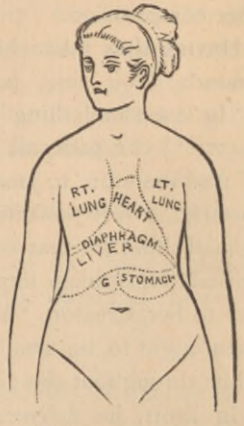
"Dr. Staines groaned. And, when he had groaned, he lectured. 'Female patients are wonderfully monotonous in this matter; they have a programme of evasions; and whether the patient is a lady or a housemaid, she seldom varies from that programme. You find her breathing life's air with half a bellows, and you tell her so. 'Oh no,' says she; and does the gigantic feat of contraction we witnessed that evening at your house. But, on enquiry, you learn there is a raw red line ploughed in her flesh by cruel stays. 'What is that?' you ask, and flatter yourself you have pinned her. Not a bit. 'That was the last pair. I changed them, because they hurt me.' Driven out of that, by proofs of recent laceration, they say, 'If I leave them off I should catch my death of cold,' which is equivalent to saying there is no flannel in the shops, no common sense nor needles at home.'

"He then laid before him some large French plates,

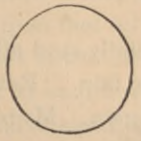
showing the organs of the human trunk, and bade him observe in how small a space, and with what skill, the Creator has packed so many large yet delicate organs, so



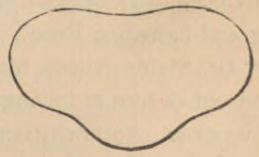
Deformed Position of the Organs.



Natural Position of the Organs.



Deformed Waist.



Natural Waist.*

that they shall be free and secure from friction, though so close to each other. He showed him the liver, an

* The above somewhat exaggerated sketches are by Mrs. Haweis, the English artist, who inserts them in her book "The Art of Beauty."

organ weighing four pounds, and of large circumference; the lungs, a very large organ suspended in the chest and impatient of pressure; the heart, the stomach, the spleen, all of them too closely and artfully packed to bear any further compression.

"Having thus taken him by the eye, he took him by the mind.

"'Is it a small thing for the creature to say to her Creator, 'I can pack all this egg-china better than you can,' and therefore to jam all those vital organs close, by a powerful, a very powerful and ingenious machine? Is it a small thing for that sex, which, for good reasons, the Omniscient has made larger in the waist than the male, to say to her Creator, 'You don't know your business; women ought to be smaller in the waist than men, and shall be throughout the civilized world?'

"In short, he delivered so many true and pointed things on this trite subject that the old gentleman was convinced, and begged him to come over that very evening and convince Rosa.

"Dr. Staines shook his head, dolefully, and all his fire died out of him at having to face the fair. 'Reason will be wasted. Authority is the only weapon. My profession and my reading have both taught me that the whole character of her sex undergoes a change the moment a man interferes with their dress. From Chaucer's day to our own, neither public satire, nor private remonstrance, has ever shaken any of their monstrous fashions. Easy, obliging, pliable, and weaker of will than men in other things, do but touch their dress, however objectionable,

and rock is not harder, iron is not more stubborn, than these soft and yielding creatures. It is no earthly use my coming,—I'll come.'"

We cannot give the whole story; but for the benefit of interested readers we may state that in the course of time Miss Rosa was convinced, gave up her corsets, "sewed on stiff flannel linings," and was "seen walking miles from home and blooming as a Hebe."

CONSTANTLY DIMINISHING FORCE.

Dr. Mercy B. Jackson, one of the Boston lecturers, speaks in the same strain as the others whom we have quoted :—

"The corsets that encase the body in a prison barred with whalebone and steel are often so closely applied that the action of the muscles within is rendered almost null. This stricture about the waist, by which the liver is so pressed upon that its proper action is greatly obstructed, compresses at the same time the large blood-vessels of the trunk in such a manner as to seriously check the flow of the vital current within. In consequence of this, all the functions of the body are carried on with constantly diminishing force, until the health is completely destroyed and an invalid life makes it impossible longer to endure the pressure of the agent that has wrought such fearful changes in the formerly healthy body.

"The evil just spoken of is not always so great as here depicted : it is proportioned to the amount of compression,

and the strength of the frame subjected to it. The less the compression, the less the evil ; and the more vigorous the body, the better able it is to resist the influence, and to carry on its work in spite of the obstacles that oppose it.

"Next come the skirts, which hang upon the weakened muscles of the abdomen. These garments are often many in number, and at the present time are generally weighted with heavy trimmings reaching to the knee or hips. All this burdensome material is fastened tightly about the waist to prevent dragging ; while the skirt is either so long as to obstruct the movement of the feet in walking, or, still worse, it trails upon the dirty sidewalks, gathering up the refuse of the streets, and disgusting those whose sense of neatness makes them shudder to think of the condition of a nice dress after a public promenade.

"These long dresses, heavily trimmed, not only entail the evils mentioned, but by their weight drag down the contents of the abdomen, and produce the many diseases peculiar to women which are the *opprobrium medicale* of the present day.

"The evils arising from tight dressing are too numerous to be mentioned here, but they are alone sufficient to destroy the health of the most robust person ; and even when the pressure thus occasioned is only so little that it is regarded as almost nothing by ladies generally, it is sufficient to lower the standard of health to a considerable degree.

"No dress should be so small as to require the least

possible effort to fasten it. It should be closed by merely bringing the edges together, without contraction of the chest; and, when closed, the chest should be as free to expand as if nothing covered it. With such garments, the necessity of support from the shoulders will be apparent.

"When any injurious garment is first worn, Nature remonstrates, and pain or inconvenience is felt; but if we neglect these monitions, and continue its use, the warning grows less and less loud, until, as it were, discouraged by our wilful neglect of her cautions, Nature ceases to remonstrate. But, though the sufferings first felt are now unnoticed, the penalty is sure to be inflicted, and we pay dearly for our disobedience in impaired health, weakened digestion, poor circulation, diseased liver, restless nights, and the whole host of sufferings that follow in the train of outraged Nature."

RETRIBUTION CERTAIN.

Dr. Arvilla B. Haynes, of Boston, adds her testimony to those which have preceded :—

"The corset, as now manufactured and worn, is loosely hooked around the waist. Owing to its own weight and to that of the clothing buttoned over it, it drops down till it rests upon the hips. This arrangement does not remove the pressure caused by the dragging down of the skirts at the waist; it only changes it from one point to another, and the result is equally injurious. When the clothing is worn in this way, pressure is made over the

abdomen, the convolutions of the intestines are crowded together and the weight of all the contents of the abdomen is thrown, more or less, upon the organs within the pelvis.

"The steel spring in the front of the corset is used as a support for the body. It presses upon the stomach, causing tenderness of the great *solar plexus* of the sympathetic nerves that lie posterior to the stomach. It weakens the abdominal muscles, and destroys in a measure the true vertical bearing of the body.

"When this vertical bearing of the body is maintained, every part above rests upon that below. The head rests upon the upper part of the vertebral column, the weight of the trunk upon the hips; and the same plan is carried out through the lower extremities to the arch of the foot. When the body is in this position, the vertebral column has two curves,—a lesser curve above, that gives increased capacity to the chest, and a greater one below. Then the abdominal muscles are tense, and the weight of the contents of the abdomen is thrown upon the pubic portion of the pelvis. But when these muscles are weakened and relaxed and the greater and lower curve in the spinal column is impaired, owing to pressure from above, the weight of the contents of the abdomen is thrown into the pelvic cavity, causing displacement and prolapsus of the organs situated there.

"Since strings have been discarded, and firm hooks and eyes used to fasten the corset, there may have been a decrease in chest diseases, but there has been a corresponding increase in uterine diseases. Some of the

mechanical supports that have been invented for uterine displacements are adjusted with the design of restoring the natural curve in the lower portion of the vertebral column, thus giving the abdominal muscles their true lifting power, and throwing the weight of the abdominal viscera upon the pubic bones of the pelvis, where it belongs.

"When questioned, ladies rarely admit that they wear their clothing tight. The hand can be readily passed under the bands, when the diaphragm is relaxed and the air is expelled from the lungs, and their garments are therefore considered loose and comfortable. They do appear to be so ; but this is apparent rather than real. If the chest is subjected to pressure for a considerable length of time, it adapts itself to that condition ; and we can go on increasing the pressure gradually, until we have contracted chest-walls and displacement of the abdominal organs. Such is the effect of habit on the system.

"When the habit is injurious, the changes it effects may be slow and imperceptible, but they will break out ultimately in disease. For, although there is a certain amount of tolerance in the system, no natural law can be disregarded from day to day without bringing, sooner or later, a certain retribution ; and the length of time before it appears will be just in proportion to the nature of the abuse and the amount of vital force that there is to resist it.

"Let us now try the opposite experiment, and begin to increase the size of the bands, and to allow a little more room for the movements of the vital organs. If we con-

tinue to do this from time to time, till the bands have been lengthened three or four inches, at the end of a year we shall find that they are about as tight as when we began to enlarge them. But in this case the tendency will have been towards health. The chest-walls have expanded, and respiration has been more perfectly performed. The diaphragm discharges its natural function; the circulation is unimpeded ; and there is greater freedom in all the movements of the body.

"Mechanical pressure at any point retards the onward flow of the blood through the veins to the heart. The veins are superficial, or near the surface; and pressure around the limbs at any point will cause a passive congestion of the vessels below that point. This can be readily demonstrated. If you compress the veins of the wrist or arm, in a few minutes the veins of the hand and arm will be swollen. The blood cannot return to the heart. The same takes place if there is pressure at any point around the lower extremities, or on any of the large veins."

WHY THE VICTIM IS UNCONSCIOUS.

Dr. John Ellis, of Cleveland, Ohio, in a volume published twenty years ago, entitled the "Avoidable Causes of Disease," says concerning tight lacing:—

"That this dreadful practice has done more within the last century than war, pestilence and famine toward the physical deterioration of civilized man, I verily believe. This habit grows upon the individual like the drunkard's thirst for whiskey, and it soon becomes a necessity and

requires to be steadily increased. The muscles of the body were intended to sustain it erect, but the very moment a lady applies a tight dress it takes off the action of the muscles; and, in accordance with a well-known law of the muscular system, when they cease to be used, they grow small and feeble. Now, if in addition to tight dresses, whalebones or boards are used, this only the more effectually destroys the action of the muscles. The longer tight dressing has been continued the more feeble and delicate become these natural supports, and the person feels the necessity continually of increasing the tightness of the dress to sustain the body erect. It is for this reason that no lady ever feels that she dresses too tight any more than the rum-drinker feels that he drinks too much, unless she suddenly increases the force applied. She may even destroy life without actually feeling that she dresses tight; in fact, feeling all the time that she dresses just tight enough to make her feel right, that is to give her proper support. The greatest possible distortion of the human chest and waist may be caused without ever using a particle of force, simply by pinning or hooking or even buttoning the garments around the body; and thousands are thus destroying themselves without ever suspecting the cause of their failing health. Almost every lady may be made to convict herself in two minutes' conversation of tight dressing; and that too by giving almost involuntarily testimony which cannot be gainsaid. Say to the next lady you meet, 'Madame, do you wear a tight dress?' She will be very sure to say 'No.' 'Is the dress you have on comfortable?' 'Certainly; very com-

fortable,' she will reply. 'You feel better in it than in a loose dress, do you?' 'Yes,' she is sure to say; 'I feel much better in this dress than I do in a loose dress, for I feel the want of support in a loose dress; I feel all gone.' . . . When a lady feels that she is not properly supported and does not feel comfortable in a loose dress, she has positive evidence that she not only dresses too tight, but that she has, to a greater or less degree, destroyed the natural activity of the muscles, and therefore rendered them incapable of supporting the body erect, and that deformity and disease must surely follow soon, unless she ceases this evil practice."

A STANDARD WANTED.

In considering this matter Mrs. Woolson, the Boston lady who edits the volume of lectures before alluded to, suggests with great sense:—

"If girding the body to the closest outline of the form over the region between the ribs and the hips, and there alone, is to remain the one essential accompaniment of a full-dress costume, might we not, at least, have a fixed standard of size for the waist, so that only those who transcend certain bounds may feel compelled to diminish themselves? As it is, no woman, however small, is small enough. Pinching appears to be indispensable. Nature is never allowed to be right as she is."

FASHIONABLE EMULATION.

Lady (speaking with difficulty).—"What have you made it round the Waist, Mrs. Price?"

Dressmaker.—"Twenty-one inches, Ma'am. You couldn't *breathe* with less!"

Lady.—"What's Lady Jemima Jones's Waist?"

Dressmaker.—"Nineteen-and-a-half just now, Ma'am. But her Ladyship's a head shorter than you are, and she's got ever so much thinner since her illness last Autumn!"

Lady.—"Then make it *nineteen*, Mrs. Price, and *I'll* engage to get into it!"—*Punch.*

SIXTEEN LAYERS.

The same writer shows forcibly the innate badness of the present style :—

"Our ordinary dress provides two tight-fitting waists, either of which suffices to force the vital organs beneath it out of place and upon each other. In the underwear, the corset reigns supreme; in the outer dress, the plain or biased waist is usually buttoned as tightly over the corset as it can possibly be drawn. Beneath such compressions, what becomes of the action of the diaphragm, the lungs, the heart, and the stomach? Then, again, every one of the lower garments has a binding fastened around the waist, and this binding is composed of a straight piece of cloth folded double. Drawers, underskirts, balmoral, dress skirt, over-skirt, dress-waist, and belt, furnish, accordingly, sixteen layers of cloth girding the stomach and the yielding muscles situated in that region. These bands are all placed one directly over the other on the same line, and are usually made as tight as they can be buttoned; so that a belt of iron, two inches wide, welded close about the body, could hardly be more unyielding. In such attire, if any one escapes weak lungs, short breath, palpitation of the heart, liver-complaint, and indigestion, it is by a special interposition of the higher powers in her individual case. Who shall say this is not an age of miracles?"

AGREEMENT OF PHYSICIANS.

"Skirts, in their best estate, require considerable cloth;

and the greater number of them are made of the heaviest material commonly worn,—viz., cotton cloth, with the addition of trimmings. The dress skirt is long, and doubled by an overskirt; and, in place of the simple gimps and braids and the few ruffles once used for adorning them, the material of the dress is heaped upon the breadths, in the form of puffs, flounces, and plaits. Add to this burden heavy cotton linings, facings, and 'skirt-protectors' at the bottom, and the weight can only be described as enormous.

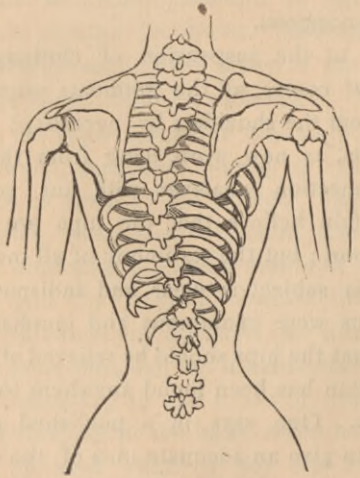
"Then, as to the suspension of clothing from the shoulders. Of course, all the garments worn above the waist hang from the shoulders by necessity; but all the lower garments, as now worn, hang from the hips, and have no connection whatever with any piece above. Many would fain believe that the hips are the proper points of support; but the testimony of all medical intelligence on this subject is clear and indisputable. Our four physicians were unanimous and emphatic in their declarations that the hips should be relieved of all weight; and no physician has been found anywhere to advocate a different view. One says in a published paper, 'No description can give an adequate idea of the evils consequent upon wearing skirts hanging from the hips;' and still another says, 'Women carry their clothing suspended mainly from their hips; and, as the clothes press by their weight upon the soft abdominal walls, they cause displacement of the internal organs.' It is this dragging down—not upon the hip-bones themselves, but upon the

front and unprotected portions of the body which they enclose—that produces the chief harm."*

CROOKED SPINES.

In a useful little work, published some twenty-five years ago, Miss Catherine Beecher says:—

"It has been shown, when the body is compressed around the waist, that the left side being over the stomach,



Distorted Spine.

yields more readily than the right side, which is more firmly sustained by the liver. In consequence of this, the ribs of the left side are forced by any compression more strongly toward one side of the spine than toward the

* "Dress Reform." Boston, Roberts Bros.

other. This makes a slow and steady *sidewise* pressure until the spine yields and the discs gradually harden, and a permanent *curvature of the spine* is the result. This is seen by the elevation of one shoulder and the projection of one hip.

"Another result of tight dressing is the entire change in the shape of the thorax. The bones of the body in early life are soft and yielding. Constant pressure on the short ribs brings them nearer together in front, while the internal organs are pressed downward, reduced in size, and oftentimes misplaced.

"This deformity of the thorax in a mother is often transmitted to her offspring as a hereditary misfortune, to be perpetuated from generation to generation."

Dr. Trall, of New York, says on this subject:—

"Spinal distortion is one of the ordinary consequences of lacing. No one who laces habitually can have a straight or strong back. The muscles being unbalanced, become flabby or contracted, unable to support the trunk of the body erect, and a curvature—usually a double curvature—of the spine is the consequence." *

NEURALGIA.

Dr. Mary J. Studley, resident physician of the Massachusetts State Normal School, says:—

"Neuralgia has been defined as the 'prayer of the nerve for healthy blood,' but the nerve prays no less fer-

* "Digestion and Dyspepsia." S. R. Wells, New York.

vently for the right quantity than for the right quality of the vital fluid.

"Doubtless many of you have felt the pangs of neuralgia, and would like to be informed how to avoid their recurrence. Let me tell you, then, right here, that all the anodyne lotions and doses which ever were or will be compounded will never cure neuralgia as long as the cause of it remains, and, in nine cases out of ten, the cause of neuralgia in young women is traceable to want of equilibrium in the circulation. The poor body is so cramped and distorted and loaded down with the thousand and one devices for making it look 'stylish,' that the blood has very hard work to get round it at all, to say nothing of getting round on time.

"Take the 'corset-liver,' for instance, as medical students have learned to call the livers of the female subjects which go to the dissecting-room. It is the rule, rather than the exception, for these livers to be so deeply indented where the ribs have been crowded against them by improperly worn clothing, that the wrist may easily be laid in the groove. And this in an organ which is a mass of blood-vessels, through which every particle of blood ought to circulate freely on its way to the heart. Of course, it cannot get through the squeezed portions, and the inevitable result of the half-done work of the liver is an unclean condition of the blood, which utters its cry by means of aching nerves.

"A sick simpleton asks, 'What shall I take?' A sick philosopher asks, 'What shall I do?'"*

* "What Our Girls Ought to Know."

III.

TOO MUCH AND TOO LITTLE.

The second great charge brought against dress, as at present worn, is that there is too much clothing provided for one part of the body and too little for the rest. The hygienists all agree that the extremities ought to be as thickly clothed as the trunk. Indeed, if any difference is permissible the extra clothing ought to be upon the arms and legs. Dr. Dio Lewis says in his "Five-Minute Chats":—

"Take the glass part of a thermometer out of the frame; hold the bulb under your tongue; wait four minutes. Now look. It is 98°. That tells you how warm your blood is. Now hold it against your foot. Don't be in a hurry; give it a chance to feel the exact state. Down it goes to 65°. That tells you how warm your feet are,—33° between your tongue and your feet.

"Don't you know that equable circulation means good health, and that the loss of it means bad health? Let us see. You have a headache. Your head is hot; it throbs. Your feet are icicles. Now put your feet in a pail of hot water. In six minutes you say, 'O mother, how good I feel! That rush in my head is all gone!' You have headache about half the time? No. Well, then, pain in your side? No. Well, I venture that every day

you have some bad feeling about the head, or neck, or chest, or back. Now let me tell you something. It is very rare that a hot foot-bath will not remove all these bad feelings for the time being. What does this mean? Why, it means that there is too much blood in the head or neck, or shoulders, or back, and that there is a lack of it in the feet and legs. A hot foot-bath draws the blood down below, and takes the excess of blood from the upper parts. That's exactly the philosophy of it. Of course the hot foot-bath is a bad thing, but it serves to illustrate the law.

"Now let me whisper in your ear. I will tell you a secret. If, during the damp and cold season, you will wear one or two pairs of thick flannels on your legs, and very thick woollen stockings, and strong, broad-soled shoes, you will have all the time that good flow of blood that the hot foot-bath gave you for the time being. This will keep the blood from crowding into the head and upper parts of the body, and will prevent those uncomfortable feelings.

"What I have been saying about the legs is true of the arms. The extremities, both upper and lower, will, in our climate, during the damp and cold season, be sure to get cold, and thus the balance in the circulation is lost. Then comes fulness in some organ, or in the head or neck, with heat or pain, or some other uncomfortable feeling. This can all be prevented by keeping the blood flowing equably in all parts. In this climate we must depend upon clothing. Friction is good; exercise is good; but the main dependence is clothing. So you

must, for eight months of the year at least, dress your legs and feet and arms with very thick woollen garments.

"Just think how women dress. About the chest, the warmest part of the body, they put one, two, three, four thicknesses; then comes a shawl, and then thick-padded furs; while their legs, with one thickness of cotton, go paddling along under a balloon. They go to the family physician, and say, 'O, doctor, my head goes bumpity-bump. Doctor, it seems as if all the blood in my body is in my head and chest.'

"'Well, madam, how about your legs and feet?'

"'O, doctor, they are like chunks of ice.'

"'Ah, madam, if you dress your legs and feet so that the blood can't get down into them, where can it go? It can't go out visiting. It must stay in the body somewhere; and if it can't go down into the legs and feet, it of course goes into the head and chest.'

"Girls, most of you wear too much clothing about your shoulders, chest, back, and hips; but there is a sad lack of it about your legs, feet and arms."

And again:—

"The usual dress is sufficient in quantity, and often good in quality, but it is very badly distributed. There is too much about the trunk, and too little about the lower extremities. If one-quarter of the heavy woollen overcoat or shawl were taken from the trunk, and wrapped about the legs, it would prove a great gain.

"The legs and feet are down near the floor, where the cold currents of air move. If the room be well ventilated,

the air down near the floor is very much colder than it is up about our heads. And it is in that cold stratum of air that our feet and legs are constantly.

"Besides this, the feet and legs, on account of their being so far away, and on account of their size, with the air all about them, are disposed to be too cold, even without being in a colder atmosphere.

"During the damp and cold season the legs should be encased in *very thick* knit woollen drawers, the feet in thick woollen stockings (which must be changed every day), and the shoe-soles must be as broad as the feet when fully spread, so that the blood shall have free passage. If the feet are squeezed in the least, the circulation is checked, and coldness is inevitable. This free circulation cannot be secured by a loose upper with a narrow sole. If when the foot stands naked on a sheet of paper it measures three and a half inches, the sole must measure three and a half.

"I will suppose you have done all this faithfully, and yet your feet and legs are cold. Now add more woollen, or, if you are to travel much in the cars or in a sleigh, procure a pair of chamois-skin or wash-leather drawers, which I have found to be most satisfactory.

. . . . . .

"No one hesitates to multiply the clothing about the trunk. Why hesitate to increase the clothing about the legs? As a preventive of many common affections about the chest, throat, and head, including nasal catarrh, I know nothing so effective as the dress of the lower extremities which I am advocating.

"The bath is a good thing, exercise is a good thing, friction is a good thing; but, after all, our main dependence in this climate must ever be, during the cold season, *warm clothing*. Already we overdo this about our trunks, but not one person in ten wears clothing enough about the legs and feet."

SUDDEN CHANGES.

Dr. Mary J. Safford Blake says:—

"That uniformity of temperature is desirable, is readily apparent from the fact that when any portion of the body becomes unduly heated for a prolonged period of time, congestion of the part is liable to follow; and when, on the other hand, a part is exposed to cold, the capillaries become contracted, the blood is thrown within, and any organ is liable to become engorged. The one which is weakened for any cause suffers most quickly and severely; and, unless an equilibrium of circulation is soon restored, inflammation follows. The myriad-mouthed pores of the skin, two thousand of which are found to occupy a square inch of surface, become closed, the tubuli leading from them become clogged, the carbonic acid the pores exhaled is retained, the oxygen they drank up is withheld, and the aeration of the blood then becomes wholly the work of the lungs. The frequently congested state of these organs during a cold is the result.

"In woman's dress, from six to ten thicknesses are found, as a rule and not as an exception, to encase the thoracic region, while the lower extremities are covered,

more frequently than otherwise, with but one thickness, and that of cotton. Under such circumstances, an effort to obtain proper warmth is usually made by adding an extra supply of skirts, although these garments contribute much more to pressure about the waist, weight upon the hips, and undue heat in the kidneys and abdominal organs, than to warmth in the lower extremities. But it is in these lower parts of the body that heat is most needed, because there the circulation of the blood is less active, and an under-current of air around them is apt to produce chills.

"Let a woman step from a temperature of, perhaps, seventy degrees within doors, to zero without, and stand on the street corner five minutes for a car, while the breeze inflates her flowing skirts till they become converted into a baloon: the air whizzes through them and beneath them, and a wave of cold envelops the entire lower portion of the body. Then let her ride for an hour in a horse-car, with ankles wet from drabbled skirts, and exposed to a continual draft of air: of course her whole system is chilled through; and it cannot be otherwise than that a severe cold will follow as the penalty for such exposure."

COLD LOWERS THE VITAL POWERS.

Dr. Arvilla B. Haynes says on this point:—

"When the temperature is such as to require extra clothing or wraps for the chest and upper extremities, the lower extremities also should receive attention. In the inclement season, when we are liable to sudden alternations

of temperature, if the thermometer drops down to zero or near that point, and we go from furnace-heated houses into the open air, we put on cloaks or shawls, furs, and wraps of various kinds, and encase our hands, not only in gloves or mittens, but in muffs. This is all right and should be done; but it is not sufficient. To the lower extremities we should also add leggins and a pair of over-drawers made either of ladies' cloth or flannel; and, in wet weather, overshoes.

"When one part of the body is over-heated, and another part exposed, the nerves of the exposed part are rendered more sensitive to receive impressions.

"In treating of the influence of alternations of temperature which arise from the application of cold to the surface of the body, I shall use the word *cold* as meaning the absence of heat or caloric. Heat and light act externally as stimulants, and are among the conditions essential to life and health. The normal temperature of the body internally is one hundred degrees; on the surface, it is ninety-eight; and the vital functions cannot be carried on if the temperature is lowered in a considerable degree for any length of time.

"Cold is a sedative, and when applied to the surface of the body it lowers the vital powers. It acts on the circulation by contracting the blood-vessels; and thus the blood is driven within from the exposed region. If one part is deprived of its normal quantity of blood, another part must have more than its normal quantity, consequently there must be congestion of some of the internal organs. This is what takes place

when the extremities are too thinly clad to maintain an equal temperature over the surface. The lungs and the uterine organs are very liable to congestions from this cause, and this is particularly true in regard to girls at the age of puberty. At that period, the vital powers have been developing and perfecting the system, which is then very susceptible of external influences. Exposure to cold at this age often leads to derangements that become chronic, impairing the general health, and causing a vast amount of suffering, while in many cases they establish right conditions for the development of disease in after life.* Who among us cannot trace sad results to only a cold?

"A proper clothing of the extremities is one of the best preventives; and we may have congestion of any of the internal organs from a failure to do this.

"When there is exposure to sudden changes of temperature, without sufficient clothing for protection, the impression on the nerves and on the circulation is often the exciting cause of acute disease. If we look over our medical works as authorities, we find a large number of diseases that are referable to this cause. Who has not observed the prevalence of coughs and colds, as soon as there is a change in the seasons and summer passes into autumn? This is because there is not a corresponding change in the clothing. The function of the skin as an eliminating organ is checked from these sudden alternations; and substances that should be removed remain in the

* See Appendix A.

system. When we remember that from one to three pounds of fluid pass off through the pores of the skin during every twenty-four hours, we see how important it is that the surface of the body should be kept at a proper and equable temperature for its normal action."

CHRONIC INFLAMMATION.

Mrs. Woolson thus sums up the errors as to temperature of the dress as worn at present:

"The limbs have not half the amount of covering which is put upon the trunk of the body. Many garments have no sleeves; and what sleeves there are either come to an end a few inches below the shoulder, or they are loose and flowing at the wrists, so as to expose the arm as far as the elbow to the cold air. As to the legs, the clothing, which should increase in direct ratio to the distance from the body to the feet, diminishes in the same ratio. Thin drawers, thinner stockings, and wind-blown skirts which keep up constant currents of air, supply little warmth to the limbs beneath. The feet, half-clad, and pinched in tight boots, are chilled in consequence. The trunk of the body has as many varied zones of temperature as the planet it inhabits. Its frigid zone is above, on the shoulders and the chest; for, although the dress-waist extends from the neck to the waist, most, if not all, of the garments worn beneath it are low-necked. The temperate zone lies between the shoulders and the belt; for that region receives the additional coverings of under-vest, corset, and chemise. The torrid zone begins with the

belt and bands, and extends to the limbs below; for all the upper garments are continued below the belt, and all the lower garments, the drawers and skirts, come up as far as the belt; so that the clothing over the whole pelvic region must be at least double what it is over any other section. But it is more than double, it is quadruple; for the tops of all these lower garments have a superfluous fulness of material which is brought into the binding by gathers or by plaits. These are especially abundant at the back, over the spine, where one of the centres of the nervous system is situated, and where the kidneys lie. When to this excess of cloth is added a panier and sash-bows, we can understand why deadly torrid heats prevail in that region, and why the worst consequences follow. The result is stated by a physician to be 'a chronic inflammation of the internal organs,—mother of a hundred ills that afflict women.'"

WHY LADIES SUFFER FROM THE HEAT.

Who has not wondered why thinly clad women suffer so much more from summer heat than men who wear broadcloth and tweed. Is it because free circulation has been injured by the clothing? Dress reformers answer unhesitatingly, Yes. Dr. Harriet N. Austin says on this point:—

"Women make a mistake in trying to increase their comfort in hot weather by covering the arms and neck as lightly as possible, while the trunk, certainly in part, has five, six, eight or ten thicknesses of covering. In a con-

gregation of ladies dressed in this way and gentlemen dressed in broadcloth throughout, every lady will be fanning herself and consciously suffering with heat, while the men, apparently entirely oblivious of the weather, are at liberty to give undivided attention to the sermon. Men do not bear heat better than women by constitutional endowment, but by reason of the fact that they are so clad that the lungs are free to take in abundance of oxygen, and the blood free to flow to every part of the system. Besides the circumstance that the women can only half breathe, their clothing piled up on some parts causes too much blood to accumulate there, and consequently those parts lightly covered have too little blood, and as a matter of course they must suffer. By securing to themselves greater uniformity in the distribution of the clothing and making it loose and easy, ladies lose their dread of summer's heat, and of winter's cold as well; for there are multitudes of well-to-do women in this country who have never known what it is to be dressed comfortably warm in cold weather."*

* See Appendix B.

IV.

OTHER ERRORS OF DRESS.

VEILS.

Veils are sometimes worn to protect from out-door light eyes rendered unnaturally sensitive by a worn-out condition of the nervous system; more often, however, they are worn merely for appearance—to soften the complexion, to confine the hair, or to add a finishing touch to the toilet. They have always been frowned upon by hygienists, who especially condemn the heavy crape veil which shuts out the fresh air, and is particularly objectionable on account of its dye. On the general subject of veils, Dr. Trall, of New York, says:—

"Parasols and veils, so generally employed by girl-babies and young ladies, are pernicious things. They weaken the eyes, enfeeble the skin, predispose to congestion of the brain, and are a prolific source of headache and nervousness. Freckles and tan may be prevented by them, and a more pale and expressionless face secured; but it is at the expense of the rosy cheek, the brilliant skin, the sparkling eye, and the true beauty of womanhood."

