

Beauty culture : a practical handbook on the care of the person, designed for both professional and private use / by William A. Woodbury.

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BEAUTY
CULTURE.

WILLIAM A. WOODBURY.

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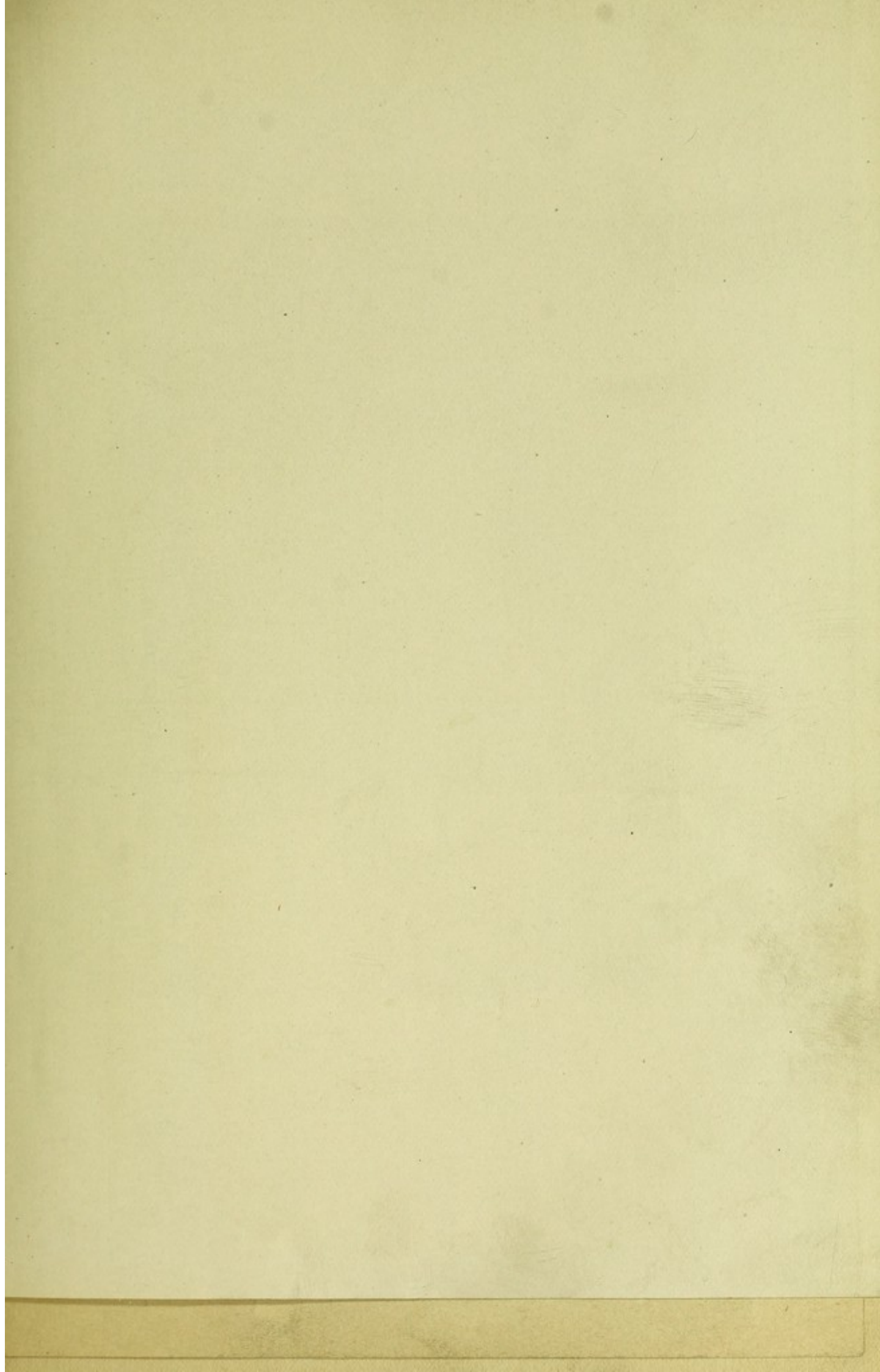
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LOVELINESS

"When unadorned, adorned the most."

—*Thomson's Seasons*

BEAUTY CULTURE

*A Practical Handbook on the Care of the Person,
designed for both Professional and Private Use*

BY

WILLIAM A. WOODBURY

DERMATOLOGIST

'Tis not a lip or eye we beauty call,
But the joint force and full result of all.
—Pope.



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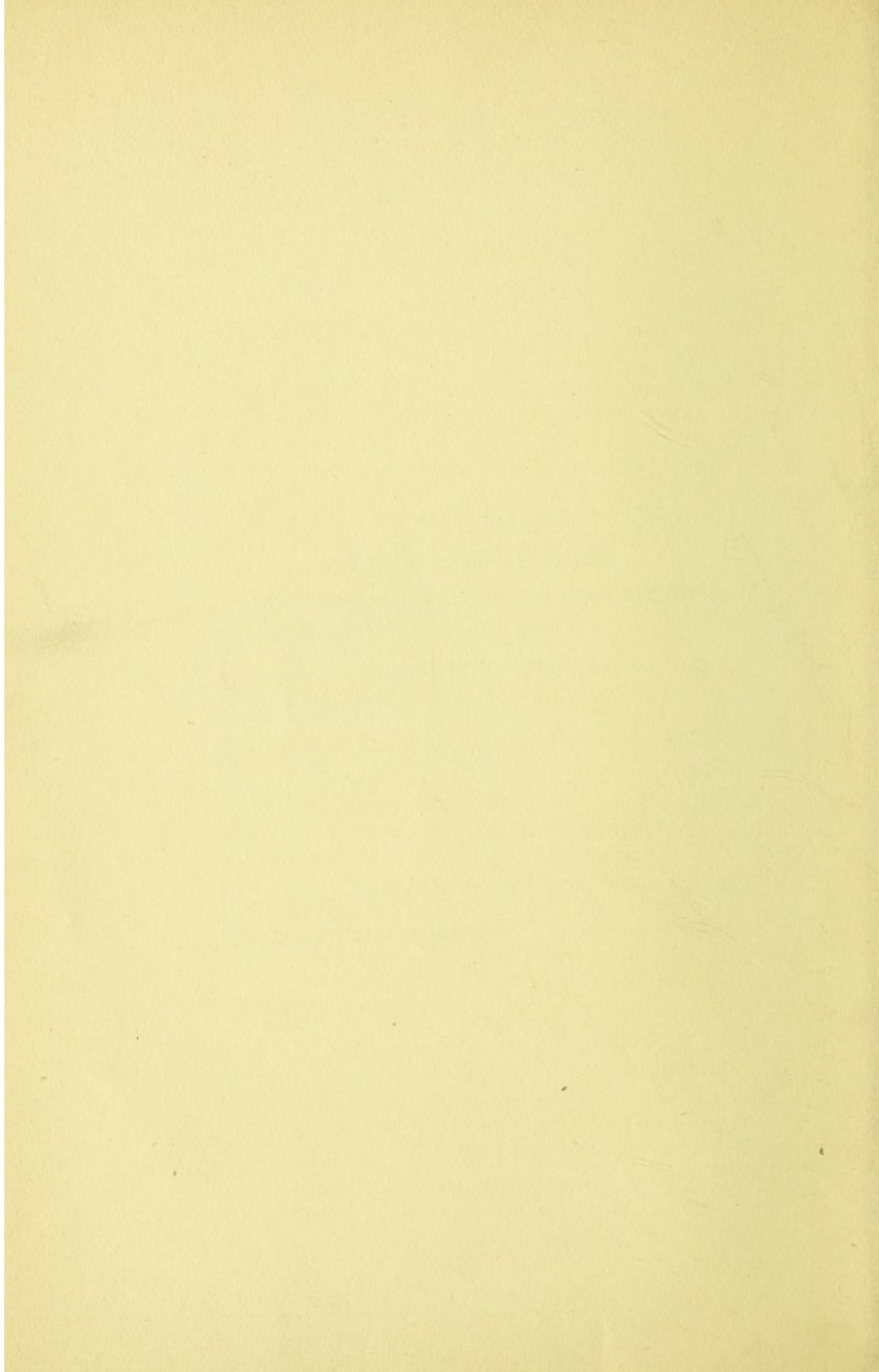
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JOHN H. WOODBURY
THE FOUNDER OF POPULAR DERMATOLOGY
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BEAUTY CULTURE

INTRODUCTION.

THEORY AND PRACTICE OF BEAUTY CULTURE.

Health the Basis of Beauty, not its Synonym—Beauty the Physical Ideal of Womanhood—General Discussion of Health, Diet, and Exercise in Relation to Beauty—Natural Methods in Beauty Culture—Beauty Culture as an Employment for Women—Incomes of Successful Practitioners—Qualifications of a Beauty Culturist—The Ethics of the Profession—Keeping in Touch with Experts—Cautions against Misinformation—The Only “Beauty Secrets”—The Author’s Purpose.

BEAUTY and utility in the arts, beauty and health in the person, are often wrongly treated as identical by theoretical writers on these subjects. There are those who would have you believe that to any solidly constructed building which is exactly adapted to its purpose the term beautiful cannot properly be denied. They assert that a well-built, well-lighted, commodious brick factory is as beautiful in its way as a Greek marble temple is in its way. Similarly there are enthusiastic devotees of physical culture who claim that every person in sound health and fine physical development must be considered as a “beautiful” specimen of humanity.

It is only by straining the application of the term

beauty to an extent unwarranted by common usage and common sense that such a view can be maintained.

It is true, as Emerson says, that "the beautiful rests on the foundations of the necessary," that, for example, true beauty of person cannot exist apart from a sound and well-developed body, but this does not mean that beauty and health are identical. Else why would we have the two terms? The truth is, beauty begins where health ends. Of two equally healthy women in an assembly, one will be passed over as plain, however thoroughly wholesome she may be in appearance, and one pointed out as notable for the attractiveness of her face and figure. Indeed, the derogation in the term "homely," which originally was applied to a woman having every housewifely virtue, and, necessarily, the health requisite to perform her duties, is a striking evidence of the superior regard that is paid to a woman who has taken pains to preserve and enhance the "good looks" which were her inheritance at birth, and to remedy defects in personal appearance which were either natural or occasioned by employment, mode of living, or accident.

Many women are resigned to being thought "plain" and "homely," just as most cripples are to the possession of their deformities, but none is pleased at the thought, and, with the joy of a lame man at discarding his crutch, would hail the opportunity to rid herself of the justification for the obnoxious terms. Indeed, the ideal of most women, however secret they may keep it, even refusing to admit it to themselves, is that they may be considered beautiful, if only in respect to one feature; and the most universal source of feminine grief is the fear of the waning of personal charms. The proof of the predominance of beauty in woman's regard was strikingly shown by the general acclamation by the sex of the

unparalleled heroism of Madame Breshkoffsky, the noble-born Russian revolutionist, when, on the occasion of her recent banishment to Siberia, the fact transpired that in her youth she had deliberately disfigured her remarkably beautiful face in order to carry on her work among the peasants unrecognized. This immolation of beauty on the altar of patriotism seemed a nobler sacrifice even than would have been the offering of her life.

And rightly, too; for, while as citizen, as mother, as wife, there may be and are higher duties, it is the supreme duty of woman as woman to be as beautiful as careful attention, first to the laws of health, and second to the arts of the toilet, can make her. In so doing she is obeying the instinct of her sex, divinely implanted at creation, when woman was designed to be, as Macaulay says, "the most beautiful object in the world."

Of attention to health in the matters of diet, exercise, and that cultivation of mind which is necessary to give a living soul to the otherwise inert body of beauty, it is not the province of this book to speak save in general terms here and in practical suggestions of immediate connection with specific subjects discussed in the body of the work. The reader is referred to books and periodicals devoted to health, diet, and physical and mental culture, and advised to consult her own physician in regard to her special needs in these matters. Constitutional treatment is required in almost every local disorder, whether of skin, or nails, or hair. Hygienic exercise, simple, natural diet, strict cleanliness, and peace of mind will lay the solid foundations of health upon which the temple of beauty must be reared if it is to stand. Otherwise it must be upheld by unsightly props, such as rouge, badly counterfeiting the blush of health; powder, obviously covering blemishes due to bad blood;

dead, lack-lustre hair, replacing the rich, living growth, and pads inertly rounding out hollows which should be filled with pulsing flesh.

In Beauty Culture proper, the building upon the foundations of general physical health and development, art should proceed along natural lines. The anatomy and physiology of the members and features of the body should be carefully studied, in order that these may be brought as nearly as possible into the form and condition of the ideal set by nature herself for attainment. The purpose of art, said Aristotle, is to fulfil the incomplete designs of nature. Too often, alas, its purpose has been to thwart these designs. Finger-nails are shaped into fantastic forms, such as the "roseleaf," "shield," and "talon," utterly out of harmony with the shapes of the fingers, and thus ruinous not only to the expression of individuality in the hand, but even to its resemblance to a human member (see illustrations on page 37). The hair is dressed according to the passing fancies of fashion, with no regard to enhancing the special charms of the subject's face or minimizing the effect of irregularities of contour or unshapely features.

The one who practises Beauty Culture, either for her own personal adornment or professionally for others, should be filled with the spirit of the artist, enabling her to adapt the mode of the hour to individual requirements, or, if such adaptation is impracticable, giving her resolution to disobey the edicts of fashion and produce results in harmony with the laws of pure beauty. Such a person will not fail of distinction. If she is a professional operator her parlors will fill with patrons, who will go forth to sound her praises among their friends, their encomiums being proved by the evidences of her taste and skill in the treatment of their own persons. ❧

Of all employments for women, the profession of Beauty Culture is the easiest for a woman of good sense and good taste to learn and establish herself in, and one of the most remunerative as well as agreeable. The cost of instruments is trifling, and their use is readily acquired. Most of the necessary preparations can be made at home, as the best formulas for them are exceedingly simple. Practice can be begun in the home of the operator, or the homes of her patrons. A public beauty parlor need not be established until the increase of custom warrants it. The operator can perform every branch of the work herself until she has too many patrons to attend to properly, when it will be time for her to employ assistants in the simpler operations. These helpers will gladly accept small wages while they are perfecting themselves in the business. There is no need for the proprietor to fear that she is training up competitors who will cut into her profits, since the number of people who employ the services of beauty culturists is increasing far more rapidly than the number of operators. It will be a long time before the business will need to be unionized and apprentices limited. Whenever a second beauty parlor has been opened in a community, the total business has at least quadrupled, since each patron is an advertisement of the practice to her hitherto unmanicured or self-manicured friends.

In other women's work the rank and file of workers must be and usually are satisfied, if they can average ten dollars weekly the year round. Nurses barely do it by being on duty twenty-four hours a day. Waitresses and saleswomen cannot possibly reach this level. In any direction you seek, you will find ten dollars a week a high average income for a woman.

On the contrary, the low average income of a beauty

culturist is not less than double this amount. Even two manicures an hour at the lowest price—thirty-five cents—net her six dollars a day, while better paid operations, say a hair-tinting one, may bring in anywhere from fifteen dollars to fifty dollars for two hours' work.

Incomes of beauty culturists vary from one thousand to twenty thousand dollars a year, the average of a good operator being possibly between twenty-five and thirty dollars a week. This, mind you, for an employee working on a salary and commission. Those who employ themselves, whether "by appointment" or as owners of beauty shops, may make more, even double or treble this amount. There are scores who take in a clear profit the year round of one hundred dollars a week and over.

The big rewards of the business are* dependent on two things* which must be combined to make up the successful practice of Beauty Culture. The operator must not only be deftly skilful and capable of meeting any requirement of her patronage, but she must also be equally well grounded in practical business management.

The successful beauty culturist must, above all, be modest, tactful, and discreet. The common impression that she should be a dashing beauty is erroneous. The appearance of good health and the evidence of good humor are better assets than good looks without these accompaniments. A clear skin and bright eye, simply arranged hair, neat dress, and a self-effacing manner will win patrons where an artificially treated complexion, hair dressed in the extreme of fashion, gaudy ornaments, and conscious pride in appearance will repel them.

Above all, the operator should see to it that her hands and nails are as near perfection in contour, trim, and lustre as her art can keep them, for with these she is

earning her livelihood, and they are always under the close observation of patrons.

The beauty culturist should have strict regard to professional ethics. She should never gossip, avoiding in particular the discussion of a patron, man or woman, with a patron of the opposite sex. One infraction of this rule may wreck her business, and render it impossible for her to build it up again, even in a new place.

In short, the beauty culturist should be a plain business woman, proving the fact by minding her business. If she does her work conscientiously, and with pride in it, rather than in her appearance and her social graces, she is bound to prosper.

It goes without saying that the beauty culturist should keep herself informed of the best practices in her profession. This is more important than to know the latest fashions in it. She should keep in communication with specialists in the treatment of the parts of the body with which she has to deal, and confer with them upon any difficult problems which may arise in her practice. As a rule she should place little dependence upon advice given in the "beauty column" of newspapers and women's magazines, unless this department is conducted by an expert of approved reputation, who gives the advice himself instead of merely lending his name as editor. Far too much of this advice is prepared by clever newspaper sub-editors who employ their powers of invention for lack of real knowledge of the subject. In nine cases out of ten, the information they give is harmless, for, in order to be safe, they confine themselves to obvious suggestions, often bordering on nonsense, but in the tenth case they may give absolutely injurious advice.

All recipes for skin lotions and other preparations, wherever these are published, should be specially exam-

ined to see if there is responsible expert authority for their safety, as irremediable harm may result from their use.

Above all, every woman interested in beauty culture should view with distrust the frequent advertisements of "Beauty Secrets," announcements of wonderful methods of removing superfluous hair, developing the bust, etc., which are not generally known in the profession. These "secrets" are either the methods belonging to the early unscientific stage of the art, and discarded for better methods by the present experts as harmful or ineffective, or they are "fakes" pure and simple, designed to accomplish the sale at an extravagant price of some cheap cream or lotion which the advertisers expect to sell only once to each purchaser. In the case of depilatories they usually remove the hair, only to have it grow again, since the effect is only that of a deep, sub-cutaneous shave.

Really the only Beauty Secrets are those which, if not generally known to the public, are common to the practice of the trained specialists. For business reasons, these practitioners are not prone to publish the names and proportions of the ingredients of their most effective preparations, or the details of their manipulating processes. They are wrong in this, not alone from the ethical, but even from the commercial point of view, since the prevalence of the best methods in beauty culture would lead to a discrimination by the public in favor of the class of legitimate practitioners to which they belong.

The author of the present book entered as a young man into close business association with the man who is acknowledged as the founder and greatest exponent of dermatology—John H. Woodbury. Together they in-

vented new methods and preparations in Beauty Culture, and carefully tested these and others which were brought to their attention. Mr. John H. Woodbury saw fit to refrain from publishing these to the world while he was in active practice, and, indeed, protected by law the manufacture of a few of the preparations. At that time the author protested, though in vain, against the policy of secrecy in regard to those recipes and methods which were unprotected and in which there was no manufacturing interest. As the advertising agent of the business he believed in the wisdom of the widest and frankest publicity, especially as the methods and recipes had become the common property of the profession through the fact that the concern was the great training school of the leading dermatologists and beauty culturists of the country.

Since the death of John H. Woodbury, the author has devoted himself to the dissemination of the best methods of beauty culture. He is neither an operator nor a manufacturer. He is simply an instructor, imparting whatever special knowledge he may possess, as other teachers and writers upon subjects of interest and value to the public are wont to do. In the present book he has collated the most important information upon Beauty Culture which he has acquired, and presents it in the form of a practical progressive course of instruction, stripped of technicalities, and suited to the needs of both the professional practitioner and the person who is interested in the art for the sake only of herself and members of her family. He holds himself responsible for every process and preparation that he describes and endorses in the book, since he has thoroughly tested their efficacy, some, indeed, being of his own devising.

PART ONE

THE HAND

—to whose soft seizure
The cygnet's down is harsh, and spirit of sense
Hard as the palm of ploughman.

—*Shakespeare.*

THE HAND

CHAPTER I.

STRUCTURE AND TREATMENT OF THE HAND.

The Anatomy of the Hand—Characteristics of the Several Fingers—Difference Between the Right and the Left Hand—Treatment of Cold or Damp Hands—Exercising the Hands—Massage—Treatment of Enlarged Joints—Of Twitching Hands—Of Hardened Hands—Of Periodical Peeling of the Hands—Of Chapped Hands.

SINCE manicuring (which signifies “care of the hands,” and not, as popularly understood, of the nails alone) is in greater demand than any other operation in Beauty Culture, and since it is the simplest of the processes, it is expedient to begin our treatise with its discussion.

ANATOMY OF THE HAND.—First of all, it is necessary to learn the anatomy of the hand in general, and that of the finger and nail in particular.

The hand consists of the digits or fingers, and the metacarpus or palm, which is connected with the forearm by the carpus or wrist.

In Figure 1 will be found the names and locations of the various fingers, fleshy protuberances, lines and folds, etc.

DIFFERENCES BETWEEN THE FINGERS.—The different lengths of the fingers are explained by Gall Humphrey, M. D., of Cambridge, England, by their adaptation to

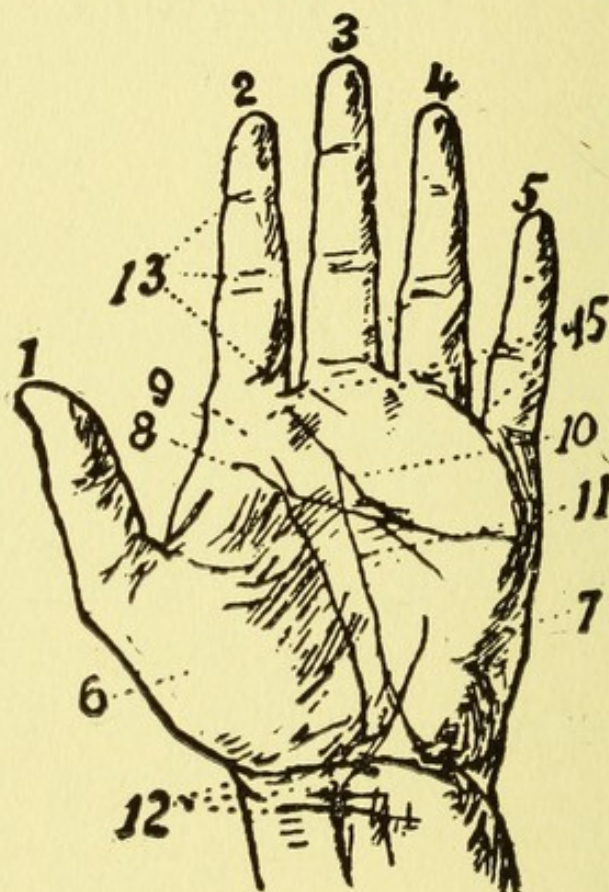


Fig. 1

THE PARTS OF THE HAND

1. Pollex, or thumb. 2. Index, or forefinger. 3. Medius, or middle finger. 4. Annularis, or ring-finger. 5. Auricularis, or little finger. 6. Thenar eminence, or ball of the thumb. 7. Hypothenar eminence, or heel of the hand. 8. Linea vitalis, or line of life. 9. Linea cephalica, or line of the head. 10. Linea men-salis, or line of the heart. 11. Linea fortunæ, or saturnine line. 12. Rasceta, or wrist markings ("bracelets"). 13. Nodes, or finger knots. 15. Interdigital folds.

From the Standard Dictionary. By permission of Funk & Wagnalls.

the amount of mobility of their metacarpal bones on the wrist.

Thus the middle finger is the largest, its metacarpal being the most fixed. The forefinger ranks next, its metacarpal being more movable. Then the ring finger and the little finger come next in size and in the mobility of the metacarpal. The thumb, shortest, has its metacarpal much more movable.

"Observe," says Dr. Humphrey, "that when the fingers and the thumb are spread out, the space between thumb and forefinger is considerably greater than the space between the other fingers. Then, by a slight movement, the thumb takes a position in front of, or opposite to, the fingers. In grasping any substance it has to antagonize the pressure exerted by all the fingers. Hence it needs to be much stronger than they are, and to be wielded by more numerous and powerful muscles."

"The forefinger has the greatest range of independent movement." Hence it is used to point with (or beckon with), and is called the index or indicator, more commonly the former.

"The ring finger cannot be bent or straightened much without being accompanied in movement by one or both of those next to it. This is partly because the extensor tendon is connected," says Dr. Humphrey, "by means of a band of fibres with the tendon on either side." In other words, there is a remnant of the webbing, so curiously found still persisting in the toes of the Russians as will be hereafter noted in the discussion of chiropody.

This finger with less independence of movement was not chosen on that account, as might be humorously imagined, to bear the ring that symbolizes that state in which men and women generally lose their individual mobility, but it was probably selected because the enforced com-

panionship of the other two fingers, when it moves, gives it a comparative immunity from injury, which is further increased by the general, though not universal practice of selecting the ring finger of the left hand. Possibly, however, the fact that the heart is on the left side had much to do with the choice of the left hand as the bearer of the engagement and the wedding ring.