With regard to the dotted veils which have been at times so universally worn, Dr. Mary J. Safford Blake says :

"If you cover your face with veils, you may save your pallid complexion, but you will injure your sight. I have the best authority that the world has ever known for saying this. Dr. Von Gräfe, the lamented oculist of Berlin, whose memory is revered in every land, told me he believed one of the prolific causes of amaurosis,— that disease in which specks float before the eyes,—among women, was the wearing of spotted lace veils; and of near-sightedness among children, the wearing of any veils. So, as you prize the precious gift of sight, avoid the things that may weaken it, or deprive you of it altogether."

HAIR-DRESSING.

The way in which the hair shall be arranged is seldom decided by the shape of the head, and almost never with any regard to the effect produced on the health by it. A moment's thought will, however, show that pads and false hair must heat the brain and tend to produce congestion. Even when the natural hair alone is worn, there is frequently at the point where it is massed an unhealthy spot, hot to the touch. Dr. Harriet N. Austin says :—

"The accumulation of it (the hair) in a large heavy knot at the back portion of the head, immediately over the small brain, is not less injurious in its effects. An undue amount of heat, an undue flow of blood to the

part, irritation, congestion, and chronic inflammation are the consequences. I advise any lady who has habitually a sense of heat, fullness, or actual pain in the back part of the head, to test the truth of what I say, by undoing her hair and letting it fall loosely over her shoulders."

Dr. M. L. Holbrook, of New York, when treating of headache, says :—

"The long hair, done up so as to make a covering for the head, increasing the heat of the scalp, and retaining the dandruff, may cause headache."

Dr. Mary J. Safford Blake says of hair-dressing :—

"And what of her hair? Why, the poor girl has but just begun to recognize her own shadow on the side-walk, since the last sudden decree of fashion, when Simon says, 'Thumbs up,' and forthwith the rats, the mice, the luxuriant braids of hair and of jute rush to the top of her head, as if a pocket battery had been trifling with each. This new arrangement causes no little suffering. There is a great deal of pressure and heat on the top of the brain, and a physician is consulted. Mamma tells Æsculapius that once when her child was very young she played out in the sun, without her hat; that a sunstroke, or something like it, occurred; and that this affection is, very probably, the result of that exposure. 'Most likely,' responds Æsculapius; and he gives quieting powders.

"The scalp adapts itself, like all else in nature, to circumstances; but then a new fashion-plate arrives, and as

with one fell swoop, at the command of 'Thumbs down,' the whole accumulation of braids, puffs, and curls drops from its lofty heights, and hangs suspended at the base of the brain.

"Now the distress of the darling daughter has changed base; spinal meningitis is feared, and medical aid is speedily secured. Mamma can assign no cause for this new phase of suffering, unless it be that, some years before, her daughter fell on the ice. This time the pain proves so stubborn and severe that the doctor is forced to suggest that the poor sufferer lay aside some of the superfluous weight of hair that has evidently caused more than a mere surface irritation."

In cases where there is chronic congestion of the brain, spinal trouble or severe headaches, the remedial measures proposed by hygienists require the patient to wear the hair comparatively short, and flowing. For people in ordinary health, however, it will be sufficient to simplify as much as possible the arrangement of the hair, using only what is natural, without puffs or pads, and avoiding the accumulation of any considerable mass of it in one place. The flowing hair and hanging plaits of the school girl should not be prematurely exchanged for the massive hair-dressing of the woman.

TIGHT BOOTS AND HIGH HEELS.

On this compound topic much has been written. Dr. Mercy B. Jackson makes the following remarks on the injury done by compressing the feet:—

"The feet have been covered with boots which are wholly inadequate to furnish protection from cold and damp, while they are so shaped as to compress the foot into the narrowest compass, and to crowd the toes upon each other within the narrow tip.* This prevents the action of the muscles of the foot in walking, and throws the whole labor upon the muscles of the leg, thus disabling our women from healthful exercise to such a degree that not one in twenty can walk three miles without complete exhaustion.

"The Chinese shock our moral sense when they deform the feet of their women by merciless compression in infancy; but we at the same time tolerate—nay, encourage—ours in wearing such covering as lays the foundation for consequences more fatal than theirs. The high heels which have been so fashionable, but which are now, happily, less used, are one of the most fruitful sources of disease. They not only cause contractions of the muscles of the leg, so great in some instances as to make a surgical separation of them necessary,† but by raising the heel they bring the weight of the body upon the toes, and thus induce the corns and bunions that alone suffice to make locomotion very painful. Moreover, by inclining the body forward, they throw the uterus

* Miss Cobbe says:—

"An experienced shoemaker informed the writer that between the results of tight boots and high heels, he scarcely knew a lady of fifty who had what he could call a foot at all—they had mere clubs. And this is done—all this anguish endured for the sake of beauty."—*Contemporary Review.*

† See Appendix C.

out of its normal position, and oblige the ligaments that are designed to steady it to remain constantly in action, in order to restore it to its proper place. These muscles kept continually on the stretch soon lose their contractile power; and then the uterus, thrown out of place by the unnatural pose of the body, remains in this abnormal position, and often becomes adherent to the adjacent parts. When this is the case, a most serious disease is entailed upon the sufferer."

Dr. M. L. Holbrook, of New York, editor of the *Herald of Health*, says :—

"Tight boots and shoes will cause headache. They should never be worn. They destroy comfort, grace of motion, and happiness. They prevent the flow of blood in the extremities, and cause slight congestion of the brain. The shoe should be made to fit the foot, and not the foot to fit the shoe."*

Dr. J. H. Hanaford, in the *Laws of Life*, says :—

"The question is sometimes asked, 'Who ever knew a woman to have warm feet?' Of course this suggests an extreme view, but it is measurably true that women as a class are the victims of cold extremities. It must be admitted there is a cause for it, and the remedy must consist in the removal of such cause. In addition to the use of tight bands, much of this defective circulation must be dependent on the fit of the boot, most of those worn in

* "Liver Complaint, Dyspepsia and Headache."

civilized society tending to cripple and deform the foot. The boots generally made for women and girls are insufficient for the purpose of protection; they are thin, shammy, ill-shaped and defective in nearly every respect. Such boots are not large enough to be comfortable or allow a circulation that permits the warm, purified blood from the heart to reach the extremities. The number of the boot controls far oftener than the size of the foot. Is this questioned? Let the weight of the stockinged foot be borne on a piece of paper, as it must in walking, and a pencil point drawn around to mark the exact size and shape, and then compare this with the sole of the boot. It will generally be found that the outspread foot is one-fourth wider than the boot, of course involving the idea of cramped, crippled, deformed and cold feet. This false idea of the necessity of a small hand and foot may depend on the corresponding smallness of the brain."

Dr. R. T. Trall, of New York, says :—

"Tight-fitting boots or shoes conduce to coldness of the feet, a symptom that always troubles feeble invalids in cold weather; while high heels throw the whole body out of perpendicularity, and render all exercises, more especially walking, not only less pleasant and less beneficial, but in some instances positively injurious. Let a feeble person, accustomed to walk one mile a day over heels one inch thick, reduce the thickness to one-third of an inch, and he may experience at once the difference

between laborious toil and agreeable and useful recreation."*

GARTERS.

Dr. Mercy B. Jackson says :—

"The compression of the calf of the leg by tight ligatures, intended to keep the hose in place, is very injurious, for it often causes distended veins, and checks the natural flow of blood in all the vessels of the leg. We find cramps as the result of this in some cases, numbness in others, and coldness in a great many."

TRAILING SKIRTS.

Dr. Blake says :—

"It would seem as if any one, however blinded by the customs of his time, might see the absurdity of a nation of intelligent women allowing themselves, under protest, to be converted into city, town and country scavengers, without thanks or the recompense of admiration from those whose approval is most to be desired. For women who go thus hampered, there can never be one step free from filth and annoyance of some kind, unless the skirts are clutched and held up by main force."

Dr. Harriet N. Austin says on this subject :—

"At present short walking skirts are in vogue, and many ladies rejoice in the freedom and comfort which

* "Digestion and Dyspepsia."

they afford, but at the decree of fashion they will go back to dragging trains through the dust and mire of the street; or else they will appropriate a hand to carrying these superfluities, while the other is occupied with a parasol to supply the defect of the hat, thus rendering themselves so helpless that if even a paper of pins is to be carried home, a clerk must trot after them all the way, even if it be a mile or more. For, unfortunately for our American women, in their attempts in their ordinary pursuits to imitate court costumes and customs, they are not usually able to command the services of a train-bearer and are obliged to stoop to the ground and pick up and carry their own trains, a manœuvre only less awkward and embarrassing than the efforts put forth in the adjustment of pannier drapery in taking a seat. · · · · When women come to know that every inch they take off their skirts, adds power to muscle and nerve in every walk of life, they will have at least physiological walking suits and home morning suits in which they can run up stairs with no help from the hands, and country suits in which they shall be as free as children."*

* "Health Dress," 1878.

V.

SLAUGHTERING THE INNOCENTS.

It will be difficult for any reader of the foregoing pages to deny that the ordinary dress of women is injurious in its tendencies. There are many, however, who will be prepared to deny that any harm has been wrought by dress upon their own persons, and who are therefore unwilling to make any radical change in their own apparel. With regard to the children who may come under their influence they are more open to conviction, and it is our intention now to show the irreparable injury which may be done to children by dress.

MOTHER AND CHILD.

Speaking of the effect upon the next generation, Dr. Haynes says:—

"As now generally worn, the under-dress is weakening the present generation of women; and, from the unvarying laws of nature, the effect must be transmitted to future generations. Mothers will confer upon their offspring a lower and lower vitality; and, when we consider the already fearful mortality in infancy and childhood, there is little hope for the future, unless we can have some reform in this direction. And when the offspring is not

thus early cut off from mortal life, in many cases tendencies to disease are inherited, which become active sooner or later; and thus life is robbed of usefulness and enjoyment. Instead of being self-maintaining and efficient co-workers with their fellows, such children find the burden of physical disability laid upon them; and they drag out a miserable existence, looking forward to a release from their physical weakness into that greater freedom of life and activity that they hope awaits them."

Mrs. Woolson touches upon a delicate but very important point:—

"In considering the hygienic aspect of this subject, physicians remember not only the daily physical discomfort and suffering of women, but the excessive agonies which child-birth brings upon them, the frequent death which it entails, and the inferior children to which such mothers must inevitably give birth. A leading female physician of Philadelphia is convinced, from her own observation, that there has been an alarming increase of ill-health among women during even the past two years, and that maternity is fast becoming an unnaturally fearful peril. She believes the dress commonly worn to-day to be the cause of all this.

"That weakness and disease are not inherent in our sex, as is too commonly supposed, will be plainly apparent, if we remember the strength and vigor possessed by the women of savage tribes, of the toiling peasant classes of Europe, and of the harems of the East. What makes the difference in this respect between them and the ladies of

Europe and America? No medical authority who has ever worn the dress of the latter can doubt that the habitual disregard of physical laws which it imposes will alone suffice to account for the existence of all their diseases, new and old. Medical authorities who have never worn it may look far and wide for other causes, but it is because they ignore or undervalue evils which they have never experienced.

"We are ready to trace a connection between two facts which Mrs. Leonowens states concerning Siamese women; viz., that they wear only a few ounces of loose silk cloth for covering, and that they are wholly ignorant of the long train of female weaknesses of which we hear so much."

Dr. Blake says, moreover :—

"A terrible epidemic raged in the lying-in wards of Vienna, while I resided in the hospital of that city. In one week thirty women were consigned to their last resting-place. Here, also, I sought to make earnest research into the true relation to each other of the internal organs; and when I saw the condition of the majority of these poor women after death, I realized, as I could never have done without such opportunities, how danger and suffering increase, both for mother and child, in proportion as the former compresses and depresses her own body, and the embryo life it shields."

Miss Catherine Beecher says with regard to inherited deformity :—

"*Abdominal* breathing has ceased among probably a

majority of American women. The ribs are girt so tight, in many cases, that even the full inspiration at the top of the lungs is impossible. And this custom has operated so, from parent to child, that a large portion of the female children now born have a deformed thorax, that has room only for imperfectly formed lungs. The full round chest of perfect womanhood is a specimen rarely seen, and every day diminishing in frequency."

DRESS OF INFANTS.

Dr. Mercy B. Jackson says :—

"The special evil of which I speak is the long skirts, dresses, and cloaks, which are now the fashion for babies. I feel the deepest commiseration for a delicate child that has hung upon its tender body a flannel skirt a yard long, and over that a cotton skirt equally long, and over that a dress to cover both, often weighted with heavy embroidery, and, if the child is carried out, a double cloak longer than all, so that the skirts reach nearly to the floor as the infant is borne on the nurse's arm. The longer the clothes the more aristocratic the baby, would seem to be the idea of the mother! Think of all this weight attached around the waist of the child, and hanging over the little feet, pressing down the toes, and even forcing the feet out of their natural position! How much of deformity and suffering this fashion produces, none can tell; but that it is a great discomfort to the baby every thinking mother must perceive.

"High necks and long sleeves are now fashionable for

babies ; but how soon they may be laid aside for low necks and short sleeves cannot be foreseen. That will depend on the enlightenment of women. To expose the delicate chest and arms of a young child in our cold, changeable climate, is often to bring on pneumonia, and greatly to lessen the chances of life. And, should life be spared, there will be sleepless nights and anxious days for the mother, as well as great suffering for the child."

CHILDREN'S BANDS.

Dr. Harriet N. Austin says on this point :—

"It is often said, and many persons believe, that the day of tight-lacing is past; that women do not injure themselves by the tightness of their clothing about the chest. This is a very great mistake. That the evil is less than formerly is true, but that one woman in a hundred can be found whose chest has been permitted to expand to its natural size, is not true. Every woman nnderstands that she cannot live without breathing ; but few understand that if they but half breathe, they can but half live, though this is actually the case. No person who, in breathing, receives into her lungs but half as much oxygen as she is organically capable of doing, lives to more than half as good purpose as she is capable of doing. She removes only half the poisonous material from her blood. She has only half magnetized her blood, and she has only half the strength of muscle, or brain, or heart, that she might have. And yet it can be said with safety that ninety-nine one-hundredths of women do not more

than two-thirds breathe. Nearly every little girl five years of age has bands pinned about her chest so snugly that she cannot take a full breath without pressing hard against the bands. This being the case, she instinctively shrinks from taking a full breath. The bones and muscles of the chest readily accommodate themselves to this state of things, which is continued up to womanhood, when, inevitably, the size of the chest is several inches smaller than it should be."

THE SCHOOL-GIRL.

It is, however, when the child grows into the school-girl that the principal injury is done by dress. At an age when the girl is growing rapidly, not only in height but in breadth of chest and girth of bust, she is put into a closely fitting fashionably-made dress, which limits growth in every direction. This dress she wears fifteen or sixteen hours out of the twenty-four and for perhaps six months at a time. It was probably too tight to begin with, to allow of perfect freedom in breathing, and during the six months which elapse before another dress is made, allowing for a little extra size, nature's efforts at expansion are hampered in every possible way. True, dresses are often "let out," but this occurs more frequently after a dress has been laid aside a little while than when it is in constant use, and many a girl wears too tight a dress without suspecting the fact. It is unreasonable to expect robust health under these circumstances, and yet, when hollow chests, weak lungs, and consumption, are the result, it is called a mysterious Providence.

Further, at an age when for obvious reasons it is imperatively necessary that skirts should be light and entirely suspended from the shoulders, the girl is allowed to exchange the child dress with waist and skirt attached, for the woman's, with skirt on band, which drags at the waist, while, to make it heavier, she adds from six to twelve inches to the length, and perhaps doubles the weight by trimming. What wonder, then, if her health becomes fitful, her periodical sufferings great, and if her constitution be gradually undermined. Her mother, however, sighs, thinks her daughter must be studying too hard, and talks of the excessive delicacy of girls now-a-days. Now we do not say that all girls, if hygienically dressed, would grow up strong women, for some have inherited feeble constitutions; but we do say that so long as they dress as they do at present, they can hardly fail to be feeble and ailing.*

Dr. Mary J. Safford Blake says upon this point:—

"A startling fact nearly precludes all gymnastic exercises in our schools: it is, that girls in their ordinary attire are so hampered in every ligament, joint and muscle, that, in order to have perfect use and command

* Dr. Verdi, President of the Board of Health, Washington, says, in a volume dedicated to his daughter:—"Girls at school, keeping a sitting posture for six hours, wearing stays, which, on account of their stiffness, must press the abdomen inwardly whenever the body is bent forward upon itself, are liable to displacement of the womb from undue pressure. And even if the womb is not displaced, the circulation of the abdomen is interfered with, which is then manifested in the costiveness of the intestines, and in painful menstruation from irritability of the ovaries."—"*Mothers and Daughters*": J. B. Ford & Co., New York.

of themselves for the brief space of an hour, this straight jacket, their clothes, in which they are encased sixteen hours of the day, must be wholly laid aside for looser and lighter raiment. If young ladies ride on horseback for exercise, as is done in some of our female colleges, what does it avail them, pinched and burdened as they are by their dress? If they row, it is under like conditions; and the results are the same."

Mrs. Woolson says:—

"Of all the seed that can be scattered by the wayside, none will bear such promise of fruit as that which shall fall upon young minds. It is with the girls that this reformation must begin, if it is to prove effectual. We older women, and all like us, however strong and well we may think ourselves, are, at the best, little better than physical wrecks, capable of repairs more or less thorough, but still hopelessly damaged by the ignorance of ourselves and of our time. What we might have been in our physiques, had we been properly trained and clothed from childhood, we can never know. But the girls of to-day should be saved before they have learned to wear the woman's dress, with its countless abominations, that they may be enabled to grow up untrammelled, vigorous, and happy, to show the world a nobler womanhood and a nobler race of children than our country offers now. Practical teaching of this sort the pupils of our schools seem glad to hear and enthusiastic to follow. In large cities its need is imperative.

"And just now it is especially important, not only to

the physical but to the mental well-being of our girls and women, that some thorough dress-reform should be effected. It is the bodily weakness, resulting so largely from their attire, which has become the chief argument for dwarfing and restraining their intellectual growth. The agencies are manifold which convert so many of our vigorous girls into suffering invalids before they have fairly grown into women; but, if there be one agency worthy to be emphasized above all others, I believe it to be our present pernicious style of dress. A physician who could attribute the sad decay of our young women to excessive and continuous study, must be ignorant of very much of what constitutes the daily life of those of whom he speaks; and I protest against that explanation of the prevailing invalidism which has lately been given. The fact that girls, upon whose muscular and nervous systems such a peculiar strain is to come in their after-lives, are suffered to do nothing in youth which shall strengthen those muscles and tone those nerves; that half-grown limbs, unfilled lungs, sluggish livers, pinched stomachs, and distorted wombs are carefully cultivated by the corsets and tight waists in which we encase their developing bodies; and that sedentary habits, bad air and poor appetites are given them as a daily portion when we keep them indoors and seek to train them into presentable young ladies,—argues nothing against the native endurance of their physical frames, but rather tends to show that there must be an extraordinary amount of vitality and recuperative power in what refuses so obstinately to be destroyed. It is a ludicrous mistake to suppose that a

few sporadic cases of injudicious study in the few female colleges of the land can be held accountable for the general ill-health of our women. Had any masculine physician who entertains that idea ever made a study of the full feminine regalia in which his delicate patients sit enveloped when they come to consult his professional skill, he would have found, in chilled and encumbered limbs, dragging skirts, overheated abdomen, compressed waist, and hot and burdened head, a better explanation of that state of things which he and all well-wishers of our country and our race must lament. It is not that boys and girls are trained too much alike mentally, but that they are trained too much unlike physically, which works the harm. Not too much knowledge of astronomy and mathematics, but too little knowledge of the laws of life, is what proves fatal to our young women. The remedy for their weakness is to be sought, not by enfeebling the mind till mind and body correspond, but by strengthening the body, through intelligent obedience to its laws, so that mind and body can both attain their perfect stature.

"When the instruction so much needed on vital matters is furnished to our girls by their parents and teachers, they will abandon for ever the style of apparel which now works such disastrous results; and then, with proper clothing and proper training, they will be enabled to grow up, not into those strange, unfeminized beings, ashamed of their sex, of whom some writers morbidly dream, but into strong-bodied, strong-limbed, clear-headed, warm-hearted, rosy, happy women, proud of their

womanhood, surrounded by husband and children, if they prefer a domestic life, but held in equal honor and esteem, if, for any reasons which may seem to them good, they choose to devote themselves, with self-reliant energies, to other labors for their race."

THE SCHOOL-GIRL'S DRESS.

A due consideration of these arguments will convince parents and teachers that a growing girl ought never to wear habitually a tight close-fitting dress, even though it be, as she says, "quite loose." The loose blouse waist, or Garibaldi, or, perhaps better, a light Princess dress, without belt, will allow freedom of action and compress none of the growing tissues.

A "good dressmaker" can, even without the aid of corsets, do much to reduce the ribs of a growing girl from the natural condition as represented on page 30 to the deformed condition depicted on page 31, simply by preventing growth in a natural direction.

Ethel C. Gale, in her book entitled "Hints on Dress," says:—

"The idea that a disproportionately small waist is beautiful is one of the immature and epidemic fancies of sweet sixteen. Once let it enter a school, and in spite of physiology and the teachers, it spreads like the measles. Said an elderly gentleman one day, 'Where do the girls get such perverted notions of beauty? Here were my own daughters, never were taught anything of that sort at home, but when they returned from school they were

drawn up in packs of torturing bones, till they looked as pinched and starved as weasels. Couldn't walk forty rods without fainting; couldn't take a long breath; couldn't laugh; couldn't do anything but look as miserable as if they were on their way to the gallows! I told the girls I'd disown 'em if they didn't take the things off; and so they did, and soon looked like themselves again.'"

A CONTRAST.

Louise S. Hotchkiss, in a paper entitled "Corsets *vs.* Brains," has the following:—

"Yesterday I visited the first-class in one of our city girls' grammar schools, consisting of forty-two pupils. I had five questions on a slip of paper, that I asked permission of the teacher to put to the girls:—

"First.—'How many of you wear corsets?'

"Answer.—'Twenty-one.' I asked them to stretch their arms as high as they could over their heads. In every instance it was hard work, and in most cases impossible, to get them above a right angle at the shoulders.

"Second question.—'How many of you wear your skirts resting entirely upon your hips, with no shoulder-straps or waists to support them?'

"Answer.—'Thirty.'

"Third question.—'How many wear false hair?'

"Answer.—'Four.'

"Fourth question.—'How many wear tight boots?'

"Answer.—'None' (which I doubted).

"Fifth question.—'How many do not wear flannels?'

"Answer.—'Eighteen.'

"I went across the hall to a boys' class, corresponding in grade, consisting of forty-four pupils. I asked for the number of boys without flannels, and found only six.

"Of course one hundred per cent. were without corsets, or weight upon hips, or tight boots, or false hair. Every boy could raise his arms in a straight line with his body, as far as he could reach, with perfect ease."

A BROOKLYN SCHOOL.

No growing child should be permitted to wear a dress in school which does not admit of the freest gymnastic exercises. A subordinate advantage gained by making these exercises a part of the usual school routine would be that the dress would be of necessity suited for them. In an academy in Brooklyn, attended by five hundred children belonging to the first families, first at least so far as intelligence is concerned, gymnastics form part of the regular exercises, and the pupils dress accordingly. The girls wear in winter, with equal pleasure, comfort, and economy, prettily-made dresses of substantial dark blue flannel, trimmed with bands of lighter blue and white pipings. The wide sash is of the same material and the loose blouse waist is attached to the light skirt, which is long enough not to be at all conspicuous in the street. All vieing with each other as to expensiveness and elegance of dress is thus prevented, besides the great gain as to healthfulness.

If such a uniform were introduced into our large schools

where a love of dress and of elegant dressmaking is showing itself—a reform which we are almost inclined to hope for—it would be of the first importance to choose a style and material which would be at once beautiful, durable and economical, so that it would meet with the favor of both parents and scholars. Would it not be well for those in charge of large female seminaries and high schools to consider whether the adoption of a simple, healthful dress by their pupils would not do away with a number of existing evils, not least of which would be the irregularity of attendance caused by occasional indispositions largely the result of errors in dress?

GYMNASTIC DRESS.

As many of our readers will probably be unfamiliar with the gymnastic dress to which we have alluded, we will copy the description given by Dr. Dio Lewis, premising that if intended to be worn by older girls in the street going to and from school, the skirts would have to be much longer, though in no case should they approach the ground, as it is a most dangerous thing for girls to sit in school with damp skirts. In giving an account of the Lexington school, he says:—

"The costume which for years had been worn in my gymnastic classes was adopted as the dress of the Lexington school.

"The features of the dress worn by our pupils may be put as follows, arranged in the order of their importance. The first is tenfold more important than the last:—

" 1st. Perfect liberty about the waist.

" 2d. Perfect liberty about the shoulders, permitting the arm to be thrust smartly upward without the slightest check, and without moving the waist of the dress.

" 3rd. Warm flannels, extending to the ankles and wrists.

" 4th. Broad-soled, low-heeled shoes, with thick, warm hose.

" 5th. A skirt falling a little below the knee.

" In regard to the material, each pupil was left to her own taste. One or two began with silk, but soon gray flannel became the common dress, a Garibaldi waist, and often no ornament, save a plain white collar and wrist-bands. A considerable proportion of the pupils—and among them girls who at home had worn rich silks and jewelry—appeared every day of the school year in a gray flannel dress, which cost perhaps five dollars.

GYMNASTIC EXERCISES.

" Perhaps I should say, for the information of such readers as may not have an opportunity to witness exercises in the new school, that the main features of this system are the following:—

" 1st. The movements are all executed with very light apparatus, wooden dumb-bells, wooden rings, light wooden rods, small clubs, and bean-bags. 2nd. The thoroughness of the training depends, not upon the slow movements of heavy weights, but upon the width, sweep, and intensity of the movements. 3rd. Every movement is adapted to

music, which enhances the interest in arm-movements quite as much as in the leg-movements of dancing.

"These gymnastic exercises figured conspicuously in the Lexington school. Each pupil began with a half-hour or two or three half-hours daily, the amount being determined by the strength of the pupil. I believe that the gymnastic exercises in that school were more complete than have ever been witnessed in any other educational institution. Conscious that I was making the first effort in the education of girls to combine thorough intellectual training, I gave much attention to the gymnastic exercises. Among the hundreds of girls who were in the school during its history, and all of whom joined in the physical training, not one was injured, although the exercises were exceedingly comprehensive and thorough. It was the common fact that in the thirty-six weeks which constituted our school-year, a pupil gained three inches about the chest under the arms, while two inches' gain about the arm near the shoulder was common. Girls who came to us under the stipulation that they should not go up more than one flight because of physical inability, walked, before the school-year ended, twelve to sixteen miles on a Saturday, which was our day for long tramps. Periodical and sick headaches, with which a majority of the girls began the school-year, disappeared entirely before the end of it. Stooping shoulders and projecting chins soon gave way, while the carriage of our pupils was the subject of general remark and admiration."

A GOLDEN OPPORTUNITY.

Girls, whose minds are not too much deformed by artificial training, glory in health and strength, and despise weakness. In schools and academies, when the subject of dress as it affects health has been brought before the scholars, much enthusiasm has generally been excited as to the means for preserving and regaining health. Teachers of girls have, therefore, a golden opportunity for benefiting their scholars permanently, and should not let it slip.

THE BRIDE.

When a young lady becomes engaged to be married and sets to work preparing for her future life, another danger arises which is thus dealt with by Dr. Mary J. Studley:—

"While you wait, do not shut yourself away from air and light and all the joy which they insure, by mousing yourself up with a sewing-machine and making a pile of elaborately-decorated underclothing which will probably be of very little use to you after it is done. I have in mind a bride who, like many another, did that very thing; and when she put on the bridal veil, neither it nor the powder on the face could conceal the pale yellow tint of the face which was a stranger to air and sunlight. The elegant white silk was fitted to the last degree of smoothness over a waist which could be clasped with two hands, and the poor thing looked more like the bride of death than like a woman going to assume the sacred duties of a wife and mother.

"In due time a poor, little, weak, white-faced boy came to her, who has never known what it is to be ruddy and strong and buoyant with fresh young life, and I fear he never will know. The poor, yellow-faced mother grows yellower every day, along with the useless underclothing which lies in the chests, and in whose fabrication she wasted the vitality which she ought to have secured for herself and her boy by going out daily in pursuit of it. Indeed, it is marvellous how it ever came to pass that a young woman on the eve of marriage should be expected to devote herself to amassing such supplies of underclothing as custom has made almost imperative; for nine out of ten who follow the custom will tell you it is mere folly, that the fashion of these things changes as does that of all outward things, and that they get tired of the old long before they can put it aside for the new.

"The sewing-machine, which ought to be a blessing to woman, has been so sadly perverted, by the excesses in the way of ornamentation to which it has given rise, that it has proved a curse, in that it has led to many forms of uterine and ovarian disease, and, in not a few instances, to the death of unborn children, whose mothers have ignorantly spent hour after hour at it in the fabrication of more than uselessly betucked and beruffled infant wardrobes."*

* "What Our Girls Ought to Know."

VI.

WHAT IS TO BE DONE ABOUT IT?

The ordinary physiological errors in dress have been frequently pointed out in the past and are more or less acknowledged by all intelligent women, and yet few have made any radical alteration in their apparel. Two reasons will account for this. In the first place, the sufferers did not know exactly how to go about making the change, and, in the second place, while they were thinking about it their interest become dulled, and they finally subsided into an apathetic contentment with the clothing to which they were accustomed, with an occasional spasmodic attempt to improve at some one point as hygienic teachings might be brought to remembrance.

Now, of these reasons we will try and remove the first by showing "*How* to do it." The second cause of neglect will, we fear, still remain largely operative; but it is in the power of every woman who chooses to war a good warfare against the prevalent ill-health of which women ought to be ashamed. If she adopt the reform garments herself, she will probably feel it incumbent upon her to induce as many others to do so as possible, and in this, if her circle of acquaintance be tolerably intelligent, she will have little difficulty. For, after all, the main obstacle is ignorance.

Let this be removed by the perusal of this or some similar book, or by simple explanation, and the work will be half done.

THE FUTURE HOPEFUL.

Dr. Haynes looks hopefully into the future:—

"There is to-day a growing prejudice against medication; and, when disease invades the system, many seek, through physical culture, the means of restoration to health. The adoption of a hygienic dress would be one of the best preventives of disease; and often some such reform is absolutely necessary before strength can be regained.

"To me the future looks hopeful, when women realize the cause of this tendency to disease, when they ask for knowledge of their own organisms, and inquire the way back to Nature. Let them but understand what they seek to know,—give them a knowledge of their own organisms, of the relation of one part to another, and a knowledge of the functions these organs are called upon to perform,—let them understand also the unvarying physical laws, and the certain retribution that follows their perversion, and thus enlightened, with their naturally quick perceptions, and their skill in adapting means to ends, they will soon render the dress of every woman and child conformable to the requirements of health."

WHAT DOCTORS MIGHT DO.

Miss Frances Power Cobbe, a well-known English

literary lady, in an article on "The Little Health of Ladies," in the *Contemporary Review*, says:—

"The influence of the family medical man on wives and mothers, and through them on husbands and children, is almost unbounded; and if it were ever to be exerted uniformly in any matter of physical education, there is little doubt that it would be effective. What then, we may reasonably ask, have these omnipotent doctors done to prevent the repetition of deadly follies in the training of girls, generation after generation? Now and then we have heard feeble cautions, given in an Eli-like manner, against tight lacing, late hours and excitement; but the steadily determined pressure on mothers and young women, the insistence on free, light petticoats, soundly-shod feet, loose stays and well-sheltered heads—when has it been exercised?"

Dr. Mercy B. Jackson says:—

"All modes of dress that injure the human body, or make the wearer uncomfortable, are strictly within the province of the doctor; and he should never lose an opportunity to benefit his patients by teaching them the evils to be avoided by a sensible reform in dress. The protest of one physician may do much; but what an incalculable amount of good could be done if the whole profession, as with one voice, would unite in decrying all the forms of dress which torture mankind and bring on the innumerable diseases that shorten life and render it miserable!"

RESPONSIBILITY OF THE RICH.

The same writer speaks as follows of the duty of the rich and influential:—

"If woman is to fulfil the high trusts that shall be given her, she must emancipate herself from the engrossments of fashion, must be clothed in garments that will contribute to her comfort, and must cast aside those that destroy her health, cripple her energies, and take all her time and means for their manufacture. She must seek first the liberal education that has so long been considered necessary for her brothers, in order that they may be prepared for the varied duties that are required of them. When the leading women of the age, and those blessed with wealth and high position, come to see that a cultivated mind in a healthy body is more to be desired, and better calculated to lead to honor and esteem, than the most costly or elaborate clothing, women will turn their attention to these higher objects, and will then make it easy for others less favored to follow in the same pathway. A great responsibility is resting upon women who are blessed with the wealth and station that carry so much influence with them. They could easily change the fashions of dress so as to remove the objections to present modes, and by so doing they would contribute greatly to the health and happiness of the wearers."

DUTY OF INDIVIDUALS.

Before influencing others, however, it is necessary that each lady should be able to speak from experience of the

comfort and healthfulness, not to say economy, of the reform dress. We again quote Mrs. Woolson, the able editor of *Dress Reform* :—

"If any lady has become convinced of a radical and pernicious error in the construction of her dress, and desires to reform it altogether, let her not wait till a costume which is both healthful and elegant shall spring into being, to serve as a model. Individual thought and effort must be expended, if individual wants are to be met. No regulation-suit can be offered which would prove acceptable to all. What one finds agreeable in material and make, another is sure she could not tolerate. Therefore each one will need to work the subject out with patience and devotion. But the result will justify her pains.

"In the first place, she must divest herself of the common notion that a dress-reform necessarily and primarily means a marked change in the outer garment,—the 'dress,' technically so called—and in that alone. The under-garments are the chief offenders; and it is far more important that they should be remodelled than that any change should be made in the external covering.

"Indeed, there is no necessity for any dress-reformer to play the rôle of a martyr by appearing in a singular and conspicuous garb, unless she chooses to do so. Bring me your latest fashionable costumes,—the dresses just fresh from Paris, made by Worth himself, if you will,—and I will pick one from among them beneath which it shall be possible to dress a woman in almost perfect con-

formity to the laws of health. Not one binding shall be needed at the waist.

"And if any have succeeded in reconstructing their clothing so as to render it in harmony with hygienic and æsthetic laws, they should endeavor to benefit others by offering practical suggestions, and by extending the advantages they have derived from their own troublous experiences and final triumphs."

VII.

CHEMISE AND CORSET.

Before proceeding to the consideration of the make of garments required by the rules laid down in connection with this reform, some space may be profitably devoted to the reasons why the corset and chemise are unsparingly condemned by reformers.

KINGSLEY ON CORSETS

The Rev. Charles Kingsley in his excellent work on "Health and Education" thus discusses the question of corsets:—

"I suppose you will all allow that the Greeks were, so far as we know, the most beautiful race that the world ever saw. These people had made physical as well as intellectual education a science, as well as a study. Their women practised graceful, and, in some cases, even athletic, exercises. They developed, by a free and healthy life, those figures which remain everlasting and unapproachable models of human beauty. But—they wore no stays. The first mention of stays that I have found is in the letters of Synesius, Bishop of Cyrene, on

the Greek coast of Africa, about four hundred years after the Christian era.

"He tells us how, when he was shipwrecked on a remote part of the coast, and he and the rest of the passengers were starving on cockles and limpets, there was among them a slave-girl out of the far East, who had a pinched wasp-waist, such as you see on the old Hindu sculptures, and such as you see on any street in a British town.

"And when the Greek ladies found her out, they sent for her from house to house, to see this new and prodigious waist, with which it seemed to them impossible for a human being to breathe or live; and they petted the poor girl, and fed her as they might a dwarf, till she got quite fat and comfortable, while her owners had not enough to eat. So strange and ridiculous seemed our present fashion to the descendants of those who, centuries before, had imagined, because they had seen living and moving, those glorious statues which we pretend to admire, but refuse to imitate.

"It seems to me that a few centuries hence, when mankind has learned to fear God more, and therefore to obey more strictly the laws of nature and of science, which are the will of God—it seems to me that in those days the present fashion of corset-wearing will be looked back upon as a contemptible and barbarous superstition, denoting a very low level of civilization in the people who practised it.

"That for generations past women should have been in the habit—not to please men, who do not care about

the matter as a point of beauty, but simply to vie with each other in obedience to a something called Fashion—that they should, I say, have been in the habit of deliberately crushing that part of the body which should be especially left free, contracting and displacing their lungs, their heart and all the most vital and important organs, and entailing thereby disease not only on themselves, but on their children after them; that for fifty years past physicians should have been telling them of the folly of what they have been doing; and that they should, as yet, in the great majority of cases, not only turn a deaf ear to all warnings, but actually deny the offence, of which one glance of the physician or of the sculptor, who knows what shape the human body ought to be, brings them in guilty: this, I say, is an instance of—what shall I call it? which deserves the lash, not merely of the satirist, but of any theologian who really believes that God made the physical universe.

"If one chooses a horse or a dog, whether for strength or for speed or for any useful purpose, the first thing to be looked at is the girth round the ribs: the room for heart and lungs. Exactly in proportion to that will be the animal's general healthfulness, power of endurance, and value in many ways.

"If you will look at eminent orators who have attained a healthy old age, you will see that in every case they are men of large size both in the lower and in the upper part of the chest; men who had, therefore, a peculiar power of using the diaphragm to fill and clear the lungs, and therefore oxygenate the blood of the whole body.

Now, it is just these lower ribs, across which the diaphragm is stretched like the head of a drum, which stays contract to a minimum.

"If you advised the owners of horses and hounds to put them into stays, in order to increase their beauty, you would receive a very decided refusal. And if you advised an orator to put himself into stays, he would reply that to comply with the request would involve the giving up of public work, under the probable penalty of being dead within the twelvemonth.

"And how much work of every kind, intellectual as well as physical, is spoiled or hindered; how many deaths occur from consumption, and other complaints, which are the result of stays—is known partly to the medical men, who lift up their voices in vain, and fully known to Him who will not interfere with the least of His own physical laws to save human beings from the consequences of their own wilful folly."

AN ARTIST ON STAYS.

Mrs. Haweis, in "The Art of Beauty," says of the corset:—

"The mischievous person who first brought in stays (some suppose her to have been Mademoiselle Pantine, a mistress of Marshal Saxe, others say an early Norman lady—and, no doubt, from very early times stiff stays have been worn) is to blame for the first and greatest defect of modern appearance—the grotesque outline of the body—and many a dire disease. . . . . The Eastern

lady who, pitied for her dull harem life, said she more pitied English wives, whose husbands (as she innocently thought) 'locked them up in a box,' was not far wrong. And all to what end? The end of looking like a wasp, and losing the whole charm of graceful human movement and easy carriage—the end of communicating an over-all-ish sense of deformity.

"Nothing is so ugly as a pinched waist; it puts the hips and shoulders invariably out of proportion in width, and it is a practice more culpable than the Chinese one of deforming the foot—in this case no vital organ is interfered with, while in deforming the waist almost all the vital organs are affected by the pressure, and the ribs pushed out of their proper place.

"To those who know anything of anatomy, the impossibility of the organs retaining their natural place and performing effectually their natural function, when the ribs are pressed in upon them, will at once be clear. . . . . And the face betrays the condition of the inside. Who can forgive the unhealthy cheek and red nose induced by such a practice? Who can forget the disease which has come or is coming? What sensible man or woman can pity the fool who faints, perhaps in the midst of a dance or conversation, from the unbearable pressure on the heart, caused by stays and girdle—or, if they pity, do not also blush for her?

"The Roman dame was wiser in her generation; the bands she employed prevented a slovenly appearance, and afforded support without impairing health or the supple beauty of the body."

In a chapter, entitled "The Reason Why," Mrs. Haweis says farther :—

"The reason why a small waist is a beauty is because, when it is natural, it goes together with the peculiar litheness and activity of a slenderly built figure. All the bones are small, the shoulders and arms *petite*, and the general look is dainty and youthful.

"The reason why tight lacing is ugly is because it distorts the natural lines of the figure, and gives an appearance of uncertainty and unsafeness. I put aside the fact that a woman so laced *must* be unhealthy, for if it comes to a choice between beauty and health, health would most likely be sacrificed by the majority. I am not writing a treatise on sanitary laws, though I might fairly remind readers that men avoid and dislike unhealthy women, and seldom take to wife a girl who has too small a waist, whether natural or artificial. I am chiefly concerned with appearance.

"In architecture, as before shown, a pillar or support of any kind is called debased and bad in art if what is supported be too heavy for the thing supporting, and if a base be abnormally heavy and large for what it upholds. The laws of proportion and balance must be understood. In a waist of fifteen inches both are destroyed, and the corresponding effect is unpleasant to the eye. The curve of the waist is coarse and immoderate, utterly opposed to what Ruskin has shown to be beauty in a curve. Real or artificial, such a waist is always ugly; if real, it is a deformity that should be disguised; if artificial, it is culpable and nasty to boot.

"A waist of the tight description has happily disappeared entirely from good society, and is now the very badge of vulgarity."

SEVEN DISEASES.

Dr. Verdi, of Washington, says of the corset :—

"While it may be said that the corset is a support to the breasts, that it affords comfort to the wearer, it may be answered that a simple band, appropriately applied, would do as much ; that all women do not need such a support, and that it is in this very instance where it is most injurious.

"The corset, as adopted in modern times, is a stiff, unwieldy instrument, covering tightly a large and most important part of the body. It is kept in place by its own pressure, which is exerted over the muscles of the chest, over the cavity of the stomach and of the abdomen, thus reducing their natural capacity. When pressing upon the bosom, it prevents its development, and sinks the nipple into its substance, rendering the process of nursing almost impossible; pressing upon the chest it prevents a full expansion of the lungs by its fixed limits, and by paralyzing the muscles ; pressing on the abdomen, it retards the circulation of the blood so important to the organs contained therein, it reduces the cavity and forces the intestines downward, the latter pressing the womb, which eventually becomes the victim of displacements ; pressing upon the stomach, it reduces its capacity and its power of muscular motion, necessary to the process of digestion.

That article of dress therefore may, when used only for the purpose of vanity, be the source of dyspepsia, consumption, prolapsus and ulceration of the womb, leucorrhœa, constipation, and hemorrhoids, so common among the most fashionable class of women."*

INTENTIONAL DISTORTION.

Dr. Harriet N. Austin says:—

"As for corsets they are evil and only evil, and that continually. They are so, of whatever form or fashion, whether patented or unpatented, whether invented by a regular physician, either man or woman, or by the veriest devotee of fashion, whether intended to bring the figure into genteel proportions, or merely to act as hygienic skirt supporters. A large proportion of ladies who wear corsets do so with the determined purpose to distort their forms thereby. That is, they intend, by the constant pressure of the corset, to force their waists into limits and proportions different from what they would assume were no such pressure brought to bear. Of course they do not analyze the process and say, now, in order to be stylish, I will gently and carefully push the floating ribs inward and diminish the cavity in which the lungs and heart play, stop the free action of the intercostal and abdominal muscles and thus lessen the capability of the lungs to play, prevent the natural contraction and expansion of the diaphragm, crowd upon the liver till it is half cut in two, upon the spleen till it is displaced, upon the

* "Mothers and Daughters."

stomach till it shrinks in size and becomes weak and sensitive to pressure, upon all the abdominal viscera till they sink down upon the pelvic viscera, displacing them, producing congestions, inflammations and ulcerations, and all together rendering the chances through life for safe and healthy maternity exceedingly small. This is not what they say, but it is what they do."

Mrs. Woolson, the talented editor of "Dress Reform," after speaking of the four rules laid down by reformers, thus denounces both corset and chemise:—

TWO MALEFACTORS.

"Some garments are found to be wholly irreconcilable with these laws, and should therefore be dispensed with altogether. Of these, the most important are the corset and the chemise. Since they are the very two without which the average female mind will find it impossible to conceive of further existence upon this terrestrial sphere, I shall do well to pause, and state clearly wherein their objectionable characteristics lie, and why they are past remedy.

"Concerning the evils of the corset, it would seem that enough has already been said. Physicians have always denounced it as most pernicious, and have refused to compromise with it in any of its forms. But, in spite of these protests, women still cling to it, and still declare that they must wear it or perish. It holds its place because of one or two plausible arguments in its favor, which are not met and reasoned away, but suffered

to remain unrecognized and unrefuted. Since they prove so powerful, they ought to receive more serious attention.

"Enfeebled by past errors in dress, and with muscles rendered incapable, by enforced inaction, of doing their appointed work, wearers of the corset assert that it is absolutely essential to the support of the body, and that without it they would collapse into an uncertain shape, with neither contours nor comeliness. They claim that its upper portion is needed for the support of the bust, and that its lower portion serves as a shield and protector for the abdomen, so that heavy skirts do not drag them to the earth.

"In short, had no human being been bright enough for the invention of this garment, one-half of God's humanity must have been a hopeless failure. He was able, it appears, to construct man so that he should be equal to the requirements of the life conferred upon him; but woman came forth from his hand wholly incompetent to maintain herself erect, or to discharge the daily duties enjoined upon her. Fortunately, some one of his creatures, seeing the deficiency, succeeded in supplementing his work. Thus one skeleton sufficed for men; but for women it had to be propped up externally by another skeleton strapped about it. Does any one believe that, when the Creator gave to women their form, he did not also give them the muscles which its proper maintenance would require?

"Tie a strong, healthy arm to a board, and keep it there for months; then remove its artificial prop. The

arm cannot lift itself; it falls helpless at the side: *ergo*, never take the arm from the board, and it will never be weak. The great majority of women, growing up without corsets, would find them wholly useless. In strength the body would prove sufficient unto itself. To doubt this is to doubt divine foresight, power or benevolence.

"It is true that corsets prevent one from feeling, at every motion, the pull and drag of each separate binding at the waist. The whole body beneath them being crowded together till its parts are incapable of much distinct motion among themselves, no one portion is conscious of more discomfort than the rest. This is why they render the skirt-bands endurable. Give up the corset, and retain all other garments as previously worn, and the clothing becomes insupportable. The remedy is not to replace the compress as before, but to modify the remainder of the clothing till it is brought into some accordance with physiological laws.

"But many say the corset is only bad when it is worn tight; loosen it, and it can do no harm; its abuse and not its use should be condemned. This statement is inadmissable. A corset is always bad, whether laced or not. Its very structure necessitates a pinching of the waist in front, even when no strings are tied: for, by many slender gores artfully woven into the cloth, it is given the shape of an hour-glass; and, if it is tight enough to retain its place at all, it must enforce this shape upon the yielding body beneath, with the stomach crowded into the neck of the glass.

"It is not thus that Nature models her human beings,

whether women or men. The trunk of the body resembles an Egyptian column, with the greatest girth about the middle. The lower ribs spread out, and enclose a larger space than the upper ribs.* Below these floating ribs, there are no bones whatever at the waist, if we except the spine behind, which serves as a connecting line between the upper and lower portions of the framework. The reason for this is apparent. No bones can be trusted over this region, lest they impede the full and free action of vital organs beneath. Soft flesh and elastic muscles are the only wrapping allowed. Thus Nature has left the body. Should not this teach woman how to construct the covering she adds to this part of her system? But what does she do? Taking advantage of its yielding character, she crowds this section inward, instead of permitting it to expand outward; and girds and laces and binds and tortures it, till it is smaller than any bones would compel it to be. What should be the base of the pyramid is converted into its apex. While it is designed that all human beings should be larger below the ribs than below the arms, women have so re-formed themselves that they would be ashamed to resemble the Venus of Milo, or even the *petite* and mincing Venus de Medici. They go, however, in their best 'glove-fitting' French corsets, to study those famous marbles in galleries of art, and express unbounded admiration for the superb loveliness of their forms, and the wonderful fidelity to nature which ancient sculptors displayed.

* See page 30.

"Furthermore, the trunk of the body is meant to be flexible, to bend backward and forward easily within certain limits. To allow this, the one bone which runs its entire length—the backbone—is broken wholly apart at every inch of its extent, and a supple joint inserted. But the corset, by means of two long, stiff whalebones behind, and two long metal bars in front, forces the body to remain as inflexible throughout that section as if, for half a yard, it were strapped firmly between two iron bars. The lower cells of the lungs would expand, the bars say, No; the stomach would rise and fall as the heart throbs, the bars say, No; the body would bend backward and forward at the waist in a hundred slight movements, the bars say, No: keep to your line; thus far shalt thou go, and no farther. But Nature is both sly and strong, and she loves her way. She will outwit artifice in the long run, whatever it may cost her. The iron bars defy her power; but, by days and months of steady pressure, thrusting them back from her persistently, she forces them to bend. This done, the human hand, that could not curve them at first, cannot make them straight again. Nature has moulded her barriers to accommodate, in some measure, her own needs; and, when they are replaced with new, she sets herself again to the work.

"But it is said, 'You can improve corsets in several ways, and render them harmless.' Without doubt there is a choice in their varieties. There are manufacturers who proclaim 'comfort corsets,' with shoulder-straps above, and buttons for stocking-suspenders below, and lacings under the arm as well as behind, and other con-

trivances intended to render them worthy to be worn in the millennium. None, however, banish the iron in front, which is one of their worst features. But these efforts to improve corsets reveal a determination on the part of their makers to keep them in vogue. All they can do, however, will furnish but trifling mitigations of an evil which can never be converted into a good. A witty writer once discoursed on the 'total depravity of material things;' and, if one thing can be more totally depraved than another, that thing is the corset. By and by, as intelligence increases, and the practices of ignorance disappear, the compression of the waist now practised by European and American women will be held to be as ridiculous and far more pernicious than the compression of the feet practised by the Chinese. Indeed, our heathen sisters must appear far more sensible than we; for their favorite torture affects only a remote and comparatively unimportant part of the body, while ours is a torture of the trunk at its very centre, where the springs of life are certain to be weakened and diseased.

"One of the strongest reasons for the general adoption of the corset—though it is one not commonly avowed—is the belief that it conduces to beauty and symmetry of figure. Slender forms are usually praised, and chiefly because they are associated with the litheness and the undeveloped graces of youth. But a pinched waist cannot make a slender form, or give the appearance of one, if above and below there be breadth and thickness which no efforts can diminish. Indeed, broad shoulders and a full chest only appear the larger by contrast with the

slight span of a girded waist; and thus they become more conspicuous from the attempt made to conceal them. The waist itself, lacking the easy, varied motion and the peculiar shape which Nature gives, deceives no one as to the cause of its small dimensions; and the poor sufferer, who would fain pass for a wand-like sylph, tortures herself in vain, and has only her pains for her labor. Although all men disclaim any liking for an unnaturally small waist, all women persist in believing that a wasp-like appearance, at whatever age, and under whatever conditions, is sure to render them lovelier in the eyes of their admirers. Mature matrons should have a look of stability, and that dignity of presence and carriage which only a portly, well-developed person seems to confer. Such a mien is as much the beauty of middle age, as slenderness is the beauty of youth. And a large, robust woman never looks so well-shaped and comely as when waist and shoulders retain the proportionate size which Nature gave.

"I have shown why the corset must inevitably perish. The chemise is condemned for quite different reasons. No charge of compression or of inflexible shape can be brought against that: it errs in the other direction, if that can be said to err which appears to be wholly without use, and to offer no excuse for its existence. But its sins are not merely negative. It produces a great inequality in the temperature of the system, by affording no covering for neck and arms, while it furnishes loose folds of useless cloth to be wrapped about the body on its warmest part and under the tight dress-waist. There is

an excess of material where it is not needed, over the lower portion of the trunk; and a deficiency where it is needed, over the extremities. The chemise can offer no support to any other garment; and in every respect a more absurd and worthless article of clothing could not possibly have been devised. Its rude and primitive construction should recommend it to no intelligence higher than that of South Sea Islanders, by whom it is doubtless worn. In civilized countries it is doomed to follow the corset to that limbo which dress-reformers will hereafter keep for the cumbrous and injurious habiliments of the past."

THE MARCH OF EVENTS.

Dr. Mary J. Studley says of the chemise:—

"History, in the records it gives us of the early Christian monks, tells us that Thomas á-Becket, and others like him, wore the hair-cloth shirt until it was a loathsome mass of vermin; that this example was imitated by the common people; and that the Saracens, about the eighth century, were the first to introduce into Europe 'the often-changed and often-washed undergarment, which still passes among ladies under its old Arabic name.' (Dr. Draper).

"Under such circumstances it is easy to see that the chemise was a godsend; but ten centuries have brought us a step further, and to-day the best-dressed woman is not a woman who wears a chemise. That garment has had its day. Reason and common-sense alike reject it

and the hair-cloth garment which it superseded, while they substitute for its bagginess a neat and comely-fitting garment of wool which covers the entire body as if it grew there. It is not, like the chemise, gathered up into a superfluous mass of drapery round the waist, whose dimensions that garment needlessly increases; it is not, like it, forever slipping off one shoulder; and it does not, like it, leave the body exposed to the harsh vicissitudes of climate. On the contrary, it is everywhere adapted and fitted to the form; it cannot slip off one shoulder, for all hygienic laws require that the whole body be uniformly covered, the shoulders just like all other parts, and it shields us from sudden climatic changes as tenderly as it did the lambs from whose fleeces it came."

VIII.

CUTTING AND FITTING.

THE FOUR PRINCIPLES.

From all that has gone before, the following principles of healthful dressing are to be deduced :

I. ALLOW THE VITAL ORGANS UNIMPEDED ACTION.—This requires the removal of corsets and all tight-fitting waists, and of all unsupported waist-bands, whether tight or loose—the latter, for this reason, if tight, they compress the ribs ; if loose, they slide downward and depress the abdomen.

II. SUSPEND THE CLOTHING FROM THE SHOULDERS.—This requires the attachment of all the lower garments to the upper, or to suspenders passing over the shoulder.

III. REDUCE THE WEIGHT AS MUCH AS POSSIBLE.—This involves careful calculation to render the skirts as few and short and light as possible.

IV. PRESERVE A UNIFORM TEMPERATURE OF THE BODY.—This requires that every thickness of cloth which covers the trunk should furnish sleeves and drawers for the limbs ; or that there should be sufficient extra covering for arms and legs to make them as warm as the body.

THE REFORM COSTUME.

The key to the changes which are to be made in the shape of garments is to be found in the necessity which exists for doing away with all bands encircling the waist. In order to have no waistbands, garments must, as much as possible, be made all in one, and any skirts or drawers which are made separate must not be gathered to an ordinary band, but must terminate in a binding, facing, or yoke which may be attached below the waistline to some other garment supported on the shoulders. The distinctive garment of the Reform is the chemilette, or chemiloon, which does away with the band of the drawers and affords a support for a short petticoat, if this is worn. Above this comes an additional waist upon which another skirt can be buttoned, and then the dress, which is supposed to be all in one.

The chemilette is theoretically a close-fitting, high-necked, and long-sleeved garment which reaches to the ankles and covers, without pressure, the whole person, with the exception of head, hands and feet. It may be woven of wool or cotton, or cut from flannel, cotton, canton flannel or any suitable material, and it is to take the place of drawers and chemise, and to furnish nearly all the warmth required. One, two, or three of these may be worn, according to the season.

The underskirt, which, it is to be understood, is to be used merely for appearance sake and not for warmth, may then be made very light, and may be attached to a waist of its own or upheld by suspenders, while the dress, like

the chemilette, made all in one as we have said, fitting neatly but exercising pressure nowhere, and short enough to be well off the ground, completes the costume.

This is the ideal clothing devised by educated women who have given the matter their best thought—and it is well to have this ideal before us, although practically it is found that many variations are required to suit individual tastes and requirements. Indeed it is difficult to find two people who will be satisfied with exactly the same mode of arrangement, and it is important to recognize the fact that a great variety of style and arrangement may be quite consistent with a unity of purpose in holding to the four rules of the Reform enunciated at the beginning of the chapter. This being understood we now proceed to describe the various garments which have been invented, and to point out the combinations which have been found satisfactory in practice. From these our readers may choose for themselves, or at least draw hints for new inventions of their own.

THE CHEMILETTE.

It is not easy to describe clearly the manner of cutting out a garment, but as the chemilette is in reality a combination of two now in use, there will be no real difficulty in the way of the intelligent reformer. The *modus operandi* is as follows:—Take an ordinary high-necked underwaist, slip-bodice, or corset cover, which has darts to fit the figure, and extends five or six inches below the waist; then take a pair of drawers, cut off the waist-band and as many inches as would correspond to the extension of the

slip-waist and sew the two articles together as in Fig. 1. This is the whole secret of the thing, and in a few hours an expert seamstress can have the same number of chemilettes as she had previously of the separate garments. If an underwaist of the required style is not to be had, a paper pattern may be taken from the basque of a dress and plenty of material may be found in the discarded chemise. Of course this composite garment will not be so elegant as one made out of whole cloth, but it will answer the purpose just as well, and it has the advantage of utilizing the garments on hand and of saving a great deal of work.*

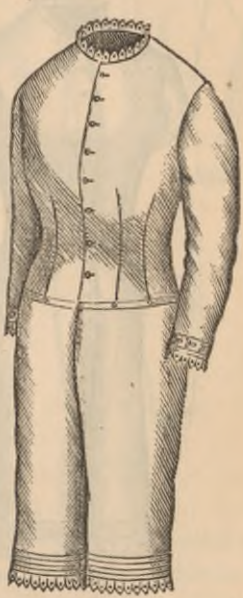


FIGURE 1.

Now with regard to the wearing of this chemilette, some will prefer to have it low-necked and short sleeved, especially for sum-

* For those who wish to cut new garments out of whole cloth, a useful pattern will be found upon the supplement supplied with this volume. We may mention, also, that cut paper patterns are now to be had from all the leading pattern agencies. A serviceable pattern may, however, be obtained from one of the composite garments described above in the following manner: divide the garment into two parts by ripping the back seam of the waist, and take one part to be further separated into the patterns required. Then detach the half back, and rip the seam of the leg and the darts, and you have your pattern ready for use. It consists of two parts, of which the back of the waist is one, and the front of the waist and the whole of the leg of the drawers is the other.

mer use, * and such can utilize the trimmed yokes and sleeves of the chemises they discard. Some will

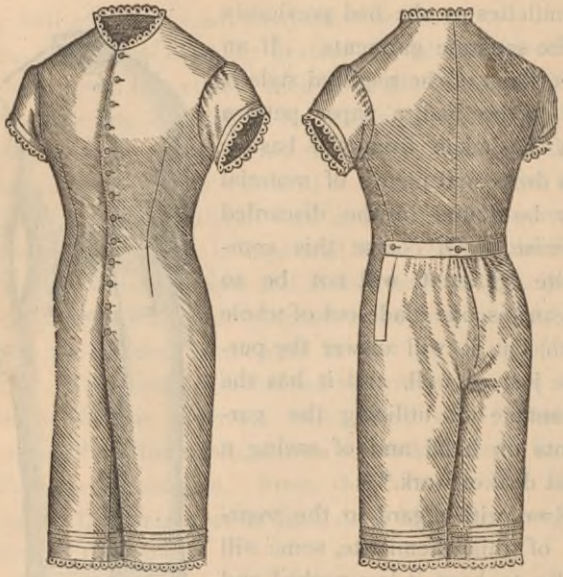


FIGURE 2.

prefer to have it high necked and short sleeved, while some will choose a medium course and make the neck half high and the sleeves half long. Some will prefer the open style illustrated in Fig. 1, while some will consider

* The high necked chemilette is preferable even in summer on the score of cleanliness, as it protects the dress and does not really add to the warmth, as will be seen by reference to the considerations advanced on pages 72 and 73.

the closed style of Fig. 2, with a band buttoning at the sides the only endurable kind. *

Under the cotton chemilette some will wear in winter a flannel one cut in the same style, while others will prefer the woven garment made of merino or gray lambs' wool (Fig. 3), and if they cannot purchase it entire, will buy vest and drawers separately and sew them together, cutting off the superfluous material. Others, again, will prefer to have next the person simply the ordinary merino vest made of gauze merino in summer, and of heavier quality in winter, making up for the deficiency in this garment by wearing an extra pair of over-drawers.

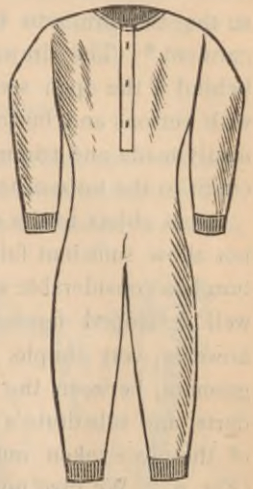


FIGURE 3.

As for the chemilette itself, some will wear cotton all the year round, and some will wear cotton in summer, and canton flannel in winter, each one consulting her own taste and surrounding circumstances in deciding what style she will adopt.

* A suggestion comes from England to the effect that the merits of both the open and closed kinds of chemilettes may be combined in one, if the material of the drawers' part be so cut as to cross over at the back so as to reach almost or quite to the side seams, both sides being, as we understand the description, sewed at the top to the lower edge of the back of the waist. Of course, in this case, a little extra fulness in the length would be required.

In cutting out the chemilette it is important to make the shoulders short and the sleeves well curved at the top, so that the arm can be raised without drawing up the garment.* The drawers should overlap both before and behind if the open style is used, and should be furnished with buttons and button-holes. The garment should be neatly made and trimmed, in order that it may do no discredit to the taste of the reformers.

Some object to the chemilette because they say it does not allow sufficient fulness over the breast. This objection has considerable weight, especially in the case of very well developed figures. The remedy in such cases is, however, very simple. Cut an oblong piece out of the garment, between the hem and the armhole above the darts, and substitute a piece two or three times the size of the piece taken out, gathering it at the edges to fit (Fig. 9). We give no exact dimensions because the size will vary with different individuals; some can see no necessity for anything of the kind, while others will require to make the piece very large. It is a very easy matter to find the fulness required in each case, and the

* Speaking of sleeves which are so cut as to prevent free movement, Dr. Charles F. Taylor of New York says :

"The slight impediment to the movement of the arms, especially the upward movement, occasioned by some styles of ladies' dresses, is injurious, not so much from the actual resistance of the dress to the action of the muscles of the shoulder, but because the resistance, though trifling, being persistent, causes an equally persistent shrinking away from the point of expected resistance. This style of dress—especially for females, they having fewer counteracting influences—constantly tends to produce narrow and shrunken chests, depression of the diaphragm, falling of the bowels, and injury to the pelvic organs, besides general debility from imperfect respiration."

inserted piece may be fastened in the garment by simply running the two edges together and whipping them, or a narrow bias band may be stitched on the seam.