It is well for the manicurist who may be called on to treat the whole hand as well as the nails of a patron to understand thoroughly the bony and muscular structure and the varying degrees of mobility in the fingers and their relations to each other, particularly, for instance, the special connection between the ring finger and its "side partners," so that, in massaging or in casual manipulations of the joints and tendons, the operator may avoid rubbing or pulling against the grain, so to speak, and so setting up a sensation of slight lameness, instead of restfulness, in the delicate hands of a patient.

Since the right hand is more in use than the left, it follows that nail growth and texture is more subject to accident; although the nail, partaking of the condition of the skin of the hand, might be firmer. If the patron has any manual occupation, is, for example, one who uses the pen constantly or any tools that tend to flatten the tips of the fingers and to spread the nail, extra attention to the manicuring of the nails of the hand most in use will be indicated, in order that this tendency may be held in check.

TEMPERATURE OF THE HAND.—Temperature of the hand is a matter to be noted by the manicurist, especially that of her own hands, since a cold or damp hand is unpleasant to a patron and might suffice to drive some away after one sitting.

Where coldness of the hands or feet or both at once is chronic, it is because the blood is not circulating properly through the system, a condition which the manicurist should seek to overcome or prevent in herself and strive to overcome in a patron, by suggesting regular exercise of the fingers and wrists, or exercises of the arms, both mild and persistent, or, in extremely obstinate cases, by advising her to consult a first-rate physician. Most cases, however, can be easily cured.

EXERCISE OF THE HANDS.—Since the functions of the hand are prehension, or grasping, and testing by the sense of touch, which is specially developed in the finger tips, the manicurist should take care not to impair these functions, but rather to develop them. The muscles should be rendered strong and flexible by exercise, either with gymnastic appliances, such as the gripping and wrist machines, or by exercise without apparatus, as described in books and magazines relating to physical culture. In gripping there is a striking difference between the masculine and feminine hand, the power of the man increasing with each successive trial until the maximum strength is exerted at the fourth or fifth trial, and thereafter diminishing, and the power of the woman beginning with the first trial as the maximum and thereafter decreasing. This shows greater initial nervous energy in the woman and less staying power. Women, therefore, should strengthen the hand by gripping exercises until the power shown in the first trial continues undiminished for several repetitions.

MASSAGE OF THE HANDS—Plumpness and shapeliness of the hands, as well as their flexibility can be greatly increased by massage, the general principles of which will be presented later in the discussion of Facial Mas-

sage. The student is to understand that massaging of the hands runs on an exactly opposite line to the direction given for the massaging of the face. The movements are to be mostly downward toward the finger tips, with intermediate light strokes or gentle pulls and pinches across the back of the hand, and only a few very delicate upward strokes toward the finish. The inside, or palm, is to be massaged toward the fingers also, with interspersed rotary movements toward its middle point.

In this massaging, the use of a little pure olive oil will be found helpful.

ENLARGED JOINTS.—Massaging is especially helpful in treating enlarged joints, not so much in actually reducing their size as in building up the other parts of the hand and so giving it a symmetrical appearance.

Enlarged joints are more frequently noted in men than in women. They are often accompanied with pain or an annoying numbness.

The causes are various, and, therefore, various treatments or combinations of treatments must be undertaken.

Where the enlargement is due primarily to a person's former or present occupation, nearly always the most that can be done is by long-continued massaging of the adjacent tissue, as well as by gentle manipulation of the joints themselves, to bring out the rest of the hand to such a fulness of contour that the enlargements do not seem quite so prominent.

If the chief enlargement is that of the first joint of the thumb—a very common disfigurement—the problem is to build up the tissue between the thumb and forefinger especially, and to some extent on the outer side of the thumb, where it joins the wrist.

In this case the patron should be made to hold out

the hand as straight as possible, with the thumb close to the forefinger or slightly curving under it. The operator then, putting her middle and ring finger in the palm of the patron's hand, maintains a firm but slight pressure upward and a little outward toward the offending joint, and with her thumb softly pushes the flesh on the back of the hand; that is to say, the little hillock that is formed between the thumb and the knuckle of the forefinger.

These pushes never should be hard, and at the first operation from twenty to thirty are enough. By practice on her own left hand the operator will readily catch the mode of doing it.

In manipulating the smaller joints, care should be taken not to use much pressure or you may enlarge them still more. A continuity of gentle movements is far more effective finally than vigorous manipulation.

Some of these cases will demand weeks of treatment to overcome or to lessen the deformity. The time spent on each treatment should usually be not more than half an hour, and at the first few sittings not more than a quarter.

Where the enlargement is due to chalky deposits, it is apt to be painful, rendering the person extremely nervous or "fidgety." Such cases you should turn over at once to a physician for internal medication, simultaneous with your scientific massaging.

Tartar-lithine tablets act with good results in less severe cases, but in many persons a long course of internal medication, coupled with great care as to one's diet, the cutting down of meat, especially beef, to a minimum, abstemiousness in the use of coffee or tea, and absolute abstention from all drinks that contain alcohol, will be found necessary to effect a complete cure.

TWITCHING HANDS.—Massage is also beneficial in the case of twitching hands. Many persons who otherwise exhibit no special sign of nervousness have hands that twitch noticeably, without their being always aware of it and of the effect of awkwardness that such a manifestation of misplaced energy produces. Others have a trick of twiddling their thumbs, which may be excellent exercise for those valuable members, but is not a pleasing sight. Massaging of the hands tends to eradicate both of these forms of abnormal activity, and also tends to check the flow of unusual perspiration that often accompanies the twitching habit. After thoroughly massaging hands of this kind, a little very fine cornmeal or rice powder should be rubbed on them. The patron should repeat this rubbing just before going to bed.

HARDENED HANDS.—Sometimes even the best-kept and handsomest hands quite unaccountably show a disposition to harden and take on a rough, coarse feel. In such cases olive oil or cocoanut butter, rubbed in twice a day, will generally restore them, but for softening them, in cases of persistent hardening, the following formula is recommended to be used twice a day for a week and then once a day till relieved:

R	<i>Tincture Benzoin</i>	2 drams
	<i>Alcohol</i>	3 ounces
	<i>Water</i>	5 ounces

PEELING OF THE HANDS.—Persons with very delicate or with very active skins are occasionally afflicted with periodical Peeling of the Hands. Sometimes this begins with small water blisters, but is often quite dry, the scarf skin turning white in small patches.

It may run up under the sides of the forefinger and

at times appear on the outside about the nails, with some inflammation of the adjacent skin, and a slight prickly and burning sensation.

It may occur only twice a year; then again as often as every three months.

A week of simple treatment usually suffices to banish it, but the fact of its periodicity indicates a constitutional condition, or an idiosyncrasy, that makes advisable, in most cases, constitutional treatment by a physician.

The simple treatment which the manicurist may give, in connection with gentle massaging, is first a washing of the hands in soft water, moderately warm, careful drying with the softest possible towel, and then a rubbing in of olive oil or of a little lanolin. The lanolin should not be rubbed on the back of the hand, as it has a slight tendency to stimulate and to darken a growth of hair.

Then the patron should be advised to wear a somewhat loose glove, never a tight one, and at night, after a careful washing of the hands with warm water and castile soap, to rinse them twice or thrice in warm water, dry them and anoint them with olive oil, wearing to bed a loose glove that has the finger tips removed.

If the peeling is accompanied with much inflammation about the ends of the fingers or in the crevices of the joints, the patron must be advised to have a physician prescribe some internal treatment or some special salve, probably one of a mercurial kind.

Simple vaseline, which is often used by persons themselves who do not wish to bother with special treatment, does not appear to have any particular penetrative or curative potency, but simply prevents temporarily an irritation of the exposed surfaces by particles of dust getting into the crevices.

Capsicum vaseline, on the other hand, may have some stimulating effect; but, unskilfully applied, is likely to prolong the condition.

CHAPPED HANDS.—Every one who does anything in winter that exercises the hands outdoors, whether wearing gloves or not, is liable to chapping. To find the right blend for cleansing and softening the hands without making them too tender for active use in cold air has been for centuries the dream and aim of soap makers. Chapped hands are in reality soiled hands; hands where the dirt has worked in and set up irritation. Many a toilet table, by the variety of "lotions" it displays, proves how hard its owner has tried to find just the one most effective. Once in a while, for a while, a lotion will "fill the bill," but it may be so continuously costly as to be deterrent.

There is, however, a thing so simple and cheap as to be within reach of all—cornmeal. The Indians used this centuries ago, and New England country women have done so for two hundred years, substituting milk for the grease—bear's grease—added by the aborigines. Oatmeal would do fairly well, but cornmeal is better.

Mix it with a little fine soap (castile) and warm water. After a thorough washing, rub in a little olive oil or lanolin or vaseline and then wipe off. With half a dozen nights of such treatment even the chapped hands of a devoted golfer will usually heal. Should they still be obstinate, rub in at night a little lime juice or lemon juice to complete the process of healing. Night is the best time, because the hands then have a longer exemption from exposure to cold and so the healing process has a better opportunity to take hold.

Always wipe hands perfectly dry after washing them and press down, and gently back, the skin around the

nail with the towel. This last will prevent the development of hangnails.

After the cornmeal washing with warm water at night, a cornmeal wash with cold water in the morning is advised. On general principles, after ordinary washing in warm water, cold should be used to harden the hands and enable them to cope with cold air. Wash for several minutes in hot water after the oil, lanoline or vaseline has been rubbed in. Then dry carefully.

Meal does by mechanic action what soap does by chemic, and does not burrow into the flesh like most soaps. The practice of greasing the hand under the notion that it feeds it is one of dubious value, but the occasional rubbing in of olive oil—absolutely pure—is beneficial in many cases, both to nails as well as hands, and will do much to prevent their chapping. Plump hands, however, rarely need such treatment; their supply of natural oil is abundant enough.

The wearing of the same pair of gloves for more than a week, unless these are turned inside out and chemically cleaned, tends to render the hands soiled in grain, and hence liable to disease. Gloves accumulate dirt even from hands kept immaculately clean, as can be seen by a cursory glance at their insides after they have been worn for several weeks.

CHAPTER II.

STRUCTURE OF THE FINGER NAIL.

Antiquity of the Care of the Nails—Blunders of Modern Manicurists—The Anatomy of the Finger Nail—Varieties of its Natural Forms—Its Artificial Shapes, Correct and Incorrect.

THE care of the nails has been for ages one of the surest marks of every serious collective attempt at civilization. Far beyond the period when regular history begins to merge into tradition and folklore, the women of the East paid great attention to the cultivation of their nails; took pride in the shape, color, and lustre of their "phalangeal appendages," as one learned writer terms the pretty things that originally were claws.

As Oriental civilization became more artificial and complex, many took to coloring their nails by insertion of organic dyes into the matrix of the nail at its upper or free edge, where the cuticle ends. Before then they had been content with external painting or staining of the nail with various pigments; black, red, and purple being mostly used, though gilding was also done—a fashion or a fad we have been expecting for some time to see revived.

In some countries the shape of the nail signed the social status of the individual. Long nails denoted persons of high birth or those who had themselves achieved such high rank as to entitle them to especial length of nail. Extreme care was taken by such to protect each nail, the finger tips being enclosed in a gold or silver

sheath, lined with soft material, when the long-nailed personage was not receiving visitors of equal or greater importance or attending social or official functions.

In Mexico and China to this day long-nailed grandees are frequently met who observe these precautions, and, even in this country, Chinese "merchant princes" are occasionally encountered who are thus distinguished. The writer met one some years ago in San Francisco who had nails about three inches long. Dr. Wolff, a famous traveller in the Orient seventy-odd years ago, reported that the dervishes in some parts of Asia were in the habit of letting the thumb nail (the strongest of our nails) grow long, and then paring it to a point so as to use it for a pen. He repeatedly saw this done and secured copies of things written that way—"thumb-scripts."

Evolution of the care of the nails has not been rapid with us in the mass, although many individual Americans from colonial times have been noted for the elegance of their finger tips; being, in the phrase of the Roman poet, Horace, describing a man of high social finish—*politus ad unguem*—polished to the nail point.

But, although popular manicuring is a comparatively recent art, it has been growing so rapidly that soon there will hardly be a hamlet in the land where a manicurist cannot be found.

One of the evils attendant on so rapid a spread is, and must be until correct instruction is thoroughly disseminated, that a vast number of incompetent manicurists will inflict injury, in some cases irreparable damage, on the nails of the rising generation of beautiful girls and well-handed young men. They are already doing it in many quarters.

About the time the first manicuring parlors were es-

tablished in New York, a man who perhaps knew more about hoofs than hands engaged a bevy of good-looking girls, taught them what he called the art, and set them to scraping and thinning down the nails of customers just as horses' hoofs are pared for shoeing. Needless to say, the nails of the customers were ruined, while the blockhead with his bluff amassed a considerable fortune.

Such cruel crudity, of course, would not succeed now, but it is unfortunately true that a vast majority of present manicurists have no true understanding of their business, being deplorably ignorant of the fine points that make for a speedy and a permanent success and apparently believing they have fulfilled their mission when they make their patron's nails retain for a few days a noticeable shine. They ought to take down their sign "Manicurist" and hang up instead one labelled "Nails Shined Inside."

ANATOMY OF THE FINGER NAIL.—First of all the manicurist should have a thorough knowledge of the anatomy and physiology of the nail—just what its structural relations are to the finger, how it receives its nourishment, and what is its process of growth.

The nail is continuous with the cuticle or scarf skin of the finger and closely bound to it beneath the free edge, back of the nail, and at the base or root in front of the nail. It is a horny product, made up of flat scales of great number, arising from the matrix or true skin situated below its body and root.

It varies in shape and length according to the build of the finger, upon which it is placed at its outer and upper extremity. It is elongated from the root outward and terminates in the free end.

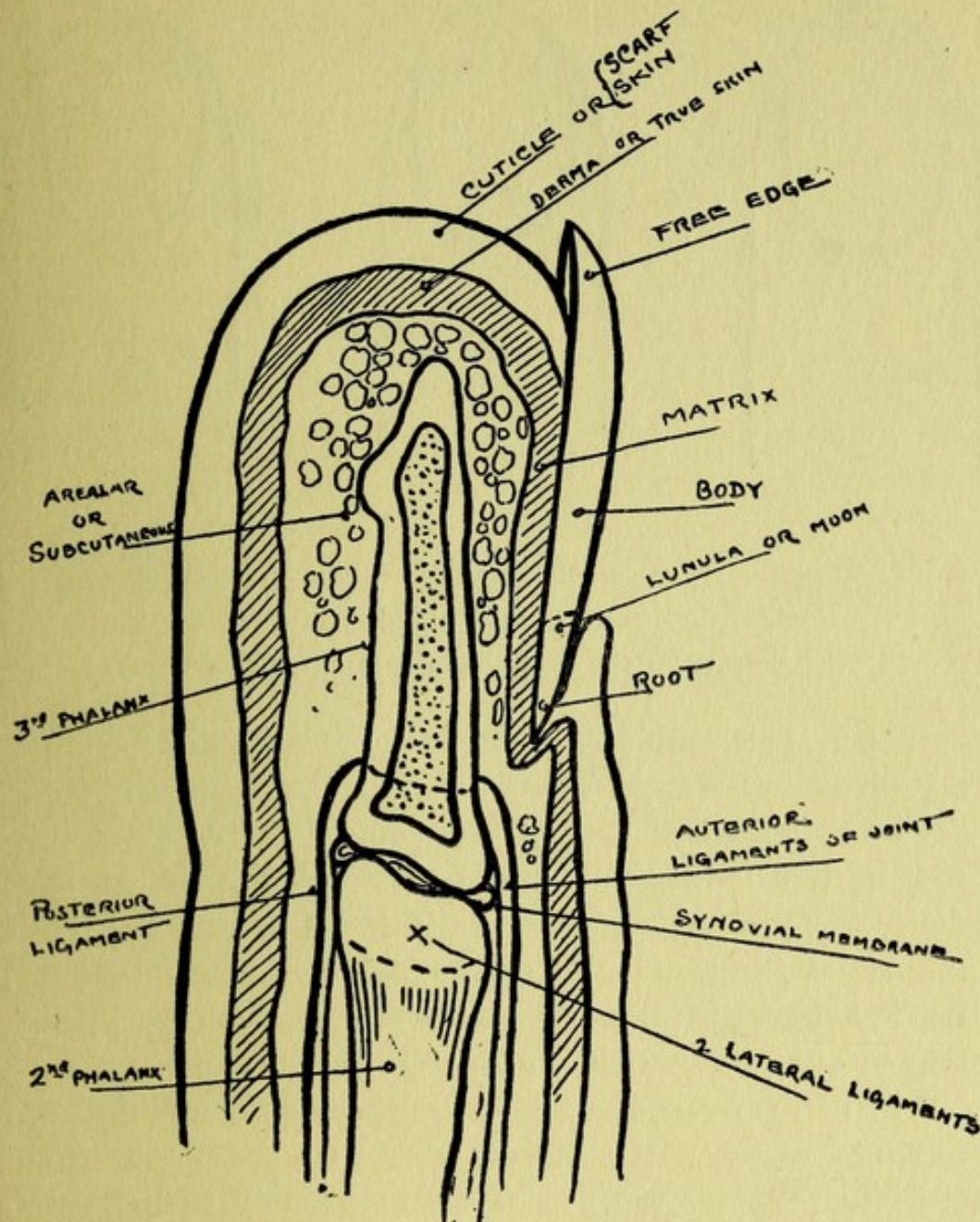
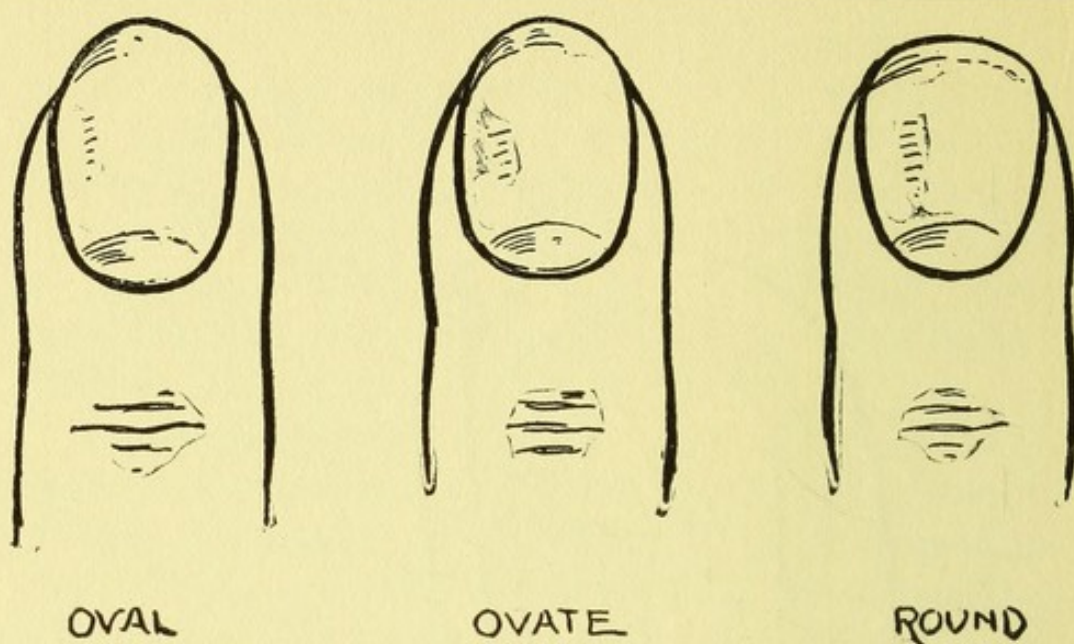


Fig. 2

THE ANATOMY OF THE FINGER

Just above the lower attachment begins the cuticle or scarf skin, which surrounds the horny or protective layer at its sides as well and beneath the free border. The



Figs. 3, 4 and 5
CORRECT SHAPES OF NAILS

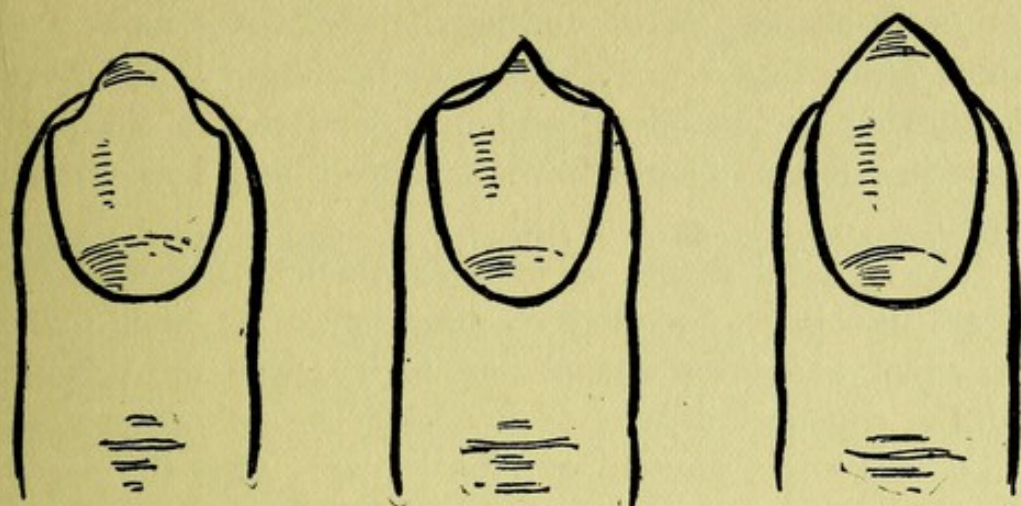
derma or true skin is highly elastic and tough, containing blood vessels and nerves.

The matrix, that part of the skin below the body and root of the nail, is the part from which the nail is produced. This is thick under the body of the nail and thinner at the root. Under the root will be seen a pale halfmoon-shaped area called the lunula, varying in extent in every individual and finger.

The nail is convexed outward over its body and slightly flattened at the root and free edge.

Figure 2 gives an idea of the association of the various parts of the structures to the nail proper, as well as shows the wonderful construction of the finger at its tip.

SHAPES OF NAILS.—The shape of the finger nails differs in individuals according to the peculiar shape of the finger tips. Some are broad and short and thick; others thin, long, and narrow. In some we find claw-like nails,



ROSELEAF

SHIELD

TALON

Figs. 6, 7 and 8

INCORRECT SHAPES OF NAILS

pale in color or of a yellowish tint, while in others the nails are ridged from root to edge or across the body of the nail. Some present thick bone-like brittle nails, and others thin flexible ones. These various forms are the result of physical conditions, some due to recent illnesses, others to chronic diseases.

The nails readily indicate the physical state of the owner thereof, and the manicurist of experience soon recognizes the value of such indication. Her observations are often invaluable to her welfare, and while she is not in a position to treat the patient medicinally, she has the advantage of knowing whereof she speaks, a fact never overlooked by her patron.

The care necessary for such abnormal nails, as far as the manicurist is able to overcome the defect, will be discussed after instructions in the general treatment of the nail.

The manicurist can do much to beautify the hand by

properly shaping or rebuilding the form of a nail. She must know that a short, stubby or fat finger is improved by having the nail long and oval, and that a sharp or tapering finger should have a shorter and less curved nail.

The fanciful shapes of nails so much in vogue a few years ago have, fortunately, gone out of fashion. The rose-leaf and talon shapes had to be given up, because of the constant danger of breaking the delicate points. The oval edge, almond or filbert shape, with the modification of curvature necessitated by the shape of the fingers, is used only at the present time.

In the figures 3 to 8 the correct and incorrect ways of shaping the nails are shown.

CHAPTER III.

MANICURING INSTRUMENTS AND PREPARATIONS.

THE following instruments are requisite for the table of the successful manicurist. They will be described as tabulated to give the student a thorough understanding of their peculiar or particular value:

- | | |
|-------------------------------|-----------------------|
| 1. Nail Clipper. | 6. Emery Boards. |
| 2. Curved Scissors. | 7. Nail Brush. |
| 3. Flexible Steel File. | 8. Orangewood Sticks. |
| 4. Cuticle Knife. | 9. Cushion. |
| 5. Buffers (large and small). | 10. Bowl. |
| 11. Cotton Holder. | |

NAIL CLIPPER.—This is a steel instrument with two curved knife edges, which clip or cut the nail placed between them, when the handles are brought together. It is shown in Figure 9.

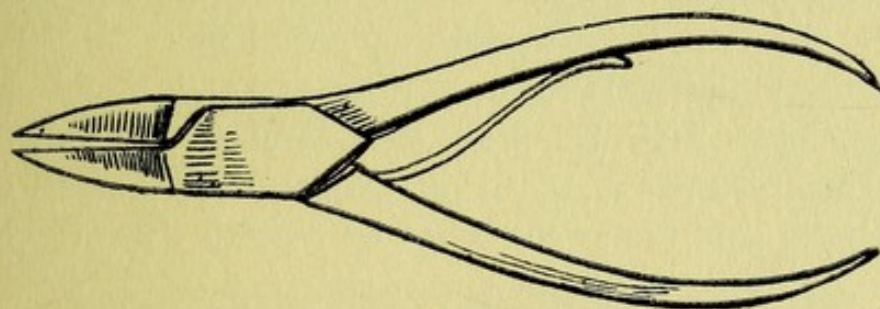


Fig. 9

NAIL CLIPPER

The above clipper is not used often in manicuring for reasons given later. It may also be employed to remove horny or callous skin at the sides of the nails.