THE REFORM CHEMISE.

Our next cut illustrates a garment which some will prefer to the chemilette. It is virtually a close-fitting chemise, and has a bias band two or three inches below the waist,

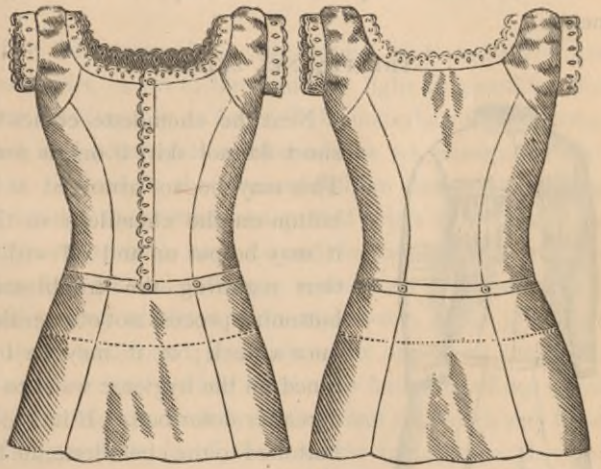


FIGURE 4.

to which the drawers and perhaps a flannel skirt are to be buttoned. The drawers should be put upon a narrow yoke band in which the button-holes are made. They must be open in front, so that when once attached they may remain on all the week, or till it is desired to change them. Some make this simply a waist, cutting it off at

the dotted line, in which case the drawers may be sewed to the band instead of buttoned. This chemise must fit well at the neck, or it will not afford the support required, and the opening in front must extend below the band.

A simpler style of chemise has a full low body gathered into a band at the neck, and also at the waist, the latter band being, of course, quite loose. A gored skirt of any length and fulness required is inserted in the waist-band, on which buttons are placed for the support of other garments.

THE FLANNEL SKIRT.

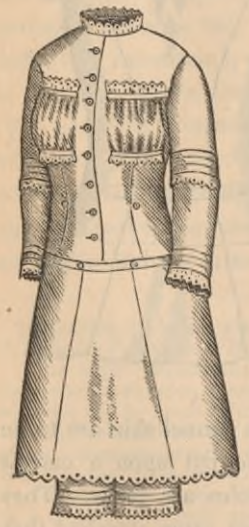


FIGURE 5.

Next the chemilette comes the short flannel skirt if one is worn. This may be so arranged as to button on the chemilette so that it may be put on and off with it, thus requiring the troublesome buttoning process not oftener than once a week; or it may be buttoned on the hygienic waist to be hereafter described. If it is to be buttoned to the chemilette, the five buttons required should be put at the junction of the slip waist and drawers, four or five inches below the waist, and should be placed one in the centre of the back, one at each side and two in the front, as represented in the illustration. The gored skirt here

depicted will be found very easy to make. Two of them may be cut out of three yards and a half of flannel. They have a gored width in front, a gore at each side, and a half width behind. They may be faced at the top, which should exactly fit round the hips, with tape in which the button-holes are cut. The chemilette with skirt attached is shown in Fig. 5.

THE SKIRT.

The skirt worn above the flannel skirt and under the dress skirt, ought to be made as light as possible, and therefore it ought to be of light material, comparatively short, and gored so that there will be no unnecessary fulness. Indeed, in the present fashion there is no excuse for wearing the voluminous quilted skirts or multitudinous cotton ones which have caused so much suffering in the past, but fashions change sometimes with marvellous rapidity, and whatever be the style worn, ladies interested in their health and yet wishing to appear as others do, should leave no method untried to find something which will give the appearance required and yet weigh very little. Furthermore, it is of the greatest importance that the weight of this skirt as well as of the dress skirt should be suspended from the shoulders and not from the waist, and how this is to be done is a problem which has been solved in various ways. Some prefer to button both skirts to a bodice made for the purpose which we describe under the name of Hygienic Waist (Fig. 8). Some attach both skirts to suspenders, some use suspenders for the

heavier dress skirt, and button the under skirt to the waist, and some sew each skirt separately to a gray linen sleeveless waist of its own, joining the waist and skirt six inches or more below the waist line or, finally, some use this arrangement for the under skirt and use suspenders for the dress skirt as represented in Fig. 6, in which the broken line shows where the band of the dress skirt would come, and the straight line the junction of the under skirt and slip waist.* The style of skirt here represented is a good combination of lightness and amplitude. The upper part is gored, and a wide flounce is set on the lower edge.

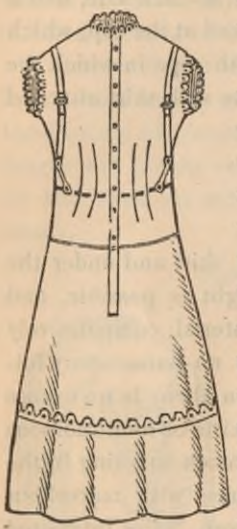


FIGURE 6.

All skirts should at the top either be gored to fit, or be set upon a wide yoke band (Fig. 7). In either case the top should be faced for button-holes. If the skirt be made of material which is either stiff or heavy, the yoke band should be made very wide, and of soft, light material. Thus a black moreen skirt might have a yoke band of black merino faced for an inch at the top with good black

*An English lady suggests that a light skirt may be worn, hanging loosely on the hips (not the waist), without injury or risk of falling. Where the hip-bones are large and the abdomen relatively small this may be the case, for it must be remembered that figures differ very materially in this respect, but as a general thing it will be found much safer to support the garment by some of the methods described.

calico. If this band be made eight or ten inches in depth and large enough to button on the slip waist over the hips, and if the skirt be made short enough to be six or eight inches off the ground, it will be seen that the amount of moreen required will be comparatively small. Colored flannel is light and warm, and therefore a very suitable material for winter skirts. White skirts should not be made of very heavy cotton, and should be as scant as the fashion will allow. Tucks should be few and fine. If the dress is made to clear the ground it will not be necessary to raise it, and the underskirt may be made much shorter than would otherwise be necessary. Many of the materials which are sold for summer dresses make pretty, light skirts, and when substituted for white ones, save laundry work.

FIGURE 7.

It is very important to remember that skirts are to be worn only for appearance, and that all the warmth required is to be put in the form of drawers. If it be remembered that every ounce saved in the weight of the skirts may be considered as so much added to the powers of walking and of enjoying life, it will be seen that it is worth while to contrive to this end. Those accustomed to long under skirts can hardly imagine the relief afforded by wearing them quite short and having only one skirt to impede the feet.

THE HYGIENIC WAIST.

This waist (Fig. 8) is intended to be worn under the dress and over the chemilette, and to have the skirts buttoned to it. It is now manufactured in large quantities to supply the new demand, but may easily be made at home, from the diagram in the Supplement, or with the

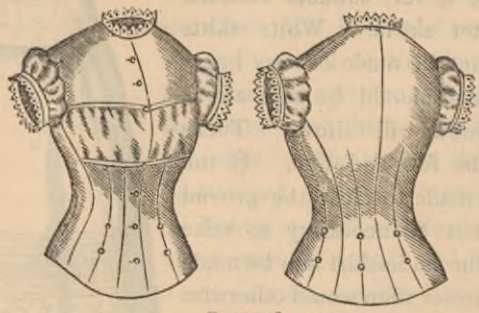


FIGURE 8.

aid of paper patterns which may be purchased under different names from almost any of the pattern agencies. It fits the figure neatly, affords support where support is required, and fulness where fulness is required. It may be made sufficiently firm to take the place of the corset by the use of stiff material, or by the making it of double cotton, and stitching heavy cord on each side of the six darts, or it may be simply made of one thickness of cotton.* In

* A patented waist made in Boston, and called the "Equipoise Waist," is so made that the gored front extends perhaps half way up under the full bust piece, and two tapes, stitched down at intervals, at the top and at or below the waist line, keep in place six whalebones on each side which may be easily removed when the garment is sent to the wash. This arrangement would render unnecessary the bust supporter described farther on.

any case the full bust portion should be single. It will be seen that the front is accurately fitted by six darts.

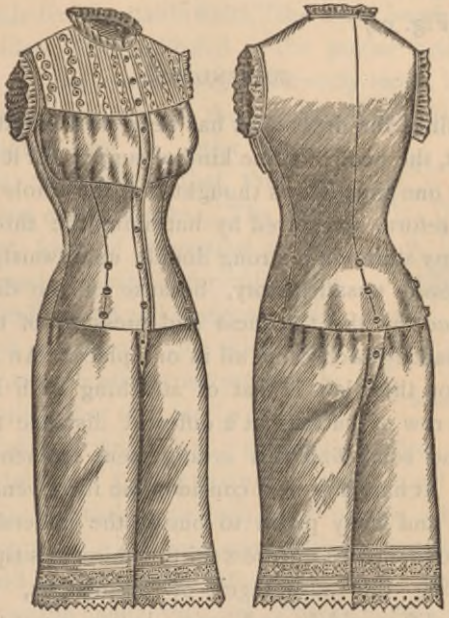


FIGURE 9.

The sleeves may be made long or short as desired, and the garment be trimmed according to fancy. For slight undeveloped figures, the full bust piece may be starched in order to take the place of the heating bosom pad so injurious in its effects. One, two or three rows of buttons may be placed upon this bodice, according to the number of skirts which it is required to support, but it is to be

remembered that the highest row is to be considerably below the waist line. Some sew the drawers to this garment and thus make what is called an "Emancipation Suit." (Fig. 9.)

SUSPENDERS.

Ever since the dress skirt has been worn unattached to the waist, the need of some kind of support for it has been felt. At one time it was thought that the whole question of dress reform was solved by buttoning the three bands of as many skirts on a strong double underwaist, but this plan proved unsatisfactory, because of the discomfort occasioned by the thickness and pressure of the three double bands which came all in one place. An improvement upon this plan is that of attaching each skirt to a different row of buttons at a different distance from the waist, and some find this arrangement eminently satisfactory. It has, however, considerable inconveniences in practice, and many prefer to button the underskirts to a waist, and to support the dress skirt or skirts by suspenders.* Concerning the advantages of suspenders, however, opinions differ widely and many ladies assert that they cannot wear them at all. However, a great many do wear them, and would not be willing to do without them for a single day, so that there can be no intrinsic difficulty in

* One of the simplest and most convenient ways of arranging a skirt which is to be worn with a polonaise is to make the opening in front, and sew the band to the seams of the polonaise inside, or it may be buttoned if preferred. If a basque be worn, button-holes may be made in a band stitched to the seams inside and corresponding buttons put on the band of the skirt, or hooks and eyes may be used.

the matter. The main point in wearing suspenders of any kind, is to bring the front strap down almost under the arm so that it may not in the slightest degree press upon the breast. If attention is given to this point, and if the bands be of suitable width ; the cross band between the shoulders being adjusted at the proper height, and the band of the skirt being sufficiently loose, the hips will be entirely relieved of the weight of the skirt, while the shoulders are in utter unconsciousness of the fact that they are bearing any extra burden. The most convenient form of suspender is one which is made especially for ladies and sold both in England and America. (Fig. 10.) It is attached to the skirts with safety pins of peculiar construction, in such a manner that they can be changed from one skirt to another at a moment's notice. It will, however, be found a great saving of trouble and friction to have a pair attached to each skirt in use. The only warning required with these suspenders is that the safety pins should never be left unfastened in the process of changing, or the hands run a risk of being badly scratched. Those who cannot obtain the manufactured suspenders need not on that account do without them, as they may be made out of broad tape, linen webbing, or even cotton bands, and sewed on the skirt band at the back, being fastened by buttons in front, or boy's suspenders may be used. Stocking suspenders are also now easily procured, but they should invariably be supported by the shoulders

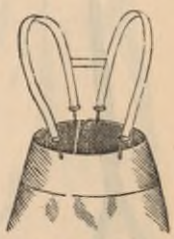


FIGURE 10.

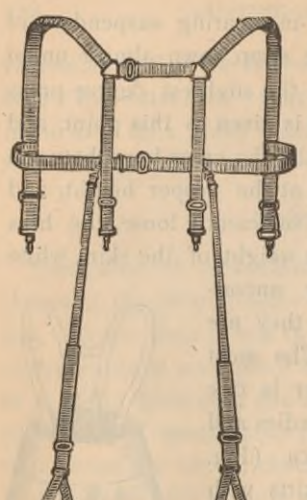


FIGURE 11.

and not attached to a narrow waist band, as is the case with some kinds which are upon the market. A combination shoulder brace, stocking and skirt supporter, is shown in Fig. 11. An arrangement of this sort requires that the stocking straps should be passed through holes made on purpose in the drawers, if these are worn over the stockings, and is perhaps rather complicated for comfort.

"BLOOMERS."

Colored flannel over-drawers are essential for out-door wear in winter. These "bloomers," as they are called in Canada, are generally made of heavy flannel, and an elastic is run into the hem at the top, so that they may be slipped on and off easily. Many, however, would find it an advantage to wear one pair of over-drawers all the time in winter, and to have another pair for drawing on when going out.* Indeed, those who are feeble or who live in

* Ladies are sometimes met with who wear no additional covering on their legs in cold weather, declaring that they are not cold and feel no need of it. An explanation of this anomaly, which has long puzzled those who have observed it, is given by Dr. James C. Jackson of Dansville, N. Y., who says:

"A great majority of women suffer from a low temperature of the

cold houses, will derive great comfort from wearing an entire chemilette of colored flannel above the woven one and the white, thus covering themselves completely from neck to ankle with three thicknesses of warm clothing. We say to ankle, for it is wise to either make the under drawers very long and pull the stockings over them, or to make the over drawers come to the top of the boot, or even to have both long. If it is decided to have over-drawers to wear in the house, they may be put on a neatly fitting yoke band, say six inches wide, lined with cotton, with button-holes to correspond to the buttons on the chemilette (Fig. 12). This style will be found to wear very well. Another plan is to gore them to fit between the hip and the waist, and to face them with broad tape at the top in which buttonholes are inserted. It is important in connection with this to remember that

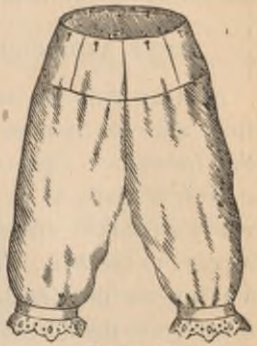


FIGURE 12.

lower limbs without being conscious of it. Their feet, ankles and legs will be cold to the touch of the physician, when they themselves are not conscious of their being cold. In my professional relations to women suffering from uterine diseases, I probably have found as large a proportion as seventy-five per cent. of the whole number thus unconsciously affected. Feet, ankles and knees clammy cold, and they affirming their limbs to be warm! While the nerves of motion have not been affected in any way to loss of action, the nerves of sensation have been seriously affected and impaired . . . . . Girt a woman's leg or girt a woman's body just above the hips so as to impede the action of the nerves of sensation, and insensibility to a certain degree is induced, and then she cannot tell when her legs are cold."

the chemilette, though it supplies the place of three garments, will not be nearly equal to them in warmth. It is cooler for summer wear than the former arrangement; but in winter it must be reduplicated to be sufficiently warm—the great advantage being that the warmth thus gained is evenly distributed over the body.*

OTHER ARRANGEMENTS.

Another style of arrangement from any we have mentioned is the following: The merino undervest is made to fit the figure neatly so that it affords a certain support to the bust. Then tapes are run on the inside from the shoulders to the skirts, a few inches from the side seam both on the back and on the front. On these tapes buttons are placed at different heights, to which the drawers and flannel skirt are to be attached. The stocking supporters are simply elastics a few inches long, buttoned at one end to the stocking and at the other to the

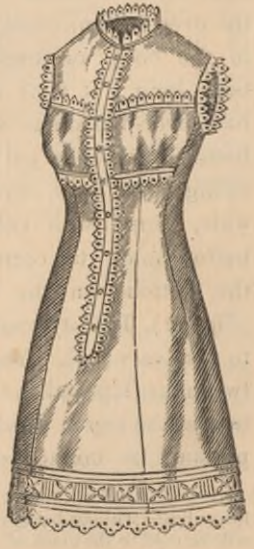


FIGURE 13.

* In fact it is necessary to guard carefully against the danger of chilling the surface of the abdomen. The chemilette is worn comparatively loose, and by no means takes the place, as regards warmth, of the thick gathers of the old-fashioned flannel petticoat. When a cold wind is to be encountered, therefore, extra protection of some kind is needed in that region, or various disorders may be the result.

vest. Above this is worn a garment represented in figure 13, which is cut like a half-fitting Gabrielle with a narrow back. In cutting from an ordinary pattern, all fulness must of course be omitted from the skirt. The fronts can be made up plain if desired. This under-dress may be made of flannel and long-sleeved, if warmth is required. It may be made short, and a longer skirt be buttoned on it, or it may be made long and buttons placed on the seams to support the dress skirt.

NOT COMPLICATED.

We have suggested so many styles and alternatives in the hope of suiting every taste, that it is to be feared that the impression will be produced that the Reform dress is very complicated. This, however, is not the case, and we cannot better close this part of the subject than by describing a simple combination for winter wear, which serves every purpose of comfort and health. The first garment is a Scotch gray lamb's-wool undersuit. Above this is a canton flannel chemilette with full cotton puffs at the bust, scalloped and buttonholed at the neck, wrist and ankle. To this is buttoned a pair of drawers, made of a pretty checked fancy flannel, set on a yoke band of grey silesia, and coming down to the top of the boots, where they terminate in embroidered bands of the flannel, buttoning closely round the leg. The same buttons which support these support also the only under skirt worn. This is made in the style represented in figure 6, of the same flannel as the drawers, and is embroidered in wool to

match. It opens at the side of the front width and comes about nine inches below the knees, which, as the dress skirt is worn quite off the ground and never needs to be held up in the street, is quite long enough. These three garments, the chemilette, flannel drawers and skirt, are put on and off together, which facilitates the operation of dressing. It will be observed that no separate underwaist is required. The stockings, which are also of gray lamb's-wool, hand knit, are worn not much longer than socks, and need no garters, being pulled up over the undersuit and kept up by the bands of the drawers.

IX.

THE DRESS.

The style of the dress must always depend somewhat on the prevailing fashion, but it is well to have an ideal before the mind that we may know in what direction to work to secure health and comfort when modifying and altering any passing style. This ideal is, as we have seen, a short "Princess," or "Gabrielle" dress,* without belt or tie-back; with very little trimming, and made sufficiently loose to enable the wearer to draw a long breath in any position. This style requires less cloth than any other, and is consequently lighter and cheaper. It has no band and no fulness at the waist, and it follows the natural curves of the body. It will, however, probably be long before women will agree to wear year after year any style of dress, even though suitable and becoming, healthful and economical. Meantime they are under the

* "Would you make this costume? Buy a good paper pattern of the Gabrielle; cut off its train, rendering it as short as you can wear it, and still retain your peace of mind; trim some fulness from the gores behind and from the side-seams of the skirt; and fit its waist loosely to your form. Make it of black alpaca, cashmere or silk, and it will be durable and suitable to all seasons. Of cambric, with no waist lining, it is that cool, light washable robe of which we dream when the dog-days are upon us, and Sirius rages."—*Mrs. Abba Gould Woolson.*

dominion of varying fashions, and they will have to bring common sense and ingenuity to bear upon each style as it comes up, deciding what to accept, what to refuse and what to modify.* The main points which are to be secured are the absence of weight and the absence of pressure.

In order to secure lightness it is not necessary to make the dress of flimsy, unserviceable material, although very heavy stuffs should, of course, be avoided. Standard goods of the best quality are not only the cheapest in the long run, but really require the least weight in the way of trimming and lining. Handsome substantial materials, such as cashmere, velvet and broadcloth may make lighter, and, at the same time, more elegant dresses than materials of only half the weight, because in their case much trimming is felt to be unnecessary. If, however, dresses must be voluminously trimmed with the material, by all means let that be as light as possible.

VARIETY UNNECESSARY.

One of the authorities already quoted, says upon this subject :—

"Time and money considered, nothing is more important in dress than the material of which it is made.

*"It is to be remembered for our consolation and encouragement that men have arrived at their present good sense in dress only within two or three generations. A hundred years ago the lords of creation set beauty above health or convenience, just as the ladies do now, and peacocked about in their peach-blossom coats and embroidered waistcoats, surmounted by wigs, for whose stupendous discomfort even a seat on the judicial bench can scarcely reconcile the modern Englishman. Now, when the men of every European nation have abjured such fantastic apparel, we naturally ask, Why have not the women followed their example?"—*Frances Power Cobbe.*

A substantial, plain, elegant fabric carries on the face of it its own recommendation. Like a well-bred person, it is always presentable in any place and upon any occasion; while the flimsy stuff, however much ornamented, like a merely superficial character, shows its worthless origin; and the more you attempt to cover over its defects by gaudy externals, the more apparent they become.

"And how much more economical and sensible is it to have one comfortable suit of clothes, adapted in color, cut, and warmth, to our needs, than to possess a variety of garments, none worn enough to justify us in abandoning them, but all left on our hands when the season ends! The remodelling of such attire, which thus becomes a part of next year's labor, really consumes more time, and gives more annoyance, than the making of wholly new garments."

TRIMMING.

When the material is chosen careful attention should be given to the style of trimming to secure elegance without weight. The weight of a skirt is often trebled or quadrupled by linings, kilt plaiting, flounces, dress protectors, skirt improvers, and especially by the jet trimmings, periodically recommended by the fashion magazines. It is always possible to choose a simple, light trimming and yet have a handsome and "stylish" dress.

If the material chosen be a heavy one, trimmings of the same ought to be out of the question. In that case the dress should be worn as plain as possible; rows of machine stitching, bindings of velvet, or trimmings of

silk should be used to produce the effect required. If the material be comparatively light the trimmings ought to be flat rather than full, and should contain as little cloth as possible. When a long overskirt or polonaise is worn, it is quite unnecessary to have the underskirt made entirely of the material. In fact, the skirt should be made of lining, and trimmed at the bottom with the material, if that be sufficiently heavy to make this mode of procedure an object, and the same plan should, as far as possible, be followed with the fully trimmed single skirt.

THE TRAIN.

During limited periods at different times, short skirts for the street have been in fashion, but as a general thing ladies who wish to be thought well dressed feel obliged to wear a train. Now, with regard to this train, which is a vexed question with those who wish to secure the advantages of the Reform and yet present as "stylish" an appearance as their neighbors, we have several suggestions to offer. Common sense teaches us that though a train is suitable and graceful in the drawing-room and unobjectionable in the carriage, it is eminently unsuitable for foot passengers in the muddy or dusty street. Few people altogether realize this distinction, which is one of great importance. A false idea of economy induces ladies to use the same dress for all purposes, and they consider that it requires a train that it may look "dressy" in the house. When walking, this train, and for this purpose we may call any length a train

which more than touches the ground, is disposed of in three ways, according to the fashion of the period. In the first place it is simply allowed to drag. Ladies who are extremely fastidious in every other respect with regard to the appointments of their toilet, will wear without hesitation skirts which are muddy and frayed at the bottom.* In the second place the skirt is pinned or tied up when required for walking. The objections to this method are that it is seldom entirely successful; that it involves time and trouble, and that the skirt is wider and heavier than a walking skirt needs to be. The third plan is to carry the train in the hand. This is more unobjectionable in a hygienic point of view than either of the other plans. It keeps the dress clean, and the weight is divided between the shoulder and the arm. It, however, requires the entire powers of one arm and hand to be devoted to the purpose of uplifting the dress, and it is, therefore, inconvenient and unjustifiable. It involves ungraceful attitudes in the act of picking up, or (we blush to say it), *kicking* up the train, and has a generally awkward appearance on the street.† The only excuse the always cumbersome train has for existence is that it is supposed to add to the height and elegance of the figure. But to

* Mrs. Oliphant in her recent work on *Dress* is of a different opinion; she says:—"Nothing can be a more certain indication that the wearer of a long train is not a lady than the fact that she allows it to sweep the street behind her."

† E. H. Dixon, the well-known physician, writes: "We are likely to have a new form of an old disease, the consequence of long trains. When every lady is obliged to turn round and bend over to grasp he train with the right hand whenever she gets out of a car or carriage, and to carry it every time she goes into the street, always inclining more

deliberately add a train to a dress for the purpose of spoiling every graceful curve by turning it up and carrying it in the hand, is an absurdity so great that we can hardly believe any one of sense would adopt it. That it is done almost universally when fashion requires it, shows the extraordinary power which fashion possesses.

The simple remedy for the difficulty is to do always what is done when short skirts are in fashion, to make the walking skirt short, and the house or carriage skirt long.

Sometimes fashion requires that the dress should just touch the ground. This is perhaps the worst fashion of all, as the wearer never holds it up unless passing through an especially muddy place. The rest of the time the motion of walking causes it to sweep the ground at every step, wafting clouds of dust upon the person, and covering itself with impurities.*

One very great objection to every dress which has to be held up is that a long, tucked or trimmed heavy underskirt has to be worn with it, which adds considerably to the weight of the clothing and to the difficulty of walking.

or less to the right side, the question arises in every thoughtful medical mind, how long before the spine will be curved toward that side? Nothing is better known than the cause of these 'internal curvatures,' as surgeons call them, as well as rounded shoulders. From such mechanical occupations as require constant lateral or anterior inclinations of the spinal column, the bones of the spine become absorbed, and the column bends as an arch falls when the keystone is crushed. Let the ladies take heed, if they wish to preserve a good figure. Nature is inexorable and will not be trifled with."—*Laws of Life.*

*"Your walking dress must never touch the ground at all. I have lost much of the faith I once had in the common sense and personal delicacy of the present race of average Englishwomen by seeing how they will allow their dresses to sweep the streets if it is the fashion to be scavengers."—*John Ruskin.*

It may require some little courage to wear a short, round skirt and walk freely and gracefully, when others are wearily and awkwardly holding up their trains, but the courage is exerted in a good cause, and will be well repaid. Eccentricity in dress is in general to be condemned, but in this case the gain is of sufficient importance to justify a slight sacrifice of uniformity.*

Thus the simple rule with regard to *weight* is to make the dress as light as possible.†

PRESSURE.

The other matter to be avoided in the dress is *pressure*. The dress must not only not be tight anywhere, but it must be loose enough to enable the wearer to draw a long breath with perfect freedom. This is impossible with ordinary waist-bands, and it is impossible if the dress waist be made to fit snugly. We have seen how to do away with waist-bands in the underclothing, but if the skirt and overskirt be put upon the ordinary bands the trouble will still exist, though in a modified form. The yoke band answers admirably for the skirt of the dress if an overskirt be worn. When a short basque is worn, however, with one skirt, the latter must be put upon an ordinary band, which should be made of unstiffened lining, and several inches longer than

* That the long skirt is the offspring of fashion, and not of any special modesty or refinement, may be judged from the fact that those who wear the longest trains when trains are in fashion, wear the shortest skirts when short skirts are in fashion. There is surely room here for the bold exercise of principle, especially as a moderately short skirt renders the wearer in no way remarkable.

† See Appendix D.

was formerly considered necessary. This extra length is also necessary in the top of the yoke band, and just in this point is probably the solution of the difficulty which many find in wearing suspenders. If the waist be 26 inches, make the waist band 29 or 30, and comfort in that respect is ensured. The buttons, hooks or suspenders keep it sufficiently in place to prevent dragging. If the skirt is full behind, it may be necessary to put an extra strap from the cross band of the suspenders to the centre of the waist band behind.

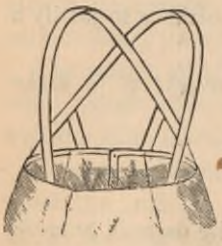


FIGURE 14.

THE BUST SUPPORTER

With regard to the waist of the dress, it must be made looser than at first sight appears necessary, or it will prevent the full expansion of the chest with every inspiration.* It can, however, be made to fit neatly if it is loose, and great care should be taken to have this the case.† Many hold that a dress cannot be made to fit

* As was pointed out in the chapter entitled "Compressing and Depressing," the result of habitual tight lacing is to oblige women to breathe with the upper part of the chest only. Hence those who are thus deformed do not at first feel the need of extra room for expanding the lower part of the lungs. The requisite space should, however, be provided in all cases in the hope that the power of deep breathing may be regained.

† Of course, it is impossible for one who values health more than fashion to altogether meet the views of a "good fit," held by those who limit that term to an unyielding, snugly fitting bodice, worn over a deformed or "wasp" waist. The number of those whose ideal for the human figure is the hour glass must, however, rapidly diminish with the

neatly in front without a corset, and, so far as stout, well-developed figures are concerned, there is undoubtedly some truth in the objection. It cannot, however, be absolutely necessary to encase the whole body in a strait jacket in order to obtain the slight stiffness and support required to make the dress fit neatly over the bust. A very simple expedient will obviate this difficulty, while producing none of the injurious effects of the corset. Take a pair of corsets and measure nine inches or so from the steels along the top of the corset on each side, and cut from that point downwards to the waist. Then take out the steels, and cut off all that comes below the waist. The two pieces may be joined by buttons and button-holes, or may simply be sewed together. The bosom gores are generally made too wide, and will perhaps require to have a little cut out of them to make a neat fit. This "bust supporter" may then be neatly bound, and if properly adjusted inside the dress, will be found to give the desired appearance, and to make the dress "sit" neatly. This, if properly shaped, can do no injury.

FIGURE 15.

WHALEBONES.

Another arrangement familiar to dress-makers, which

spread of knowledge, and meantime the efforts of those who are wiser should be directed towards the education of this class rather than to the imitation of their follies. When physiology is properly studied in schools, the owners of unnaturally small waists will take pains to disguise the deformity.

will be found specially useful in unlined summer dresses, is to attach a piece of lining to each of the side-seams of the dress, extending from a point near the arm-hole to the waist line, so arranged that they will meet in front, where they may be fastened with a lace, or with hooks and eyes. In this lining whale bones are to be placed in sufficient number to afford the support required, but great care must be taken to allow plenty of room. Dress-makers ordinarily make these lining stays much tighter than the dress itself, but they will be found to answer every purpose if made perfectly easy.

The corset itself may be rendered comparatively harmless by judicious modifications, but it can never become an altogether desirable article of dress, and it will not be found comfortable by those who have never submitted to its tyranny. Some remove the steels and substitute buttons and button-holes, trim it off a little below the waist line, and especially over the hips, and add shoulder straps. This makes a comparatively unobjectionable garment, which, however, adds unnecessarily in summer to the warmth of the clothing, and produces an unhygienic and unbeautiful stiffness. The principal difficulty is, however, that if a corset be admitted at all, the temptation to fasten the waist bands tightly over it without support appears to be irresistible, as in that case the pressure of the band is not perceptible. Perhaps not one lady in a hundred could be trusted to wear corsets on this account. So-called "health corsets," which retain the steels, and are large, heavy and stiff, are objectionable in many ways, although they may be much better than the kinds which

boldly claim that they are most effective "in reducing the figure and keeping the form flat," as do certain kinds which are extensively advertised.*

It may be necessary in some cases to wear more whalebones, than formerly, in the waist of the dress, and these whalebones should be changed when they get out of shape. Besides the usual bones in the darts and the side-seams, it is very well to insert bones in the centre of the front and back, and a thin bone on each side of the front midway between the outside darts and the side-seams. These additional bones will prevent the dress from wrinkling in the wrong place, as it is apt to do if worn loose. Every effort should be made to have the dress fit neatly, for if the reproach of slovenliness rests in even the faintest degree upon the Dress Reform, it will prevent thousands from availing themselves of its privileges. †

SLEEVES.

The shoulders of the dress should be cut high to allow perfect freedom to the arm, and the sleeve should be so made as not in any way to cramp its movements. The

* If any style of basque absolutely requires the pressure of the corset upon the abdomen to make it fit neatly, that style should be avoided. Fashion may be imperious, but now-a-days it always presents a choice, and the wise will accept the good and reject the evil.

† We are aware of the fact that extreme hygienists condemn the use of whalebones, but if the dress be easy they can hardly be injurious, and with the present fashion are required for the neatness which is an absolute necessity if the Dress Reform is to be successful. Many cases have come to light in which the adoption of reform garments by a slovenly, easy-going person has irremediably prejudiced a whole community against them.

extremes of very tight sleeves which do not permit the elbow to bend freely, and very loose, open sleeves which do not protect the arm, and which catch on every projection, are to be avoided for general wear. The latter would not be so objectionable for evening dresses were it not that they cannot be worn with the long, warm under sleeve, which we have shown to be so desirable.

LOW NECKED DRESSES.

Low necked dresses for evening wear are also undesirable and somewhat dangerous, as the wearer must not only leave off the high dress, but all high under waists and flannels, and thus expose her system to great risk of chill.*

Miss Frances Power Cobbe writes in the *Contemporary Review* :—

"The practice of wearing *décolletée* dresses, sinning equally as it does against health and decency, seems to be gradually receding—from ordinary dinners where it was universal twenty years ago, to special occasions, balls and court drawing-rooms. But it dies hard, and it may kill a good many poor creatures yet, and entail on others the life-long bad health, so naturally resulting from the exposure of a large surface of the skin to sudden chills."

* Of course, if ladies felt the chilliness which might naturally be expected to result from changing warm high-necked garments for a low dress, it would be easy to convince them of the impropriety of the custom, but from reasons explained on pages 72 and 73 and in Appendix B, they seldom feel this, but are on the contrary often unnaturally warm and flushed with excitement when in full evening dress. Hence their comparative immunity from cold.

FULL DRESS.

Mrs. H. R. Haweis, an acknowledged authority in Art, says in her recent book, "The Art of Beauty," concerning low dresses:—

"As for shapes of dresses, a good way of testing the beauty of form is by drawing the outline of a dress, and looking at it from all points of view, and with half-closed eyes. This test, applied to that form of gown which was so long in vogue—the long, pinched waist, and the unnatural width of the hips, low neck, and no sleeves—proves the extreme ugliness of it. This gown in outline simply looks like a very ill-shaped wine-glass upside down. The wide crinoline entirely conceals any natural grace of attitude, the horizontal line across the neck invariably decreases height, and the absence of sleeves is a painful blot to an artistic eye. Few women's arms are beautiful above the elbow. We are not like the Greeks, who made the improvement of the body their dearest study; and, not having reduced our superfluous fat and cultivated our muscles into per-

fection, we ought to be careful how we expose them.

. . . . . .

"It is a mystery how any fashion so hideous or so unmeaning as the modern low dress ever came in. It infallibly diminishes the height. There was nothing approaching it in bareness of design, in poverty of invention, or opportunities for indecency in the days of the finest costumes—I had almost said in *any* previous age. There have been many corrupt fashions, but they have been almost always picturesque ones.

"In the sixteenth and seventeenth centuries the women were sufficiently *décolletée* for such a book to be published as *A Just and Seasonable Reprehension of Naked Breasts and Shoulders*, with a preface by Richard Baxter; and they were as bad in the eighteenth century; but then, if the dress was not high behind, the arms were covered to the elbow—the whole effect was not so scanty and fleshy as the modern low neck and back and shoulder-straps."

X.

BOOTS, HATS AND WRAPS.

THE ARTIST'S DIFFICULTY.

Who has not suffered from tight or ill-shaped boots? Mrs. Haweis says* :—

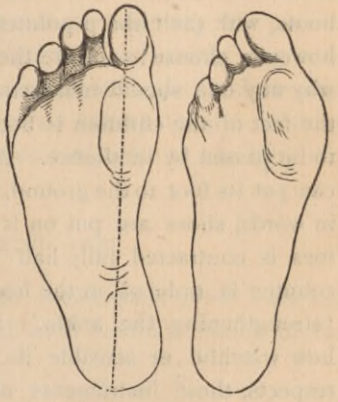


FIGURE 16.—Natural and Deformed Shape of Foot.

"Every artist knows that any foot that has worn a shoe is deformed. The great toe is bent in toward the rest of the toes, instead of being bodily parted. The other toes are crushed and shortened. How seldom in real life does one find the second toe longer than the great one, its natural length. If an artist wishes to make a study of a beautiful foot, does he choose out the smallest-footed lady of his acquaintance and copy those "little mice" of

* "The Art of Beauty."

hers? No, he ignores the whole race of English and French women. He goes off to the East, or to the fish women on the shores of Italy, who have never worn a shoe; there he studies the free, practised muscles, the firm steps, the ineffably graceful movements."

Another recent writer says:—

"Canova chose 500 beautiful women from whom to model his Venus, and among them all could not find a decent set of toes. If he had lived now-a-days what luck would he have had under the dainty little buttoned boots, with their sharp-pointed heels? If adult women, however, choose to torture themselves, there is no reason why any one should remonstrate; but the condition of the feet of the children is becoming too serious a matter to be passed by in silence. As soon as the helpless baby can put its foot to the ground, and before it can complain in words, shoes are put on it by which the width of the toes is contracted fully half an inch; and usually a stiff counter is ordered in the heel, with some vague idea of 'strengthening the ankle.' From that time, no matter how watchful or sensible its parents may be in other respects, these instruments of torture always constitute part of its dress. Toes are forced into a narrower space year by year, 'to give a good shape to the foot,' until they overlap and knot and knob themselves over with incipient corns and bunions. Then the heel is lifted from the ground by artificial means, and thus the action of the calf muscles is hindered, and the elastic cartilage of the whole foot is stiffened at the earliest and most tender

period of its growth. The results are a total lack of elasticity in the step and carriage, and a foot inevitably distorted and diseased. American women are noted for their cramped and mincing walk. Southern children are more fortunate in this matter than those in the North, as it is customary, even in the wealthiest classes, to let their feet go uncovered until the age of six. Mothers in the North are not wholly to blame, however, as the climate requires that the feet shall be covered, and it is almost impossible to find shoes properly made for children, unless a last is ordered for the foot. As a new last would be required every month or two, very few parents are able to give the watchfulness and money required; but if the proper shape were insisted upon by those buying shoes, dealers would quickly furnish them. Nothing is more prompt than the reply of trade to any hint of a new want of fashion."

DISTORTED FEET.

Mr. Joel McComber, an enthusiastic New York last maker, says in a lecture delivered before a branch of the American Institute:—

"There are feet which suffer distortion yet do not suffer pain in any great degree. These are the most unfortunate cases of all, as no warning cry of agony comes to demand relief for the abused feet. The suffering which accompanies the maltreatment of our bodies is important and salutary. It is the sentinel guarding the wonderful human fabric with sleepless vigilance, and telegraphing to the

brain all unfair encroachments. Let no one who has worn boots and shoes from infancy to maturity claim that his feet are perfect, simply because he has not suffered greatly. It will be found, in such cases, that the undue and unequal pressure has so far paralyzed the nerves as to render them insensible to abuse. The circulation has been impeded, and sensitiveness has given place to obtuseness. Instead of "breaking in" the shoe, the foot itself has been broken in, and in losing its symmetry has lost also its desire and its ability to complain. It becomes the worst victim to the unholy warfare waged by ignorance, because an unresisting one. The worst foot is the foot which wears whatever leathern thing the shoemaker puts upon it, and never complains. The best foot is the active, vigorous one, which openly rebels—in corns and bunions and bad nails and sore places—against the cruel treatment. For this there is a certainty of salvation; for the other there is little hope. In most cases of deadened sensibility it will be found that the trouble has been wrought in infancy and in childhood. It is then that the superior judgment of the observing parent should be exercised, to save the little one from distortion and lasting injury. Excessive pressure upon any part deprives it of the power of feeling, if applied long enough."

A TEST.

"Try and see how much strength exists in your toes. There should be great strength there; there is practically but very little. Very few can support themselves by their toes alone, without resting partially upon the ball of the

foot. This is because people cannot and do not use their toes naturally when walking in the shoes now provided for them. If shoes were properly constructed all the toes would assist naturally in walking."

CIRCULATION IMPEDED.

In his appeal to parents, Mr. McComber says :—

"Just look at a baby's foot. There is no more beautiful and curious member of the human body than a healthy, natural foot. How many of my readers can look at their own feet and call them beautiful? Why are they not as handsome as the infant's foot? It is because their feet have been most cruelly treated and their original beauty despised and destroyed.

"The distortion of the foot commences with the first tottering steps of the child. From the time the innocent babe commences to walk alone, until death, this process continues. The first pair of shoes may not accomplish serious injury, but, as ordinarily constructed, they are sure to commence the deforming process. The foot is in a cramped, unnatural position, the great toe is forced inward toward the others, and its joints begin to put on the appearance of a protuberance. The abominable work is fairly begun, never to be suspended.

"The delicate frame work of soft and imperfectly ossified bones forced into a leather case, having no proper adaptation to the shape of the structure which it clothes, gradually assumes the shape of the ill-formed and unyielding sheath. It does not thus conform itself to the

barbarous structure provided for it without inducing suffering or causing a multitude of evils. It suffers at every point of contact, and it entails upon the poor little wearer numerous lasting woes. The circulation is impeded at the very period of youthful development, when it should be free and unchecked. The result of this is found in congestion of the vital organs, the brain, the heart, the liver, and the kidneys. How many a child who has been called a poor scholar has owed the failure in the daily lesson to badly formed boots or shoes.

"Let it be understood, as it is not now, that the mere local pain and disturbance caused by the present style of dressing the feet is but a very small portion of the evil which it does, or may cause. If free circulation is impeded at any one point, some other part of the body must necessarily have more than its share of blood—must be engorged, and engorgement is congestion, and congestion is always dangerous.

"A clear head and impeded circulation cannot go hand in hand. If this is true of adults it is even more true of children. It behooves parents then to start right, as well in the physical as in the moral development of their little ones. If they would have their children walk uprightly as men and women, let them be as careful how they distort their feet as they are how they permit their morals to be distorted. The errors of youth may be repented of; the deformity remains. To begin right with the child is the duty of the parent, because the child is not able to exercise intelligent judgment. With a start in the right direction all things are possible; but with a deformity

commenced almost at the cradle absolute relief is difficult and uncertain. The Chinaman who compresses the feet of his infant daughter is scarcely more cruel, and is guilty of hardly greater barbarity, than the American father who suffers the tender feet of his children to be practically ruined for life by forcing them into the nameless abominations which are generally considered respectable foot coverings."

TIGHT BOOTS.

No one acknowledges to wearing tight boots, but there is little doubt that many feet are never permitted to reach the size that would be natural and becoming. From the time she is able to walk the little girl's boots never allow for growth, and were it not that the boots wear out with marvellous rapidity the resulting compression would bear a fair comparison with that practised by the Chinese. Fortunately, too, the child spends long hours in bed, when Nature, no doubt, does its best to make up for the loss of time through the day. This constant compression accounts, in some measure, for the very moderate powers of walking and standing possessed by women, and for their persistent cold feet. Many have an idea that a large foot will look smaller if crowded into too small a boot! This is, generally speaking, quite contrary to the facts of the case. A boot which is too long will often look much smaller than one that is too short, a statement which is not so paradoxical as it appears.

FIGURE 17.—A comfortable Boot.

RATIONAL FOOT COVERINGS.

To get a boot made to fit is, however, no easy matter, even for dress reformers. There are bootmakers in many of the large cities, and especially in London and New York, who claim to follow the natural shape of the foot, and to make boots which will be easy the first day they are worn.* Satisfaction, however, is not always found with these, although the price paid may be high. When the foot is full grown it is desirable to have special lasts made by an intelligent lastmaker, and to have the boots always made upon these lasts. If these boots are found to press at any point, induce the bootmaker to nail a piece of

* The form of shoe represented above was designed by a Swiss scientist, Dr. Herman Meyer, and has been found very comfortable by those who have tried it. The dotted line represents the usual shape. Dr. Meyer says: "So long as the influence of fashion is confined to the cut and amplitude of the coat, the form and color of the hat, and the like, the only harm that accrues is the probable production of a somewhat ludicrous effect. It signifies little, so far as health is concerned, whether a man wears a grey coat or a brown one, but it is of some importance whether the shoe he wears be broad or narrow, rounded or pointed, long or short. The shape of the shoe has too much influence on health and comfort to be left to the dictates of fashion.

"The influence of fashion on the shape of the shoe produces the most baneful effects on the mechanism of the foot, and on its soundness, and thus materially affects our moving about, and our consequent ability to take a sufficient amount of open air exercise.

"It is quite clear that the foot must get into the shoe, and if the shoe differ in shape from the foot, it is no less plain that the foot, being the more pliable, must necessarily adapt itself to the shape of the shoe. If, then, fashion prescribes an arbitrary form of shoe, she goes far beyond her province, and in reality arrogates to herself the right of determining the shape of the foot."

leather on the last at that point. In this way at length comfort may be attained. Any one who tries the difference between a wide sole and a narrow sole, in actual walking, will hardly be willing to return to the latter. The heel should be low and broad, and should be set straight under the heel of the foot, and not sloping toward the centre*

CHILDREN'S SHOES.

Dr. Pye Henry Chavasse, a London surgeon, in his well-known and useful volume, "Advice to a Mother," says:—

"Let me urge upon you the importance of not allow-

* A New England newspaper is responsible for the following account of a young lady who visited a celebrated oculist with a trouble in her eyes, which threatened serious results:—"She was already in a state where reading was out of the question, and other entertainment was fast becoming a torment. 'I can walk and ride and drive and do anything with my strength; if it wasn't that my eyes were in such condition I could enjoy so much, and now I can enjoy nothing,' was her woful complaint. The oculist looked at her with his professional wisdom, asked her various questions, and then suddenly amazed her by asking her to put out her foot. This sounded like the most extraordinary request. Had the good doctor lost his wits? and, thinking something of this kind, the foot, in its smart kid boot, with the wicked tall little heel the young lady was so proud of, was thrust forth. The doctor eyed it a moment with a stolid face, then, 'Go home,' he said, 'and take off those heels—keep them off for a month, and then come to me again, and we'll see how the eyes are!' In a month the eyes were well, and the young lady learned by her experience and little wise talk how near she had come to having no eyes at all. It may not follow that all young women equally devoted to wicked heels will be affected in a like manner; but it serves to show that there is the possibility, and always the certainty, that with that instrument of torture constantly at work in the centre of the foot, where all those delicate nerves and tendons lie that are so intimately connected with all the other delicate nerves of the body, there must presently come some disarrangement and disease that may work fatal mischief with the health, and, consequently, with the enjoyment and good looks of the wearer."

ing your child to wear *tight* shoes; they cripple the feet, causing the joints of the toes, which ought to have free play, and which should assist in walking, to be, in a manner, useless; they produce corns and bunions, and interfere with the proper circulation of the foot. A shoe ought to be made according to the shape of the foot—rights and lefts are therefore desirable. The toe-part of the shoe must be made broad, so as to allow plenty of room for the toes to expand, and that one toe cannot overlap another. Be sure, then, that there be no pinching and no pressure. In the article of shoes you ought to be particular and liberal; pay attention to having nicely fitting ones, and let them be made of soft leather, and throw them on one side the moment they are too small. It is poor economy, indeed, because a pair of shoes be not worn out, to run the risk of incurring the above evil consequences.

"*Shoes are far preferable to boots:* boots weaken instead of strengthen the ankle. The ankle and instep require free play, and ought not to be hampered by boots. Moreover, boots, by undue pressure, decidedly waste away the ligaments of the ankle. Boots act on the ankles in a similar way that stays do on the waist—they do mischief by pressure. Boots waste away the ligaments of the ankle; stays waste away the muscles of the back and chest; and thus, in both cases, do irreparable mischief.

"It is a grievous state of things that in the nineteenth century there are but few shoemakers who know how to make a shoe! The shoe is made not to fit a real foot, but a fashionable imaginary one! The poor unfortunate toes are in consequence screwed up as in a vice!"

A HINT TO INVENTORS.

Boots should be so made as to require very little time to put on. Numerous buttons, some of which are continually coming off, and which always require the aid of a button-hook, are not a desirable feature of the modern boot, while laces, which knot and break, are only a shade less troublesome. Boots with elastic sides are objectionable, both as regards health and as regards appearance, so that it will be seen that there is a want of some new invention for the fastening of boots, which, like a clasp, could be fastened at a touch. Instead of sewing on buttons, the patent button fastener, a curved piece of wire, slipped into the shank of the button on the inside of the boot, may be used with advantage, as the button can then never come off unless it breaks.

RUBBERS.

Rubber overshoes are very necessary in wet weather, not only to protect the feet from damp, but to protect the boots from mud, if these latter have to be worn all day, as in the case of girls attending school, and ladies occupied in teaching or business. A heavy muddy boot is certainly very undesirable wear for the house, and a much lighter boot can be worn if rubbers be used to protect it while walking in damp weather. Rubber overshoes should not, however, be worn a moment longer than is necessary, as they make the feet damp by retaining moisture, and teachers should see that children do not wear them while in

school in forgetfulness or ignorance.* The low American overshoe with a strap over the instep and one around the heel of the boot will be found to afford sufficient protection from roads which are merely damp, but high ones are, of course, required for rain. The special advantage of this low overshoe is that it may be worn with any shape of heel.

LEGGINS.

FIGURE 18.

When soft snow lies deep on the roads, or when the rain falls in torrents, strong boots and overshoes are not found sufficient, and the leg from the ankle to the knee becomes thoroughly wet by contact with the wet skirts. Many colds are taken through exposure of this kind on the way to shop, church or school, and it has been difficult to find a remedy. Now, however, it is possible to purchase at many shoe and india-rubber stores a waterproof leggin of any size required, and we may say that it is important to secure exactly the right size, as ill-fitting ones are neither useful nor comfortable.

* Inquiries made during a spell of wet weather, elicited the statement from a twelve-year-old boy attending a large Montreal school, that only three boys in his class were in the habit of taking off their rubbers in school, and there seemed reason to believe that in some other classes the proportion was not much larger. What is even more extraordinary, the writer has actually seen invalid ladies at a health resort wearing rubber overshoes in the house for hours together.

STOCKINGS.

Stockings should fit the foot and leg neatly, but tightness at the toe should be especially guarded against. They should be held up by suspenders, never by garters.* Garters worn above the knee are more injurious, it is said, than those worn below, as they compress certain large blood vessels. The suspenders should be attached to some garment worn over the shoulders, and never to a band passing round the waist. Ladies should also be careful to attach them at the side and not toward the front, as the strap passing over the abdomen would be hurtful. If the drawers are worn to the ankle, suspenders are rather troublesome, and it has been suggested that socks requiring no suspenders might, in that case, be worn. In this connection Mrs. Woolson's suggestions will be found useful:

"When a flannel suit is worn and is close-fitting at the ankle, the stocking may be drawn up over it, and secured at top by a button or small safety-pin. When the suit is loose at the ankle, the stocking will pass under it; and an elastic or tape band for its suspension must be attached to the upper portion of the garment at some comfortable point, so that the shoulders may serve for the support.

"For this purpose, a piece of stout tape, about a third of a yard long, may be folded over at the middle, so as to give the shape of the letter V with the included angle

* "Any band elastic, or otherwise, which is tight enough to keep the hose smooth, is tight enough to interfere with the circulation of the blood."—*Dr. Mary J. Studley.*

made acute. Upon the point of the V sew a button; sew the two upper ends of the V to the inside of the flannel or cotton chemiloon, just above the waist-line at the side; then the button will hang free from the garment, and will pull from the shoulder on both front and back. To the button on the lower point of the doubled tape attach some stocking-supporter that may be found convenient. Some portion of this supporter should be elastic; and one end of the upright band should be doubled upon itself, by means of a movable slide or in some other way, so that it can be made longer or shorter according to the length of the stocking. The top of the stocking will be secured by buttons, or by a simple clamping contrivance upon the ends of the supporter."

Knitted stockings are best for winter wear, as they are likely to be warmer than woven ones, and are certainly more economical in the long run, as, if made with good yarn, they will wear for years. If one pair of stockings does not keep the feet warm, it is best to wear two.*

* Ladies will often complacently say, "My feet are like icicles all the time," and never make a single effort to mend the matter, not realizing that it is anything but a question of comfort. Cold feet are so bad for the health, however, that it is well worth while to take a good deal of trouble to avoid this condition. If exercise will not warm them other means must be resorted to. A thick rug on a cold floor, a stone jug with a rubber cork for hot water, a couple of bricks kept in the oven ready to put in carriage or sleigh, and a foot muff made like a tea-cosy, only, of course, much larger, are inexpensive luxuries, and would often save the cost of a severe illness. A convenient foot muff may be made out of two pieces of cretonne, 20 inches wide and fifteen deep, lined with the same material, well stuffed with batting and bound with braid. A hot bottle may be put in this if desired. Artificial heat should, however, be avoided if the feet can be kept warm without.

GLOVES AND MUFFS.

Gloves that compress the hand or wrist are injurious. There is no special beauty in having a hand too small in proportion to the figure. Beauty is more in the shape of the hand than in the size, and the shape is certainly not improved by a tight glove. Muffs are hardly to be commended on the score of grace, as they keep the arms in an unnaturally stiff position.

Dr. Mary J. Studley says:—

"There can be no real grace of motion for the woman who walks with her hands in a muff; nor does she secure that full expansion of the chest, and so that full benefit of a walk in the open air, which are insured when the shoulders are thrown back and the arms left to assist, as Nature meant they should, in the act of walking. The seal skins and other skins, which go to make muffs, had much better be put into the form of gloves and mittens."

HEAD COVERINGS.

With regard to the hat or bonnet, there are three principal requirements which should be kept in view. First, it should be a head covering protecting from sun in summer and from cold in winter, and not a mere ornamental structure perched on the side, back or front of the head, or on the top of an erection of hair. Second, it should be light (the weight of a fully trimmed bonnet is sometimes something incredible), should fit comfortably, and not require to be pinned on. Third, it should, if possible, protect the eyes

from the glare of the sun, so that a parasol would not be necessary; and, fourth, it should be becoming and beautiful in itself, which certainly all "stylish" bonnets are not. Fortunately fashion now-a-days permits a wide range of choice, but still it is frequently difficult to obtain head gear which even approximates to these requirements, and the only present remedy seems to be to hold on to a sensible style as long as possible, and not to be too anxious to follow the fashions at the expense of health and comfort.

Miss Frances Power Cobbe, in her recent article on "The Little Health of Ladies," in the *Contemporary Review*, says, after speaking of brain-heating chignons:—

"Along with them should be classed the bonnets which expose the forehead to the cold, while the back of the head is stewed under its cushion of false hair, and which have the still more serious disadvantage of affording no shelter to the eyes. To women to whom the glare of the sun is permanently hurtful to the sight, the necessity for wearing these bonnets on pain of appearing singular or affectedly youthful, constitutes almost a valid reason against living in London. And the remedy forsooth is to hold up perpetually a parasol! a yet further incumbrance to add to the care of the draggling train, so that both arms may be occupied during a whole walk, and, of course, all natural ease of motion rendered impossible. In this, as in a dozen other silly fashions, the women who have serious concerns in life are hampered by the practice of those who think of nothing but exhibiting

their persons ; and ladies of limited fortune, who live in small rooms and go about the streets on foot or in cabs, are compelled (if they wish to avoid being pointed at) to adopt modes of dress whose sole *raison d'être* is that they suit wealthy *grandes dames*, who lounge in their barouches or display their trains over the carpets of forty-feet long drawing-rooms. What snobbery all this implies in our social structure ! Some ten millions of women dress as nearly as they can afford in the style fit at the most for five thousand."

WRAPS.

Fashion must, of course, determine to some extent the shape of outer garments, but it is well to bear in mind certain principles with regard to them, in order to make, at all times, the best choice possible. In winter the object should be to get as much warmth as possible with as little weight. Long cloaks and circulars if of heavy material are only suitable for the carriage. Those who walk, unless piercing winds are to be encountered, should favor the *sacque* shape, made comparatively short, as every inch taken off the length saves a great deal of weight, and the requisite warmth can be easily obtained otherwise.* The more close-fitting a mantle is, other things being equal, the warmer it will be, but it should be made perfectly easy about the arms, chest and shoulders.† The

* Let any one who doubts the superiority of the short to the long cloak, find by experiment the comparative distances which they can walk, without fatigue, in each, and conviction will follow.

† Cases have been known where a heavy, ill-fitting winter cloak, dragging down the shoulders, has been the first cause of an injury to the lungs, which afterward developed into consumption.

shawl, according to one critic, "impedes the movement of the body in walking, covers the arms till they are nearly useless, and crowds about the neck." It has, however, the advantage of not being subject to changing fashions and of improving some figures, though, on the other hand, there are many who cannot wear a shawl if they would look well.

XI.

CLOTHING FOR THE LITTLE ONES.

INFANTS' CLOTHING.

It is a curious fact that in the most enlightened countries of the world, in this most enlightened nineteenth century, a girl-baby is often hardly an hour old before the first steps have been taken toward deforming her precious little body. Owing to the style of clothing, which one generation has taught to another, the little body is overheated, and the soft, little bones are pressed together; and, as we have already shown, the long clothes (see page 86) press down the toes, and even force the feet out of their natural position. The nurse, anxious that her little charge should, when grown up, have an elegant figure, pins the band far too tightly around the body, and when the child cries from the discomfort so produced, she drugs it for the colic, or trots it to soothe the little stomach.

The baby's appeal,

> "O mother, dear mother, no wonder I cry,
> More wonder by far that your baby don't die,"

has more truth than poetry in it, for it is not surprising that a large proportion of the babies do die.

Hygienists now teach that bands are as much out of place in a baby's garments as they are in its mother's. One band of soft flannel, which is more elastic than cotton, is needed at first, put on very carefully, so as to retain its place without compressing the body; but this, says a lady doctor* of long experience, "need be worn in ordinary cases but a week or ten days." The clothing itself should consist of loose, high-necked, long-sleeved garments; but to save unnecessary trouble in changing, the underskirts may be made separately, and buttoned on a little, high-necked waist. Various arrangements of this new underclothing have been suggested, and of these we will try to give an idea to our readers. The main point insisted on is, that the clothes should be *loose*, so loose that "if the baby is restless, or has the colic, you can, without undressing it, carry the hand up under the clothing, and rub the back, or stomach and bowels, to its great relief." †

FIGURE 19.—Infant's Waist.

* Dr. R. B. Gleason, of Elmira, N. Y., who says:—"The one band need not be retained after the navel is healed, if all is right in that region. If not, then the surgeon should advise what must be worn. Those cases of hernia, or breach, which we have seen were not where the bands had been removed, but where retained and adjusted with anxiety. Feeble infants when crying need to have the bowels supported by gentle pressure from an intelligent hand. This will do more to prevent hernia than any band."—*Talks to My Patients.*

† Mrs. Gleason says:—"Many mothers, who are anxious to leave their infants sufficient breathing and growing room, slip their fingers under the inelastic bands as a test of tightness; when this can be done easily, they feel certain that they are 'plenty loose.' Such should remember that portions of the ribs, spine and breast-bone are cartilaginous, not yet made into solid bone; that they yield to slight pressure, and if that pressure be permanent, assume a form correspondingly."—*Ibid.*

The undershirt to be worn next the skin may be made of soft linen or cambric, and should be high-necked and long-sleeved. Above this comes an underwaist* (Fig. 19) very similar in form, also high-necked and long-sleeved, upon the bottom hem of which flat buttons are to be placed. This may be made of silk or cotton-warp flannel, which does not shrink much, or if a knitted wool undershirt be worn, this waist may be made of cotton. One or two skirts are to be buttoned to this waist, and the ingenious mother will find some way of also by its means supporting the diaper, which should be fine and soft. This may, perhaps, be done by sewing to the inside of the lower hem short bands or tapes, to which the diaper may be fastened with safety pins, or a slightly made longer band may pass between the legs, over the diaper and be buttoned to the waist at the front and back. Experience will show what is the most convenient way, but it is most important that something should be done to obviate the necessity of pinning the napkin tightly round the abdomen.† A clumsy diaper is apt to cause deformity of the legs,‡ and

* A pattern of this waist is given in the Supplement.

† See Appendix E.

‡ There is no doubt that the wearing of a clumsy napkin, night and day, must tend to produce deformity. A learned English physician, who recently advanced a curious theory to account for the prevalence of bow-legs among children, is thus answered by an American mother :—"We think that any thoughtful and intelligent mother will say at once that the cause of the deformity called bow-legs or knock-knees is due directly or indirectly to the improper adjustment of the child's linen rather than to any predisposition the little one may have for rubbing the soles of the feet together. The pernicious habit that some mothers have of crowding two or three and sometimes even four folded napkins or diapers between a child's legs is simply barbarous, and this we have often seen done. In one instance we saw a young

as soon as possible the child should be taught to make known its wants, and the diaper be dispensed with altogether.*

Two skirts may be made, one of flannel and one of cambric or cotton, and, according to some authorities, these should not be much more than half a yard long, and perhaps a yard and a quarter wide at the bottom. They are gored to fit, and simply need to be hemmed at the top, and button-holes inserted to button on the little underwaist. The little legs are to be kept warm by long stockings, which it is suggested may be easily made by crocheting long tops to the little bootikins found in the shops. Instead of separate skirts, some recommend that

child only about three months old when prepared for the night, wearing a diaper composed of an old bed quilt : this was doubled twice, or so as to form four folds, and placed inside a linen one, which was drawn very tight around the hips and pinned. Upon remonstrating with the mother for such cruelty to her child, she quickly asked in astonishment, 'Do you suppose that I am going to have my good bed spoiled by having that child wetting it every night?'

"When we come to think of a child being kept almost constantly in such a position as that for several months, and that, too, at a time the bones and tissues are so easily misplaced, is it any wonder that the child should be deformed? Nay, we often wonder that they are ever able to walk at all."