CURVED SCISSORS.—The manicurist should provide herself with the best possible pair of fine steel scissors she can obtain. They should be half curved, with well-meeting, delicate points and a long shank or handle to permit her to see plainly what she is doing. Short scissors brings the operator's hand too close to the work, thus covering the parts to be treated, or interfering with the facility of action. The proper instrument is shown in Figure 10.

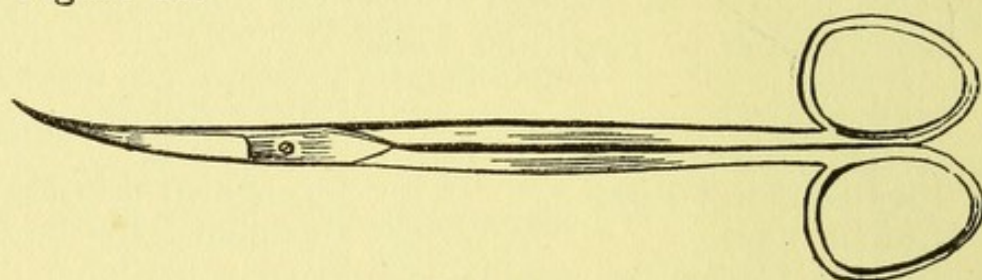


Fig. 10
CUTICLE SCISSORS

Let the operator beware of the so-called "manicure scissors." These are, as a rule, a cheap, clumsy product, with cutting edges that wear out in a week or ten days.

FLEXIBLE STEEL FILE.—This indispensable instrument is very different from the ordinary nail file. It is very thin, shaped as shown in Figure 11, and made very accurate. It may be bent considerably on the flat. These files are made of various lengths and shapes, and are usually sold under the name of French Files.



Fig. 11
FLEXIBLE STEEL NAIL FILE

The one side of the file is fine ribbed and the reverse coarse. The operator will usually become attached to the form and flexibility peculiarly suited to her needs.

CUTICLE KNIFE.—While this instrument is termed a knife, it is never used as such. Its knife edges are quite dull, as they should be, because it is used more as a scraper for removing cuticle or scarf skin than as a knife for cutting it. The scissors is the cutting instrument of the manicurist. The shape of the knife is shown in Figure 12.



Fig. 12

STEEL CUTICLE KNIFE

The handle of the instrument should be preferably of steel, for hygienic reasons. Ivory and wood do not withstand antiseptic lotions well and become loosened by repeated washing.

NAIL BUFFERS.—Nail buffers are of elongated ovate shape, covered with chamois and having ivory, celluloid or wooden handles. See Figure 13.

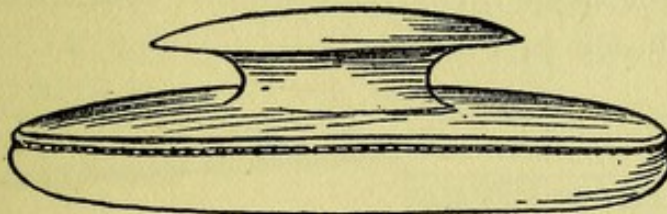


Fig. 13

NAIL BUFFER

The manicurist will need a large and a small one. Their especial use will be mentioned later.

Buffers are used with powder to polish the outer surface of the nails.

EMERY BOARDS.—These are made of flexible wood fibre or thin wood, covered on both sides with emery

powder or white sand. They are made large and small, and of different shapes, as shown in figures 14 and 15. The large size is usually preferable.

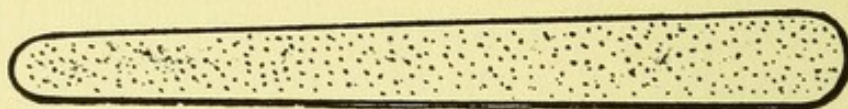


Fig. 14
LARGE EMERY BOARD

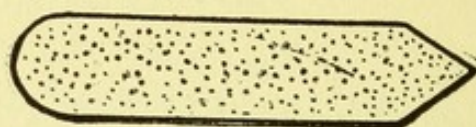


Fig. 15
SMALL EMERY BOARD

NAIL BRUSH.—The nail brush of the manicurist should be made of bone or ivory, having long, white bristles and handle. Wooden-backed brushes are unclean and unsatisfactory, and, while cheaper in price, are more expensive in the end. They split easily, curl and look unsightly in a short time. A desirable shape of the instrument is shown in Figure 16.



Fig. 16
NAIL BRUSH

ORANGEWOOD STICKS.—These are sticks of varying lengths, made of orangewood, because of its hardness,

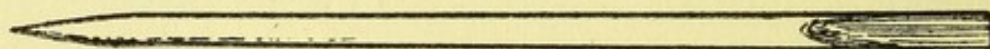


Fig. 17
ORANGEWOOD STICK

pointed at one end and flattened on the other. They are usually sold in bundles or by the half dozen. They are a much-used adjunct to the armamentarium. See Figure 17.

CUSHION.—This article should be made of heavy white material, about ten to twelve inches square, and sufficiently thick to elevate the patron's hand from the table and to rest the forearm of the customer. It may be stuffed with hair or cotton batting or pine needles, and can be easily made by any one handy with the needle, or bought at a small cost.

The cushion must at all times be covered with a clean, small square towel for each patron.

BOWL.—This vessel for immersion of the hand should be round, of glass, preferably of plain design, and large enough to hold about a quart of water.

COTTON HOLDER.—This is another desideratum. Nothing is more objectionable than to see an operator pull pieces of cotton out of a paper parcel in the drawer of her table, wherein it lies loose and exposed. A holder in the form of a white powder jar may be filled with teased absorbent cotton, from which little pledgets may be taken as needed. The box should have a suitable cover.

A glass jar with ground-in salmouth stopper makes a neat holder.

The necessary preparations of the manicurist are:

- | | |
|---------------------------|-------------------------|
| 1. Castile Soap. | 5. Nail Cream. |
| 2. Borax. | 6. Cold Cream. |
| 3. Nail Bleach. | 7. Styptic Pencil. |
| 4. Nail Powder or Polish. | 8. Tincture of Benzoin. |

CASTILE SOAP.—This kind of soap is the purest and least objectionable to all patrons. Perfumed soaps are

not pure as a rule, and therefore are objectionable. While some may like their odor, others will not. Therefore a neutral soap is indicated.

The white castile soap is best for use in this line of work. It is procurable at any druggist's, and should be seasoned—that is, hard, so that it will not be used up too readily. Its use has another advantage—it is cheap.

BORAX.—This is known chemically as borate of sodium. For use in manicuring it should be pure. It may be obtained at a druggist's as washed borax. Grocery store products should be avoided—borax is cheap enough to warrant buying the very best. Its use will be mentioned later.

NAIL BLEACH.—The principal ingredient of nail bleaches is peroxide of hydrogen, although some operators still use a solution of oxalic acid. The most satisfactory bleach is made as follows:

NAIL BLEACH

R	<i>Hydrogen Peroxide</i>	1 oz.
	<i>Ammonia</i>	$\frac{1}{4}$ "
	<i>Fresh Lemon Juice</i>	$\frac{1}{4}$ "

Mix the above and keep in a dark, glass-stoppered bottle. The mixture can be made without the lemon juice in larger quantities, but since the whole can be readily prepared in a few moments it is hardly necessary to have a large quantity in stock, especially as so little is required for each patron.

NAIL POWDER OR POLISH.—This powder can be readily made by the manicurist. It is used with the buffer to polish the surface of the nail.

Several formulas have been used from time to time, consisting principally of talcum and starch powder, but

the best product, usually sold in fancy containers with import labels, is composed of the following:

NAIL POWDER

R	<i>Oxide of Tin</i>	4 dr.
	<i>Boric Acid</i>	2 dr.
	<i>Talcum Powder</i>	2 dr.
	<i>Oil of Lavender</i>	20 drops
	<i>Oil of Violet</i>	20 drops

Rub the above ingredients together in a mortar or porcelain bowl, or shake thoroughly until well mixed.

If a light pink or rose color is desired in the above, add

Tincture of Carmine..... 10 drops

and again mix until the color is uniform throughout.

Another nail polish is made as follows:

NAIL POLISH

R	<i>Oxide of Tin</i>	8 oz.
	<i>Carmine</i>	10 gr.
	<i>Oil of Lavender</i>	15 drops
	<i>Oil of Bergamot</i>	15 drops

Oxide of tin being the principal ingredient, either formula may be used, the first being antiseptic, and the latter differing in fragrance. Both are equal as to their polishing merit.

NAIL CREAM.—This preparation is one of the dainties of the manicure table. A small quantity is prepared, as very little is needed. It is kept in a small porcelain jar. The following is a fine combination:

NAIL CREAM

R	<i>Pure Cold Pressed Leaf Lard</i>	½ oz.
	<i>Tincture of Carmine</i>	1 dr.
	<i>Tincture of Benzoin</i>	15 drops
	<i>Oil of Bergamot</i>	30 drops
	<i>Oil of Cyprus</i>	15 drops

Rub the tincture of benzoin and lard together and incorporate well; then add the carmine, blending it well by rubbing, and last the perfume.

COLD CREAM.—The standard ointment of rosewater, as prescribed by the United States Pharmacy law, will be quite satisfactory. If the manicurist, however, desires to manufacture her own, the following formula will be found excellent:

COLD CREAM

R	<i>Rosewater</i>	4 oz.
	<i>Almond Oil</i>	4 "
	<i>Spermaceti</i>	1 "
	<i>White Wax</i>	1 "
	<i>Tincture of Benzoin</i>	1 dr.

Melt the wax and spermaceti and almond oil together in an earthen dish over a slow fire until the ingredients form an even mass. Then stir with a glass rod to mix thoroughly. Continue stirring and add the rosewater, pouring it in slowly, until a creamy appearance results. Then add the benzoin. Allow to cool and put up into small wide-mouthed porcelain or glass jars.

STYPTIC PENCIL.—These pencils are usually made of alum or a crystal or lump of alum may be used. Their object is to stop any bleeding that might be caused by an accidental injury from the cuticle knife or scissors.

TINCTURE OF BENZOIN.—The simple tincture is employed. By adding a small quantity of water it is rendered slightly cloudy or milky. It is used especially in the water of the finger bowl, to which about ten drops are added.

The object of the benzoin is to render the water slightly antiseptic, as well as to give it the agreeable, aromatic odor of the benzoin gum. Benzoin is also a moderate stimulant to the skin; that is, it brings the

blood to the skin, therefore giving it a better color, particularly required in pale persons, whose finger nails are extremely pale. Its use in water can be repeated daily in such cases.

NAIL ROUGE.—While nail rouges are often used to color nails, it is considered bad practice and is looked upon as vulgar by the community. When requested to rouge the nails, however, the following formula answers well:

℞ *Alkanet Root (ground)*..... 2 dr.
Soak in Diluted Alcohol..... 2 oz.

After several days strain through fine muslin. The mixture makes a splendid tincture. The latter, painted upon the nails, will give a rosy hue to the nail and is absolutely harmless.

NAIL VARNISH.—Many mixtures have been used to varnish the finger nail when thought necessary. The habit is rather vulgar and not resorted to much at the present day, but when called upon to use it the manicurist will do well to employ the following:

℞ *Tincture of Benzoin*..... $\frac{1}{2}$ oz.
Alcohol $\frac{1}{2}$ oz.

Mix and paint upon the nail with a fine camel-hair pencil, after the second polishing, and allow to dry on. The resulting light gloss will remain on for at least a day.

THE MANICURE TABLE.—The table of the manicurist must be placed where there is sufficient light to enable the operator to see her work to the best advantage. This is absolutely necessary, both for the sake of her eyesight and to accomplish satisfactory results. Therefore the

table should be placed as near a window as possible. Artificial light is not as good as daylight for the work.

The right kind of a table to use is one of wood, enameled white or finished in so-called mission style. Its top should measure $1\frac{1}{2} \times 2\frac{1}{2}$ feet, and its height be somewhat lower than the ordinary table to bring the hands into comfortable working distance.

There are many kinds of such tables on the market, ranging from those with nickel-plated or iron enamelled legs, and with marble or glass tops, to the ordinary

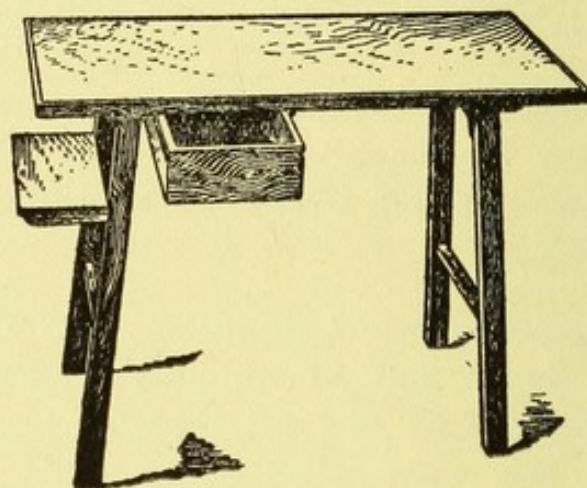


Fig. 18

THE MANICURE TABLE

wooden structure. Any table is satisfactory, however, if kept perfectly clean and recovered with clean towels as necessary. The general type of table is shown in Figure 18.

The table should be properly prepared with a covering of clean towels. There should be one towel allowed for the hands of the patron. A small, clean towel is placed over the cushion.

The various articles employed are placed so they may be taken up readily without awkward twisting or turning. It is a good rule to place the creams and liquid

preparations at the edge of the table nearest the window, to be handy and yet out of the way.

The cushion is placed to the right, and the glass bowl on the left. It should be half filled with water made soapy with a little castile soap, and to which has been added a pinch of borax or a few drops of benzoin. (The former softens the nails and skin and makes them more amenable to treatment.)

The nail brush and castile soap, on a suitable porcelain dish or tray, should lie close by. The instruments should lie upon the table to the right of the cushion.

All bottles, such as those containing the bleach and tincture of benzoin, should be kept where they cannot be knocked over with the moving hands. With the jars of cold cream, nail cream and nail-polishing powder, this is not likely to happen if jars of small size are used. Never employ a jar over a one-ounce size, and choose one either of plain white porcelain or glass of some neat design.

CHAPTER IV.

TREATMENT OF FINGER NAILS.

Details of a Normal Operation—Treatment of Abused and Abnormal Nails: Nail-biting, Bruised Nails, White Spots, Fragile Nails, Ridged Nails.

FILING THE NAILS.—It is very rarely necessary to use the scissors or the clipper for cutting a nail down to near its desired length. The shock of cutting or clipping tends to thicken the nail itself and render it less beautiful. In extreme cases, where the nails have not been attended to for some time, the clipper may be used, but if the patron is to continue treatment do not use it thereafter.

The nail file is the only proper instrument for trimming the nail. It should be lightly held between the fingers of the right hand on the upper surface of its handle, supported by the thumb beneath.

Before using the file on the nail have the patron place both hands within the bowl of warm water long enough to have the skin and nail soften slightly.

Remove the right hand from the water, and dry it gently with the extra towel placed close by for this purpose. In doing this, do not rub the skin of the hand, but rather press the towel upon the fingers, removing the moisture. Do this, working from the wrist down to the finger tips.

Have the patron rest her arm upon the cushion, then take the index or first finger between your thumb and

second finger of your left hand, placing your index beneath the patron's to support it, and trim the nail down by filing from the outer sides toward the centre, never from the centre to the corners, because the file is liable to scratch and roughen the delicate skin.

File the nail down to its proper shape and length, remembering the law pertaining to styles peculiar to individual hands.

Do not file the nail too short. It should extend about one thirty-second of an inch beyond the finger tip.

Repeat the filing of each finger in the same manner and then the thumb.

This done, remove the left hand from the water, putting the one just worked on back into it.

File the nails of the left hand in the same manner and rotation as the right, using your best care to make the nails of both hands as near alike and perfect in the shape you have decided on as you can.

This hand finished, the right hand is taken from the water. Move the bowl to the other side of the table, so that the patron can keep her left hand—the one just finished—in the water.

The right hand should now be dried as before described. You will find that the nails and skin have now become quite softened from the second immersion of the hand. The next step is to clean and bleach the nail.

CLEANSING THE NAILS.—The hand having been well dried, a small amount of absorbent cotton is wrapped around the sharp end of the orangewood stick and dipped into the water in the bowl, or, better, the bleach.

The swab is then gently rubbed under the free edge of the nail to remove what foreign matter, dirt or stain, it may have retained after the immersion, beginning as before with the index and finishing with the thumb.

The manner of holding the stick and the position of the hands of both operator and patron are shown in Figure 19.

In performing this step the operator must be careful not to injure in any way the delicate cuticle or scarf skin below the free end of the nail.

It is good practice also to swab over the entire surface of the nail with the bleach to remove any discoloration there or in the adjacent skin.

Having assured yourself that the nail and underlying tissues are perfectly clean, wipe the finger tips dry with a pledget of absorbent cotton and proceed to smooth the edges of the nails with the emery board.

USE OF THE EMERY BOARD.—Look upon the emery board as a file. It is practically the same thing, but finer and more delicate. It is really a delicate sandpaper process.

Proceed as with the file to remove all roughness with the emery board, working from the outer edge toward the centre at all times.

Look carefully to all hangnails, or agnails, as they are called, and if present remove them with the emery board, leaving the entire free edge of the nail regular and smooth.

Before leaving the finger draw the emery board lightly over the upper surface of the edge of the nail, working toward you or in a line with the nail. This smooths or thins down the edge of the nail, thickened somewhat by the filing process.

One or two of such strokes are sufficient to accomplish the desired result.

Take up each finger and the thumb in the order heretofore mentioned.

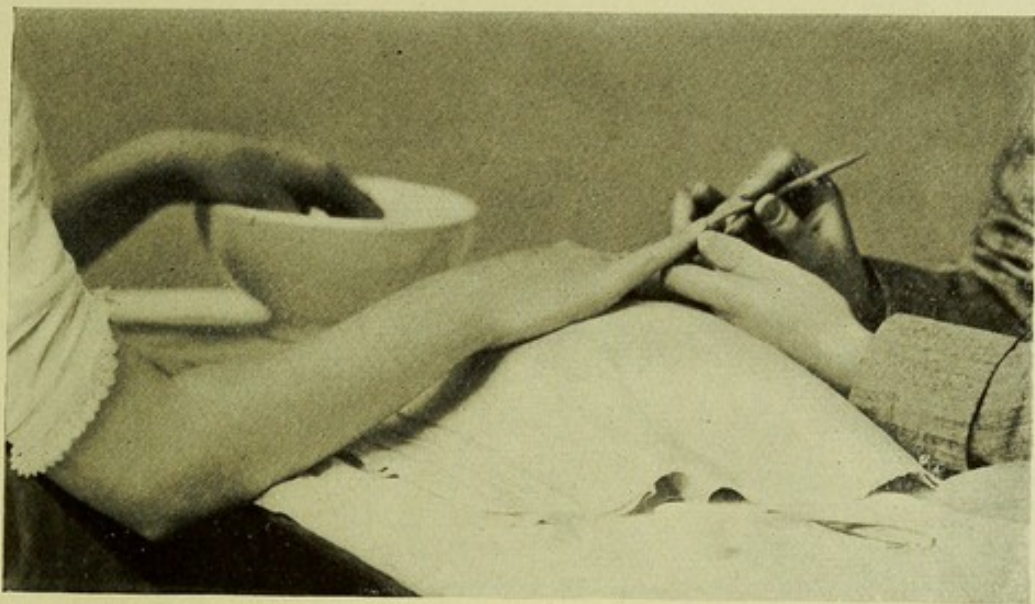
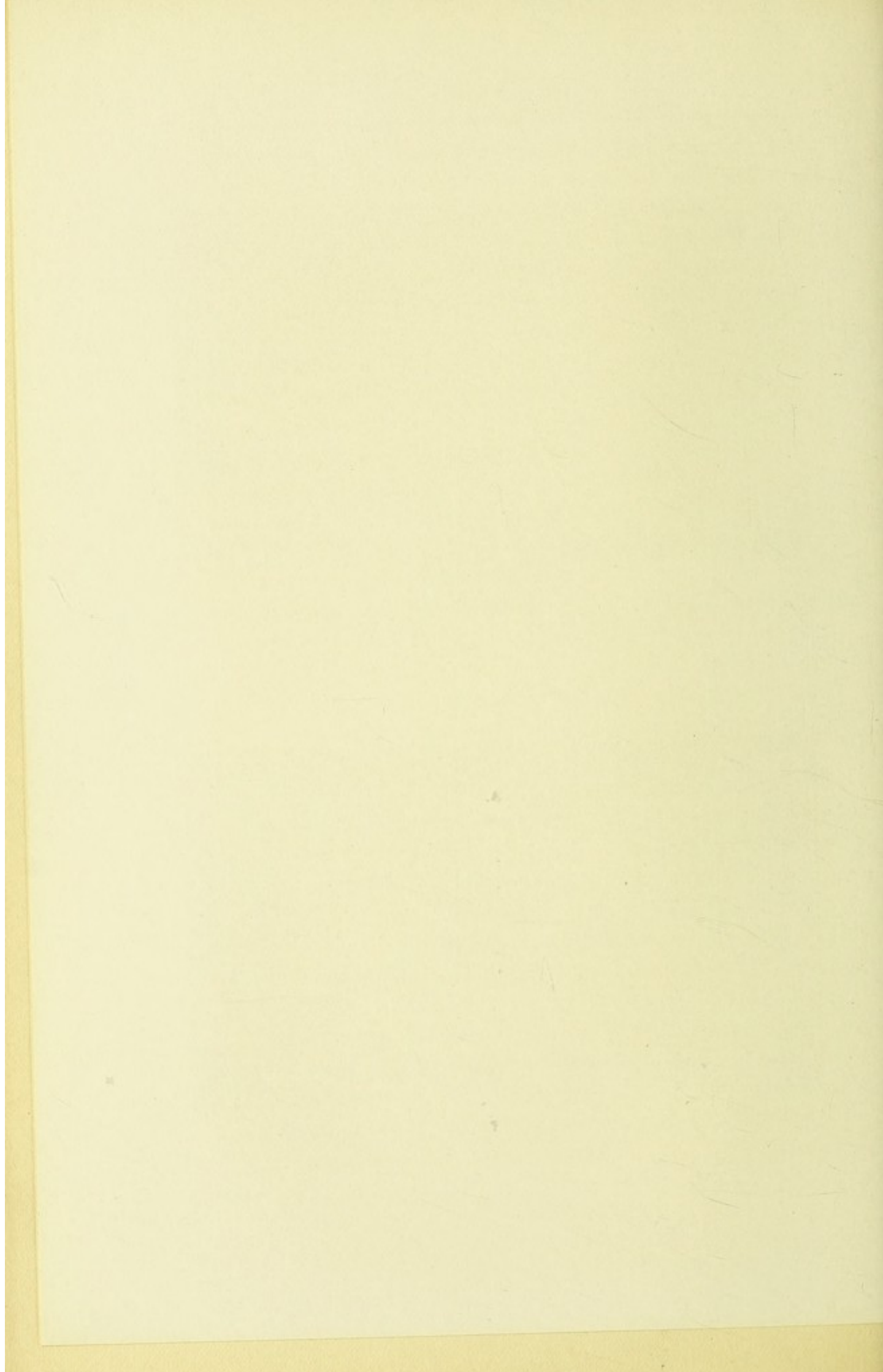


Fig. 19



Fig. 20



REDUCING THE CUTICLE.—The next step is to reduce the cuticle at the base of the nail, so as to expose as much as possible the halfmoons.

For this purpose use the flat end of the orange stick and, holding the finger as in filing, gently crowd back upon the finger the cuticle that has grown upward on the lower section of the nail.

Do not use force for this method, as it is easy to injure the delicate skin and to cause pain to the patron, also to make the parts bleed.

If bleeding should result, the mere touch of a styptic pencil of alum or a crystal of alum applied for a moment will stop it.

Repeat the process of loosening the skin of each finger and thumb, then take up the cuticle knife, as shown in Figure 20, and scrape away the loosened skin.

If you find the skin does not come away readily, use the cuticle scissors and cut it away carefully, leaving it free of all rough edges. In doing this do not injure the nail in any way, as it is likely to leave scars and ridges that will take weeks to grow out, and may even cause permanent disfigurement of the nail.

If the cuticle is so plentiful and thick that it cannot be removed satisfactorily at the first sitting, leave it for the next, when a happy result may be obtained.

Treat each finger in like manner; then, taking the left hand out of the water, dry it and repeat the same operation. Then rub a little cold cream upon the nail and upper surface of the finger end.

The right hand should not be placed in the water during this time. The patron may lay it upon the table or rest it in any position desired.