* Another warning with regard to this article of clothing is given by Dr. Chavasse, who says :—"An infant's clothes, napkins especially, ought never to be washed with soda. The washing of napkins with soda is apt to produce excoriations and breakings-out." He further quotes Sir Charles Locock's recipe for the detection of this practice, which is as follows : "As washerwomen often deny that they use soda, it can be easily detected by soaking a clean, white napkin in fresh water, and then tasting the water ; if it be brackish and salt, soda has been employed."—*Advice to a Mother.*

two high-necked and long-sleeved slips, one of flannel and one of cotton, should be worn under the dress, and in this case the underwaist may be made without sleeves. As the child grows older some put on diaper drawers, which support and conceal the diaper, and help to keep the legs warm. These should, of course, be buttoned or pinned to the underwaist. The simple Gabrielle dress may be made a little longer than the skirts, and above it, instead of a shawl or jacket, a little flannel wrapper opening in front and considerably shorter than the dress, but made in the same style, is recommended. When the baby is old enough to wear leather boots over the little stockings,* great care should be taken that these do not compress the toes, and they should be laid aside as soon as they are outgrown. Slippers with straps are said, by a Boston physician, to be very objectionable, as the strap cuts the little foot cruelly. The same lady states that she has seen corns on babies six months old. Caps, which used to be considered such a necessary part of an infant's wardrobe, are now declared to be not only unnecessary, but injurious, and the wise mother will be careful not to

* "Let me strongly urge you to be particular that the sock or stocking fits nicely—that it is neither too small nor too large; if it be too small, it binds up the toes unmercifully, and makes one toe to ride over the other, and thus renders the toes perfectly useless in walking; if it be too large, it is necessary to lap a portion of the sock, or stocking, either under or over the toes, which thus presses unduly upon them, and gives pain and annoyance. It should be borne in mind that if the toes have full play, they, as it were, grasp the ground, and greatly assist in locomotion, which, of course, if they are cramped up, they cannot possibly do. Be careful, too, that the toe-part of the sock or stocking be not pointed; let it be made square, in order to give room to the toes."—*Pye Henry Chavasse, F.R.C.S.*

adopt them, even if they again come into fashion. Veils also should not be used unnecessarily.*

FIGURE 20

Little difficulty will be found in planning and cutting these garments with the assistance of the patterns in the Supplement, but full sets of patterns may easily be obtained from the Dress Reform Agencies in New York and Boston, or from the Hygienic Institute, Dansville, Livingston County, N. Y. This last set of patterns, planned by Dr. Kate J. Jackson, contains an admirable feature, which we recommend for universal adoption. This is what used to be known as the "raglan" sleeve, which, instead of being set into the ordinary arm-size, terminates in a point at the neck. This sleeve gives the little arms entire freedom of motion, slips on and off with the greatest ease, and does away with irritating seams over the shoulder.

The young mother should be willing to make up her baby-clothes as simply as possible to save her own time and strength. Quiet rest in the open air is much better for mother and babe than an ornamental wardrobe, and it should never be forgotten that long hours of machine stitching are, so far as the expectant mother is concerned, not only suicidal in tendency, but murderous.

* "I cannot help expressing my disapprobation of the practice of smothering up an infant's face with a handkerchief, with a veil, or with any other covering, when he is taken out into the air. If his face be so muffled up, he may as well remain at home; as under such circumstances, it is impossible for him to receive any benefit from the invigorating effects of the fresh air."—*Pye Henry Chavasse, F.R.C.S.*

FOR LITTLE GIRLS.

As the little maiden grows older anxious friends will urge the mother to keep her body in tight, firmly-fitting bands, and sometimes no little strength of mind is required to reject such advice, fortified as it always is, by reference to children who, having been so treated, have grown up with the "elegant figure" before alluded to. The wise mother will, however, resist all such persuasions; and will, at an early day, put the little girl into chemilettes, made in much the same style as those she wears herself * (Figs. 20 and 21).

FIGURE 21.

It is, however, easier for a sensible mother to clothe her little girl loosely than it is to clothe her warmly with the short skirts and stockinged legs now in vogue. The idea formerly so prevalent that children should be hardened † by exposure has now largely passed away, but it

* Dr. Richardson, lecturing recently in London on "Woman's Dress," summed up the idea of the reform needed clearly, but crudely, in saying that in all practical details the dress of women should be the same as that of men, only in lighter materials, with the exception of the exterior robe or gown. Speaking of girls, he says:—"Let the mothers of England clothe the girls precisely as they clothe the boys, permitting knickerbockers if they like, and let them add the one distinguishing mark of light, loose flowing gown, and the girls will grow into women as vigorous, as healthy and as well formed in body as their companions of the sterner sex."

† Mr. Herbert Spencer says:—"It is needful to remark that children whose legs and arms have been from the beginning habitually without covering, cease to be conscious that the exposed surfaces are

is still difficult for a mother to imagine how she would feel if condemned to wear in winter, like her babe, one thickness of muslin over neck and arms, or to face the cold blast with the greater part of her legs covered with but one thickness of cotton, as her six-year-old daughter has to do.

ONE MOTHER'S PLAN.

That it is possible to dress little girls warmly may be seen from the following extract telling how one mother dressed her daughter, which we take from *The Laws of Life*, from which some useful suggestions may be gained. We think, however, that the first suit should, perhaps, have been of flannel,* or lamb's wool, instead of merino. The account is as follows :—

"The first garment is a union suit of soft merino. There are two grades, one light and thin for fall and spring, another for winter, fine and soft, but heavier. If these cannot be found woven whole, the vest is cut off to the right length, and the drawers seamed to it. Indeed,

cold ; just as by use we have all ceased to be conscious that our faces are cold even when out of doors. But though in such children the sensations no longer protest, it does not follow that the system escapes injury, any more than it follows that the Fuegian is undamaged by exposure, because he bears with indifference the melting of the falling snow upon his naked body."

* Dr. Chavasse says :—"Flannel, as it is a bad conductor of heat, prevents the sudden changes from affecting the body, and thus is a great preservative against cold. Flannel is as necessary in the summer as in the winter time. Indeed, we are more likely both to sit and to stand in draughts in the summer than in the winter, and thus we are more liable to become chilled and to catch cold."

a gossamer suit, the drawers buttoned to the waist, so they can be taken off without undressing, is put on in cool or wet summer days. Over this suit is worn a cotton-flannel union suit fitted with great care, having a seam in front to conform to the outline of the figure. Both suits come to the wrists and ankles, are buttoned behind and open on the right side only, the slit being left long enough for convenience. There are three buttons on the sides, one above another, the lower to hold the elastic stocking-strap, the next the fall band, and the upper the gaiter dress drawers. There is also one button in front to hold the over-drawers, and two behind at equal intervals between the side buttons.

"The hose are knit of soft wool yarn, and come near to the hips. The very best thick-soled shoes with inside wool-covered cork soles are worn, and in very cold or wet weather arctics or rubber overshoes. There is no under-skirt (except a white one for summer dresses), and the dresses are all princesse fashion, made of woollen goods, and lined throughout with heavy linings, like colored drillings or unbleached cotton. The outer garment is a beaver cloth coat, double-breasted and reaching to the ankles. It is lined with brown cotton-flannel and wadded. This lining has a thin interlining back of the wadding, and is sewed in slightly so that it can be taken out after the coldest part of the season is past, and thus the coat answers for all seasons—a matter of economy in dressing a growing child. Knit woollen mittens are fastened to the coat by cords so they cannot be lost, and a knit woollen hood protects the head.

"A very important part of the out-door dress is the over-drawers, which terminate in nicely fitting gaiters coming down over the foot and held by straps under the boots. They are to be put on and off with the coat, and give that protection to the lower part of the body which the coat does to the upper. Being intended for hard service in snow and slush they are of waterproof and lined with bedticking. These materials seem well nigh impervious to water. They button to the under suits; the gaiter ends button by a few buttons over the bootees about the ankle, and elastic straps hold them under the shoe. The child comes in from play on the snowiest or wettest days, and, taking off coat and drawers and arctic shoes, is perfectly dry. So the dear little five-year-old, snug and warm and safe, almost lives out of doors in winter, and is well-nigh as hardy as the chickadees and nut-hatchers that pipe to her from the bare trees."

COLD PREVENTS GROWTH.

It is not, perhaps, generally known that warmth is necessary to growth. Mr. Herbert Spencer points this out in the following paragraphs from his work on "Education:"—

"When the constitution being sound enough to bear it, exposure does produce hardness, it does so at the expense of growth. This truth is displayed alike in animals and in man. The Shetland pony bears greater inclemencies than the horses of the South, but is dwarfed. Highland sheep and cattle, living in a colder climate, are

stunted in comparison with English breeds. In both the Arctic and Antarctic regions the human race falls much below its ordinary height; the Laplander and Esquimaux are very short; and the Terra del Fuegians, who go naked in a cold latitude, are described by Darwin as so stunted and hideous, that 'one can hardly make one's self believe they are fellow-creatures.'

"Science clearly explains this dwarfishness produced by great abstraction of heat; showing that, food and other things being equal, it unavoidably results. For, as before pointed out, to make up for that cooling by radiation which the body is constantly undergoing, there must be a constant oxidation of certain matters which form part of the food. And in proportion as the thermal loss is great, must the quantity of these matters required for oxidation be great. But the power of the digestive organs is limited. Hence it follows, that when they have to prepare a large quantity of the material needful for maintaining the temperature, they can prepare but a small quantity of the material which goes to build up the frame. Excessive expenditure for fuel entails diminished means for other purposes; wherefore there necessarily results a body small in size, or inferior in texture, or both.

"See, then, the extreme folly of clothing the young scantily. What father, full-grown though he is, losing heat less rapidly as he does, and having no physiological necessity but to supply the waste of each day—what father, we ask, would think it salutary to go about with bare legs, bare arms, and bare neck? Yet this tax upon the system, from which he would shrink, he inflicts upon

his little ones, who are so much less able to bear it; or, if he does not inflict it, sees it inflicted without protest! Let him remember that every ounce of nutriment needlessly expended for the maintenance of temperature, is so much deducted from the nutriment going to build up the frame and maintain the energies; and that even when colds, congestions, or other consequent disorders are escaped, diminished growth or less perfect structure is inevitable."

THE FATHER'S DUTY.

The sensible mother then will see that the child's legs are kept warmly covered in cold weather with thick drawers, bloomers, knitted stockings and leggins, and she will devote more attention to securing suitable head-coverings* and comfortable broad-soled, low-heeled boots for her child than to embroidering her dress. Indeed, finery is out of place on a child's every day clothes. They should be chosen with reference to wear, so that the child's play need not be restrained, nor the mother overworked. With reference to this point, Mr. Herbert Spencer feels obliged to call for the interference of the

* Dr. Chavasse says :—"It is an abominable practice to cover a child's head either with beaver or with felt, or with any thick impervious material. It is a well-ascertained fact, that both beaver and silk hats cause men to suffer from headache, and to lose their hair—the reason being, that the perspiration cannot possibly escape through them. Now, if the perspiration cannot escape, dangerous, or at all events injurious, consequences must ensue, as it is well known that the skin is a breathing apparatus, and that it will not with impunity bear interference."

fathers to prevent the evil consequences of maternal vanity. He says :—

"Lamentable, indeed, is it to see mothers seriously damaging the constitutions of their children out of compliance with an irrational fashion. Discomfort, more or less great, is inflicted; frequent disorders are entailed; growth is checked or stamina undermined; premature death not uncommonly caused; and all because it is thought needful to make frocks of a size and material dictated by French caprice. Not only is it that for the sake of conformity, mothers thus punish and injure their little ones by scantiness of covering; but it is that from an allied motive they impose a style of dress which forbids healthful activity. To please the eye, colors and fabrics are chosen totally unfit to bear that rough usage which unrestrained play involves; and then to prevent damage the unrestrained play is interdicted. 'Get up this moment: you will soil your clean frock,' is the mandate issued to some urchin creeping about on the floor. 'Come back: you will dirty your stockings,' calls out the governess to one of her charges, who has left the footpath to scramble up a bank. Thus is the evil doubled. That they may come up to their mamma's standard of prettiness, and be admired by her visitors, children must have habiliments deficient in quantity and unfit in texture; and that these easily-damaged habiliments may be kept clean and uninjured, the restless activity, so natural and needful for the young, is more or less restrained. The exercise which becomes doubly requisite when the clothing

is insufficient, is cut short, lest it should deface the clothing. Would that the terrible cruelty of this system could be seen by those who maintain it. We do not hesitate to say that, through enfeebled health, defective energies, and consequent non-success in life, thousands are annually doomed to unhappiness by this unscrupulous regard for appearances; even when they are not, by early death, literally sacrificed to the Moloch of maternal vanity. We are reluctant to counsel strong measures, but really the evils are so great as to justify, or even to demand, a peremptory interference on the part of fathers."

XII.

RESOLVING AND DOING.

We have now fully described the apparel which enlightened ingenuity proffers to the women of our time. "Clothe yourself thus," says an enthusiastic American reformer, "and life is no longer a burden. You look like other women, and no one suspects that you are not as miserable as they; but you breathe when they gasp, the library books on the top shelf are within your reach, and when a friend asks you to walk a mile you are ready to go with him twain." It is not, however, a mere question of comfort, or even of health for the individual. Miss Cobbe puts the matter in the right light when she says: "I hold it to be an indubitable fact that if twenty years ago a rational and modest style of dress had been adopted by English women and encouraged by English men instead of being sneered down by fops and fools, the health not only of women but of the sons of women, *i. e.*, of the entire nation, would now be on altogether a different plane from what we find it." We have described the reform, and have now to leave the responsibility of carrying it out with the conscience of each reader.

It is the *duty* of every woman to use every means within her power to preserve or regain her health. It is her

duty to be as strong as possible, and as fit for the work which God has given her to do. If then she finds the testimony of this book as to the injurious nature of her present attire unanswerable, let her begin as soon as possible to improve matters.

Those who are so conservative as to be quite unwilling to give up at once their accustomed garments, or who have worn their corsets so tight that they feel as if they were "falling to pieces" without them, and who therefore cling to them with not unnatural desperation, should consider carefully what point they are willing to yield, and *begin* there. Do not relinquish the hope of relief because you are unwilling at first to go the whole length. If you are willing to loosen your corsets, do so. If you can agree to lighten your skirts, and wear suspenders, do not hesitate to do it because you object to the chemilette. It is so much clear gain. If you can make up your mind to the chemilette, wear, if you must, your corsets above it, but loosen them and support the outer skirts by waists and suspenders, and by and by you will find yourself forgetting to put them on at all, and then you may consider the victory gained, and month by month you will see with pleased surprise your former ailments and weaknesses disappear, and will wonder much at former blindness and ignorance. You will not then despair if you find your friends as slow to avail themselves of the way of escape as you were, but will persevere in pointing out the right way.

A caution here may be necessary. Many have tried to reform at one point or another, and the change not

being in harmony with the rest of the dress has made them very uncomfortable, and they have speedily returned to the old style. Many, for instance, after reading or hearing of the evil of the corset, have laid that article aside and have attempted to button the waist-bands to an under-waist. The result of this change was a feeling of discomfort, as though the waist were girt about with a tightly fastened rope. Experience teaches that if the corset is abandoned the waist-bands must be abandoned also. Others have experimented on stocking suspenders, attempting to fasten them to the corset or waist-band, and have relinquished the plan as unfeasible. Others declare skirt suspenders injurious, because they have not the wit to fasten the front strap almost under the arm, where it can do no harm.

Any one with a moderate amount of resolution and intelligence can easily surmount all obstacles and make her "freedom" suit, as enthusiasts call the new attire, everything that is desirable and beautiful. She will then feel inclined to call her neighbors and friends to exult with her over the wonderful discovery which she has made, and will soon induce them to follow her example if she perseveres in keeping before them the merits of the system, letting nothing turn her aside from her purpose.

FALSE ECONOMY.

The first thought which will arise in most minds on this subject, will probably phrase itself something as follows: "My underclothes are all made; I have enough to last me for several months or years. It will be time

enough when they are worn out to attempt the new kind. I cannot afford to do anything at present." "Cannot afford" generally means "will not afford." The same people who cannot afford the two or three dollars necessary to purchase the material for the new underclothes, will manage in one way or another to afford the new bonnet and handsomely trimmed suit when the season changes. It depends upon what relative importance you attach to health compared with outside appearance as to which style of garment will have the preference in the immediate future. If economy be necessary, you will, as we have shown, be able, with a little ingenuity, to transform most of your present garments into those demanded by the reform. It is a very false economy to save off matters affecting one's health. Illness and doctor's bills will come to far more than chemilettes and suspenders.

PREVENTION BETTER THAN CURE.

The main difficulty is to persuade women that they are really injuring their health at present. Retribution comes surely, but it comes often so slowly that the victims of dress cannot be persuaded that it is coming at all. Many will read this book carelessly and yield but a half assent to its teachings, and the effect will soon pass off without producing any result. We can only advise such as do not feel themselves sufficiently impressed to reperuse the chapter entitled "COMPRESSING AND DEPRESSING," and to notice that so many qualified observers all agree exactly as to the injury done, and point out the same remedy.

"The mills of God grind slowly,
But they grind exceeding small."

Your health may be now what you call perfect, but there is no doubt that by errors of dress you, in the first place, lose a great deal of that elasticity and buoyancy which is your natural right; and in the second place, if you do not change, injury is being gradually done which will certainly show itself in the course of time—injury which is proportioned to the *compression* caused by the corset and bands and to the *depression* caused by the weight of skirts. A glance at the delicate subject treated in pages 81 to 85 will show one of the most serious of the ways in which harm may be done, and yet perhaps the one which is least often attributed to dress. Teach the young to be wise in time.

WARNING.

We have said so much in favor of this reform that it is but fair to mention also the objections made to the new costume by those who have tried it, that by being forewarned, our readers may be forearmed against using too freely their new liberty. A lady remarked half jokingly to the writer,—

"I think the Dress Reform is dangerous, because you are able to do so much more without fatigue that when you are worn out it is much harder to recover from the exhaustion than in former times. Why," she continued, "in old times I used to be so tired after a morning shopping that I had to lie down, but with the reform

costume I was able to work on and on until I broke down altogether." Now, there is, no doubt, some force in this objection, but its force lies, as may be seen at a glance, not in the direction of wearing heavier skirts, but in the direction of taking needed rest. Very few women take the rest they need under any circumstances; some cannot, and the rest will not, and the consequence is early wrinkles and premature death.* Again, those who by the change of dress have been relieved from severe periodical troubles, are apt, in their complacency, to over-exert themselves at such times, and thus, perhaps, they bring on worse ailments than those which they have escaped. This danger is so easily avoided that it needs only to be hinted at in the way of warning, but it should be remembered that it takes a long time for unused or relaxed muscles to recover their natural strength, and if it be desirable to increase the amount of exercise taken, it should be done carefully and with regularity, especially guarding against making spasmodic efforts when there is any special drain upon the system.

"FASHION AND PHYSIOLOGY."

The position which this reform is taking in the United States may perhaps be best shown by a chapter taken from Miss Alcott's recent work, the "Eight Cousins," which bears the title given above.

It may be explained that Rose, the heroine, had become quite delicate under the unwise nurture bestowed upon

* *I. e.*, death before the age of seventy.

her by her aunts, when fortunately her guardian uncle, Dr. Alec, returned from abroad, and with a few months under his wise physical training the weakly girl had grown strong and hearty:—

"'Please, sir, I guess you'd better step up right away, or it will be too late, for I heard Miss Rose say she knew you wouldn't like it, and she'd never dare to let you see her.'

"Phebe said this as she popped her head into the study, where Dr. Alec sat reading a new book.

"'They are at it, are they?' he said, looking up quickly, and giving himself a shake, as if ready for a battle of some sort.

"'Yes, sir, as hard as they can talk, and Miss Rose don't seem to know what to do, for the things are ever so stylish, and she looks elegant in 'em; though I like her best in the old ones,' answered Phebe.

"'You are a girl of sense. I'll settle matters for Rosy, and you'll lend a hand. Is everything ready in her room, and are you sure you understand how they go?'

"'Oh, yes, sir; but they are so funny! I know Miss Rose will think it's a joke,' and Phebe laughed as if something tickled her immensely.

"'Never mind what she thinks so long as she obeys. Tell her to do it for my sake, and she will find it the best joke she ever saw. I expect to have a tough time of it, but we'll win yet,' said the Doctor, as he marched upstairs with the book in his hand, and an odd smile on his face.

"There was such a clatter of tongues in the sewing-room that no one heard his tap at the door, so he pushed it open and took an observation. Aunt Plenty, Aunt Clara, and Aunt Jessie were all absorbed in gazing at Rose, who slowly revolved between them and the great mirror, in a full winter costume of the latest fashion.

"'Bless my heart! worse even than I expected,' thought the Doctor, with an inward groan, for, to his benighted eyes, the girl looked like a trussed fowl, and the fine new dress had neither grace, beauty, nor fitness to recommend it.

"The suit was of two peculiar shades of blue, so arranged that patches of light and dark distracted the eye. The upper skirt was tied so tightly back that it was impossible to take a long step, and the under one was so loaded with plaited frills that it 'wobbled'—no other word will express it—ungracefully, both fore and aft. A bunch of folds was gathered up just below the waist behind, and a great bow rode a-top. A small jacket of the same material was adorned with a high ruff at the back, and laid well open over the breast, to display some lace and a locket. Heavy fringes, bows, puffs, ruffles and *revers* finished off the dress, making one's head ache to think of the amount of work wasted, for not a single graceful line struck the eye, and the beauty of the material was quite lost in the profusion of ornament.

"A high velvet hat, audaciously turned up in front, with a bunch of pink roses and a sweeping plume, was cocked over one ear, and with her curls braided into a club at the back of her neck, Rose's head looked more

like that of a dashing young cavalier than a modest little girl's. High-heeled boots tilted her well forward, a tiny muff pinioned her arms, and a spotted veil, tied so closely over her face that her eyelashes were rumpled by it, gave the last touch of absurdity to her appearance.

"'Now she looks like other girls, and as *I* like to see her,' Mrs. Clara was saying, with an air of great satisfaction.

"'She does look like a fashionable young lady, but somehow I miss my little Rose, for children dressed like children in my day,' answered Aunt Plenty, peering through her glasses with a troubled look, for she could not imagine the creature before her ever sitting in her lap, running to wait upon her, or making the house gay with a child's blithe presence.

"'Things have changed since your day, Aunt, and it takes time to get used to new ways. But you, Jessie, surely like this costume better than the dowdy things Rose has been wearing all summer. Now, be honest, and own you do,' said Mrs. Clara, bent on being praised for her work.

"'Well, dear, to be *quite* honest then, I think it is frightful,' answered Mrs. Jessie with a candor that caused revolving Rose to stop in dismay.

"'Hear, hear,' cried a deep voice, and with a general start the ladies became aware that the enemy was among them.

"Rose blushed up to her hat brim, and stood, looking, as she felt, like a fool, while Mrs. Clara hastened to explain.

"'Of course I don't expect *you* to like it, Alec, but I don't consider you a judge of what is proper and becoming for a young lady. Therefore I have taken the liberty of providing a pretty street suit for Rose. She need not wear it if you object, for I know we promised to let you do what you liked with the poor dear for a year.'

"'It is a street costume, is it?' asked the Doctor, mildly. 'Do you know, I never should have guessed that it was meant for winter weather and brisk locomotion. Take a turn, Rosy, and let me see all its beauties and advantages.'

"Rose tried to walk off with her usual free tread, but the underskirt got in her way, the over-skirt was so tight she could not take a long step, and her boots made it impossible to carry herself perfectly erect.

"'I haven't got used to it yet,' she said, petulantly, kicking at her train, as she turned to toddle back again.

"'Suppose a mad dog or a runaway horse was after you, could you get out of the way without upsetting, Colonel?' asked the Doctor, with a twinkle in the eyes that were fixed on the rakish hat.

"'Don't think I could, but I'll try,' and Rose made a rush across the room. Her boot-heels caught on a rug, several strings broke, her hat tipped over her eyes, and she plunged promiscuously into a chair, where she sat laughing so infectiously that all but Mrs. Clara joined in her mirth.

"'I should say that a walking suit in which one could not walk, and a winter suit which exposes the throat, head and feet to cold and damp, is rather a failure, Clara;

especially as it has no beauty to reconcile one to its utter unfitness,' said Dr. Alec, as he helped Rose undo her veil, adding, in a low tone: 'Nice thing for the eyes; you'll soon see spots when it is off as well as when it is on, and, by and by, be a case for an oculist.'

"'No beauty!' cried Mrs. Clara, warmly. 'Now that is just a man's blindness. This is the best of silk and camel's hair, real ostrich feathers, and an expensive ermine muff. What *could* be in better taste, or more proper for a young girl?'

"'I'll show you, if Rose will go to her room and oblige me by putting on what she finds there,' answered the Doctor, with unexpected readiness.

"'Alec, if it is a Bloomer, I shall protest. I've been expecting it, but I know I *cannot* bear to see that pretty child sacrificed to your wild ideas of health. Tell me it *isn't* a Bloomer!' and Mrs. Clara clasped her hands imploringly.

"'It is not.'

"'Thank Heaven!' and she resigned herself with a sigh of relief, adding plaintively, 'I did hope you'd accept my suit, for poor Rose has been afflicted with frightful clothes long enough to spoil the taste of any girl.'

"'You talk of *my* afflicting the child, and then make a helpless guy like that of her!' answered the Doctor, pointing to the little fashion plate that was scuttling out of sight as fast as it could go.

"He closed the door with a shrug, but before any one could speak, his quick eye fell upon an object which

caused him to frown, and demand in an indignant tone:—

"'After all I have said, were you really going to tempt my girl with those abominable things?'

"'I thought we put them away when she wouldn't wear them,' murmured Mrs. Clara, whisking a little pair of corsets out of sight with guilty haste. 'I only brought them to try, for Rose is growing stout, and will have no figure if it is not attended to soon,' she added, with an air of calm conviction that roused the Doctor still more, for this was one of his especial abominations.

"'Growing stout! Yes, thank Heaven, she is, and shall continue to do it, for Nature knows how to mould a woman better than any corset-maker, and I won't have her interfered with. My dear Clara, *have* you lost your senses that you can for a moment dream of putting a growing girl into an instrument of torture like this!'—and with a sudden gesture he plucked forth the offending corsets from under the sofa cushion, and held them out with the expression one would wear on beholding the thumbscrews or the rack of ancient times.

"'Don't be absurd, Alec. There is no torture about it, for tight lacing is out of fashion, and we have nice, sensible things now-a-days. Every one wears them; even babies have stiffened waists to support their weak little backs,' began Mrs. Clara, rushing to the defence of the pet delusion of most women.

"'I know it, and so the poor little souls have weak backs all their days, as their mothers had before them. It is vain to argue the matter, and I won't try, but I wish

to state, once for all, that if I ever see a pair of corsets near Rose, I'll put them in the fire, and you may send the bill to me.'

"As he spoke, the corsets were on their way to destruction, but Mrs. Jessie caught his arm, exclaiming merrily, 'Don't burn them, for mercy's sake, Alec; they are full of whalebones, and will make a dreadful odor. Give them to me. I'll see that they do no harm.'

"'Whalebones indeed! A regular fence of them, and metal gate-posts in front. As if our own bones were not enough, if we'd give them a chance to do their duty,' growled the Doctor, yielding up the bone of contention with a last shake of contempt. Then his face cleared suddenly, and he held up his finger, saying, with a smile, 'Hear those girls laugh; cramped lungs could not make hearty music like that.'

"Peals of laughter issued from Rose's room, and smiles involuntarily touched the lips of those who listened to the happy sound.

"'Some new prank of yours, Alec?' asked Aunt Plenty, indulgently, for she had come to believe in most of her nephew's odd notions, because they seemed to work so well.

"'Yes, ma'am, my last, and I hope you will like it. I discovered what Clara was at, and got my rival suit ready for to-day. I'm not going to "afflict" Rose, but let her choose, and, if I'm not entirely mistaken, she will like my rig best. While we wait I'll explain, and then you will appreciate the general effect better. I got hold of this little book, and was struck with its good sense and good

taste, for it suggests a way to clothe women both healthfully and handsomely, and that is a great point. It begins at the foundations, as you will see if you will look at these pictures, and I should think women would rejoice at this lightening of their burdens.'

"As he spoke, the Doctor laid the book before Aunt Plenty, who obediently brought her spectacles to bear upon the illustrations, and after a long look exclaimed with a scandalized face :

"'Mercy on us, these things are like the night-drawers Jamie wears ! You don't mean to say you want Rose to come out in this costume ? It's not proper, and I won't consent to it !'

"'I do mean it, and I'm sure my sensible Aunt *will* consent when she understands that these—well—I'll call them by an Indian name, and say—pajamas—are for underwear, and Rose can have as pretty frocks as she likes, outside. These two suits of flannel, each in one piece from head to foot, with a skirt or so hung on this easily fitting waist, will keep the child warm without burdening her with belts, and gathers, and buckles, and bunches round the waist, and leave free the muscles that need plenty of room to work in. She shall never have the back-ache if *I* can help it, nor the long list of ills you dear women think you cannot escape.'

"'*I* don't consider it modest, and I'm sure Rose will be shocked at it,' began Mrs. Clara, but stopped suddenly as Rose appeared in the doorway, not looking shocked a bit.'

"'Come on, my hygienic model, and let us see you,'

said her uncle, with an approving glance, as she walked in, looking so mischievously merry that it was evident she enjoyed the joke.

"'Well, I don't see anything remarkable. That is a neat, plain suit; the materials are good, and it's not unbecoming, if you want her to look like a little schoolgirl; but it has not a particle of style, and no one would ever give it a second glance,' said Mrs. Clara, feeling that her last remark condemned the whole thing.

"'Exactly what I want,' answered the provoking Doctor, rubbing his hands with a satisfied air. 'Rosy looks now like what she is, a modest little girl, who does not want to be stared at. I think she would get a glance of approval, though, from people who like sense and simplicity, rather than fuss and feathers. Revolve, my Hebe, and let me refresh my eyes by the sight of you.'

"There was very little to see, however, only a pretty Gabrielle dress, of a soft, warm shade of brown, coming to the tops of a trim pair of boots with low heels. A seal-skin sack, cap, and mittens, with a glimpse of scarlet at the throat, and the pretty curls tied up with a bright velvet of the same color, completed the external adornment, making her look like a robin red-breast—wintry, yet warm.

"'How do you like it, Rosy?' asked the Doctor, feeling that *her* opinion was more important to the success of his new idea than that of all the aunts on the hill.

"'I feel very odd and light, but I'm warm as a toast, and nothing seems to be in my way,' answered Rose, with a skip which displayed shapely gaiters on legs that now

might be as free and active as a boy's, under the modest skirts of the girl.

"'You can run away from the mad dogs, and walk off at a smart pace without tumbling on your nose, now, I fancy?'

"'Yes, uncle! suppose the dog coming, I just hop over a wall so——and when I walk of a cold day, I go like this——.'

"Entering fully into the spirit of the thing, Rose swung herself over the high back of the sofa as easily as one of her cousins, and then went down the long hall as if her stout boots were related to the famous seven leaguers.

"'There! you see how it will be; dress her in that boyish way and she will act like a boy. I do hate all these inventions of strong-minded women!' exclaimed Mrs. Clara, as Rose came back at a run.

"'Ah, but you see some of these sensible inventions come from the brain of a fashionable *modiste*, who will make you lovely, or what you value more—"stylish" outside and comfortable within. Mrs. Van Tassel has been to Madame Stone, and is wearing a full suit of this sort. Van himself told me, when I asked how she was, that she had given up lying on the sofa, and was going about in a most astonishing way, considering her feeble health.'

"'You don't say so! Let me see that book a moment,' and Aunt Clara examined the new patterns with a more respectful air, for if the elegant Mrs. Van Tassel wore these 'dreadful things' it would never do to be left behind, in spite of her prejudices.

"Dr. Alec looked at Mrs. Jessie, and both smiled, for

'little Mum' had been in the secret, and enjoyed it mightily.

"'I thought that would settle it,' he said, with a nod.

"'I didn't wait for Mrs. Van to lead the way, and for once in my life I have adopted a new fashion before Clara. My freedom suit is ordered, and you *may* see me playing tag with Rose and the boys before long,' answered Mrs. Jessie, nodding back at him.

"Meantime Aunt Plenty was examining Rose's costume, for the hat and sack were off, and the girl was eagerly explaining the new under-garments.

"'See, Auntie, all nice scarlet flannel, and a gay little petticoat, and long stockings, oh, so warm! Phebe and I nearly died laughing when I put this rig on, but I like it ever so much. The dress is so comfortable, and doesn't need any belt or sash, and I can sit without rumpling any trimming, that's *such* a comfort! I like to be tidy, and so, when I wear fussed up things, I'm thinking of my clothes all the time, and that's so tiresome. Do say you like it. I resolved *I* would, just to please uncle, for he does know more about health than any one else, I'm sure, and I'd wear a bag if he asked me to do it.'

"'I don't ask that, Rose, but I wish you'd weigh and compare the two suits, and then choose which seems best. I leave it to your own common sense,' answered Dr. Alec, feeling pretty sure he had won.

"'Why, I take this one, of course, uncle. The other is fashionable, and—yes—I must say I think it's pretty—but it's very heavy, and I should have to go round like a walking doll if I wore it. I'm much obliged to auntie, but I'll keep this, please.'

"Rose spoke gently but decidedly, though there was a look of regret, when her eye fell on the other suit, which Phebe had brought in; and it was very natural to like to look as other girls did. Aunt Clara sighed, Uncle Alec smiled, and said heartily:

"'Thank you, dear; now read this book and you will understand why I ask it of you. Then, if you like, I'll give you a new lesson; you asked for one yesterday, and this is more necessary than French or housekeeping.'

"'Oh, what?' and Rose caught up the book which Mrs. Clara had thrown down with a disgusted look.

"'Physiology, Rose. Wouldn't you like to be a little medical student with Uncle Doctor for teacher, and be ready to take up his practice when he has to stop? If you agree, I'll hunt up my old skeleton to-morrow.'

"That was too much for Aunt Clara, and she hastily departed, with her mind in a sad state of perturbation about Mrs. Van Tassel's new costume, and Rose's new study."

XIII.

THOUGHTS FOR THE THOUGHTFUL.

CAUSE AND EFFECT.

It is to be expected that many readers of this little book will at first feel very incredulous as to the amount of injury done by dress. The not unnatural question which arises is, "If dress does all the harm which the doctors say, then why do we not see the effects? Such-an-one has," they say, "in going to every extreme of fashion, committed every error described, and more, and yet she always seems strong and well, or, at any rate, much stronger than many more sensible people." An answer to this question which will be satisfactory to those who have not studied the subject in all its bearings, is difficult to give in short compass. Up to a certain point man's physical nature, and still more woman's, has a tremendous power of endurance. If any part has extra work to do Nature seems to make every effort to assist that part to the utmost, even by drawing away strength from the rest of the body. Of course, the break down when it comes is all the worse for that, but in the meantime injury and special strain are often long concealed, even from the person most interested. Then, again, the matter must be looked at in the light of three or four generations, not

of a single individual only. That is to say, a person who has inherited from parents and grand-parents a strong constitution, well-formed bones and firm muscles, may be able to stand with comparative impunity three times as much of the compression and depression spoken of by the physicians whom we have quoted, as one who inherits a more feeble physique. Behind the effect on the individual also is the question of what sort of constitution is to be transmitted to the next generation. Many infants are born into the world, but how few live to the appointed three score and ten. Some one has said that if the same proportion of lambs died as of babies, no sane man would expect to get his living by rearing sheep. Something is out of joint, or the little ones would live and not die, and it is, at any rate, safe to say that the children of a fashionably dressed woman, if they live at all, can never be as healthy as they would have been had she dressed according to the rules of health. But even with regard to the actual wearer of the garments, Nature always takes her revenge sooner or later. How many so-called victims of fever and consumption might be more truly said to have died of tight lacing, or rather debility occasioned by errors of dress, we can never know ; but it is, perhaps, fair to consider that, as a cause of weakness and indirectly of death, the injuries produced by dress take the same place among women as dram drinking and tobacco smoking do among men. Certainly few women claim to have perfect health, but so far from seeking for the cause of their weakness, they take for granted that women labor under natural physical disabilities, and can

never expect to be very strong. It is, besides, difficult to estimate the real amount of ill-health among women, as the fact that anything is wrong with an individual often is unknown even to her immediate family. With true martyr spirit most women conceal their sufferings as far as possible, and go about with smiling faces, while the body is racked with pain, or exhausted with weariness. It is not impossible even that the very woman who is pointed out by her friends as remarkable for health and energy in spite of violations of hygienic laws, is really walking on the verge of a precipice, down which she may at any moment fall and die, or only survive as a shattered wreck, though we cannot deny that many seem to set all laws of health at defiance with impunity.

The general tendency to ill-health in women has been attributed to various causes, according to the class to which attention has been specially directed. Now it is overwork that is blamed; now too much devotion to study; now it is the sewing-machine, and again the many stairs that have to be climbed in modern mansions. Now it is the standing in shops, then it is the exposure to all weathers, and the rapid monotonous movements exacted from the factory operative. Then we hear that it is the luxurious idleness of the drawing-room, or the late hours and excitement of the woman of fashion that is at fault. With another writer, the diet is the sole trouble, while some one else lays the blame on the fact that girls cultivate delicacy of health in order to increase their attractiveness. That so many reasons are found for ill-health proves, in the first place, that there is a great deal of it to

be accounted for; and, in the second place, that there is something radically wrong in our arrangements. All the causes named are probably at work to produce the effect, but a moment's reflection will show that there is hardly one of them which is not aggravated by the prevalent errors of dress. If standing all day, or running up numerous stairs, or overwork, be injurious under any circumstances, how much more so will it be if heavy skirts drag the internal organs out of position, and at the same time free breathing is prevented. If the diet be faulty, digestion is certainly not helped by the corset steel and waist-band pressing the stomach out of shape. Exposure to the weather is not dangerous if suitable clothing be worn. Hard study would not have the same chance to injure, if the body of the growing girl were not cramped in clothes which prevent the natural development. The child is early taught to substitute an artificial shape for that given her by nature; and it is not altogether wonderful if in other matters she distrusts nature and attempts to improve upon it.

Dress thus intensifies and aggravates every other cause of ill-health and it becomes the duty of every sensible woman to do what she can for its reform.

ETHICS AND ÆSTHETICS.

We have touched but lightly, so far, upon the outside dress, and have treated it entirely with regard to health of body. There is another and equally serious aspect, however, about which we would like to say a few words. If dress so easily affects the health of the body, it may, with

equal facility, affect the health of both mind and soul. Let us put a case. Suppose a man of education and refinement, with a small income for which he does not need to work, and which, with economy, suffices for his wants. Suppose that, with the exception of some hours given to society, he spends his time in the construction of his garments, making them himself for the purpose of saving tailor's bills and spending the money thus saved in the purchase of clothes as fine as any worn by his wealthy neighbors. Let us suppose, farther, that he stints himself in food—for body or mind—all summer, that he may be able to purchase a handsome fur coat when winter comes; that he goes to church chiefly to study the new clothes worn by the worshippers, and that when a new style is observed on any one whom it would be safe to copy, he straightway rips his own garment to pieces, and, laboriously matching the cloth, does his best to imitate the stylish model, at the expense of perhaps a week's work.

The whole supposition is absurd,—no one would for a moment imagine such a man to be sane. If sanity could by any possibility be pre-supposed, no words would suffice to express the scorn with which such conduct would be viewed. It is only women who can spend their lives in this way with impunity. Of course we have taken an extreme case, and, besides, the parallel between a man in such circumstances and a woman is not exact. But are there not many women whose conduct approximates in foolishness that of the man in the case we have described? Is it then with impunity that they thus spend their lives?

To take a low view of the matter—can any one give the mind to the never-ceasing consideration of clothes and not have it essentially vulgarized thereby? How much more true refinement there would be in wearing such clothes as could be easily afforded, and not attempting to vie with those who are richer. It is very desirable to dress well. Every garment should be neat, suitable and becoming; but the question of becomingness is very different from that of expense and from that of following every vagary of the fashion. A garment that is becoming one year ought, if well preserved, to be equally so the next, even though the fashion books suggest something a little different.

The fashionable color, the stylish ruffle, the prevalent mode of dressing the hair or of cutting the dress-waist, may all be most unsuitable to the complexion, shape of head, or figure of the wearer, yet the slave of fashion prefers to be most unbecomingly dressed rather than show in the least her independence of fashion's freaks. Ladies of education and presumably of culture, will, if not possessed of sufficient means to employ freely the art of the dressmaker and milliner, frequently sacrifice their entire time and power of thought, as well as all the money they can obtain from father or husband, to the petty desire of wearing as elegant garments as the neighbor or relative who may have six times as much money to dress upon. This, however, is not the worst of it. The melancholy thing is to hear these ladies boasting that they do all their own sewing, and expecting, for this, to receive the praise of all right-thinking people. They look complacently at

the ruffles and frills and pleatings, the shirrs and *revers*, the puffings and cordings; the fortnight's work put upon one dress of flimsy material and expect praise for "doing their own sewing." They have no time for reading—they do all their own sewing. They have no time to play with or instruct their children; no time to think; no time to pray—they do all their own sewing. They have no time, in fact, for the things which make life really valuable, because if they do not keep the sewing-machine running vigorously they may be left behind in the race after style. Doing all one's own sewing may be praiseworthy, or it may not; let the reader judge which it is in her own case. Might it not be better to dress more simply, and with the money thus saved pay the needy seamstress or the widowed dressmaker, who is trying to bring up her family respectably, for doing the work. Bring conscience into your dressing, and, looking at the matter in the fear of God, do as seems right to you. The Christian's time is not her own, but is bought with a price, and should be used for the glory of God.

The evil which we have pointed out does not end with *ladies*. The wealthy lady dresses richly and can afford to do so;* the well-to-do lady imitates her richer sister, which she can do without any great sacrifice of time or comfort. The lady whose income is barely sufficient for

*"We might dispense with half our complicated folds, our whalebones, our scrunched toes, our immovable arms, and many other miseries, and look less like mere blocks for showing off clothes, and more like human beings; but we can't bear to let the housemaid or the crossing-sweeper think we have got a sixpence in our pockets when it can be hung or piled on our backs, and we go about loaded like the celebrated camel that finally collapsed under a straw."—*Mrs. Haweis.*

the wants of her family must attempt to dress equally well, and must therefore make up in time and thought and skill what she lacks in money. If she has three or four daughters, all to be dressed in equal style, what sacrifices must be made only the victims can tell. Over-worked teachers must sit up far into the night to do what they can to imitate the style of the rich; shop girls must, as they may, vie with the carriage lady in elegance of attire; and the servant girl and the factory operative must do without flannels, underclothing, overshoes, and other necessaries, that their Sunday dress may have as many flounces and puffings of the overskirt as are presented by the fashion-book, and when the attire required by the season is not in perfect readiness, or when the weather threatens destruction to its flimsy material, these latter classes easily excuse themselves from church and Sunday-school, and thus lose a large proportion of their scanty opportunities of learning of a better life.

If people of all classes would be satisfied to dress according to their means, these evils would be largely done away with. We would not, however, be understood to say that this ambition to dress as others do is all bad. It is a manifestation of that spirit which is now working in all classes, rousing them from apathetic contentment with their lot and stirring them up to seek a better and a higher life. This particular manifestation, however, needs to be confined within rather close limits, as it has the power of causing an incalculable amount of evil. The true solution of the problem will probably be found in the future, when all who aspire to the position of true ladies will be con-

tent with modest, well-made, durable garments, and when it will be considered a mark of vulgarity and inferiority to spend a large proportion of the income in personal adornments, or to wear anything which excites attention by reason of its expensiveness, or because it is in the extreme of fashion. A reform beginning at the top would thus work downward, by degrees, until it reached every class of society. *

HINTS AND SUGGESTIONS.

Many ladies are not anxious to vie with those who are richer: they merely want to dress according to their own station in life; but they find that to do this requires more money and time and thought than they are willing to give. They groan under the slavery, but see no means of relief. A few suggestions may be helpful to these.

In the *first* place, then, we would say,—Try to get things of real value for your money. Only rich people can afford to buy bargains. Never buy a cheap or poor material. It costs as much, perhaps more, to have a poor material made up as a good one, and it will only last a third or fourth of the time, and never look as well. A cheap material tempts to excessive trimming to cover its poor-

* Experience has apparently proved the utter futility of attempting to bring hygienic reasons, or indeed abstract principles of any kind, to bear upon the dress of the comparatively ignorant and uncultivated members of society. Wherever dress reform principles have penetrated within the last seven years, they have been invariably caught up and practised by really cultivated women, and as invariably rejected and scorned by the half-educated women and girls who are everywhere, unfortunately, in the large majority. This majority will only accept reform garments when these are sanctioned by the usage of women of wealth and position.

ness, while a good stuff will be a continual pleasure from its own excellence. A good dress material may be worn for years. It may be scoured, turned, dipped, made over, and at last given away, while a flimsy one is unfit even to give away after a little wear. To trimmings the same principle will apply. A woman will often spend in two or three years, on fringes or fancy trimmings, an amount which would purchase real lace sufficient for a life-time. The fringes wear out, fade, and are good for nothing in less than a season, while the lace would last out her time and then go down to her descendants. Yet she says she cannot afford to buy real lace. In purchasing dress goods, fancy stuffs should be looked upon with great suspicion, especially if they present an unusually fine appearance for the price. It is safer to keep to standard materials of which you have proved the durability, though even these will vary greatly in different years. If ladies would insist on obtaining durability, rather than cheapness, the manufacturers would soon rise to the demand, and would improve the style of their goods as fast as they are deteriorating them at present.

Having chosen a good material, have it, in the *second* place, *well made*. A well made garment wears longer, looks better, and is in every way more satisfactory, than one that is badly cut and poorly put together. The wearer is tempted to lay aside a poorly made dress, long before it is worn out. To secure this point, you will probably have to secure the aid of an experienced and skilful dress-maker, and this is generally the truest economy, as, apart from the fact that it will be better done, your

time is probably worth more to yourself and your family, than the few dollars which you will have to pay out. It is better to have one or two durable, well made dresses, than half a dozen poor ones.

In the *third* place, choose a material and a style which are not likely soon to go out of fashion. Many styles are evidently so ephemeral, that no economical person should have anything to do with them. Extremes of fashion should in all cases be avoided, while sensible styles should secure your support and approval, and you should cling to them as long as possible. It is needless to say, that it is not necessary to wear anything which looks absurd, merely because others do, or that it is wrong to wear anything which is injurious to health.

In the *fourth* place, after you have bought good material, and have had it well made in a sensible fashion, wear it without alteration as long as possible.* There is something very vulgarizing in the present wide-spread notion that it is necessary to keep things in the latest fashion by continual alterations. The mind should be engaged on better things than the continual study of the

* How cultivated people in Germany look upon this matter of altering dresses may be judged from an incident related by Dr. Mary J. Safford-Blake :—

"I retain as a delightful memory an evening spent at the house of a German Professor in Berlin. There were rare minds gathered together from many lands, men and women whom one had known and prized from afar. The charming manner in which the *Frau Professorin* welcomed her guests left nothing to be desired. I do not know that any other than my American eyes took note, even, of her dress ; certainly no one seemed to scrutinize it. But she was arrayed in a pearl-colored silk, which, as I afterward learned, had been her wedding gown, made fourteen years before. It had a long bodice, with small plaits at the waist and broad ones upon the shoulders ; an open front, with lace

cut and make of garments—a study which interferes not only with culture, but too often with devotion. If a garment gets so much out of date as to attract attention from its singularity, it may be time to think of altering it; but if, as we advise, the extremes of fashion are avoided, this will not often take place.

In the *fifth* place, every woman should decide how much money she can afford and ought to afford to spend upon her own dress in the year, and then she should rigidly keep within that sum. A little calculation will show how much money is required for underclothing, how much for the shoemaker, how much to pay the seamstress, how much for millinery, and how much for dresses and dress-makers. A little system would do away with the vague wonder which many feel as to whether or not they can afford every pretty thing they see, and save many of the interminable hours which some spend in shopping. In connection with this, we would advise strongly that every woman should pay ready money for every article of dry goods. It is an invaluable check upon the purchase of unnecessary or extravagant articles. Running up bills

under-kerchief; mutton-leg sleeves, closed at the wrist, with a frill of lace about them; and the skirt was short and full, and gathered upon the waist. I could but make an estimate then of the probable time she had saved from those fourteen years by wearing her gown as it was first made. I felt sure, taking into consideration the matching of material, the selection of trimmings, the confabs with dressmakers, that would have been necessary to keep the dress modernized in accordance with the changing demands of the mode, that months of precious time had thus been spared to the wearer, and peace of mind beyond computation. Who could tell but that those days, weeks, and possibly months, were what gave her the time, in part, to learn to converse fluently with her guests, as she did, in as many different languages as they represented?"

is a most dangerous thing to do. Especially should the cash system be adhered to in paying for work done, both in justice to those you employ and in justice to yourself. If you pay well and promptly you are in a position to insist upon having your work done well and promptly; and you should do so. If ladies would never employ a second time those who lightly promise work for a definite time and as lightly fail to have it done, there would soon be an end to the intentional deception practised by so many dressmakers, milliners, shoemakers, and others who undertake work.* These few suggestions will, if carried out, assist ladies in dressing well, without giving too much time, thought and money to the work. Of course, the subject is not nearly exhausted.

We have shown at length in this book the danger to health of a blind following of the example of others in matters of dress; and we have hinted at the effects produced on mind and soul by the devotion of so much time and thought to the question of wherewithal we shall be clothed. To simplify dress and render it healthful, and thus deliver woman from the two-fold slavery which saps the vigor of both body and mind, is surely a worthy subject of thought and endeavor. Let our most cultivated and refined women lead this movement, being careful to avoid everything which would excite the prejudices of the ignorant or rouse the fears of the fastidious, and there is hope that in the course of time a wonderful revolution may

* The failure to keep appointments is not all on one side, and ladies often show very little consideration for a dressmaker's time or her engagements with other customers.

be effected. Indeed it is not impossible that in the distant future a time will come when it will not be necessary for a woman to give any more time and thought to her dress than is now necessary for a man, and every one that is interested can do something to hasten such a desirable consummation, by cultivating within certain limits independence of thought, and following styles which are simple, permanent, and of individual suitability, instead of blindly following the freaks of fashion and the whims of the idle rich. *

* There are those who hope for much from the present high-art movement, and certainly the freedom to wear dresses copied from pictures instead of from Parisian models, is a step gained in the way of independence of fashion. It affords, however, no help to those who are not gifted with artistic perceptions, and will probably end in creating as much ugliness of costume as it abolishes.

XIV.

LADIES' HEALTH ASSOCIATIONS.

The amount of good work which has been done by ladies' benevolent societies and temperance and missionary associations, is everywhere recognized and appreciated, and the same energy, good sense and devotion, if brought to bear on the health of the community, could not fail to accomplish wonderful results. The curing of physical ills was the great sign given to the world to prove that the Saviour had come,* and ought not the diffusion of the knowledge how to live physically be considered as truly a religious work as the knowledge of how to live spiritually? Every city, town and village might with advantage have its Ladies' Health Society, which would take into consideration the special needs of the community in this respect, diffusing sanitary information, and suggesting means to set right what is wrong.

In founding such a society, some generally recognized

* "Now when John had heard in prison the works of Christ, he sent two of his disciples, and said unto Him, 'Art thou He that should come, or do we look for another?' Jesus answered and said unto them, 'Go and shew John again those things which ye do hear and see: The blind receive their sight, and the lame walk, the lepers are cleansed, and the deaf hear, the dead are raised up, and the poor have the Gospel preached to them.'"—MATT. xi. 2-5.

and easily remedied evil might be used to form the first rallying cry to bring together those who are interested in putting an end to the trouble, whatever it may be. In one town some insufficiency in the system of street drainage, ignored by voters and office-seekers, may be increasing the death rate indefinitely. In another town a stagnant pond or marsh may spread miasma around at certain seasons. In another, every mother may be induced to join the society in order to secure proper ventilation of the school-houses, or regulations against the spread of infectious disease among the children. In another, ladies may be willing to unite to secure the adoption of an earlier hour for evening parties, that the young people may not be deprived of the sleep so much needed in these days of excitement, or it may be that their efforts may be wisely directed toward the suppression of expensive, unwholesome suppers at these parties, and the offering instead of some simple refreshment. In another the want of a suitable play-ground for children may be the most obvious necessity, or the growing use of tobacco by boys may excite alarm among the thoughtful. Indeed, the number of agencies which are constantly at work to reduce the standard of health in any community, is so great that it cannot be very difficult to find one or two which all would be glad to unite in suppressing.

The important question of Dress Reform could generally be handled by such a society with much greater effect than it could be by a society formed on purpose, and that for the following reasons:—In the first place, the wearing of corsets, waist-bands and heavy skirts is only one of

many ways of producing illness and weakness, and many would be willing to join a health society who would at first scorn the idea of dress reform, although they might be afterward influenced in that direction. In the second place, women are intensely sensitive to ridicule in the direction of dress, not when they are in the fashion, but when they are daring to be out of it, and any society which was known to have dress reform for its object would be certain to receive so much ridicule from outsiders as to render its existence very precarious, and excite unconquerable prejudice against its aims. A health society could, however, discuss the subject of dress at its ordinary meetings, and pass resolutions on the subject without outsiders being any the wiser. In the third place, the one matter of dress reform would hardly afford sufficient occupation for a society for any long period, while a society on a broader basis would find abundant occupation for weekly meetings for an indefinite length of time.

Let us see now, how such a society might be formed and what it might do.* We will suppose that at a sewing circle connected with one of the churches in the town of Z., Mrs. A., who has deeply considered the matter and talked over it with one or two confidential friends, leads the conversation to the subject of health. On this topic all are at home; Mrs. B. tells how her children had the scarlet fever in the spring, and how Johnnie is still deaf from the effects of it, and Annie is so weakly that she does not know whether or not to send her

* See Appendix G.

to school ; Mrs. C. tells of her husband's dyspepsia, which takes away all enjoyment of life ; Mrs. D. grows eloquent on the subject of her bilious attacks, while Mrs. E. tells what she suffers from rheumatism ; and the afternoon proves far too short for Mrs. F. and the rest to tell their tales of woe. Mrs. A. however, puts in her word again, and mentions that she has read that most illnesses might be prevented if people knew enough about the laws of health. Her remarks are disdainfully received by some of the ladies, while others show an intelligent interest in the subject, and at length several agree that it would be a good thing to know more about this matter. Mrs. A. then suggests her carefully considered plan, but objections are at once raised to the effect that the ladies have no time to attend any more meetings, and there is a general sentiment of agreement with Mrs. G., when she remarks with a decisive air, "I never heard of such a thing." However, the idea "takes," the ladies talk it over at home and with their friends of other churches ; and the more they think of it, the more feasible does it seem ; until after a while some half a dozen ladies from two or three different churches meet in Mrs. A.'s parlor by special invitation to mature the scheme. They decide on a time of meeting, on a convenient place, on suitable officers, on the means of raising funds and other matters ; all these decisions being, of course, subject to revision by the society when formed. Then on a certain Sunday it is given out in all the churches, that all ladies who are interested in the formation of a Ladies' Health Society, are invited to meet at a certain time and place. Many

come out of curiosity, but all are interested in the well laid plans and happy suggestions of the committee, and the society being fairly formed, it is decided to meet weekly in some central and convenient room. The Society has before it two definite objects: one is to obtain and diffuse information on the subject of health, and the other is to accumulate moral force sufficient to carry out the reforms agreed upon. Both objects are difficult of obtainment; the first, because there are so many points in which health reformers differ from each other, and the second, because human nature is what it is. Energy, however, conquers all difficulties, and the efficient committee easily select matter from books, tracts and magazines treating of health, which conveys unexceptionable hygienic information. A definite subject is appointed for each meeting, and each lady is invited to bring any information which she can find in her own or her neighbors' experience, bearing upon it, the officers always taking care to be supplied with the opinions of good authorities on that particular point. Half an hour, perhaps, is spent in reading these selections, and then a general discussion ensues, each speaker giving her views or experience. In order that the ladies may be encouraged to talk freely, the seats are arranged around the room if it is a small one, or if it is too large for this, they are placed on three sides of the president's table, not all in front of it as is the custom. If the subject is not exhausted in one meeting, it extends over two or three, but is not passed over until the ladies have reached some definite conclusion, as to whether any reform on that point is required

among them, and, if so, exactly in what that reform should consist. It may sometimes be desirable to put the decision in the form of a resolution. At all events, it should be definitely understood and recorded by the secretary. Of such resolutions, the following may serve as specimens :—

Resolved :—The Health Society of Z., being convinced that the gas emitted by the school-house furnace is injuring the health of our children, appoint the following ladies a committee to confer with the authorities, and to see if the defects can be remedied.

Resolved :—The Ladies' Health Society having reason to think that oatmeal porridge would form a decidedly hygienic addition to the breakfast table, especially as regards children, hereby appoint two ladies as a committee, to wait upon the grocers of Z., and request them to obtain a supply of oatmeal of superior quality, that the experiment may be fairly tried, and further empower the committee to have directions printed for the use of the oatmeal, said directions to be supplied gratuitously to the purchasers.

Resolved :—The Health Society of Z. is of opinion that it is desirable to discourage the prevalent practice of allowing little girls to wear jewelry and expensive dresses at school, and that it would be better taste never to dress children in any easily spoiled material.

Resolved :—The style of underclothing ordinarily worn, by ladies, having been shown to be decidedly injurious in principle, the following ladies are appointed a committee to obtain the best patterns of the various reform garments, which patterns shall be exhibited at the meeting, and lent

to the members in turn ; and this committee is also requested to take orders for suitable suspenders, and have them imported by the dry goods merchants.

Resolved :—We, the officers and members of the Health Society of Z., do agree henceforth to abstain from the use of wine in cooking, for the following reasons: first, it countenances the sale of intoxicating liquors ; second, it places temptation in the way of servants; and third, it tends to develop in children a dangerous taste for stimulants.

These imaginary specimens will give an idea of the work which might be done by such a society. A very slight yearly subscription from each member would furnish a fund for the purchase of books, tracts and magazines bearing on health, which should, if possible, be freely loaned both inside and outside of the society. No decision should be arrived at without full discussion, or the society will find itself accepting on different days contradictory views, and care should be taken never to go to extremes.*

* Of course, a great deal of the work done by such a society as we have here depicted, would be very crude in its nature, as each health reformer is apt to state his views in an extreme form, and to speak of some one point as though attention to it would at once empty the hospitals. Our society could hardly at first avoid running to some foolish extremes, and, though this should be carefully guarded against, almost anything is better than the apathetic ignorance which prevails concerning the laws which govern health. Time and experience will tone down the belief that people who have been transgressing physical laws in perhaps twenty different ways, will at once attain a state of millennial health by reforming in one or two points, or by running to an opposite extreme of error. The great danger is that one or two individuals may, by insisting on extreme views, disgust the others, and put an end to the society. Care should be taken that the officers, at least, should have well-balanced minds, and power sufficient to suppress extremists.

The benefits to be derived from such a society are immense and far reaching. The very fact of the minds of the people being awakened to the idea that their health largely depends upon their own modes of living, and that it is below the standard attainable, leads at once to many improvements, which would otherwise never be thought of, and the suggestions of the society are soon eagerly received by outsiders. At one meeting a lady reads a paper, expressing her own views on the subject of "the best room," and the next morning the shutters of many parlors are thrown open to admit the sunlight, and in the afternoon and evening husbands and children are surprised and delighted by the invitation to sit around cheerful, open fires in the hitherto close and darkened apartments. Dress reform comes up, and while fashion imposes on women elsewhere an inconvenient train, in the happy town of Z. the fashion equally enforces a neat, cleanly skirt, which never touches the ground. The question of food for infants is discussed, and Mrs. M. learns with surprise that her starch-fed baby, of whose fatness she is so proud, is much more liable to succumb to slight maladies than if it had received more nourishing food, and at once sets herself to enquire into the matter, that she may find a remedy. Mrs. F., Mrs. P. and Mrs. O., young mothers, each with a number of little ones, are taught by the society that they are wronging themselves and their families, if they do not take what rest they need, and that a two hours' nap in the middle of the day is none too long for those who are disturbed at night by restless babes. This teaching, however, would

be in vain, for these ladies are much more anxious to be thought good house-keepers than they are to retain their health, were it not for the moral force brought to bear upon them by the society, which, at length, leads them to compromise upon one hour's rest every day but washing day. Having decided upon this, they keep each other up to it, and husbands and children soon reap the benefit in the comparatively rested nerves and cheerful countenances of those on whom the happiness of their homes depends.*

The society uses every effort to diffuse sanitary information in the community. Old Dr. W. is induced to lecture on ventilation, which is a favorite topic of his; and young Dr. X. is glad of the opportunity of announcing his views on drainage and preventable diseases; while Prof. Y. is invited from the University in the neighboring city, to deliver his celebrated lecture, entitled, "Boys and Tobacco." The ladies take measures to have these lectures well attended and well reported, and they obtain permission to have the last reprinted for gratuitous circu-

*In places where the formation of such a society as we have described is considered quite infeasible, on account of the timidity of would-be reformers, or for any other reason, any lady may induce from one to half a dozen or a dozen of her particular friends to combine with her in quietly carrying out in their own families any particular measure of reform, which they can agree upon. Mrs. A. M. Diaz, in her work, "*A Domestic Problem*," speaking of the drudgery which mothers undergo in making elaborate clothing for their families, makes the following simple but wise suggestion :—"Meanwhile, as an immediate measure of relief, suppose a dozen or twenty mothers in each town should agree to adopt a simple yet tasteful style of dress for themselves and their little girls; this would lighten, at once, their heavy burden of work, give them time to read, and would be a benefit to those little girls in many ways."

lation. Even Dr. S., the most popular minister of the place, catches the enthusiasm and announces a sermon on the text, "Do thyself no harm," in which he shows the sin of disregarding the laws of health established by God, and gives much good practical advice to a crowded audience. As a result of these efforts, Z. becomes known far and wide for its low death rate, and its healthy, cheerful, intelligent inhabitants.

The beauty of the place has been materially increased, for our society has taught that rubbish and refuse around the house is not only untidy, but injurious to the health; and, therefore, everything of that sort is now carefully burned or buried. Further, the society has taught that an abundance of fruit is conducive to health, and the fences are now covered with vines and the roads lined with fruit trees. For all these reasons, the value of property in the town has been materially enhanced, and its children leave it with reluctance, and when they go, they carry with them the teachings which they have imbibed, for the benefit of less favored places, and the ladies never see any reason to regret the formation of the Health Society of Z.

APPENDIX.

A.

HOW DRESS MAY AFFECT GIRLS.

Under this heading, Dr. Verdi, of Washington, says in a work entitled "Maternity":—

"We all love to see children looking pretty, cunning and attractive. The vanity of mothers does a great deal toward the attainment of this aim. Let us commence from the period that a girl baby leaves off her long robes for short skirts. The mother will take care that the baby's chest is well covered; the pretty limbs, however, will be exposed, the little stockings short, and the drawers made of cotton or linen, but thin. If the child goes out: 'Nurse, put a sacque on the baby, and do not let her go out without her hat: it is cool to-day!' Unless it is decided winter, no additional clothing is suggested for her limbs or abdomen. The child goes out, sits on the ground, the temperature of which being lower robs the child of some of the heat from the legs and the lower part of her body. So the child goes from year to year without much difference in her apparel, the dress of the lower half of the body being much less in proportion than the dress of the upper half. The putting on of an extra *skirt* does not help this difference a great deal. In a small child the skirts are so short that they cannot be considered sufficient to keep the child warm any better than an umbrella carried above one's head. The cold air must necessarily get under the skirts, and the warmer the body the quicker the air will rush up—on the principle of a flue.

"In this way the temperature of the body of the girl, from her waist down, is kept from year to year several degrees lower than that of her body from the waist upward.