Having finished the left hand in like manner, again take up the right, look over each finger, and with the scis-

sors remove all ragged edges of skin, callouses or overgrown scarf skin at the sides of each nail. Repeat this with the left hand.

This motion leaves the fingers about the nails smooth and neat, giving great satisfaction to the patron. Assure yourself of the neatness of your work by rubbing your own index finger tip downward toward the finger of the patron, so that if any free edges of skin have been overlooked they will be roughened up and show. If any, remove them with the scissors.

Having satisfied yourself that nothing thus far has been overlooked, again take up the right hand, rub off the cold cream from the finger tips and nails with the towel, always rubbing toward you or from the base of the nail toward the free edge.

BLEACHING THE NAILS.—The next step is again to bleach the nails preparatory to polishing.

While this is not always necessary, since it is the second application of the bleach, it is often found necessary to resort to it in bad cases. It is done simply with a piece of cotton wound upon the flat end of the orange stick dipped into the bleach and wiping thoroughly over the body of each nail of both hands.

It is well to bleach the under side of the free edge of each nail at the same time, as most of the stains will be found there.

The nails of both hands finished, place the right in the bowl of water and, with the nail brush, scrub the finger ends, freeing them of the bleach and other matter. Take the hand out of the water, letting the left take its place.

Dry the right hand thoroughly and proceed as follows:

POLISHING THE NAILS.—Having dried the hand with



Fig. 21

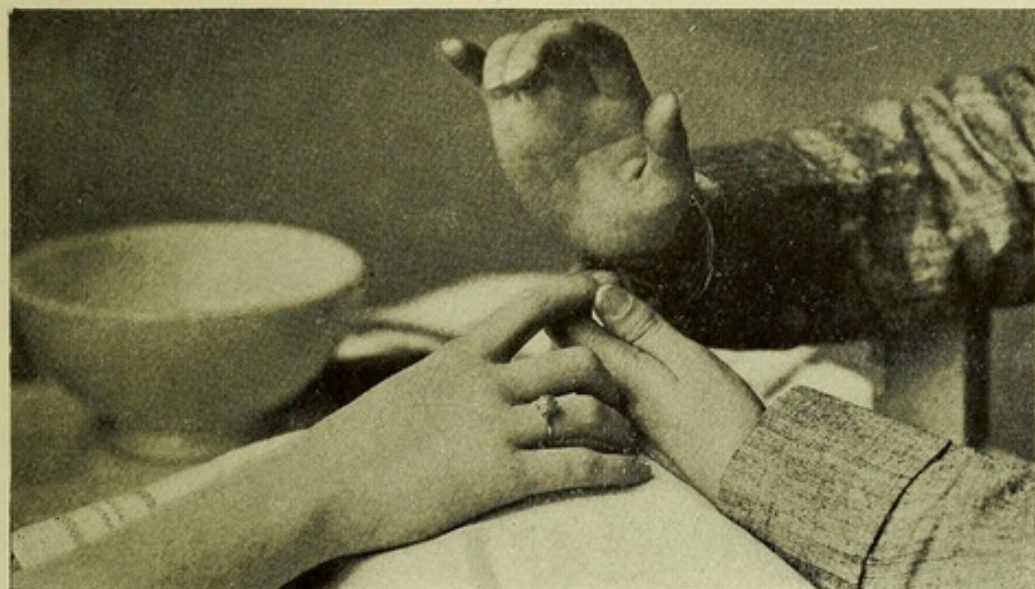
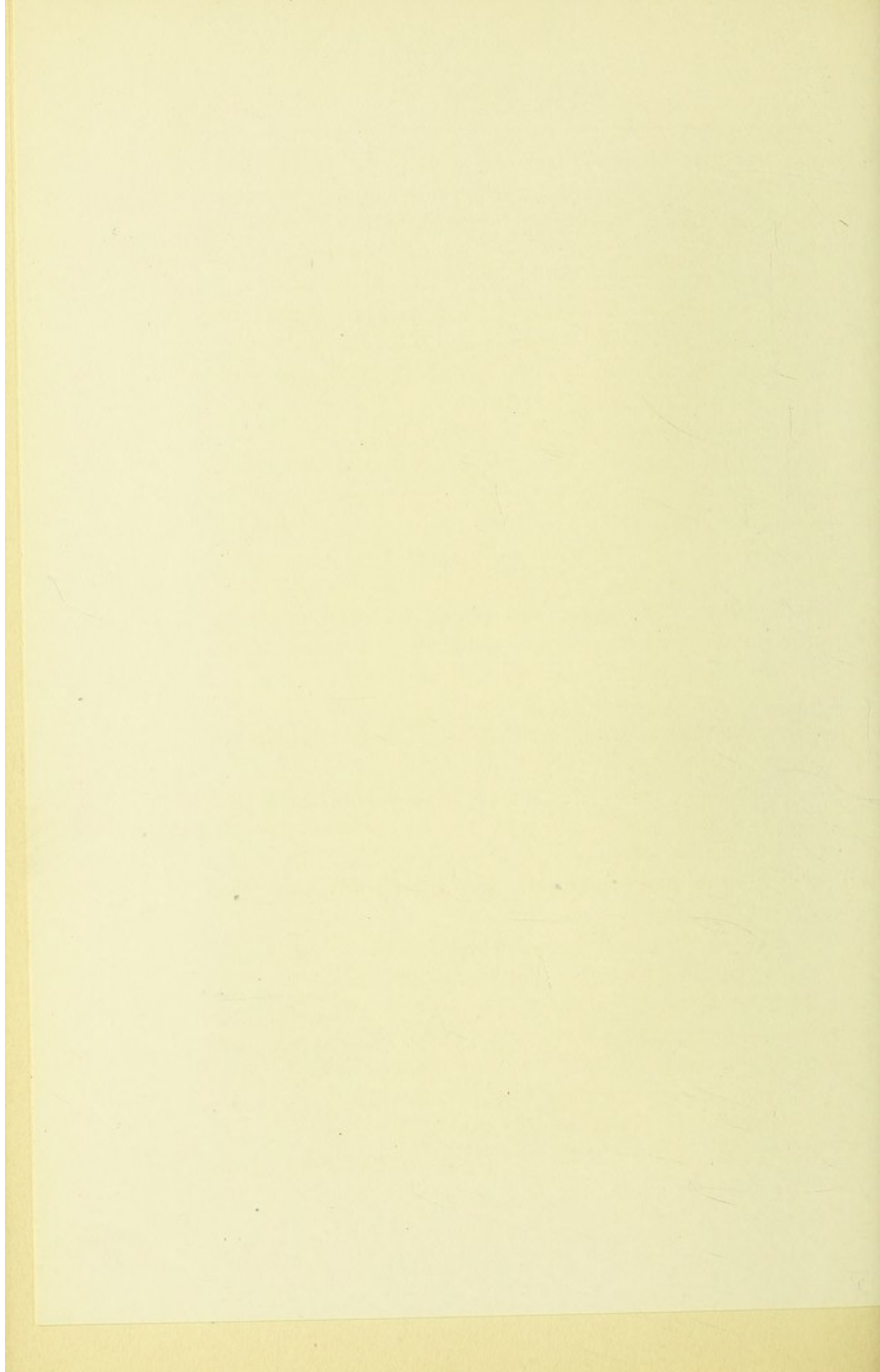


Fig. 22



firm pressure, as described before, dip the small buffer into the nail powder and, holding the index finger as shown in Figure 21, rub the buffer briskly over the body of the nail in a lateral or side to side direction, never from base to tip.

This operation will usually make the nail matrix tingle and bring the blood forward and color the nail deeply. This is to be desired, since it gives vitality to the parts and improves the nail growth.

Repeat this operation with each finger.

The right hand finished, dry the left and proceed to polish the nails as with the right preparatory to the second polish.

Having buffed the nails of both hands, again place the hands in the bowl of water, and, with the nail brush and a little soap, scrub the finger tip well, working from the base of the nail toward the free edge. This removes the powder from the nail and crevices.

Again dry the hands and, beginning with the right hand, wipe a little nail cream over each nail with the tip of your right index.

Dip the large buffer in the nail powder and again buff or polish each nail from side to side, using a lighter touch, however, than used in the first buffing.

Treat each nail separately and thoroughly until the lustre of the nail is satisfactory.

Having polished all the nails as described, again dip both hands into the water and dry them well.

Then, rubbing a little of the nail powder into the upper part of the palm of your hand, burnish or buff each nail again from side to side, as shown in Figure 22.

Wiping off gently each finger nail with a piece of absorbent cotton concludes the operation.

The manicurist will often be called on to treat abused

and abnormal nails. The following directions will be of value:

NAIL-BITING.—This very bad habit is due to nervousness. Mothers should look to their children and use every means to prevent this deplorable affliction by painting the finger tips daily with tincture of aloes or wrapping them up with bandages or strips of red flannel.

If the habit has remained to maturity nothing will correct it as much as careful manicuring. If the nails are kept even and somewhat shorter than the usual nail, the patron will not be inclined to bite them.

BRUISED NAILS.—A bruised nail may be prevented from turning black with clotted blood by immersing the finger tip into as hot water as can be borne for at least half an hour.

The finger tip may then be covered with a layer of hot antiphlogistin or a pledget of cotton dipped into hot witch hazel wrapped around the member, allowing to remain on over night.

Either of these applications is removed the next morning, leaving the patron to rest the finger for a day or two to allow it to get back to its normal state.

WHITE SPOTS.—White Spots or Gift Marks may be removed from the nails with the following:

<i>R</i> Refined Pitch	$\frac{1}{2}$ oz.
Myrrh	$\frac{1}{2}$ oz.

Under heat melt the two ingredients and when thoroughly mixed by stirring pour into a jar. Apply to the nails at night and remove each morning with a little olive oil on absorbent cotton.

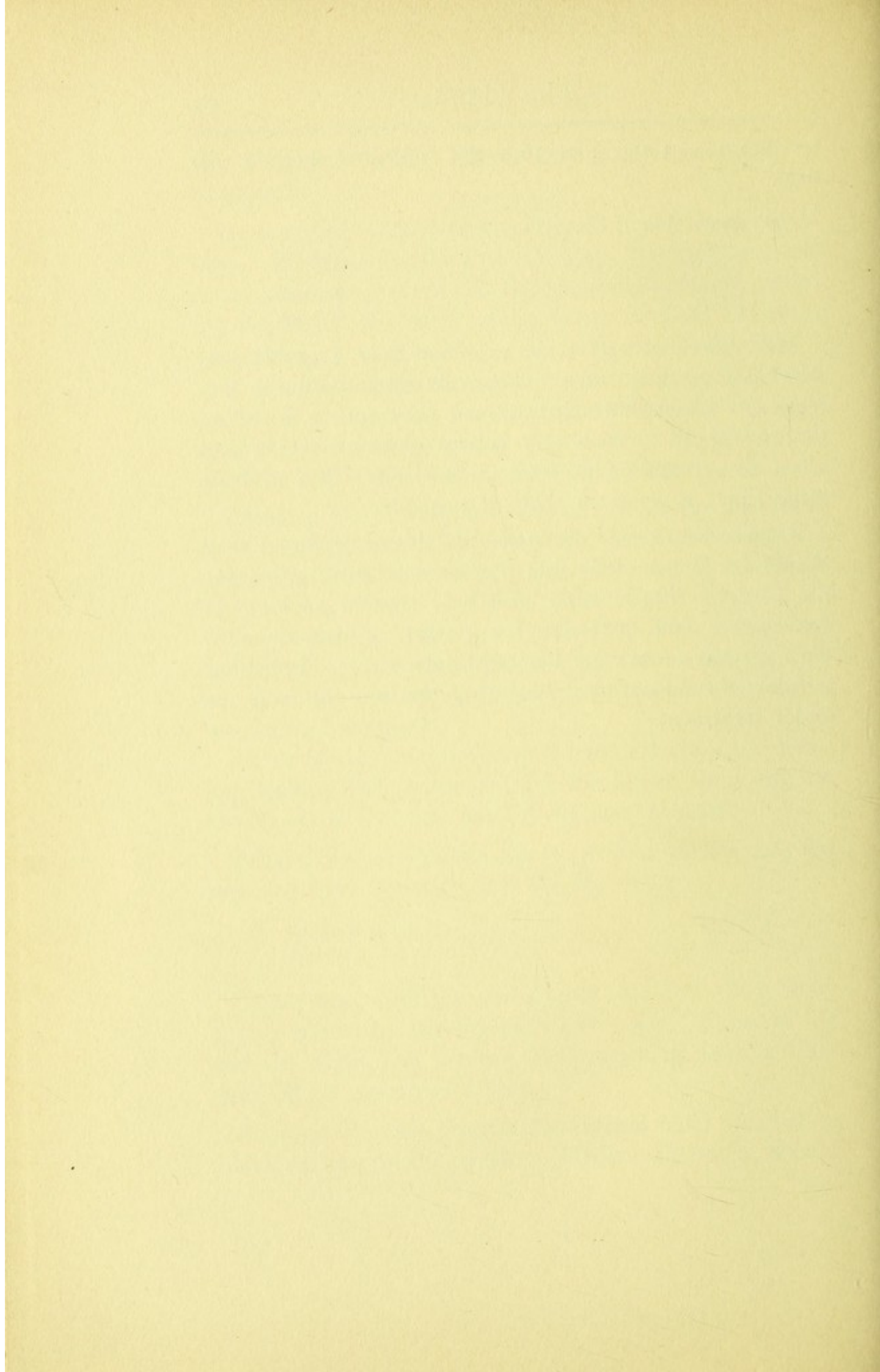
FRAGILE NAILS.—Fragile and brittle nails are due to a lack of lime in the system. Medical treatment should

be advised; at the same time the following method will help.

R	<i>Table Salt</i>	30	<i>gr.</i>
	<i>Almond Oil</i>	$\frac{1}{2}$	<i>oz.</i>
	<i>Powdered Resin</i>	30	<i>gr.</i>
	<i>Powdered Alum</i>	30	<i>gr.</i>
	<i>White Wax</i>	80	<i>gr.</i>

Melt the wax and resin together over a gentle fire, stirring constantly; then add the oil, salt and alum in succession. When thoroughly mixed pour into a porcelain jar and apply to each nail with a piece of cotton and allow to remain on as long as possible. Use at least three times a week, or daily if possible.

RIDGED NAILS.—If the nails are ridged or fluted they should be dipped daily into the same mixture given for the care of fragile nails, and held therein as long as convenient, once each day for a week or two, or until the nails have taken on a normal appearance. Polishing powders should not be used during the time the nails are under treatment.

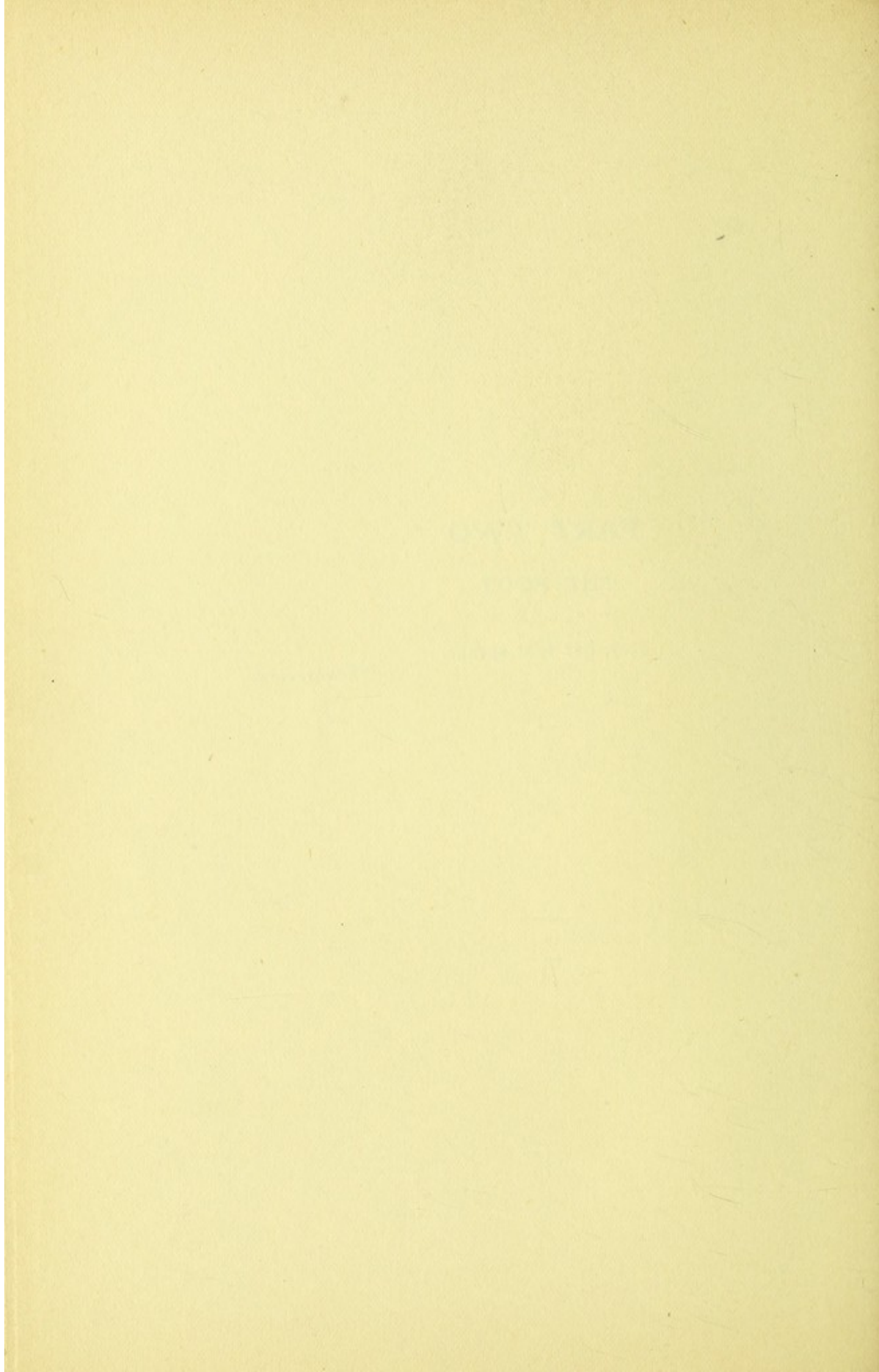


PART TWO

THE FOOT

Nay, her foot speaks.

—*Shakespeare.*



THE FOOT

CHAPTER V.

ANATOMY OF THE FOOT.

Expressiveness of the Foot—Racial Characteristics—Structure of the Foot.

IN its natural undistorted condition, the foot is almost as beautiful and expressive a member as the hand. It can be trained to do wonderful things. A ballet dancer, such as Fannie Elsler, whose music of motion extorted the ejaculation "divine" from the Concord philosopher, Ralph Waldo Emerson, reveals the marvellous strength and pliability which the foot may acquire by assiduous cultivation. Even in its ordinary function of walking, the foot's capacity for expression strikes the eye. Virgil makes her gait the most significant sign of the goddess of beauty, Venus:

"And the true goddess is shown by her going."

Furthermore, the foot may be trained to do many things that would seem utterly outside its particular province. Men and women who have lost the use of their hands have learned to write with their toes, to sew and to embroider. To box with the feet in connection with the head and fists, is not an uncommon accomplishment among Frenchmen. It is called the savate.

RACIAL CHARACTERISTICS.—Races are markedly distinguished by differences in character of the foot. The English foot is rather fleshy, but short and not so strong as it should be. The Scotch foot, high and thick, shows power and endurance.

The French foot is recorded as long, narrow, and well proportioned.

The Russian foot is peculiar in that the skin between the toes is generally webbed to the first joint. The Tartar has toes of equal length.

The Mexican Indian foot is quite short and strong, with a noticeable distance between the great and second toes.

Savage tribes, such as the Mexican peons (now a gentle, industrious people) were a few centuries ago, usually show a decided distance between the great and second toes, undoubtedly due to the spreading of these parts in climbing trees.

The feet of Americans are well formed, but inclined to be too short for the height of the individual, especially in women.

The length of the foot of a woman five feet and six inches tall should be nine and one-third inches. Such a foot should not be thick and heavy, but slender and of delicate look, though firm of skin and with a well-defined arch at the instep that should be rather more marked than that of a man.

STRUCTURE OF THE FOOT.—The human foot may be truly said to be of a higher order than that of any of the so-called lower animals in that it is constructed not only to give ease to every poise and movement of the body, but to bear this weight gracefully and to add by its own movements, as well as its own shape, to the grace or beauty of the individual.

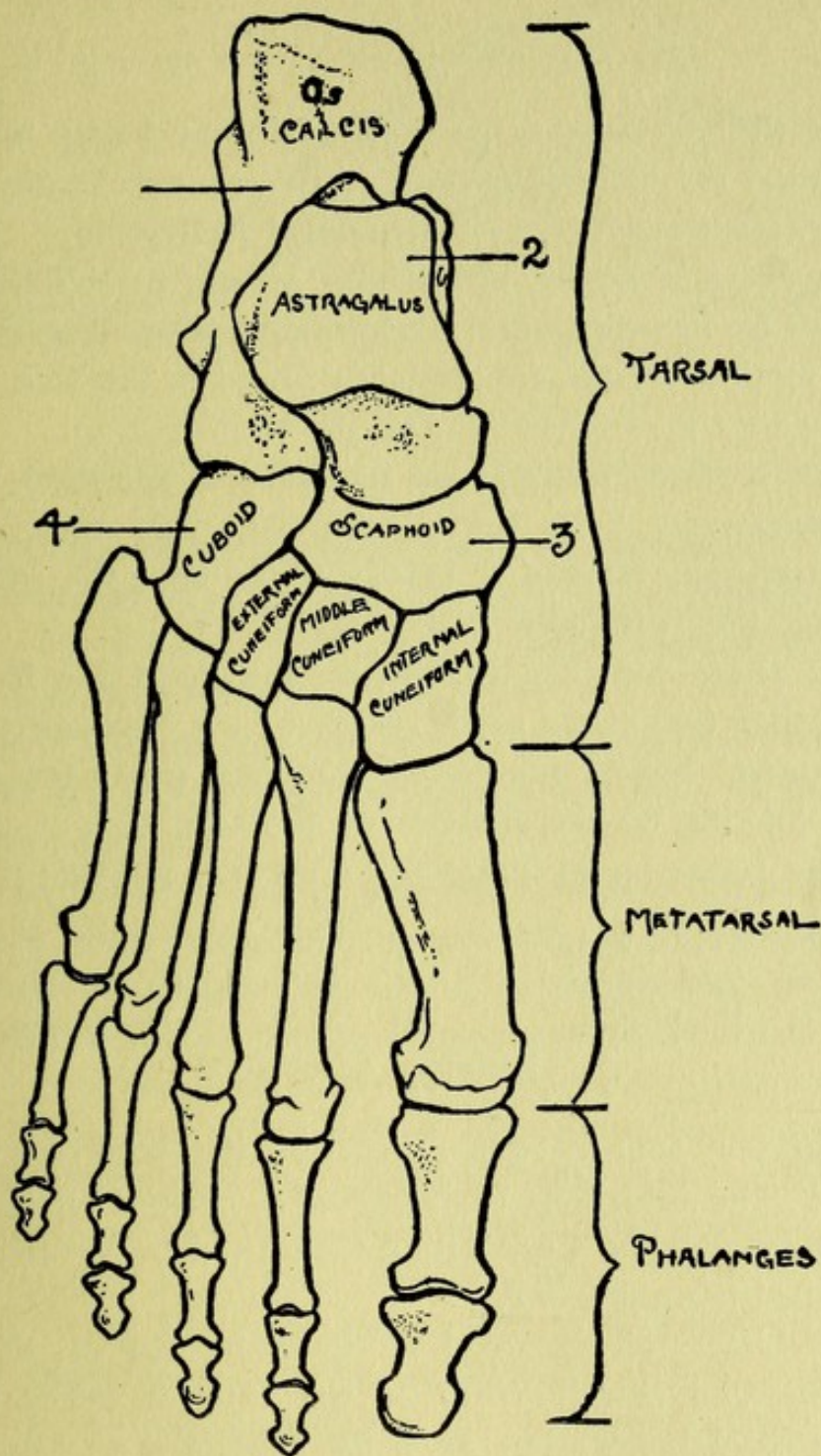


Fig. 23
THE ANATOMY OF THE FOOT

"Her feet beneath her petticoat
Like little mice played in and out"

sings the old English poet, Sir John Suckling, who understood the esthetic quality of feet as well as any physiologist appreciates their structural perfection.

Twenty-six bones, beautifully arranged, bound up together by ligaments and muscles and permitting more or less motion on one another, are found in the foot. (See Figure 23.)

The motion is chiefly on its outer or toe division and comparatively little behind the ball. Of these bones, fourteen may be said to belong to the toes, the rest composing the formation of the tarsus.

Of these fourteen toe bones, the great toe has two, the other toes three each. Back of the toes are the five metatarsal bones, numbered from the great toe one to five, making up the anterior of the arch.

The seven tarsal bones are especially named:

- | | |
|----------------|------------------------|
| 1. Os Calcis. | 4. Cuboid |
| 2. Astralagus. | 5. Internal Cuneiform. |
| 3. Scaphoid. | 6. Middle Cuneiform. |
| | 7. External Cuneiform. |

The last four of these make up the posterior of the arch. The anklebone (astralagus) is clasped on each side by the malleolus, a projection from the leg, forming what is called the ankle joint.

Architecturally studied on its inner aspect, the arch is found to rest in front on the anterior heads of the metatarsal bones; but (a point especially to remember, because of its great importance in scientific treatment of the foot) chiefly on the metatarsal of the great toe, and on the os calcis or heelbone behind. The astralagus is the keystone of the arch. (See Figure 24.)

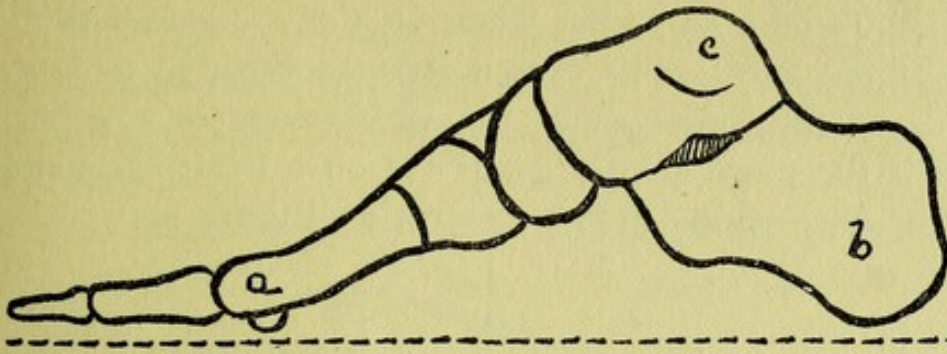


Fig. 24

THE ARCH OF THE FOOT

a=Metatarsal b=Os Calcis c=Astralagus

Ligaments, or strong bands, hold this marvellous piece of mechanism together and thus make it capable of upholding the weight of the body, yielding only a little as one moves, without giving way.

If we stand on one foot, the arch flattens and lengthens. If we rest the foot or dangle it over a chair, the curvature increases.

To have one leg on the floor and the other crossed over its knee gives each foot temporarily a different arch. And so in walking, as the foot is raised, by the action of the muscles, the curvature is immediately increased.

This arch is practically developed to its proper adult form about the sixth year of life; being more or less flattened during infancy and early childhood. Connecting it with the metatarsus, the great toe has but one joint, while each of the smaller toes has two.

From what has been said of the architectural relation of the great toe and the heelbone to the arch as a whole, it will be seen that in walking the chief work of the foot, running along a straight line from heel to great toe, falls upon the latter.

The great toe ought, therefore, as Professor Herman Meyer of the University of Zurich demonstrated over

fifty years ago, so to lie, when on the ground, that the line of the axis, a line drawn straight through it, backward, would come out at the very centre of the heel. This is the position of a great toe on a perfectly sound foot as exemplified in the illustration Figure 25.

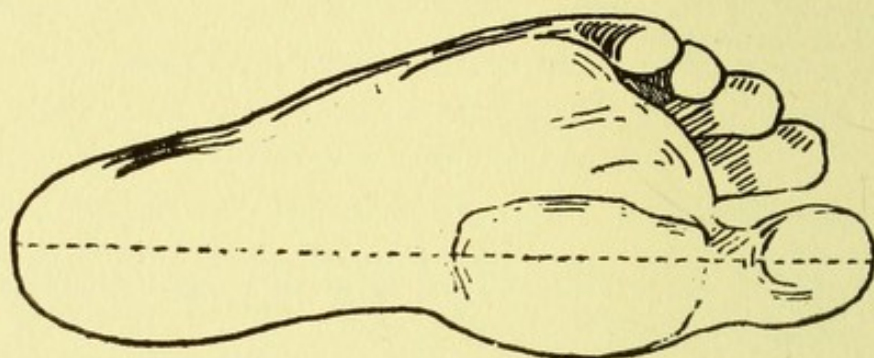


Fig. 25

THE AXIS OF THE FOOT

While insisting on the importance of the great toe, and the special care it should receive, the writer does not mean to minify the value of the smaller toes, or detract from the attention that should be paid to them likewise. They have their uses.

One of these is the giving of side support to the foot, when standing. Another is in walking, to bend in such a way as to press firmly against the ground; in this, too, giving a side support to the foot. The peculiarity about the walking curvature is, that the first joint bends upward strongly, while the second is hollow above. This would give to the smaller toes, if one went barefoot, a little grip on the ground such as is taken by the claws of a bird when walking or hopping about.

In order to ascertain the exact character of the arch effect, the chiropodist should have the patron place the bare foot firmly, but naturally, without undue pressure, on a sheet of paper that has been previously blackened

with the smoke of burning gum of camphor. The imprint thus made will give a fairly indicative outline as to the perfection of the arch or its deviation from perfection.

A broken-down arch, if complete, gives an outline of the entire sole of the foot, showing the more or less elliptical imprint of the ball of the foot; the dividing line between the round impression of the heads of the smaller toes and the pear-shaped impression of the great toe; the rounded area of the heel, and a line at the outer border of the foot, more or less pronounced, which con-

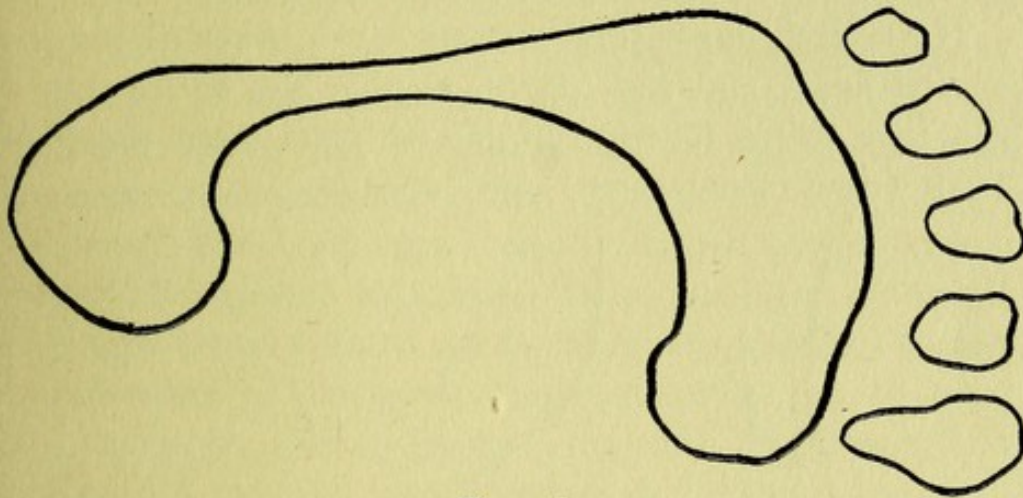


Fig. 26

THE FOOT PRINT

nects the imprints of the heel and the ball. A good idea of this impression may be obtained from Figure 26.

The practitioner, when he has taken several hundred of such arch impressions, will very likely have become such an expert that he will hardly need to take them; the eye will tell him, sometimes at a glance, just what the matter is with the patron's arch, and what should be done to correct it.

In outline the foot from its inner side should appear practically as shown in Figure 27.

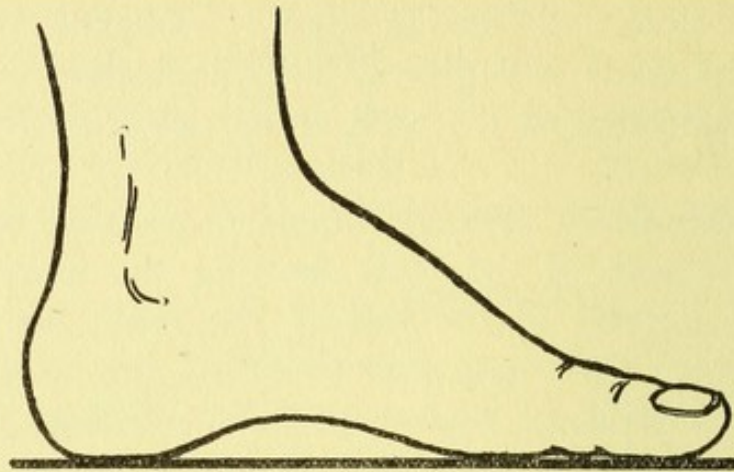


Fig. 27

THE NATURAL ARCH

If the arch has become flattened, the bones of the foot spread apart and sink down, so that the entire sole of the foot either touches or almost rests upon the floor. Such a foot is shown in Figure 28.

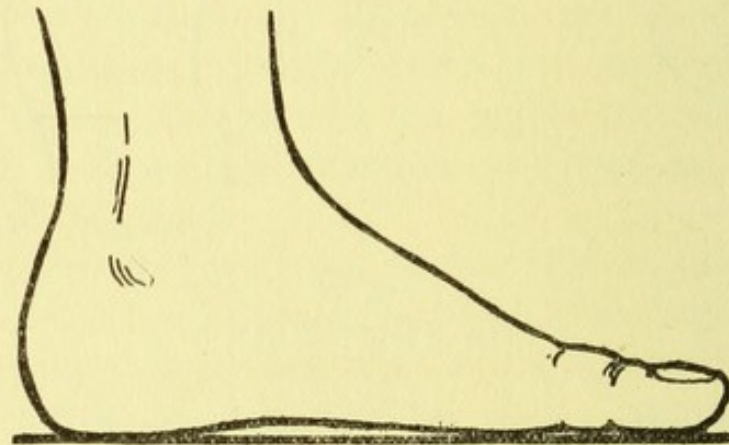


Fig. 28

THE FLATTENED ARCH

This sinking of the arch varies, of course, with each individual. If after walking for a while, one has a continual dull ache in the foot, particularly the outer side of it, and a corresponding stitch in the calf of the leg, this is a warning that the ligaments of the arch are loosening, and that the arch is likely to fall. Specific cause and treatment will be given later.

CHAPTER VI.

SHOES.

Ancient Shoes: the Sandal, the Buskin—The Moccasin—The Chinese Shoe—The Chiropodist as a Shoe Expert—Meyer's Reformation in Shoe Construction—Characteristics of a Proper Shoe—Children's Shoes.

FAR more than any other part of the body the foot is affected by its covering. Every chiropodist should be an expert on shoes, knowing the subject from beginning to end. The footgear of the ancients shows a much clearer understanding of the rights of the foot as a member of the body than we somewhat self-appreciative moderns appear to possess from the kind of foot coverings we generally wear—to our constant discomfort and often to the serious impairment of our health.

It might almost be said that one good reason why Egypt flourished, and Rome stood so long, was because their inhabitants kept their feet so well; so uncramped; so able to support the rest of the frame in comfort, with ease and with power.

Study the illustration (Figure 29) of an Egyptian woman's foot, and note how the simple, light sandal affords ample protection to it against injury below and yet allows it free play above. Would anything in foot-wear have been more fit in a climate mostly warm and dry, like that of Egypt?

Mark the finely arched instep and the straightness of the toes. Such feet were almost as beautiful as hands,

and merited all the care they received. They never had corns, and only by accident callosities.

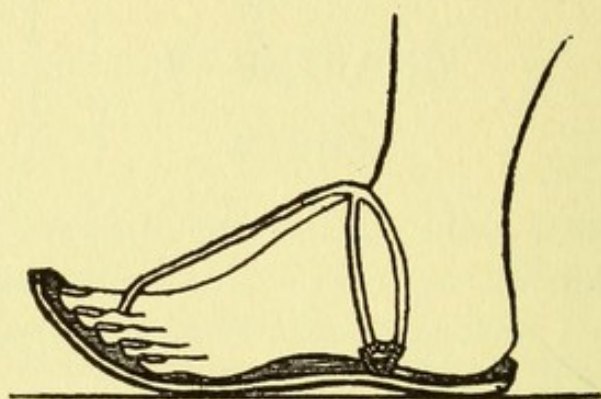


Fig. 29

THE ANCIENT SANDAL

Illustration 30 gives a fairly good representation of the old Roman foot covering called the *cothurnus*, or buskin. This was laced not overtightly (for that might interfere with circulation) over only the *root* of the *toes*, permitting even more free play than did the sandals of those pedal digits.

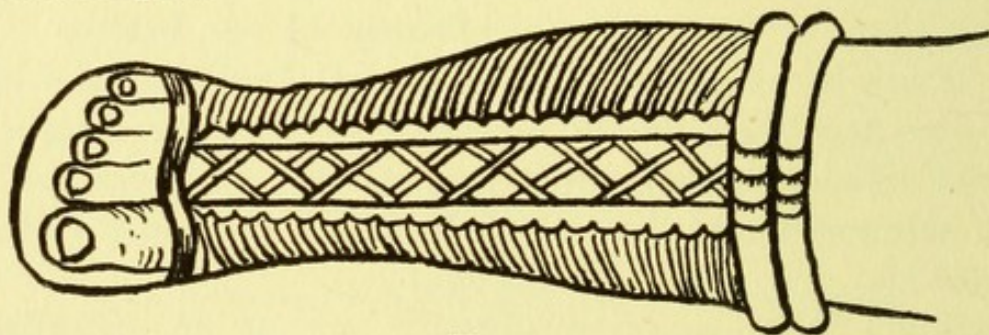


Fig. 30

THE ROMAN BUSKIN

The Roman buskin had a sandal sole made to fit the foot, instead of the foot being forced to fit the sole. Compare, too, the evenness in length of those noble Roman toes, and their *straightness*, with the irregularity of the modern foot with its one bulgy lop-sided big toe and four curlycue runts beside it.

On the ordinary Roman sandals, the thongs or strips of a thinner, more pliant leather, separated the toes and strapped the sandal to the foot, serving to keep the toes leaning on or overlapping each other. Feet, thus dressed, gave off their perspiration naturally, and did not hive it up to become offensive in odor and productive of softness of the skin and of ultimate disease.

It is pleasant to note that we are beginning now, in the raising of our children, to realize the value of sandals; and it is to be hoped that this fashion, which allows the feet to grow naturally and spread properly, will continue to spread until it reaches to adults.

For men and women who spend the summer in country places or at the seaside the wearing of sandals in summer and as late into the fall as comfortable would be extremely beneficial. All athletes, whether practicing in the gymnasium or engaged in exhibitions or playing any game, except football, would be immeasurably benefited by a return of the sandal of the ancients. To golfers particularly, with the undulant character of most golf-links, the sandal would be a boon.

The American Indian covered his feet entirely with soft leathern mittens called moccasins. It would be well if these replaced the modern "sneakers" whose soles, being made of rubber impervious to perspiration, render them pernicious to the health of the feet. Pliable leather is the best protective foot covering in a cold climate. The Esquimos make their boots of skins, lining them with fur and eiderdown, and for these Arctic explorers invariably cast aside the stiff boots of civilization.

Wood, instead of hard leather, is used to protect the soles in many countries.

From time immemorial the Chinese have worn shoes having wooden soles lined with soft material and cloth

uppers in slipper fashion, which give the feet considerable freedom of movement, and consequent immunity from corns. (See Fig. 31.)

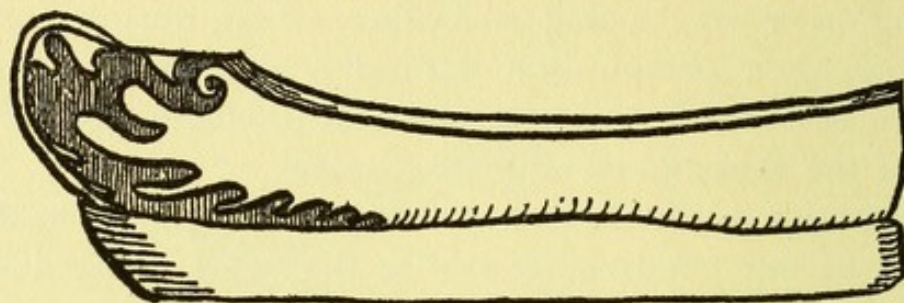


Fig. 31

THE CHINESE SHOE

But even in wise old China, Fashion, that teeming mother of many deformities as well as absurdities, has decreed that certain feet should be compressed to as great an extent as possible, limiting, however, this cruel and hideous folly to the girls of the aristocracy, who were regarded as toys, rather than creatures with souls demanding activity in service, and whose helplessness, therefore, was an ostentatious proof of the husband's ability to afford such a luxury.

The method of doing this, which is undertaken almost from birth, entails constant pain throughout girlhood. By the tight bandaging, the bones are displaced upward so as to render it short along the line of the sole and apparently small, though the actual size of the foot, thus distorted, remains about the same.

Carried to extreme extent, this practice renders the Chinese belle a cripple, able only to hobble ungracefully, and sometimes, when fatness arrives, necessitating her being lifted around by servants, a pitiable piece of feminine furniture, to whose helplessness the European or American woman but feebly approaches with her "French heels" and "hobble skirt."

There is no evidence in their literature that the ancients experienced such afflictions as bunions or corns.

It was with the advent of the modern shoe that all forms of foot distortion and foot-disease appeared, and with its spread that these multiplied until a perfectly shaped and perfectly healthy foot is a greater rarity than anything to be found in an anatomical museum.

Even shoes of our grandfathers' days, being custom made, were not so likely to cause abnormalities of the feet, but the recent shoes, manufactured in fixed styles and built on lasts peculiar to each manufacturer, have cut a terribly wide swath of havoc, making the chiropodist or foot-doctor an increasing necessity in our scheme of civilization.

When this highly important specialist first made his appearance, not so very many years ago, he was looked at askance as a cheap faker who gave only temporary relief. Unfortunately, this was not only true in most cases, but still worse, his treatment often caused irreparable damage.

And to-day, there are still many deplorably ignorant persons presumptuously calling themselves pedicures, and practising chiropody under license from the various States. As Dr. Kahler, who had the honor of attending to the sore feet of Abraham Lincoln, with just indignation remarks, these quacks, "ignorant of anatomy and incapable of performing a delicate operation, possessing only a few salves and the knowledge of some powerful acids or astringents, and often doing more harm than good, have brought the profession of chiropody into contempt, and to them are applied such names as corn-doctor, etc."

Accordingly, every earnest and honest would-be chiropodist should first understand the Anatomy of the Foot,

and, second, should study the make of shoes and be able to instruct patrons just what kind of shoe to wear; otherwise, only temporary relief, not cure, is the result, and the foot-doctor, instead of being a desirable citizen and an honor to any community, is a cheap charlatan whose practice is to keep persons continually coming to himself or to somebody else, as patients, instead of curing them and thus converting them into active advertisers of his probity and skill.

There are, however, reliable and conscientious chiropodists, and when one is found it is a good plan to visit him at least once in every six months and have the feet examined, just as it is a good plan to have one's teeth examined that often by a reliable dentist.

If one has very fine or tender feet a visit every three months, instead of semi-annually, would be advisable. Even for persons possessing comparatively healthy feet, to have them pedicured as often as they have their hands manicured would be well worth the expenditure of time and money.

THE RIGHT KIND OF SHOE.—It stands to reason that no two pairs of feet are exactly alike. Therefore, the shoes of modernity, manufactured by wholesale according to set forms, would inevitably cause mischief to some feet, even if the said shoes were built along the general natural lines dictated by the foot's architecture.

So, inasmuch as comparatively few can afford to have shoes made especially to fit their feet perfectly, there is all the more reason why shoe-manufacturers should endeavor to seek such guidance from a study of anatomy as would enable them to build shoes which would average a fair conformity with nature's clear intention, and so create the least amount of mischief possible,

But, as pointed out more than fifty years ago by Dr. Hermann Meyer, the pioneer in the arduous field of reforming shoe-manufacturing methods, this is not done, as it ought to be, either universally or even locally to any extensive degree. Ignorance, intensified by fashion, has dominated, and in consequence the feet, the foundation of our physical superstructure, have suffered and will continue to suffer.

In the illustration (Fig. 32) of a perfectly normal child's foot, it will be noticed that a straight line drawn through the middle of the big toe emerges at the centre of the heel, and the same will be noticed in the illustration (Fig. 25), which is that of a healthy natural adult masculine foot. But in the feet of most adults, owing to the shoes they have been wearing, there is a marked deviation, the great toe having either sprawled outward or crawled inward onto other toes.

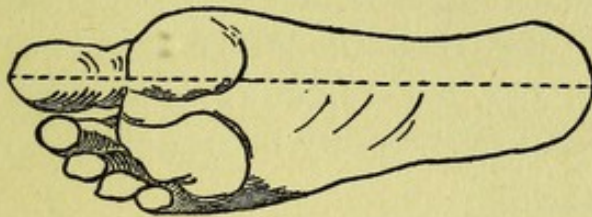


Fig. 32

NORMAL FOOT OF A CHILD

The chiropodist, therefore, after making a drawing of the patron's naked foot on paper, running the pencil lightly into the indentations indicated by the toes, should find whether the medial line of the great toe corresponds with that of the outer surface of the heel. (See Fig. 33.)

There is then before him the problem of coaxing the great toe into line again, if it has taken an abnormal position or has abnormally grown outward.

Where the curvature is inward, plugs of cork, preferably wrapped round with soft cloth, are to be inserted;

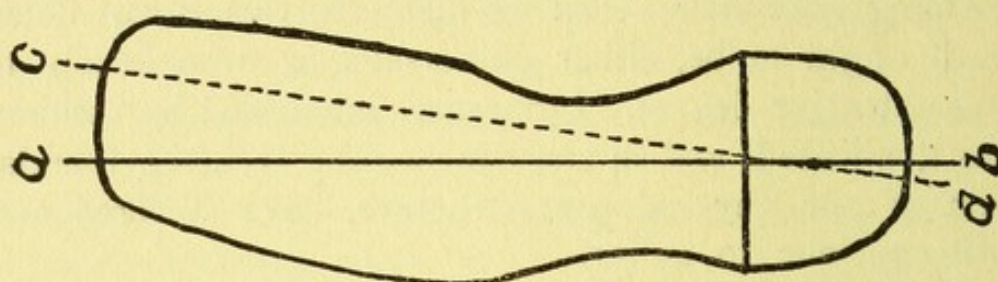


Fig. 33

THE MEDIAL LINE

ab=improper medial line cd=proper medial line

the size of the plug should be increased gradually, say, week by week, and the kind of shoe to be worn must be not only roomy at the toes, but should be considerably longer than the toes.

If, on the other hand, the toe has sprawled outward, a soft cotton bandage, holding it pretty tightly, should be worn and the shoe should be narrower across the toes (see Fig. 34), but, as before, a little longer, so that the toe may have opportunity to straighten forward. The

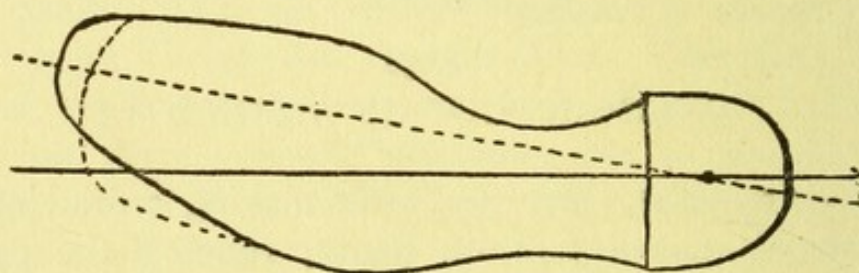


Fig. 34

SHOE TO CORRECT SPRAWLING GREAT TOE

stocking in this latter case should clasp the forepart of the foot somewhat more snugly than usual.

This slight elongation of the shoe beyond the toes not only affords fair play to them, and helps their general

health, but it adds grace to the looks of the feet, especially if they be naturally broad. A short, thick foot, as has been said before, can be made to look more graceful by the selection of a shoe somewhat longer than is needed for an exact fit.

Dr. Meyer did not succeed in getting the manufacturers of his time in Europe to adopt his ideas to any noticeable extent, but his treatise, translated by John Stirling Craig and published by R. T. Trall & Co. in 1863, stimulated study of the foot in this country and led some makers of shoes to try his methods. They appear to have been discouraged, because not enough persons among the general public had sufficient understanding to appreciate the reform and by their patronage make it pay.

Some of Meyer's ideas, however, had taken partial hold of the public, particularly his approval of the so-called congress shoe, in the matter of substituting elastic at the sides for lacing. But the popularity this kind

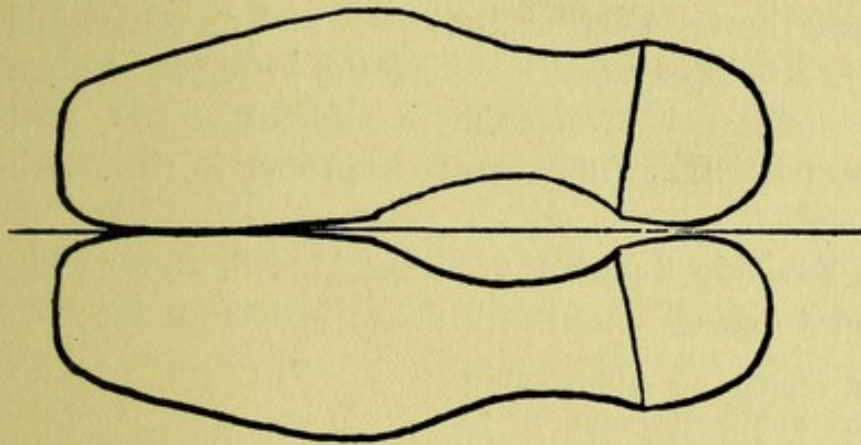


Fig. 35
SHOES IN THE MEYER STYLE

of shoe once had was very likely due to the ease with which it could be put on and drawn off, rather than to the higher hygienic quality.