"*The consequence is serious in the extreme.* Every one knows that cold contracts the skin, veins and arteries, and propels the blood from the surface. Put your hand in ice-water for a few minutes, and you will see it shrunk and colorless, for the blood has been driven from it. This process is going on all the time that the child is less warm in one

part of the body than in another. In the coolest part the circulation becomes slower as the blood is driven away. Where is the blood driven to? To the other parts of the body, where it is not wanted, where it clogs up and actually causes passive congestion.

"What is the first ill effect produced? *Constipation.* The bowels, like the stomach, have their functions to perform in digestion; they require the same quantity of animal heat; they require unobstructed circulation.

"But to expose the surface of the abdomen causes great evaporation of needed heat; the cold drives the blood to the interior, causing a clogging up in the internal circulation; the digestion, robbed of the heat, its operation interfered with, becomes gradually slower, all its functions slower and delayed; and constipation is a natural result of the whole. Is this not true? Witness eight women out of ten constipated! Why are men not so prone to constipation? Because their dress is calculated to *keep the whole body of an equal temperature*, and their circulation unimpeded.

"But, again, constipation is the almost *universal cause of displacements of the womb.* These congestions of the womb, inducing leucorrhœa and ulceration; these frequent retention of the menses; this universal painful menstruation; these irregularities, depriving the woman of her health, her vigor, her happiness, are all due to this unequal dressing, which by causing unequal circulation implants the seeds of disease and disorder from earliest infancy.

"When will woman love her children better than fashion? When she does, when she dresses them according to physiological common sense, then, and then only, will our women be strong and healthy; then will they go without sick headaches and neuralgias; then will they go without constipation and piles; then will they go without the eternal 'pain in the back.'

"How can the mother secure this? As soon as the baby is old enough to wear short dresses, let the mother, according to the season of the year, dress her *equally all over.* If it is summer light drawers will do, as she will wear but little above. As the cold season comes on, and she puts on the baby a flannel shirt, let her put on her flannel drawers. If she thinks the child needs more for the protection of her chest, let her think that the child will need as much for the protection of her limbs and abdomen.

"Thus let this system be continued, not until the girl has arrived at the age of puberty only, but even after, and until she will need no dress at all.

"How does constipation cause displacement? If the bowels are not moved daily, fecal matter must accumulate within, distend them, and deprive them of the natural elasticity that causes them to expel the obnoxious contents. When they get loaded they press downward and all around them; they press down the womb, or they impact the rectum, and thrust the womb forward upon the bladder. They press upon the arteries, and prevent the purified blood from going to give sustenance

to other organs. They press upon veins, and prevent the return of blood, causing a clogging up of the hemorrhoidal veins, which, in their turn, cause 'piles;' or of the veins of the limbs, causing 'varicose veins.' The veins, so distended, ooze out water from their walls, and cause dropsy. Thus constipation, together with the continual draft on the abdomen, will cause congestion of the womb; congestion will cause inflammation; inflammation will cause leucorrhœa and ulceration; and all these disorders will cause such debility of the womb as will disable it from carrying a child longer than six or eight weeks; hence the *constant miscarriages occurring*.

"Let the mother bear this in mind; let her save her child from constipation, and she will save her from a hundred and one disorders that will render her life a misery. And to do this, let her begin with the child's *earliest years*, to dress her *equally all over*."

Dr. Chavasse, in "Advice to a Mother," the matter throughout which is arranged in the form of question and answer, makes the following remarks with regard to the clothing of girls :—

"*When should a girl begin to wear stays?*

"She ought never to wear them.

"*Do not stays strengthen the body?*

"No; on the contrary, they weaken it. (1.) *They weaken the muscles*. The pressure upon them causes them to waste; so that, in the end, a girl cannot do without them, as the stays are then obliged to perform the duty of the wasted muscles. (2.) *They weaken the lungs* by interfering with their functions. Every inspiration is accompanied by a movement of the ribs. If this movement be impeded, the functions of the lungs are impeded likewise; and, consequently, disease is likely to follow; and either difficulty of breathing, or cough, or consumption, may ensue. (3.) *They weaken the heart's action*, and thus frequently produce palpitation, and, perhaps, eventually, organic or incurable disease of the heart. (4.) *They weaken the digestion*, by pushing down the stomach and the liver, and by compressing the latter; and thus induce indigestion, flatulence, and liver-disease.* (5.) *They weaken the bowels*, by impeding their proper peristaltic (spiral) motion, and thus might produce either constipation or a rupture. Is it not presumptuous to imagine that man can improve upon God's works; and that if more support had been required, the Almighty would not have given it?—

God never made his work for man to mend.—*Dryden.*

"*Have you any remarks to make on female dress?*

"There is a perfect disregard of health in everything appertaining to

* Several years ago, while prosecuting my anatomical studies in London University College Dissecting-rooms, on opening a young woman, I discovered an immense indentation of the liver large enough to admit a rolling-pin, produced by tight-lacing.

fashion. Parts that ought to be kept warm, remain unclothed; the *upper* portion of the chest, most prone to tubercles (consumption), is completely exposed; the feet, great inlets to cold, are covered with thin stockings, and with shoes as thin as paper. Parts that should have full play are cramped and hampered; the chest is cribbed in with stays, the feet with *tight* shoes—hence causing deformity, and preventing a free circulation of blood. The mind, that ought to be calm and unruffled, is kept in a constant state of excitement by balls and concerts and plays. Mind and body sympathise with each other, and disease is the consequence. Night is turned into day; and a delicate girl leaves the heated ball-room, decked out in her airy finery, to breathe the damp and cold air of night. She goes to bed, but, for the first few hours, she is too much excited to sleep; toward morning, when the air is pure and invigorating, and when to breathe it would be to inhale health and life, she falls into a feverish slumber, and wakes not until noon-day. Oh, that a mother should be so blinded and so infatuated!"

Mrs. Dr. Gleason, in "Talks to my Patients," gives the following warning with regard to dresses which are tight across the chest:—

"The period from twelve to sixteen is an important one for every girl. In a few months they pass through great changes in their physical, mental and moral natures.

"Girls are shy of mentioning symptoms at this age, and consequently do not speak of a pain in the back, aching of limbs, and such discomforts. I have had several cases of serious trouble with the breasts of young mothers, from their being unduly compressed when they were enlarging. They remembered well the time, but were ashamed to say their dresses were too tight across the chest."

B.

SENSITIVENESS TO HEAT AND COLD.

Dr. James C. Jackson, in a book entitled "Consumption—how to Prevent it and how to Cure it," aims to solve a problem which has puzzled many thinkers. He says:—

"Men of observation have often had their attention called to this point, as between themselves and women,—that though more vigorous

in health, more robust in frame, with much more habitual exposure to atmospheric changes, they proverbially wear more clothing than women, and complain more of the changes from heat to cold, though not so much of the changes from cold to heat. Thus, let a woman go out of a warm room into a cold one, or from in-doors to out-doors, and she will complain very much less, as a general thing, about the sensational impressions which she experiences, than a man would under the same circumstances; but let her go from a low to an elevated temperature, and she would be likely to complain much more than a man would. How is this to be accounted for? . . . . . I offer this solution: That from girlhood up to womanhood, and afterward, females are subject to abnormal conditions of their circulation; and these come, at length, to be so habitual as to constitute a positive state insomuch that, except in extreme instances, they have little sensational consciousness. Women, therefore, in their ordinary conditions, do not know when they are cold; they are by no means as sensible as men are to the changes they undergo; and if, from any cause whatever, the matter is brought home to their consideration, and they are asked to determine the question by reference to their own feelings, they have no standard by which to be guided. A man keeps up, at least in a measure, his instinctive sensibility in respect to his external conditions; and, if subjected to great changes of temperature, his body responds to the impressions made upon it; but woman's does not; she may be chilly, and not know it. This unnatural condition of her circulation, this constant and uninterrupted habit of being chilly on the surface, at length produces its legitimate result, and causes her to feel uncomfortably warm, even when wearing a quantity of clothing only sufficient to protect her against the exposure to which, from time to time and day to day, she is subjected.

"It is a very curious fact, and pregnant with instruction, that, of the whole quantity of blood that circulates through a woman's body, at least thirty-three and a third per cent. of it finds its permanent location in those tissues and structures of her organism which lie remote from the surface. As compared with man's, woman's hands are always pale, her legs are bloodless, her face has no color: her skin throughout is generally much whiter than man's. I care not if it be said that this is the result of man's more thorough and habitual exposure to the influence of the air, sun, and rain; or, if you please, to woman's being kept more constantly in the house, where sun, wind or rain cannot touch her. Be it so: it does not change the fact. Men have usually a much more healthy external circulation than women; and, this being so, men should be much more sensitive to heat than women. Upon woman's own statement, however, this is not so. As a general thing, she wears much *less* clothing than man, and yet she claims to be comfortable under it; and there is no possible way of accounting for her impression in this regard, except upon the ground that she is unaware of her actual condition. She is abnormally related to the question of warmth, and of the means by which alone warmth can be naturally

produced; viz., a healthy circulation of the blood through and over the surface of the body. Thinly clad from her babyhood, and exposed constantly to severe changes—as all or nearly all girl children are—when she arrives at womanhood, she does not know, nor can she judge, what amount of clothing she needs to maintain healthy conditions of her physical organism. I never see young girls walking up and down the public streets with light, thin shoes upon their feet, short stockings upon their legs; with pantalets just below their knees, made of cotton or calico or some other thin substance—without saying to myself, "By the time you get to be full-grown, you will have no more idea of what comfortable conditions are, as derivable from clothing, than a blind boy would have of the infinite beauties of color." But I go further than this in my reflections, when I see such children; and I am led to feel that at least one-half of them will die before they grow to womanhood, and that one-half of the remaining half will not live to see old age."

C.

HIGH HEELS.

As the short skirts now in vogue bring with them the temptation to high heels, we copy a letter from a Montreal physician, which appeared in the *Witness* several years ago :—

SIR,—An able extract from a French medical journal, reproduced by the *Lancet*, has been in my hands some days. When read it struck me as being just the thing for your columns, and was put aside for a leisure moment to make plain and send to you : the days went on, when a sight decided me to get it off at once. Returning home from the upper part of the city on Saturday, a lady passed over a crossing : she seemed (to a medical eye) to have a ridiculously small foot, for she was a well-made woman, well above the medium height, &c. A further look, for doctors have eyes, professional and society eyes, and they always can please themselves as to their use : she had a large foot, near the centre of which a heel was placed—I call it a heel that the public may understand me—it was rather an inverted pyramid, with its apex applied to the point. I stepped on and passed her, and what did I see?—a lady well dressed and limping, her back being thrown into the most unnatural and unlady-like motion, all caused by her heels. Her face was a study, a complicated one, a painful one, all caused by the boots. The man who wrote on the "Poetry of Motion," if he could revisit earth and see one of those ambling females, would gladly return to his grave satisfied

that such was not known in his day. I append the extract and leave it to mothers, fathers, husbands, wives and daughters to "read, mark, learn and inwardly digest."

High Heels.—The unnatural character impressed on the gait of women by the prevalent fashion of high and narrow heels to the boots, is the expression of a perversion of the natural relation of the articulations and muscular action such as cannot but result in serious and permanent damage. The character of the injury which they produce, and the symptoms by which it is expressed, are well described by Dr. Onimus in a recent communication to the Société de Médecine of Paris, which has been published in *L'Union Médicale.* The heel of the boot is not only high, but narrow and inclined forward, so that the distance between the heel and the point of the foot is lessened, and the foot appears smaller than it really is. This, absurd as it is, appears to be their chief recommendation in the eyes of their wearers. The effect of the oblique position of the foot is, of course, to remove the weight of the body from its natural support—the prominence of the os calcis or bone forming the heel—and project it forwards on to the plantar or bones forming the arch. Hence one of the most frequent symptoms of which the wearers of these shoes complain is an acute pain in the sole of the foot, in front of and below the external malleolus, or ankle joint. There is often considerable tenderness as well as pain, possibly in consequence of inflammation of the middle bony articulation. The forced depression of the anterior part of the foot determines a painful displacement of the articular surfaces. The toes, instead of the heel, first touch the ground, and the walk is clumsy and heavy, instead of light and undulating. The toes become permanently flexed and pressed together, partly in consequence of the narrowness of the front part of the boot, partly in consequence of the over-action of the flexors of the toes, due to the increased pressure on the toes, no doubt partly also to the habitual over-extension of the metatarso-phalangeal articulations, or small bones of the foot, forming the toes, &c., and their posterior articulation, and to the irritation and contraction of the short flexor of the toe in the soles of the foot.

Other muscles are also involved in the disturbance. Those of the calf are commonly in a state of painful contraction. In consequence of the height of the heel, the body has a tendency forward, and the soleus and gastrocnemius muscles forming the calf of the leg have to overact to correct this tendency. The peroneus longus muscle at the back of the leg is also affected in a very marked and uniform manner, and the pains persist longer in it than in the other muscles. These muscular pains were the symptoms which first drew attention to the effect of the boots. Even the muscles of the thigh may suffer, and the rectus and adductor muscles in front of and behind the thigh may be the seat of some contraction. In cases of nervous temperaments the pain and irritation have produced general nervous symptoms of hysterical character. The mode of carriage of the body is influenced by the position of the feet. The centre of gravity must be kept in the

line of the base of support, and hence the pelvis is tilted forward, and uterine trouble is easily produced, and is, according to Dr. Onimus, actually present in a considerable proportion of the wearers of the "*bottines Louis Quinze*," as they are termed, in consequence of their extensive adoption in the last century. Then, as now, the fashion emanated from Paris, and then, as now, at least one stringent protest was made against the form of shoe, and its consequences on the feet of the wearer were pointed out. This was in 1781, by Petrus Camper, Professor of Medicine at La Haye. He insisted strongly on the articular deformities, almost in the same words as those employed by Dr. Onimus, but did not associate these deformities with the muscular pains.

C. M., M. D.

D.

LONG SKIRTS.

In this volume we have only urged reform in dress so far as is perfectly practicable in the present state of public opinion. It will, however, we trust, do no harm to the cause if we state that some hygienists utterly condemn the long skirt, and consider perfect health and liberty of action require a short skirt, which permits of entire freedom of the leg below the knees. Dr. James C. Jackson, of Danville, N. Y., says on this subject :—

"When a long skirt is hung down directly in front of the leg from the hip to the foot, every time the leg is lifted and thrown back a little in order to get a momentum, whereby it can put itself forward, this skirt presents itself in the shape of an obstacle just at the knee. The result is that, instinctively and unconsciously to the wearer, the body sets itself at work to escape from the difficulty, and soon a habit of walking is instituted, which transfers all the motional energies from below to the point of the junction of the limbs with the trunk of the body. The style of walking becomes peculiar—is unlike the natural gait, and compels a set of muscles to over-action. While activity within proper limits develops muscular tissue and strengthens it, over-action debilitates and weakens it; and here lies one of the chief causes of weakness and soreness of the back, of which our women complain."

Of the deformity thus produced by the substitution of one set of muscles for another, Dr. Jackson says further :—

"It is such a deformity as is very much to be deplored, and its con-

sequences are terrible by reason of the transference of the propelling power from the muscles which are constituted to exercise it, to muscles whose chief office is other than this; and in causing them to appropriate more blood than they ought, induces congestion of those organs that lie within the pelvic cavity."

Now while we cannot expect women to endure social martyrdom by wearing conspicuously short skirts in the street, a knowledge of the fact that long skirts are in themselves injurious can do no harm, and may do good in the following ways. It may induce some to wear shorter skirts than they would otherwise do. Two or three inches off the ground behind, and four in front when fashion requires a long skirt, is not a very noticeable change, and it will be found to add greatly to comfort and convenience. If the dress is made this length, the petticoat can be made quite short, as the dress does not need to be lifted. It will also induce people to consider well before putting heavy trimmings, which must increase the difficulty tenfold, at the bottom of the skirt. Furthermore, mothers understanding this will see the advisability of keeping girls in short dresses as long as possible; and will perhaps transfer the period of change from the fourteenth or fifteenth to the seventeenth or eighteenth year, which would be a great point gained at that susceptible age. Then again, ladies who do their own work should not object to wear a quite short dress in the privacy of their own homes, if by means of the change they can accomplish their work with half the expenditure of strength formerly required. A short, clean dress would certainly be more elegant than the soiled, untidy, dragging, but fashionably made costume, which many think appropriate for housework.

Miss Cobbe says in her article in the *Contemporary Review*:—

"It has often been remarked that the sagacity of Romish seminarists is exhibited by their practice of compelling boys destined for the priesthood to flounder along the streets in their long gowns, and never permitting them to cast them aside, or play in the close-fitting clothes wherein English lads enjoy their cricket and foot-ball. The obstruction to free action, though perhaps slight in itself, yet constantly maintained gradually tames down the wildest spirits to the level of ecclesiastical decorum. But the lengthiest of *soutanes* is a joke compared to the multitudinous petticoats which up to the last year or two every lady was compelled to wear, swathing and flowing about her ankles as if she were walking through the sea. Nor is the fashion of these later days much better, when the scantier dress is "tied back," as I am in-

formed, with an elastic band, much on the principle that a horse is "hobbled" in a field ; and to this a tail a yard long is added which must either be left to draggle in the mud, or must occupy an arm exclusively to hold it up. In youth these skirts are bad enough, as exercising a constant check on free and healthful movement ; but the moment that the elastic steps begin to give place to the lassitude of middle life, the case is desperate. There is no longer energy to overcome the impediments created by the ridiculous *spancels* ; and the poor donkey of a women hobbles daily round a shorter and shorter course till at forty or fifty she tells her friends with a sigh that she finds (she cannot imagine why) that she cannot walk at all."

E.

INFANTS' CLOTHING.

T. S. Verdi, M. D., in his useful work, "Mothers and Daughters," writes :—

"Since the pelvis has important relation to child-bearing, it follows that in early life great care should be exercised that proper proportions may be secured, and deviations from normal conditions obviated. Its cavities and outlets are regarded by the physician with great interest, for upon them depends, in a great measure, the safety of the mother at delivery. Like all other bony structures, its development is gradual until the age of eighteen, and even later, when ossification seems to have reached its degree of perfection. During all these years of growth, the various bones of the pelvis are held together by muscular attachments, and by cartilaginous articulations. During the tender age of a girl, a fall, or badly applied vestments, causing pressure on any part of it, may disturb the normal position of the respective bones, and produce a distorted pelvis. Such an unfortunate occurrence might prove a serious malformation, that would impede the natural progress of labor.

"At birth, the pelvis is extremely narrow and elongated, and of such inconceivably small dimensions that its cavity cannot contain several of the organs afterward found in it ; from which circumstances the protuberance of the abdomen, observed in the fœtus and in children at term, in great measure results.

"We find that at birth and for several years after, the pelvis is divided into separate parts, each part being kept in juxtaposition to the others by elastic, fibrous ligaments and cartilages. There are no less than six such parts thus united, three on each side, having five distinct articulations or joints. It is true that these articulations do not allow as much

freedom of motion as those of the elbows, knees, or other bony surfaces of the skeleton ; but they are nevertheless movable, sliding one on the other and easily bent by compression, particularly during the tender period preceding puberty, and more or less, also, until the age of eighteen, when ossification has firmly secured the several parts together.

"Mothers acquainted with these facts could not fail to appreciate our solicitude regarding the normal growth of this part of the body of woman. The tender care of the mother should therefore commence immediately after the birth of a girl. At this time it is usual for the nurse, for the sake of neatness, to apply a napkin to the child ; but this napkin is often a cumbrous affair, badly adjusted. It is generally folded in a triangular form, the longest side drawn over the hips around the back and pinned in front of the abdomen. We have already stated that at this time of life the little pelvis is so incompletely developed, that the womb of a girl is out of its cavity and the protection of its bones. If that napkin is coarse and heavy, clumsily applied, or too tight around the abdomen, it may be that undue pressure is exerted over the prominence of the abdomen, thus causing the womb to descend, and induce, even at this early age, a displacement of that organ, which in turn may press upon the bladder, disabling the child from holding its water for a longer period than an hour. The frequent micturations of infant girls may be due partly to this unsuspected pressure.

"It is known, moreover, that at the tender age of infancy the bones do not contain enough earthy matter to render them hard, and consequently they are pliable and easily bent. The broad bones of the pelvis are oblique ; hence, constriction around the body may cause them to bend, thus changing the direction of growth, so that, instead of growing outwardly, they may be made to grow inwardly, restricting the development of its cavity to its minimum, instead of encouraging its width to the maximum.

"In consideration of the above, the attendants should see that the bands and napkins applied to infants be so loose as to make *no pressure whatever*. Allowing a napkin to be a necessity for cleanliness, and even for decency, let it be pinned to the undershirt, or to a loose belt held in position by suspenders."

Mrs. Dr. Dodds, of St. Louis, Mo., thus criticises the ordinary clothing of infants, in a paper quoted in the "Mother's Hygienic Handbook":—

"Let us glance for a moment at the clothing of the 'infant of the period.' First in order in the dressing of the young infant comes the inevitable bandage or 'roller.' This is commonly made of flannel, wrapped twice around the body, and pinned so tightly that it is absolutely impossible for the child to use properly the abdominal muscles in breathing. For the first few weeks of a child's life, breathing and

crying are almost the only exercises it is able to indulge in, and every garment should be loose enough to admit of free intercostal and abdominal muscular action.

"But as babies' clothes are worn, we have quite the reverse of this. The bandage above referred to so compresses the walls of the abdomen, as to prevent lateral expansion, and whenever the infant cries, the intestines are pushed down into the pelvis, not unfrequently causing infantile hernia; for at this early age the opening to the inguinal canal is often only partially closed, and it requires but little force to cause the bowels to protrude.

"The next piece to be considered is the diaper, and a more uncomfortable article could not well be imagined. It is generally made of cotton flannel, doubled twice, making four thickness of this hot material, which is pinned tightly around the pelvis. Add to the above a thin rubber article now in our market, and which is used by some, and see what we have! No wonder so many children have prolapsed bowels, and inflammation generally in that delicate region. Only think of it, mothers! for two long years this heating process is kept up, day and night, without interruption.

"Next in order in our little toilet comes 'baby's shirt,' a little scrap of very fine linen, which, considering its scrimp dimensions, is, for all ends and purposes, a consummate nuisance. Then come the flannel skirts, nicely plaited or gathered on to a cotton band which has also to be pinned around the body, under the arms, so that every time baby is tossed around, the skirt is dragged down over the abdomen, thus adding another binding to the already overbound parts. Last comes the dress, made of some thin material, with or without sleeves, according to the fashion of the times or taste of the mother, who very rarely knows anything about physiology, and if she did, would be indifferent to its laws rather than not have her child look just like other people's babies. We have then, you see, arms and chest relatively bare, while just below is the petticoat band above referred to, and just below that come the thick hot plaits of flannel over the little pelvis. In this manner the blood is drawn by over-heating the vital parts, and kept there; while it is driven away from the tiny hands and arms, leaving them blue and cold every time the infant is exposed to the air.

"The clothing of a little child, as well as that of a grown person, should, in the first place, be made loose enough to allow of the free use of the muscles. Not only that but every portion of the body should be covered *evenly;* there should be as many thicknesses on the arms and chest as there are on any other part. As respects the bandaging of an infant, all that is needed is a piece of thin soft muslin, to be worn loosely round the body, for the first week or so, until the umbilicus heals. The under-garments should be made of soft cotton material, instead of flannels, as this is very apt to irritate and chafe the tender skin, and is one great cause of 'gum rash,' which is so annoying to both mother and child. A little waist should be made with long sleeves and high neck, with a deep hem round the bottom, and buttons for fastening the skirt to.

This latter should be made of the same material, gored perfectly plain, with a narrow band or hem around the top in which to work the button hole.

"In hot weather the above garment, with a gored dress, made with high neck and long sleeves, is all that is required. In cooler weather a flannel suit should be worn between the two, made the same as the outside dress and buttoned down the front."

F.

CAUTION FOR MOTHERS.

Dr. Chavasse, in a volume entitled "Advice to a Wife," makes the following points with regard to clothing :—

"Let me strongly caution the newly-made wife against the evil effects of *tight lacing*. The waist ought, as a rule, to be from twenty-seven to twenty-nine inches in circumference; if, therefore, she bind and gird herself in until she be only twenty-three inches, and in some cases until she be only twenty-one inches, it must be done at the expense of comfort, of health and happiness. If stays be worn tightly, they press down the contents of the lower part of the belly, which might either prevent a lady from having a family, or might produce a miscarriage. Tight lacing was in olden times a frequent cause of miscarriage. I am sorry to find that within the last year or two the reprehensible practice has been again advocated, and become fashionable. The result, if tight lacing be adopted in pregnancy,* will frequently be either miscarriages, or premature labour, or still-born children. Tight lacing is a frequent cause of displacement of the womb, as the case may be, either backward or forward.

"A great number of gathered breasts arises from a faulty nipple. If a lady have a *good* nipple she usually makes a *good* nurse, and seldom knows the meaning of a gathered breast. But what is the usual cause of this arrest of development of the nipple—or 'no nipple?' The abominable custom of allowing girls to wear tight stays and corsets; and as long as this senseless practice is permitted by mothers 'no nipples' will be of frequent—of every day—occurrence, and unspeakable

* With regard to the origin of the word *enceinte*, Dr. Montgomery, in his valuable *Exposition of the Signs and Symptoms of Pregnancy*, observes:—"Many a one who confesses with a smile or a blush, that she is *enceinte*, would do well to remember the origin of the word she uses. It was the habit of the Roman ladies to wear a tight girdle or cincture round their waists; but when pregnancy occurred, they were required by law, at least that of opinion, to remove this restraint; and hence a woman so situated was said to be *incincta*, or unbound, and hence also the adoption of the term *enceinte*, to signify a state of pregnancy.

misery will, as a matter of course, in due time, be the result. Tight stays may truly be called instruments of torture, invented by that tyrant of tyrants—fashion. Pressure on a part always induces the part to waste away, or, in other words, arrest of development: hence tight lacing is really and truly the principal cause of 'no nipple.' It is worthy of remark, that the 'no nipple' is generally to be found among the higher ranks, where tight stays and tight corsets are worn; poor women have usually well-formed nipples, which is one important reason why poor women generally make good nurses, and why the poor women are those selected by the rich as wet-nurses to rescue their children from death. I do not mean to say that pressure is the only cause why many of the rich have 'no nipple'—certainly not; simple living, occupation and exercise have much to do in developing and in perfecting the poor woman's nipple; while luxurious living, indolence, in addition to the pressure, have much to do in deteriorating and in dwindling away the fashionable lady's nipple. I will maintain, then, that freedom from pressure and simple living, conjoined with occupation and exercise, are the main causes of determining the matter. The effects of tight lacing, in so frequently both arresting the development of the bosom and in causing 'no nipple' in girls, are often so terrible in their ultimate consequences as to proclaim tight lacing to be one of the crying evils of the day, and should open the eyes of a mother to its enormity. Verily the rich have to pay heavy pains and penalties for their fashion, their luxury, their indolence and their folly."

G.

LADIES' HEALTH ASSOCIATIONS.

A plan for an Association or Club somewhat similar in design to the one we have suggested, but rather more comprehensive appeared in *Sunday Afternoon* for September, 1878. It was from the pen of Anna C. Garlin, who gave the following skeleton for the constitution of the proposed society:—

"We, the undersigned, believing that ignorance in the mother is danger to the home, and that the elevation of the next generation waits on the devotion and wisdom of this, and realizing that the special duties of domestic life require special preparation from those most responsible, unite for the study of the following subjects:—

"Physiology and Practical Hygiene; including healthful cooking, dressing, etc.

"Public sanitary conditions and laws; and prevention of disease.

"The art of nursing.

"The care of infants.
"The laws of heredity.
"The home training of children, physical, mental and moral.
"The science of school education.
"The true relation of the sexes.
"The legal condition of woman as maiden, wife, mother, and widow.
"The relation of the home to public morals.
"The art of house-building and decoration, and any other topic relating to woman's special interests, or to home management.
"We propose to organize into a society by the election of a President, a Vice-President, a Secretary, a Treasurer, and four standing Committees into which the whole membership of the association shall be divided, viz: Committee on Hygiene; Committee on Morals; Committee on Education; Committee on Art. The Committees shall severally have charge of the topics grouped under their divisions, and shall collect statistics, gather information, and furnish instruction to the whole meeting upon subjects belonging to their departments."

H.

BEAUTY IN DRESS.

Mrs. Haweis, in a volume entitled, "The Art of Beauty," from which we have already made several quotations, makes the following points with regard to beauty in dress:—

"The reason that an ordinary low neck with short sleeves looks worse in black than in any other color is because the hard line round the bust and arms is too great a contrast to the skin. A low neck always lessens the height, and a dark dress made thus lessens it still more, and it strikes the artistic eye as cutting the body in pieces, in this way: if you see a fair person dressed in a low dark dress standing against a light background some way off, the effect will be that of an empty dress hung up, the face, neck, and arms being scarcely discernible. On the other hand, against a dark background the head and bust will be thrown up sharply, and the whole dress and body will disappear. This effect, common enough, is execrably bad. If you must wear a low black bodice, let it be cut square, giving the height of the shoulders (or, better, with the angles *rounded*, for corners are very trying), and have plenty of white or pale gauze or thin black net to soften the harsh line between the skin and the dress. White gauze or lace softens down the blackness of the dress at the edge of the bodice, and thin black stuff has an equally good effect, as it shades the whiteness of the skin into the dark color of the gown. *Only under these condi-*

tions does the sudden contrast enhance, as some persons suppose, the fairness of the complexion.

"Short women should never wear double skirts or tunics—they decrease the height so much—unless, indeed, the tunic is very short and the skirt very long. So also do large, sprawling patterns used for trimmings; let these be left to women tall enough to carry them off. Neither let a very little woman wear her hair half down her back; let her lift it clean up as high as possible.

"Large feet should never be cased in kid—least of all white kid slippers—for kid reveals so clearly the form and movements of the feet, and stretches so easily, that few feet have a chance in them.

"Those who are very stout should wear nothing but black; those who are very thin should put a little padding in their gowns; and neither should be in the least *décolletée*. Perpendicular stripes in dresses give height and increase fulness, and are therefore particularly suited to very slight, small people, and particularly unfitted for stout figures."

A writer in the *Nineteenth Century* says:—

"If in our public schools any attention were bestowed upon the cultivation of the sense of beauty, the educated gentleman would not encourage by his admiration the vagaries of feminine fashions, not because of its changes—'variety is charming'—but because all the changes revolve round a centre of radically bad taste, formed by two ideas, viz., that the waist and the foot cannot be too small. Amid all the changes there is no being rid of the stiff, contracted waist, really ugly, always so low down as to suggest the positive deformity of short lower limbs, and cruelly destructive to health, nor of the straight compressed shoes, destroying the form of the foot, and turning the beautiful structure into a crippled bunch of bunions."

That these ideas are already bearing fruit appears from the following paragraph in a religious journal:—

"The London *Medical Examiner* says that it is proposed to form a 'School of Beauty' in England, in which the members, male and female, pledge themselves to do all they can to make themselves comely by natural means. Prizes will be given to those ladies who can move with ease and grace, and so afford evidence of the free use of their limbs, while it will be a leading rule of the school that, though stays may be used as a means of support, they shall not be deemed essential as an accessory to beauty. In other words, a natural waist and a well-curved back, with a perfectly posed head, will be at a premium. God made man upright, and woman too; they have sought out many inventions to improve upon the handiwork of the Creator, but all to no good. The laws of health are the rule by which beauty is preserved, and whatsoever is more than this cometh of and tendeth to evil."

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