Recently, however, there has been considerable attempt to restore the general shape of shoes approved by Dr. Meyer, a shoe that is comfortably broad and that appears to turn inward (see Fig. 35), but the value of this has been nullified in great measure by making it too narrow at the side next the smaller toes. We are speaking now of men's shoes. Reform in the footgear of women is a more stupendous task.

Objection may be offered that the wearing of these shoes of uncurved shape might eventually lead men to turn in more in walking or become "pigeon toed" as it is called, in their locomotion. This, of course, could be guarded against by the wearer making during the first three weeks of wear a conscious effort to toe out a little more than he usually would.

On the other hand, a slight broadening of the leather under the arch of the foot would take away the look of extraordinary incurvation and would perhaps add not a little to ease and grace in movement, and a slight extension of the toe part, as indicated in Fig. 34, would also add to its appearance. Where the instep is at once high and thick, such broadening would, of course, naturally suggest itself as fundamentally proper in the making of a shoe.

In advising a patron as to the kind of shoe to buy, the things to dwell upon with polite insistence are:

1. Sufficient width of sole.
2. Sufficient room for toes.
3. Sufficient lowness of heel.
4. Sufficient elasticity over instep.

And in case of soreness or crookedness of toes, as intimated previously, extra length in the toe part should be advised, until the condition has been permanently rectified. This does not exceed in any direction; it does

not mean a shoe in which the foot slips about as in a slipper, except that in the point of length the shoe may extend considerably, which, while doing good to the toes, also adds to the shapeliness of a shoe's appearance.

The shoe should fit rather snugly to the foot. The foot should not be cramped, but firmly grasped by its leathern envelope. If the shoe is too large, the foot slides to and fro in it, which not only causes discomfort and tired feet, but induces corns and callosities, and even inflammations that require weeks to overcome.

It is equally true that a tight shoe, so generally worn, especially by women, is quite as harmful, if not more so, as a shoe that is too large for the foot. Tight shoes cause not only foot-ache, but lead to all kinds of troubles, such as corns and bunions, and also induce diseases of the blood vessels of the lower limbs, pain in the calves of the legs, headache and, in some extreme cases, trouble of the eyes.

Normal shoes, as before stated, should fit snugly, but should allow plenty of room for the toes. They should also give support to the arch of the foot by having a heel of medium height. High heels are injurious to the health of any wearer and a torture to many.

The weight of the body should be so distributed to the ball and heel of the foot that standing should be comfortable and walking a matter of easy grace, even under unusual strain, if such be not repeated too frequently.

The toe of the shoe should never be anything but of the shape of that part of the foot, slightly narrower than the bare or stockinged foot in standing. The shape of the shoe should conform to this and not be boxed or raised so that the cramped toes overlies one another.

A common-sense shoe can be made as beautiful as any

other, and its comfort will conduce to health and prosperity, for it may be truly said that one who has chronic trouble with his feet is heavily handicapped in the race of life.

A short, thick foot can be made to look more graceful by the selection of a shoe somewhat *longer* than is needed for an exact fit.

Remember that only in extreme cases of deformity shoes need be fashioned to fit that deformity. In average cases the foot after treatment should be confined in a shoe made according to the natural method, but a shade larger than if the deformity were not present.

For displaced joints and bunions a shoe considerably larger than the foot should for obvious reasons be worn at first; but, as the displacement disappears or the bunions give signs of cure, the size of the shoe should be correspondingly lessened. There are cases where, on the road to recovery, the patron may properly be advised to change the shoes several times in this way.

The ideals to be sought in a shoe are three:

1. Comfort.
2. Beauty.
3. Durability.

Here every chiropodist is going to meet his chief obstacle, particularly in dealing with feminine patrons, and frequently with men.

Style, a word derived from the sharp-pointed instruments used by the Greeks and Romans as a pen, and from which the Italian word, stiletto, the weapon of assassins, is in turn derived, has indeed been for years a weapon wounding thousands and thousands of people.

All women really wish for beauty, but the obsession of the majority seems to be that one cannot have beauty unless one is in style.

The truth is that any style, however fascinating, which in any way deforms the natural shape of any member of the body and thereby interferes with free play of functions, is contrary to the Law of Beauty, and should be religiously shunned by women for their own sake, and the sake of their children, or the children they may have if their womanhood arrives at full bloom and fruitage.

The wisest book in the world declares that the body is the temple of the living God. Now, the foundations of that temple are the feet. If these foundations are impaired, the whole temple may totter, and the light within the dome, the mind, be extinguished.

It was proved by the world-famed surgeon, Brown-Sequard, that the weight of the body, improperly thrown on one man's great toe, unbalanced his mind to a violent degree. To effect a cure a bisecting of the nerve was necessary.

The mysterious connection between the nerves of the feet, practically those of the great toe, and the brain, is now known, though not yet fully understood. But it might be hinted that one cause of many persons going astray mentally—and morally—lies in the ill-treatment of the feet from childhood up.

Mothers ought not to let their children begin to walk as early as they do; ought never to cramp the growing feet or stuff them into "stylish" shoes; *ought to take their children early to a first-rate chiropodist and faithfully follow his advice.*

In childhood the bones of the foot are soft and pliable. Machine-made shoes, bought for sake of economy, are an outrage on the helpless little one, and also entail extra expense in many ways as life goes on.

Every child is entitled to have a shoe in which the

foot can grow naturally. Anything else is an abomination.

If this reform can be started and maintained, in one generation crooked toes, corns, inverted nails, swollen joints, and bunions will virtually have disappeared.

If your patron is a wife and a mother, talk to her earnestly about baby's feet. Every mother whose feet have been a torture to her in any way will appreciate this, and, even though she may wilfully continue to suffer herself, and for the sake of wearing "stylish" shoes refuse to be cured permanently by you, she will nevertheless in ninety-nine cases out of a hundred have loving sense enough to desire that her children be set right as to their feet and started well, to that extent, in the race of life.

CHAPTER VII.

THE CARE OF THE FEET.

Change of Shoes and Stockings—Bathing—Nail-Trimming—Advice for Patrons.

SHOES should be changed every day to save both feet and shoes, two pairs of shoes as near alike as possible being ordinarily sufficient. This alternation helps each pair to hold its shape, as well as to last much longer.

Alternation of socks or stockings from day to day, like alternation of shoes, is a good plan. The stockings, when removed, should be turned inside out and hung up to get well aired. They may be worn three times without washing. If they are not thus changed, clean ones should be put on at least three times a week. If it is convenient, or one's purse permits, a change at the end of the day for evening wear is advisable.

Frequently it rests the feet to rub them with a soft towel, or special footcloth, expose them to the air for a few minutes, and then don the evening socks. In all this we are speaking of comparatively normal feet.

When one has particularly sweaty feet, special remedies for which condition will be given later, a much more frequent change of stockings naturally suggests itself. But one should not, without the sanction of his chiropodist, switch from one kind or one thickness of the same kind to another.

STOCKINGS.—Stockings of which the toe section is white or cream white are preferable. The tops may be

of any fast color the fancy chooses. The dyes of colored stockings irritate the skin and often cause ulcers or soft corns by setting up inflammation between the toes.

Stockings should not be loose. When they grow so by frequent use and washings, they should be discarded. Loose stockings on tender feet by bunching in places cause irritation, and may produce inflammation if persisted in. Even if the creases do not seem at first to threaten any evil results, they cultivate the ground for corns and callosities. Stockings ought to fit snugly like a glove, but to possess elasticity enough not to interfere with the foot's expansion in motion.

Stockings are sometimes made with a special compartment for the "big toe"—the toe of honor, on which the burden of walking is thrown. In some cases, the use of such is to be particularly advised, and, if it could be made practicable, doubtless the whole stocking might be well converted into a foot-glove, with separate places for each pedal digit.

Heavily darned socks are just as deleterious as those with holes at the toes. Both kinds discomfort and irritate the wearer unless the feet are unusually tough.

It is desirable to have rights and lefts in stockings, though it is hard to persuade patrons to do so.

If the feet are tired and swell at night from too much standing, they should be bathed in hot water to which several tablespoonfuls of sea salt or even common salt have been added, and then be well dried and bound with white flannel bandages.

If the feet are cold, the bath should be followed with bandages of red flannel, or they should be rubbed with cologne spirits, witch hazel, or rum.

Upon arriving at home after the day's toil, it is well to rest the feet by putting on slippers with lower heels

than in the shoes worn during the day. "Slipper ease" is as hygienic as it is sybaritic.

For persons who have sedentary occupation, a foot-rest, or cushion several inches above the floor, is advisable. This is particularly so when the floor is of stone, or cement or tiling, as in many business places, or when it is of wood, but has been exposed to cold or damp air. Many carpets retain dampness. Any floor covering that cannot be often taken up and thoroughly cleaned is dangerous to health.

A fine foot bath for tired feet is made by adding the following to the simple hot foot bath:

FOOT BATH

R	<i>Alum</i>	$\frac{1}{2}$ oz.
	<i>Borax</i>	1 "
	<i>Sea Salt</i>	1 "

Tender feet may be rubbed to advantage with witch-hazel, to which spirits of camphor have been added, one or two teaspoonfuls to four ounces of the former. Also to rub a little pure olive oil into tender feet, as well as upon dry and cold feet, at night after the bath is beneficial.

NAIL TRIMMING.—The nails of the toes should be trimmed at least once every two weeks. All calloused skins should be very gently scraped off or ground down with a pumice stone after the bath.

The nails should be cleaned of dirt and accumulations, taking care not to injure the cuticle under the nail, since such injury will cause them to ingrow just as cutting them too short will.

The nails should be cut squarely and not rounded as are the finger nails. The nail of the large toe should be cut concave, that is, closer to the toe in the centre than at the sides.

Dead cuticle or scales of scarfskin or epidermis should be scraped away with a blunt orangewood stick or cuticle knife, taking care not to injure the skin or make it bleed, since this invites poisoning either from stocking dye, if one is foolishly wearing dyed socks, or from the dirt which accumulates in the shoes combining with decomposing sweat.

All wounds made in pedicuring should be cleansed with an antiseptic solution at once and be covered with antiseptic absorbent cotton.

ANTISEPTIC SOLUTION

R	<i>Carbolic Acid (pure)</i>	1 dr.
	<i>Glycerine</i>	4 dr.

Mix and apply with cotton to wound. The above solution may be used on such wounds, or a solution of boric acid, 10 grains to each ounce of water, may be substituted.

Specific treatment of diseases of the foot will be described later.

If the feet are naturally weak and cold more or less of the time, much can be done to bring them into a healthy state by bathing them every night in a hot water and sea-salt mixture made as already described. While the feet are in the bath, they should be scrubbed vigorously with a fairly stiff nail- or hand-brush to arouse the circulation, and by the pressure of this increase of blood to the parts to invite better nourishment to the skin, which before long will become thicker and more able to resist sudden changes of temperature.

Cold feet are often the result of overactive brain work. If this is the cause, the life of the patron should be regulated, and outdoor exercise and calisthenics insisted upon. If the cause of this uncomfortable condition is due to any other physical disturbance, the pa-

tient should be sent at once to a physician for proper medicinal care.

ADVICE FOR PATRONS.—You may truthfully tell your patrons in an incidental way the following facts:

Sore feet hasten the advent of old age.

Diseased feet cause premature grayness.

Every long-neglected corn may be the seed of a dozen gray hairs.

Shoes too small, or improperly made, cause injury to the feet, sometimes permanent.

The story of injured feet writes itself in wrinkles on the face.

High heels cause weak knees.

Weak knees pave the way to nervous breakdown.

Wearing of improper shoes indisposes one to take proper exercise.

Lack of proper exercise invites either adiposity or consumption.

Pressure of pain in any part of the body, long continued, seriously mars the expression of the face, disturbs and sometimes ruins the disposition, and may upset the brain at last.

CHAPTER VIII.

CHIROPODY.

The Necessary Instruments—Preparation of the Feet—Treatment of Hard Corns: By Knife Alone; Medicinal Method—Inflamed Hard Corns—Soft Corns—Vascular Corns—Removal of Callosities—Treatment of Ingrowing Nails—Of Bunions—Recipes—Treatment of Flatfoot—Artificial Arches—Treatment of Chilblains—Recipes—Treatment of Perspiring Feet—Recipes—Treatment of Hot Feet and Cracks Between Toes.

THE instruments necessary for the chiropodist are not many, but these few should be of the best kind. Cheap steel instruments soon lose their cutting edges and have to be thrown away. The repeated buying of such makes the ultimate expense far more than when the best are bought in the beginning.

Following is a list of what are required:

- | | |
|-------------------|-------------------|
| 1. Nail Clipper. | 4. Scalpel. |
| 2. Nail Scissors. | 5. Pair Tweezers. |
| 3. Corn Knife. | 6. Hone. |
| 7. Pumice Stone. | |

NAIL CLIPPER.—The nail clippers should be of the best steel, with the nail-cutting or clipper curved so that when clipping off the nail it will give the required shape. It is illustrated in Fig. 36.

The blades should meet evenly and be sharp so that, by bringing the handles together, the nail will be evenly and quickly clipped off.

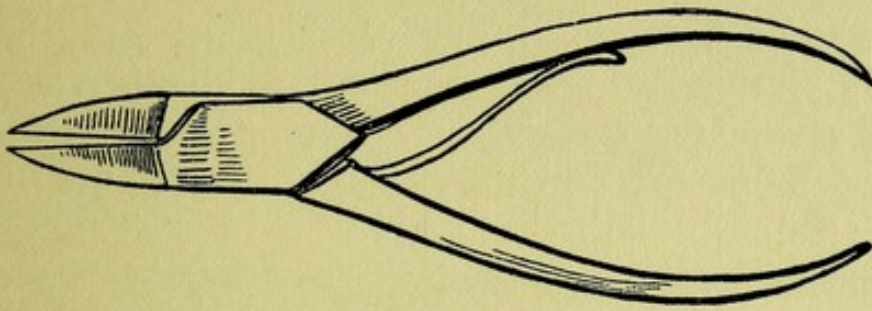


Fig. 36
NAIL CLIPPER

NAIL SCISSORS.—The scissors should be curved on the flat. The blades should be stout and short. This instrument is used to cut or trim the nails as well as pieces of loosened skin of soft or hard corns; therefore it should be of the best quality of steel. The proper kind is shown in Fig. 37.

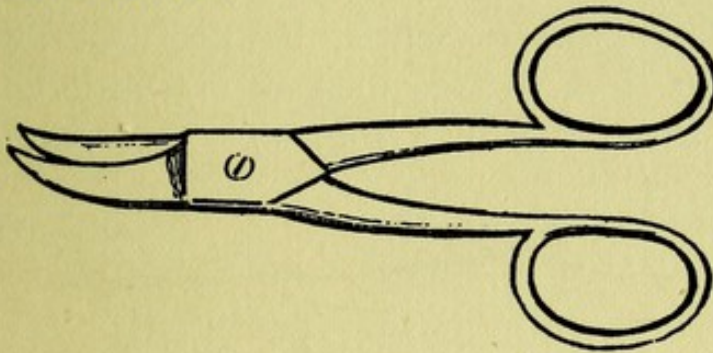


Fig. 37
NAIL SCISSORS

For hygienic reasons the so-called French lock is to be preferred, since this allows them to be taken apart and thoroughly cleansed and dried. The ordinary screw lock is hard to clean and invites sepsis.

CORN KNIFE.—This instrument is a type of razor, a short, slightly hollowed blade with one cutting edge, blunt at the end and back, where it is thickened.

The handle should be of steel, nickel-plated to insure

cleanliness. Bone or horn handles soon become loose and useless from the boiling which is necessary in the proper cleaning of all instruments, and antiseptic solutions attack them readily. The proper instrument is shown in Fig. 38.

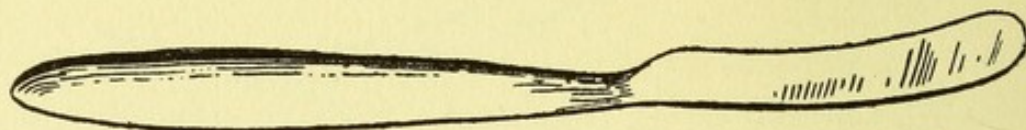


Fig. 38
CORN KNIFE

This instrument should never be used on the nails or bony callouses, for such employment soon destroys its fine, razor-like edge.

SCALPEL.—This is really a small, metal-handled operating knife which is used for paring off callous skin and soft corns, and not for cutting hard corns. It should be of the best steel, not too thick in the blade and of the size and shape shown in Fig. 39.



Fig. 39
OPERATING SCALPEL

TWEEZERS.—The tweezers should be of steel, with stout, well-meeting sharp points, ribbed inside of the points and outside in the handles to permit of a firm hold. They are used to raise pieces of skin or soft corns that have been loosened, or partially dissected with the scalpel, and which are to be cut away finally with the scissors. These tweezers are called Dressing Forceps, and are shown in Fig. 40.

The tweezers are also to be used to convey dressings

of small size to the parts operated on, or to crowd cotton under ingrown nails, as later described.

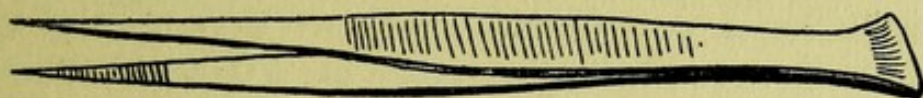


Fig. 40

DRESSING FORCEPS

HONE.—The hone to be selected for the sharpening of knives should be of the best quality. The usual barber's hone is a little too fine. An oil stone of high quality answers best. It should be about four inches long, and one and one-half inches wide. Plenty of oil should be used in sharpening, and the knife should be drawn evenly toward the centre of the hone, edge inward, first the one side and then the other of the knife. A number of strokes are needed to get a good edge. Drawing the knife away from the centre of the hone with the knife edge outward tends to give a sawlike edge.

PUMICE STONE.—At the present day pumice stone may be had in various-sized pieces of regular shape, either oblong, oval or round. It is best to purchase one of these, instead of using the rough and irregular stone, as it makes a better impression, while it does the work more effectively.

PREPARATION OF THE FEET.—To prepare the feet properly for pedicuring, they should be soaked for a few minutes in as hot water as can comfortably be borne. A little borax, about a teaspoonful, may be added to the water. It renders the latter slightly antiseptic, and helps to soften the cuticle and corns as well as the toe-nails.

Remove the feet from the bath and dry with a clean towel, rubbing *downward* toward the toes. Dry well and pay particular attention to the skin between the toes.

Moisture does not permit of good work. When the skin is wet the fingers are liable to slip nor can the instruments render as good service.

DISEASES OF THE FEET.—There are a number of diseases of the feet which the chiropodist will be called upon to treat and overcome; and to give the proper knowledge and the practical method of treatment each will be fully considered under its own heading.

CORNS.—The most common disease of the foot is the so-called corn. There are three types generally considered:

1. Hard Corns.
2. Soft Corns.
3. Vascular Corns.

HARD CORNS.—These painful, localized callosities are usually found upon the toes, particularly on the second joint of the small toe, but they may occur on all toes, and at one or both joints of each, or the skin over one or two of such joints of all the toes may alone be affected.

A corn is composed of callous skin, having a central plug of horny skin pointing downward into the sensitive layer of the true skin. The outer cuticle, or horny layer of the skin, is thickened by reason of constant irritation, or the pressure caused by shoes which are either too tight or too loose, or which do not match the shape of the foot. In tight shoes, the cause is pressure; in loose, friction; in shoes that do not perfectly fit the shape of the foot, it may be both.

As the horny layer becomes thicker, the plug beneath its central point is forced deeper into the sensitive true skin, and walking becomes a painful task, even the mere touch of the finger sometimes producing an acute ache. If the cause of the disease continues, the skin

about and below the corn becomes highly inflamed, and an abscess may eventually form which at once becomes a serious condition, liable, without proper antiseptic care, to end in blood poisoning.

When, therefore, one discovers a corn on one of the toes, it should be treated at once, not simply to cut away the callous skin, but to remove the corn permanently. This will sometimes prove a tedious task, especially if the patron persists in clinging to the ascertained cause of the trouble.

It is well to tell your patron that to cut away a corn and give present relief is an easy matter, whereas to prevent its recurrence requires not only skill on your part, but the patron's co-operation. Much can be done, however, in the average case by following the methods herein given.

The foot upon which the corn has come is immersed in a hot footbath. The water should be as hot as can be well endured, since the heat by expansion of tissue softens the corns, at the same time reducing the irritation of the whole toe. The foot should remain at least ten minutes in the bath. It is then dried, and placed with the heel down upon a properly cushioned stool, which has previously been covered with a clean towel.

The afflicted toe is then taken between the thumb and forefinger of the left hand. The corn knife is held in the right, and with it the operator, gently and carefully, pares down the hard mass, working from the *centre* of the corn *outward* or *toward* himself.

Proceed in a circular manner to trim away all the callous part, until the skin becomes thin and rosy in color. Do not cut so deeply as to draw blood.

This done, apply a little carbolated vaseline to the part operated on and allow it to be absorbed.

The next step is to prevent further friction or pressure. To overcome this, cut out a disc of felt, or one or two pieces of chamois skin, about four times the size of the corn. Then cut a circular piece out of the centre of the disc of the material used, about twice the diameter of the corn.

The disc, thus formed, is laid upon the toe with the corn at the open centre. Fasten the disc down with several fine strips of adhesive zinc oxide plaster, or paint the part over with flexible collodion, applied in several layers with a fine camel-hair brush, letting it dry and harden.

Flexible collodion can be obtained at any drug store. It forms a skin or film when painted on any surface, and is preferable to plasters, which are liable to be sweated off or rubbed off in walking.

The stocking may now be drawn over the foot and a proper shoe worn. An old shoe will be found best for the purpose, or the shoe may be cut in such a manner that the pressure over the corn is relieved. If the pad is properly put on, in nine cases out of ten cutting the shoe should not be necessary.

The pad, or disc, applied as directed, is removed the second or third day, and a new one applied. This treatment should be continued until the corn disappears, or until it fails to rebuild itself. After that the patron should look to the wearing of proper shoes.

THE MEDICINAL METHOD.—Another method of removing a corn permanently is to pare down the hard callos mass and then paint the corn with the following mixture:

R	<i>Salicylic Acid</i>	1	gram
	<i>Tincture of Cannabis Indica</i>	½	gram
	<i>Alcohol 95%</i>	1	gram
	<i>Ether 65%</i>	2½	grams
	<i>Flexible Collodion</i>	5	grams

A coating of this paint should be applied on the corn every day for at least a week, care being used not to paint the surrounding skin. On the eighth day, after a hot footbath, remove the collodion skin and the corn will come away with it. If it does not come away entirely, the same method is to be repeated.

Once removed, all pressure of the shoes at the afflicted part must be guarded against.

Another method is to use the following plaster :

R	<i>Resin</i>	3	<i>dr.</i>
	<i>Balsam of Tar</i>	2½	<i>dr.</i>
	<i>Salicylic Acid</i>	5	<i>dr.</i>

Melt the resin and balsam together over a slow fire ; add the acid and stir until the mixture is even.

Then place a pad of felt, or chamois skin, with a hole in its centre over the corn. This pad should be stuck to the skin, with a mixture of equal parts of balsam of fir and resin, melted over a slow fire. Stir well, and while still warm, paint it on the under side of the felt or chamois skin, which, when cold, can be cut into discs, and a hole made in the centre.

Having fastened the disc to the corn, a little of the paste, of which the recipe has just been given, is put into the hole over the exposed corn. A quantity equal to the size of a half pea is about sufficient. This is allowed to remain in the corn for one or two nights, or until it drops off of its own accord, when the corn will come away with it. If the corn is not entirely removed, the method is repeated. All pressure of the shoe should be guarded against thereafter.

INFLAMED HARD CORNS.—If the skin about a hard corn is inflamed and tender, it is best to reduce the inflammation with hot water baths, allowing the foot to

remain in the bath at least fifteen minues. Dry the skin thoroughly and relieve the corn of all shoe pressure with a chamois pad as above directed. Repeat the bath the next day and remove the corn as heretofore directed.

If the above treatment does not overcome the soreness, place a hot poultice of linseed meal about the corn overnight, removing the corn the next morning. The linseed meal is mixed with hot water till it forms a paste, then is put in cheese cloth as applied, or may be plastered over and bandaged on, the meal coming into direct contact with the corn and surrounding tissue.

SOFT CORNS.—The soft corn is, in structure, the same as the hard corn; but is found usually on the *side* of the toe where there is sufficient moisture to keep the callous skin soft.

To remove a soft corn, separate the toes with the fingers of the left hand, after the proper preparation of the foot, as described before, and remove the thick cuticle with the scissors, being careful not to make the parts bleed.

But a better or more scientific method is to employ a Toe Expander, which holds the toes apart, leaving both hands of the operator free to work with. The instrument, which is cheap, is so made that it can be held in position with a set screw; it is shown in Fig. 41.

Quite often the soft corns, if allowed to remain, will cause a blister to form beneath, which is broken by friction, creating a painfully exposed area of true skin. In this event, the edges of thickened cuticle are cut away with the scissors, and an antiseptic dusting powder, such as aristol, sifted upon the wound to heal it.

After the removal of a soft corn, a Felt Disc or Washer is to be applied over it to prevent further fric-

tion or pressure. An old shoe should be worn several days until the parts have returned to a normal state.

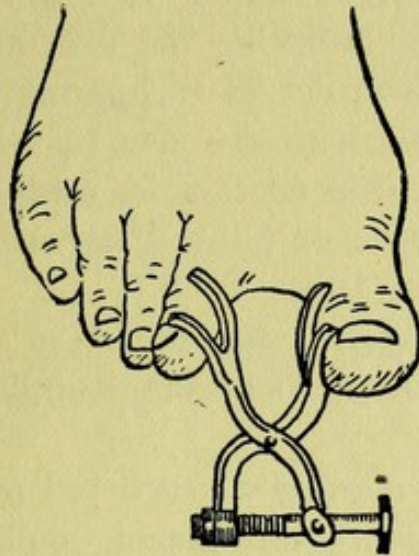


Fig. 41
TOE EXPANDER

If the feet perspire very freely, a condition often accompanying the presence of soft corns, they should be treated as later described. (See PERSPIRING FEET on page 112.)

VASCULAR CORNS.—This form of corn is not commonly encountered. Such corns are found mostly upon the sole of the foot, either under the heel or the ball of large toe. They resemble a wart, somewhat, and are composed of a number of small blood vessels from which they get their name.

These corns are of a spongy nature, lying deep in the skin and very little above it.

There may be a number of these vessels visible in the form of little red spots.

The skin about the corn is usually inflamed and tender.

The treatment for such corns is as follows: Prepare

the foot by bathing as for the removal of other corns, then carefully cut away with the corn knife or a corn file the upper surface, taking care not to incise or cut the veins. If the veins lie too near the surface to do this, or if a vein is cut in the paring treatment, touch the bleeding point with the dry tip of a lunar caustic pencil, or with a little nitric acid, applied with a wooden tooth pick. If the acid is used, be careful not to get it on the surrounding skin.

This at once causes the vessel to stop oozing, but nothing must be attempted further until healing has been established.

If there are a number of such red points showing, it is best to treat with nitric acid, applied to each spot with a toothpick. This is to be repeated every other day. In the meantime, place a chamois or a felt disc about the corn, in the manner previously described, to relieve pressure. Loose shoes are also advised.

After a number of such treatments, the corn will be found to grow smaller, or to shrivel up, finally disappearing altogether. The inflammation of the skin usually subsides in one or two days, if pressure on the foot is relieved as directed.

The discs of chamois or felt should be worn over the site of the corn for several weeks, even if there is no sign of the corn, to prevent its return and to give the skin an opportunity to become normally thick again.

CALLOSITIES OR CALLOUS SKIN.—This is a common condition of the feet, and is due to the friction of ill-fitting shoes. It usually appears in spots about the sole of the foot, at the heel, or the ball, or at both places. There may be one or more of such areas of thickened, horny skin closely grouped.

To restore these painful surfaces to a proper state the foot is bathed as described heretofore. When dried, the foot is taken between the fingers and the thumb of the left hand, and the skin is pared or shaved off carefully with the scalpel, held in the right hand, as shown in Fig. 42.

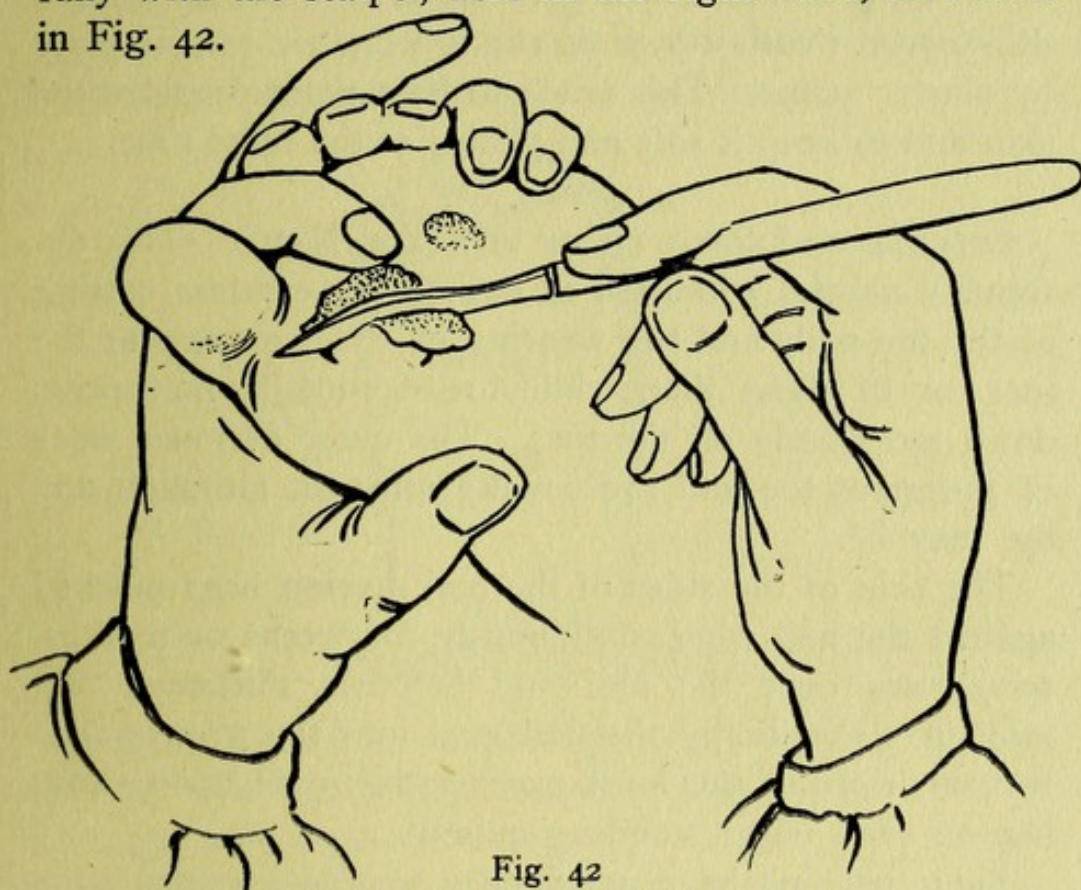


Fig. 42

REMOVAL OF CALLOUS SKIN

Do not cut carelessly, or too deep. Avoid wounding the skin. Pare the callous down until the surface looks pink and is thin to the touch.

It is well now to apply some antiseptic lotion, such as listerine, or witch hazel. Allow this to remain on and dry in, as it were. Dust on some stearate of zinc and cover over the surface with a fairly thick layer of absorbent cotton. Over this lay a two-ply piece of borated gauze and hold the whole in position with strips of rubber adhesive plaster.

Advise the patron to wear a loose shoe. Owing to the movement in walking, these dressings are likely to be displaced and need to be renewed every day.

After the skin has taken on a more normal appearance, apply borated white vaseline to the area with a thin layer of cotton over it, and with gauze held in place by plaster strips. This tends to help nature restore the skin and to keep it soft and pliable at the same time.

ONYXIS, OR INGROWTH OF THE TOE NAILS.—This extremely painful condition is due to the careless cutting of the toe nails and the wearing of shoes narrow at the toes, or of shoes that, while broad enough, may press down too closely on the toes. The outer or inner sides of the great toe nail are usually affected, although any toe may be.

The skin of the sides of the nail, having been pinched against the nail edge continuously for weeks or months, soon rises over the nail and becomes thickened and swollen. Eventually the nail cuts into the groove thus formed, causing the most excruciating pain upon walking or even when standing quietly.

Some persons have a tendency toward ingrown nails because of the natural curvature of the nails, which, not being trimmed properly, soon grow down into the cuticle. It is therefore necessary in all cases to look very carefully to the trimming of the nails. The dry scales of cuticle should be removed from under the edges of the nail. The nail should be cut square across at its free end, and if, owing to a natural curvature of the nail, the edge tends to turn down at the sides, they should be elevated as hereafter described, and kept in this position until the nail ceases to curve downward. In the meantime the centre of the nail from the cuticle to the outer

edge should be filed down. This tends to raise the sides of the nail.

Another method is, to cut a V-shaped piece out of the free edge of the nail. In doing this, care should be taken not to injure the tender skin under the nail. The filing down of the nail is shown in the dotted lines and the V-shaped cut in dark outlines in Fig. 43.

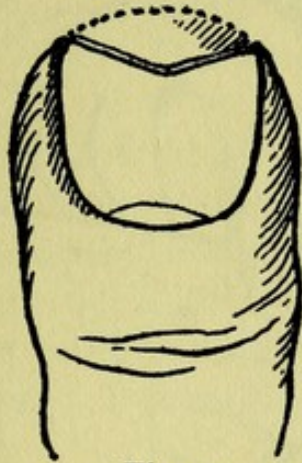


Fig. 43

FILING THE NAIL

If the nail sides have already curved downward, the dead scales of cuticle are removed carefully from under the edges with a pointed orangewood stick. This is followed with a packing of absorbent cotton, that should be allowed to remain there for twenty-four hours or two days, when it must be removed and replaced. This procedure should be continued until the nail has taken on a normal growth.

If inflammation or wounding of the skin has taken place, the treatment must vary accordingly. The foot should be bathed in hot water to which a teaspoonful of borax has been added. This softens the nail and skin and is antiseptic as well. The foot is now dried, and the parts about the ingrown nail are washed with a swab of cotton, dipped into listerine or alcohol, or into

a solution of peroxide of hydrogen and water, equal parts.

The latter is especially useful, if pus has appeared at the seat of irritation.

The peroxide will cause foam to appear at the site of the wound. This is washed off with listerine, and

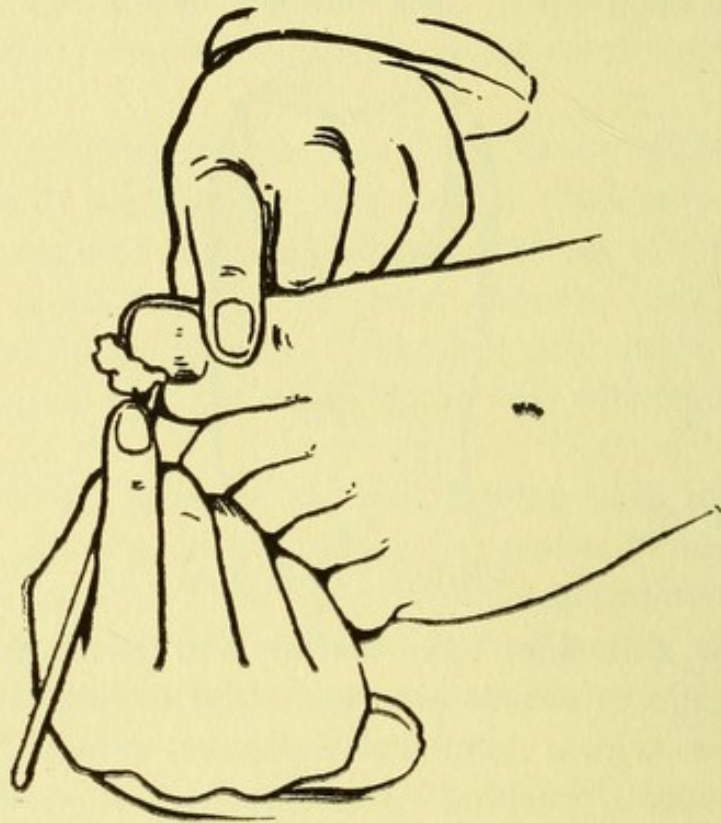


Fig. 44

INSERTING COTTON UNDER NAIL

the edge of the nail is pried up gently and out of the inflamed groove. This will be found to be very painful, and the entire lifting may not be accomplished at the first sitting. If not, it should be repeated the next day—and daily thereafter until the nail edge lies free above the skin. In the meantime, a piece of absorbent cotton is packed under the edge of the nail to keep it raised. The method of introducing this is shown in Fig. 44.

A little zinc ointment should be applied to the inflamed skin and groove, to heal the parts. All pressure at the side of the toe should be avoided.

Another good method is to use a thin wedge of cork, which has been dipped into a weak carbolic acid solution before using. Two drops of carbolic acid to the ounce of water will answer very well. The advantage of the cork is that, as it becomes moist, it swells gradually and this raises the nail edge. This should be renewed every second day.

Either of the treatments is, of course, to be continued until a cure has been established. If in the meantime the edge of the nail appear rough or sharp, it should be trimmed of its jagged edges, which will give a great deal of relief. But much cutting is not advisable, since it tends to make the nail grow thick in some cases, and brittle in others.

The nail during treatment should be filed down thin along its centre, and the V-shaped cut be continued and made as shown in Fig. 43.

If the ingrown nail has caused too much skin disturbance, indicated by the parts being highly inflamed and swollen, and the nail edge has become so deeply buried that it will be found useless to pry it upward without causing damage to the toe, the patient should be advised to see a surgeon for a permanent operation in order that complete relief may be secured as quickly as possible.

BUNIONS.—If the foot has been subjected to the continuous pressure of a short or a too narrow shoe for a long time, it often happens that the skin over the second joint of the great toe at its outer side becomes inflamed. This may also happen on the outer side of the same joint

of the small toe, or both great and small toes may be involved. This condition is, however, most commonly found in the large toe.

If this inflammation is not relieved, it leads, at first, to the formation of a callous, which, by the continued pressure, causes irritation of the *bursa*, or little sac that covers the joint cushion-like, to protect its delicate joint lining.

The inflammation under consideration at first leads only to a callous formation, disappearing in from three to four days when the cause is removed, but necessarily recurring at short intervals if the proper shoe is not placed upon the foot, and eventually leading to a thickening of the entire tissue about the joint, and then to an enlargement of the joint, and ultimately to a partial dislocation of the joint, the toe being thrown inward and forward, disfiguring the entire foot.

This condition must not be confounded with gouty or rheumatic disease. The history of the bunion is quite easily followed, and the gradual development of the enlargement, with spasmodic inflammation following the wearing of new or tight shoes, should convince the pedicurist of the correctness of his diagnosis.

The early relief and obliteration of a bunion is a simple matter, but once it has become chronic little can be done as a rule to give permanent relief except a surgical operation.

Given an early case of bunion during the stage of inflammation, all causes of pressure must be removed. Shoes of ample length and width across the ball of the foot should be advised at once. The foot should be bathed in hot water for fifteen to thirty minutes to reduce the inflammation, and a soothing lotion be applied over night to relieve the pain and swelling.

The following should be painted upon the part several times a day with a camel-hair brush:

R	<i>Tincture of Iodine</i>	2 dr.
	<i>Carbolic Acid</i>	2 dr.
	<i>Glycerine</i>	2 dr.

Or, if the pain is very marked, the following may be employed with better result:

R	<i>Tincture of Belladonna</i>	2 dr.
	<i>Tincture of Iodine</i>	2 dr.

This is painted about the joint at least three times a day.

After the bath, usually given at night, all callous skin and the small corns about the size of a split pea that are so commonly found about the enlarged joint should be trimmed away with the knife before the application of either of the above recipes is made.

If, by any chance, the skin is wounded, neither of these lotions must be used.

In such case, where the inflammation is moderate, a paste made as follows will be found to give relief:

R	<i>Zinc Oxide Powder</i>	2 dr.
	<i>White Vaseline</i>	2 dr.

Rub the vaseline and the zinc together well to make a smooth mixture. Apply to joint with two folds of gauze, over which place a layer of absorbent cotton, which must be held in place with strips of adhesive plaster.

Shoes should not be worn at any time during such treatment, or, if they must be, that part of the shoe over the toe joint should be cut out to relieve all pressure. A heavy stocking should then be used to cover the dressing just mentioned.

Hot or cold applications of witch-hazel at night often give excellent results in mild cases.

Once the inflammation, swelling and pain has subsided, do not let the patron wear a shoe without encircling the site of the bunion with a ring of felt, or chamois, to prevent further pressure on the part. See Fig. 45.

The faithful use of such a protective, and the wearing of proper shoes will usually effect a cure, if the case has been seen early enough.

If the case has become chronic or an abscess has devel-

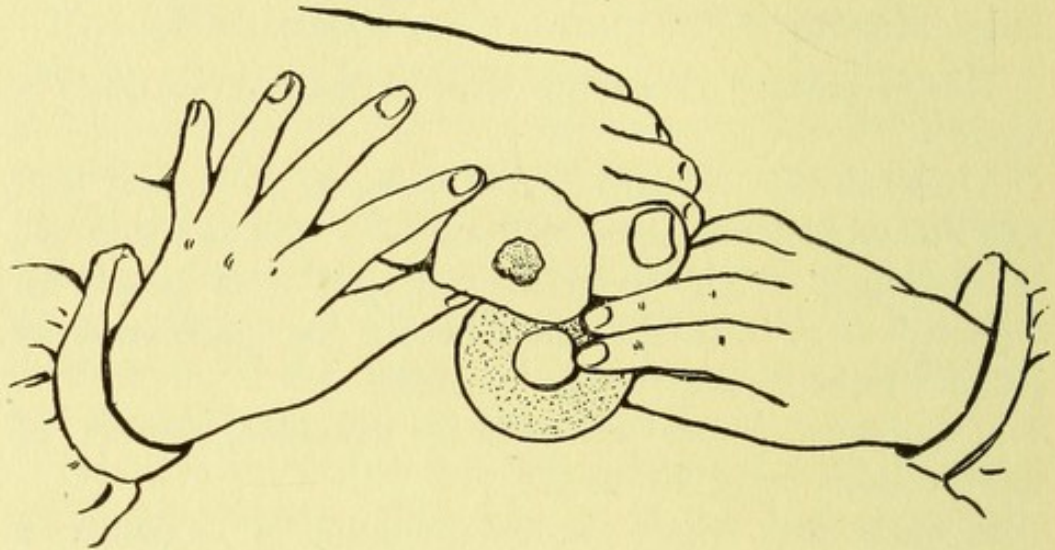


Fig. 45

APPLYING BUNION SHIELD

oped, a great deal of attention is required, and in most cases the services of a surgeon are necessary.

In case an abscess has formed, it is well to poultice the part with a flaxseed meal poultice, applied hot, at short intervals, until the skin becomes thinned out by the pressure of the pus, when it should be opened and the pus let out. The small lancet with which the incision is made should be sterilized both just before and after each operation by dipping into a little jar of sterilizing fluid.

The wound is washed with equal parts of peroxide of hydrogen and water, after which aristol powder is dusted on. Over this, lay two plies of gauze covered with ab-

sorbent cotton and a bandage to prevent infection or injury. This dressing is to be renewed each day.

Once the parts are healed, a protective bunion-shield or ring must be placed over the affected parts until recovery is confirmed beyond a possibility of relapse. Proper shoes, of course, are to be worn.

For dislocation of the toe, and enlargement of the joint, nothing but surgical intervention will be of any use. The patron must in this case be referred to a skilful physician or specialist.

FLATFOOT.—When the arch of the foot becomes weakened or broken down, the sole of the foot, instead of being arched between the ball and heel of the foot, becomes flat or sprawled.

This condition is becoming more and more marked in modern times, due principally to the wearing of improperly made shoes.

High heels are a cause to a great extent, as well as improperly balanced shoes with little or no support under the arch.

It is also caused by continuous standing, or by excessive walking or by adiposity. Even moderately stout persons are very liable to become victims of this affliction. Long-continued confinement to the bed, as during a protracted illness, or general weakness, are also causes. In such cases, the muscles of the leg having become weakened, the whole weight of the body falls upon the body structure of the foot, and causes it to give way.

Children who are taught to walk too early in life often become flatfooted.

The loss of the arch of the foot may occur at any time in life, and as often in men as women. It may be found more often with the former, however, in certain locali-

ties, where a man is subjected to long periods of work in a standing position, and eats improper or poorly cooked food. Low vitality and poor environment may be stated as very common causes.

The early symptoms of flatfoot are rather uncertain. There is no sign of inflammation about the feet. The patient complains of pains in the feet, a dull aching in the calves of the legs, and of becoming easily tired on standing or walking.

On examination the arch may seem to be as shown in Fig. 27, but as these symptoms continue to grow worse, and walking becomes a burden, the arch will be seen to fall lower and lower, until the entire sole of the foot falls flat upon the floor as shown in Fig. 28.

Once this condition has resulted, there is little possibility of restoring the arches to the normal position.

Cases must be recognized and treated early, in order to attain any marked relief, and, unfortunately, the patients will not often present themselves until too late.

Early in the disease, the feet should be bathed nightly in a hot bath to which a handful of sea-salt has been added. The bath should last about fifteen minutes. After thoroughly drying the skin, rub the feet with alcohol and have the patient go to bed so as to remove all strain from the feet.

Properly fitted shoes must now be provided. The heels should not be high, for, while very high heels at first seem to give relief, they only hasten the final ruination of the arch. Laced shoes, because they can be more simply applied to the feet, are best.

ARTIFICIAL ARCHES.—Arches of steel covered with leather have been much in vogue. They are bad. Arches of cork with a small steel spring have been tried to the

feet and worn inside of the shoes, and are much better, but the cork becomes damp and swells and rots. If a glove of some kind that would resist dampness were put over them in making, the cork arches would be preferable for many feet. The arches now most in use and most advisable are of hard rubber with a small steel spring. These have a considerable elasticity, which the steel arch lacks, but they are liable to snap. These arches should be worn but an hour or two during the first and second week especially, because if they force the arch up abruptly they will cause great pain. They should be worn a few hours each day until the feet have become accustomed to them and the bones have begun to assume a position *near* that of the original.

In such cases, these arches should not be given up for years, inasmuch as the old trouble is apt to recur.

In severe cases a flannel bandage should be put on the feet after the bath at night; or Faradic electricity for ten minutes be applied to the feet before the bandages. These bandages are to be removed in the morning and proper shoes with arches worn. The sufferer should avoid standing for any length of time, and rest the feet as much as possible.

The treatment just suggested should be repeated every other day for several months to gain any benefit.

As a rule, all treatment in chronic cases gives only relief, since the arches once entirely broken down can rarely be replaced. The patron is therefore compelled to treat the feet with continuous care for the rest of life. If he or she can be taught by the chiropodist to realize early the importance of wearing sensible, well-fitting shoes and to adopt the use of proper arches therein, much good will result, because much ill will be escaped. Neglect of flatfoot eventually leads to intense physical pain

and mental anguish that at times seems almost unbearable. Therefore, if you have cause to suspect from an examination of a patron's feet that flatfoot is likely to come, or if the stoutness of your patron indicates a liability to a sudden attack of it, advise earnestly against the dangers of neglect. The gratitude of an intelligent patron whom you have saved in time, or whose feet you have set right in the early stages of this common malady is often very great and constant.

CHILBLAINS.—Some persons are especially susceptible to frost bite or chilblains of the feet. Lowered vitality, snow water, severe cold and too quick heating of cold feet are the usual causes of chilblains.

At the first symptom, which is usually an itching of the foot, applications of olive oil or almost any handy grease should be put on without much rubbing. After the grease has been gently manipulated into the skin and between the toes, the surplus may be wiped off to avoid too much soiling the stockings. Care must be exercised to keep the feet dry, that is, thoroughly wiped or patted dry after bathing and wiped dry and the stockings frequently changed if the feet perspire.

Some persons appear to be particularly susceptible to chilblains, even a chill dampness causing the condition.

In some cases, the frost bite results in the loss of one or more toes.

When the case is seen early the feet should either be rubbed with snow until the circulation is re-established, or be placed into a cold bath which is warmed gradually. Any sudden application of heat is to be avoided. Even the room in which the patient is to be treated should be cool, so as not to increase the general circulation too readily.

To relieve any further discomfort, after such a bath or snow rub paint the chilblains with pure guaiacol. Repeat the external use of this several times during the day.

If the frost bites are not severe, they may be painted with equal parts of camphor and belladonna liniment, or with this:

℞ *Oil of Cajeput* 2 dr.
Strong Liquid Ammonia..... 2 dr.

Compound soap liniment enough to make 3 ounces.

If the skin over the parts has become cracked and sore, apply a soothing antiseptic ointment, such as the following:

℞ *Ichthyol* 20 drops
Zinc Oxide 1 dram
White Vaseline 2 ounces

Mix into an ointment, apply on pieces of lint, and cover with absorbent cotton, or this, applied by binding on the part absorbent cotton or linen bandages soaked in it:

℞ *Glycerine* 1 oz.
Tincture Iodine 20 gr.
Tincture Opium 20 gr.

To prevent further danger from frost bite, have the patient wear woollen socks or stockings. The use of an artificial perforated medicated insole is often helpful, as it also is in case of callosities,

Use a hot footbath, to which a handful of sea-salt has been added, each night, and follow after drying with an alcohol rub. Spirits of camphor are also soothing, or a mixture of half alcohol and half spirits of camphor may be used after the bath.

When there is intolerable itching or burning, this mix-

ture applied on cotton or bandages to the parts often quickly soothes:

<i>R</i>	<i>Burnt Alum</i>	5 gr.
	<i>Iodide of Potassium</i>	2 gr.
	<i>Laudanum</i>	2 gr.
	<i>Rose Pomade</i>	5 gr.
	<i>Lard (fresh)</i>	3 gr.

A so-called passive movement or treatment of the soles of the feet is to cross the foot over the opposite knee and with a ruler or short stick strike the sole of the foot a series of rapid light blows, about 30 or 40. The sole of the foot to be protected by a slipper. The benefit derived chiefly belongs to the capillaries and nerves of the part, the congestion of the capillaries, as in chilblains, is quickly scattered. The movement warms the feet and the cure of chilblains is often speedy and permanent.

Avoid placing the feet upon oven-hot air registers, or putting them near to the fire. Improve the health by proper exercise and food.

PERSPIRING FEET.—While perspiration of the feet is natural, excessive perspiration is a disease depending upon lowered nerve tone in the skin of the feet, or upon general poor health.

To overcome the condition improve the health first of all by proper living and food, healthful exercise, and daily care of the feet as heretofore prescribed.

For the sweating, the following powder will be found locally excellent:

<i>R</i>	<i>Perborate of Soda</i>	1 dr.
	<i>Salicylic Acid</i>	20 gr.
	<i>Boric Acid (powdered)</i>	2 oz.

Mix the powders together well and shake about a teaspoonful into the shoes each morning.

Change the stockings each day, as well as the shoes, wearing each pair alternate days.

Another excellent powder is made of the following:

R	<i>Alum (powdered)</i>	$\frac{1}{2}$ oz.
	<i>Orris Root (powdered)</i>	1 "
	<i>Rice (powdered)</i>	$2\frac{1}{2}$ "

Mix well together and dust into the shoes as the above.

The following, dusted on freely, will also be found excellent:

FOR PERSPIRING FEET

R	<i>Borax</i>	10 grams
	<i>Starch</i>	10 "
	<i>Salicylic Acid</i>	3 "
	<i>Powdered Alum</i>	5 "
	<i>Talcum Powder</i>	50 "
	<i>Naphthol</i>	5 "

or this far simpler preparation often very quickly effective, can be applied with a camel-hair brush or soft sponge:

R	<i>Distilled Water</i>	$\frac{1}{2}$ qt.
	<i>Bichromate of Potassium</i>	$1\frac{1}{2}$ dr.
	<i>Essence of Violet</i>	1 dr.

If the patient suffers from excessive ill-smelling sweating of the feet, the following will be found highly satisfactory:

R	<i>Bismuth Subnitrate</i>	$\frac{1}{2}$ oz.
	<i>Permanganate of Potash</i>	6 dr.
	<i>Rice Powder</i>	1 oz.

Mix well and dust into the stockings and into the shoes, following the same general directions for the proper care of the feet as heretofore given.

HOT FEET AND CRACKS BETWEEN TOES.—If the cracks between the toes are caused by excessively hot feet, quick relief is obtained in most cases by a prompt appli-

cation of zinc ointment over the cracked surfaces, or by powdering thickly with Fuller's earth.

If the feet are bathed nightly in tepid salt water or water into which a little borax has been sprinkled, there is little likelihood of sensitive swollen feet, or of hardened or calloused spots. Be careful when bathing the feet to dry between the toes thoroughly.

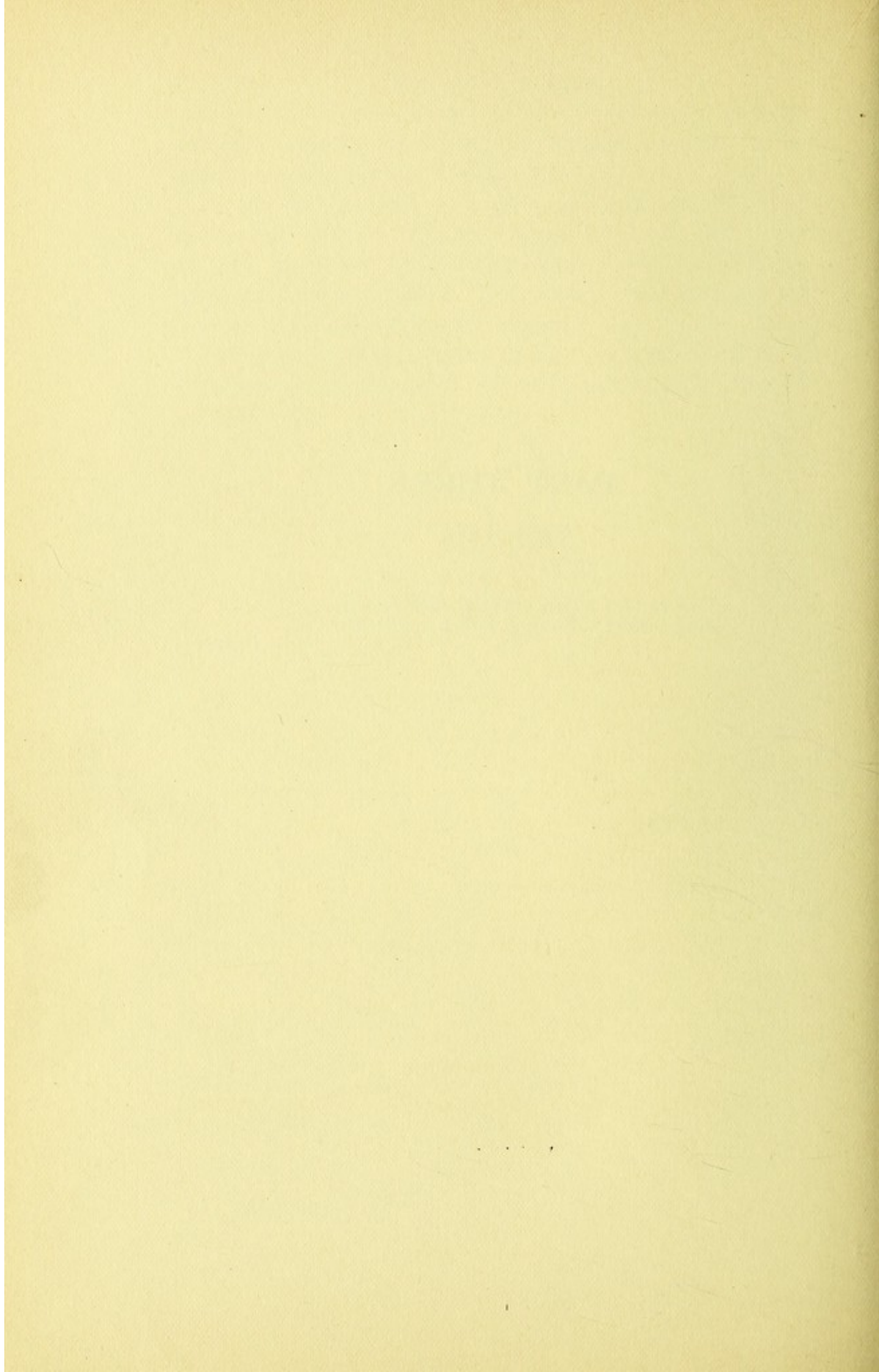
Rub any swollen portions of the feet with witch hazel or alcohol, and any hard, calloused places with olive oil or cold cream.

PART THREE

THE HAIR

Fair tresses man's imperial race ensnare,
And beauty draws us with a single hair.

—*Pope.*



THE HAIR

CHAPTER IX.

STRUCTURE OF THE HAIR.

Anatomy of Hair and Scalp—The Colors of Hair—Racial Differences—Albinism—Number of Hairs—Growth of the Hair—Shape of the Hair.

It would seem that the possession of healthy, beautiful and abundant hair should be so universal as to be unnoticeable, instead of the reverse as we actually find it, for the exercise of intelligent care is all that is necessary to bring this about, and the average woman requires no chiding for indisposition to take pains to look her best. The trouble springs from the fact that so little is generally known of the scalp and its covering, and so many conflicting things have been advised for their care, that feminine minds have been confused with disastrous results ensuing to the very object designed to be conserved and cultivated.

It is, therefore, necessary to give the woman who intends to devote earnest efforts to the beautifying of the hair and to the proper corrective treatment of scalp disorders a concise, comprehensive idea of the physiology of the hair and of the skin in its special relation to the hair, and to advise her how she may conduct her treatment in accord with the processes of nature.

ANATOMY OF HAIR AND SCALP.—The hair of a human

being is similar in structure to the nails of the fingers and of the toes. In other words, it is made up of the cuticle or scarf skin.

It is vulgarly believed that the hair is a hollow tube closed at its upper end. This is not true. The shaft of

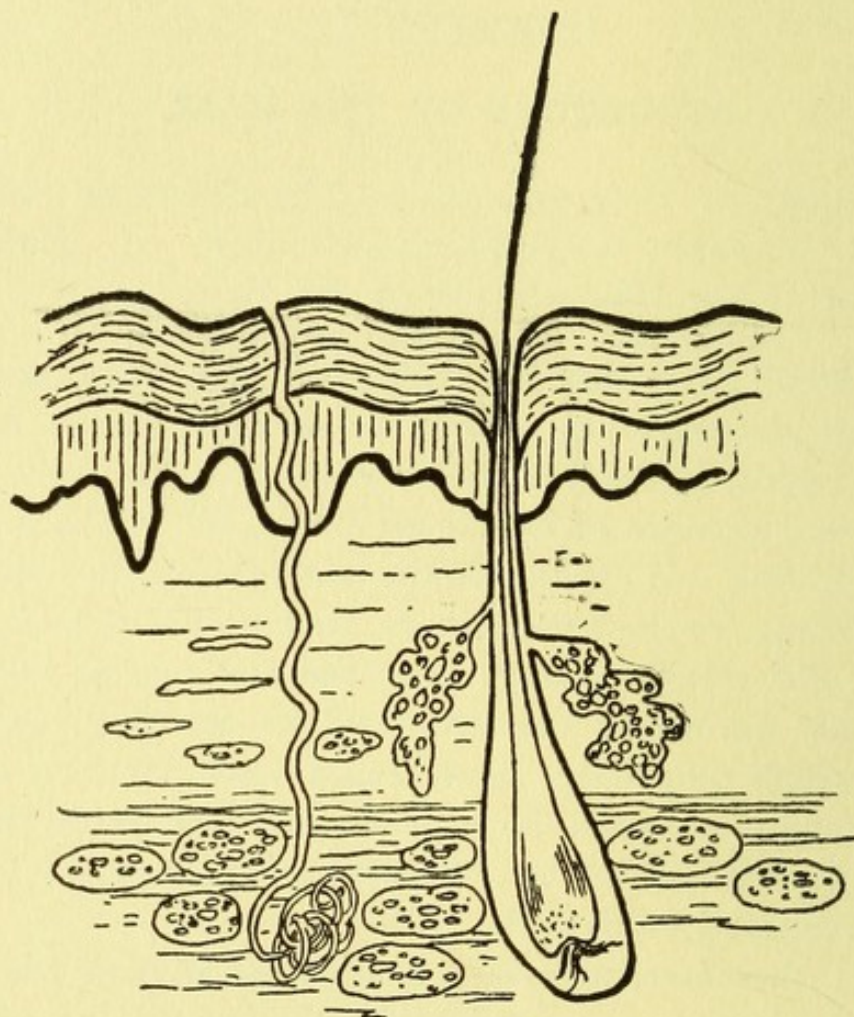


Fig. 46

DIAGRAM OF SKIN AND HAIR

the hair, or that part of the hair appearing beyond the skin, is a solid rod, varying in color, texture, length and curl with every individual. Let a hair slip between your thumb and finger from its root to its tip, then from tip to root. If your sense of touch is keen, you will notice

a difference; it does not slip along so smoothly *toward* the scalp as *from* it. This, as the microscope shows, is because the surface of each hair is laminated. Tiny scales run under each other from the root to the tip. In other words, each hair is notched like a tapering saw.

The hair springs from a tubular depression in the scalp called a follicle. Its root or bulb, somewhat larger and softer than the hair proper, rests upon a little projection or tip of tissue called the papilla. (See Fig. 46.)

It derives its nourishment from this papilla, which nourishment is carried to it by the little blood-vessel, as shown in the illustration.

One or two little glands or sacs will be found to lie along the course of the follicle which are called sebaceous glands.

Their function is to deliver a natural oil called sebum into the follicle, which keeps the hair itself soft and lustrous and prevents it from breaking or cracking.

In the illustration (Fig. 46) is shown another gland called the sweat gland, from the opening or pore of which effete products of the skin contained in the secretion, commonly called sweat or perspiration, are thrown off. Often there is a fault or failure of normal behavior in either of these glands and a scalp trouble develops.

Small muscles are found attached to the side of the hair follicles, called the erector muscles. The latter, when acting under a nervous shock, cause the hair to

"Stand on end
Like quills upon the fretful porcupine."

THE COLORS OF HAIR.—The color of the hair is due to a pigment given off at the very tip of the papilla. Its color varies in each person and depends on certain chemical combinations.

Light or blond hair contains more oxygen and sulphur than any of the other shades, but less hydrogen and carbon. It is finer than dark hair and so there is more of it to the square inch.

Red hair contains considerable sulphur, iron and a red oil.

Brown hair contains more carbon than the other shades, but less hydrogen, oxygen and sulphur.

Black hair has a larger proportion of oxygen and sulphur than carbon and hydrogen.

White hair contains magnesia, sulphate of ammonia and a white oil. In the hair of old persons there is present more or less phosphate of lime.

The color of the skin of parents is blended in their offspring, but this does not appear to be the case in the color of the hair. One child may follow the father in this respect, another the mother, and a third may present a blending of the two. Also the children may have hair markedly different from that of either parent.

RACIAL DIFFERENCES.—Not only does the hair of different races present marked difference in structure, but among different nations of the same race one finds a marked differentiation in color as a rule.

Broadly speaking, dark hair prevails in tropical, semi-tropical and southern lands. To this rule are some striking exceptions, explanations of which have been found by ethnologists in the forced migrations and intermarryings of peoples far back in history.

Among the Spanish, hair so dark as to be classed "black" predominates; yet, in southern Spain one meets many light-haired Spaniards. In Italy, perhaps, a greater variety of shades can be found than in any other country, making Italians hard to classify as a nation in this re-

spect. In France, dark brown hair prevails. In Germany, light brown, sandy, yellow, chestnut and flaxen hair. Among the pure Russians we find light hair, but in Poland and Hungary, dark, as also among the Finns, although the other inhabitants of Northern Europe as a rule are fair-haired. Among the English, a very mixed people, and among ourselves, that is to say, Americans of many generations who have developed a new type, brown hair predominates with a possible inclination toward lighter shades.

Not only climate, but mode of life, influences the color of hair. It has been remarked that people of the same race who live in the country are not so dark-haired as dwellers in the city. It has even been asserted that a change in mode of life has wrought a transformation in a whole race as to the color of hair and eyes. For example, the Celtic race, in the British Isles, of which the modern representatives are the Irish, Welsh and Highlanders of Scotland, were described by ancient historians, and by many travellers up to hardly more than two centuries ago, as mostly blonds, and very decided blonds at that. Now they average as dark-haired as the English, and by some are considered darker.

ALBINISM.—Among all races will be found individuals devoid of pigmentation, not only in the hair, but in the skin and eyes as well. This condition has been ascribed to a disturbance of the nervous system, and is endemic in some tropical countries. The name Albinos was given by early Portuguese discoverers to a number of negroes so affected whom they found on the West Coast of Africa. These "white negroes" were held in special veneration by their black brethren, in striking contrast to the European practice of that day, which was to shun as lepers persons in like condition.

The faulty vision by day, the habitual *melatation* or winking of the lids, to shield the eye from light, and the fact that the sight of the Albino is better in twilight, were noted centuries ago, and the latter peculiarity led to giving these rarities the opprobrious nickname of "Cockroaches." It was also long supposed that Albinos were deficient mentally. This error was doubtless caused by the very natural shyness, or timidity, of the Albino—his *photophobia* or shrinking self-defensively from bright light. It is not only untrue, but it should be a comfort to parents who have an Albino child to know that an Albino is quite likely to be the brightest intellectually of their brood.

Close interbreeding is believed to be a considerable factor in the production of albinism. Darwin notes a case of seven Albino children, born of marriages between cousins—two brothers and two sisters—although neither the parents nor any of their relations or known ancestors were Albinos.

The hair of an Albino negro is woolly, and they have all the other characteristics of the race. The hair of European and American Albinos is peculiarly fine, glossy and silky, often giving the impression of a sort of flax or corn-tassel silk, never the appearance of old age. Cases of partial albinism have been reported casually, where the hair was flaxen or was red, with all the rest of the marks of albinism present. But there is only one case on record of an Albino with red hair.

NUMBER OF HAIRS.—It has been estimated that there are from 75,000 to 150,000 hairs on the human head, varying with the peculiar physical condition of each person, brunettes having less than blonds and the flaxen-haired having a greater number than any type. In those of

nervous temperament the hair is usually more plentiful and of finer texture than with people who take life easy. The number of hairs in the eyebrows is usually about 600; in the eyelashes 420, and the average life of the eyelashes is four months.

STRENGTH AND RESISTANCE.—A single strand of hair will under favorable circumstances exhibit remarkable tensile strength; that is, it will support a weight or strain of about four ounces, varying with the thickness of the shaft. Taking a collection of hair in strands, in such a way that weight could be applied, it would show a surprising *supporting* power.

For a thing that appears so delicate and perishable, hair possesses in reality an extraordinary power of resistance. It can be dissolved, but the water in which it is boiled has to attain a very high temperature to accomplish this. Hair has remained unchanged for thousands of years on Egyptian mummies; and there are well authenticated instances of hair growing very considerably, long after the death of the wearer.

The most remarkable of these is one mentioned by Wulferus, a German author. On opening the grave of a woman, who had been buried forty-three years, her body was found almost intact and covered from crown to feet with an envelope of beautiful hair, long and curly.

GROWTH OF THE HAIR.—Perfectly healthy hair grows from five to eight inches a year, varying with the general physical condition of the individual as well as with the environment, habit of hair dress, exposure to the air, sunshine and climate. Changing one's clime might check the growth or might stimulate it.

Hair grows less in winter than in summer, and less

at night than in day-time. Mild, even climates are best for its growth and beauty. The hair of the head lives about four years. The average length of the hair in Europeans (both sexes) is 25 inches. The longest hair recorded was 10 feet. That was on the head of an Indian youth.

SHAPE OF THE HAIR.—The shape of the shaft of human hair, when cut across its length, varies peculiarly with the races, which accounts for the straight locks of one people, and the short, curly or kinky hair of another. But the hair of no race is ever perfectly cylindrical, as long was commonly believed. The microscope reveals it more or less flattened. Short, curly hairs are the most flattened, and the hair of a man's beard is flatter than the hair of his head.

The following table may be accepted for general purposes to distinguish the different kinds:

Oval shape, found in Aryan races.

Cylindrical shape, found in Chinese, East Indian and American Indians.

Flat or angular shape, found in Semitic races.

Elliptical shape, found in Negro races.

The more ovoid, that is, the more elliptical the shape, the more curly will the hair be.

Hair may be rendered curly artificially for a short time by the application of heat and pressure, or with moisture and pressure, or by the aid of continued tension in a rolled or curled position, and lastly, by the use of certain chemical mixtures. This result, however, can never be made permanent, and it is futile to attempt it beyond even a few hours with truly straight hair.

CHAPTER X.

CARE OF THE HAIR.

Combs and Brushes—Method of Combing—Resting the Hair—Care of a Child's Hair—Massaging the Scalp—Washing the Hair—Recipes for Shampoos and Tonics—Tar Soap—Drying the Hair—Effect of Washing on Color of Hair—The Nightly Care of the Hair—Care of Eyebrows—Care of Eyelashes.

IN the care of the hair it should be primarily considered that the scalp of the head is a delicate structure, and that the still more delicate hair it supports will not permit of rough treatment such as that of the scraping and scratching of wire hair-brushes, more or less rusty in many cases.

For the same reason fine combs or combs of metal of any kind should not be tolerated. These not only injure the scalp, but pull out the hair and may, by reason of such a wound, cause serious disease of the scalp and, through blood-poisoning, even death.

When a brush is selected, let it be one with long soft bristles. *Never use wire brushes.*

The comb should be of hard rubber with teeth well shaped and rounded at their sides so as not to present sharp cutting edges, and these teeth should be uniform throughout—not a comb half coarse and half fine.

Never use a fine-tooth comb—especially on the head

of a child. Wash carefully the comb and brush in warm water impregnated with a few drops of ammonia. Dry in the sunlight, whenever possible.

METHOD OF COMBING.—The hair should be combed from the free ends upward, toward the scalp, short sections at a time, until a gentle sweep will carry the comb through the hair from the scalp down and through the ends.

If tangles occur, the fingers should be used to disengage the hair before the comb is again applied.

Comb the hair first on one side of the head and then the other, making the part about the middle of the scalp.

Comb until the entire hair is free and falls soft about the shoulders, then follow with the brush, brushing from the scalp down.

Do not press hard on the brush. The objects of its use are to remove the dead cuticle naturally thrown off by the scalp; to remove whatever dirt has been deposited on the scalp and in the hair by the atmosphere, and to distribute the sebum, or natural oil, secreted by the sebaceous glands, keeping the hair pliant and lustrous.

Part the hair in sections or strands to accomplish the best results in brushing. Remember that the hair brush does not take the place of the finger tips of the masseuse.

Exposing the loose hair to the air, if mild, and to the sun rays is a great factor in beautifying it and stimulating its growth. The chemical changes these occasion facilitate the evaporation of the perspiration, cleansing the hair of foreign matter, and the sun's warmth causes a mild softening of the oil about the roots.

RESTING THE HAIR.—The hair, especially when it is abundant, should be rested frequently. This is accomplished by loosening it, combing and brushing it some-

what vigorously and sitting for half an hour, or even longer, in sunlight. The sitter is not to face the sun, but have its rays fall on the top and back of head, moving occasionally so the light may visit the sides also.

Not only is this practice highly beneficial to both hair and scalp, but, after several sittings, it is likely to become peculiarly agreeable, a very delicate, exquisite sensation. The mind of the sitter should be lightly occupied either in gay conversation with a friend, or in pleasant reveries, or with some not too exciting novel or book of essays. The sitter should also move the lower limbs, particularly the feet, from time to time, so that the blood should not be flowing too vehemently toward the head.

Indulgence in this natural and very simple performance, especially when women have an unusual or a very thick and heavy crown of hair, will often cure a headache, and will serve to prevent many headaches, or ward off any tendency of that kind. There is no hair tonic in the world so effective as the sunlight. But caution your patron not to overdo what is good. Many persons, when they get a good idea, instead of possessing it, get possessed by it and push it to extremes.

CARE OF A CHILD'S HAIR.—Care of the hair should begin in earliest childhood. Neglect or rough treatment of a child's hair lays the foundation for scalp diseases or for premature baldness. Never violently comb or brush a child's hair. Children are often tortured in such ways and rendered averse to cleansing the hair regularly in after life.

Never plaster down a child's hair with pomade or grease of any kind. Such things prevent the elimination of the natural excretions; in other words, they store up the dandruff, causing the scalp to itch, and tempting

the child to scratch for relief, and perhaps thus poison with its nails the tender skin.

Rainwater that has been boiled and is fairly warm is the best thing to use for washing a child's head. Use only the purest of soaps, such as good castile. After rinsing the hair thoroughly and drying promptly with a soft towel, brush the hair with a very soft brush very gently, and *downward*, or in the natural direction of its growth. The child will soon enjoy this kind of treatment and will gain a liking for the sense of cleanliness.

If crusts have gathered on the scalp, use a few drops of pure olive oil, and apply it several times a day, if the crusts are thick and obstinate. When the saturation with oil has loosened the crusts, wash the scalp with tepid water and castile soap. Then rinse thoroughly with water alone and proceed to dry with a soft cloth—*never a coarse towel*.

Bear in mind that nothing except the purest soap, purest olive oil and warmish water should be applied to a child's head, unless a clear case of scalp disease is indicated. Then consult a physician.

If the scalp of the child is dry, try at once a little olive oil, rubbing it in very gently. It is needless to say that the hair of young girls ought to be as loose as possible so that it may grow well.

A simple cleaning of the hair and gentle massaging of the child's scalp once a fortnight will sometimes within a year work wonders for a child with comparatively scanty or not very pretty hair, and result in giving her permanently such locks as will be, indeed, her "glory" as a woman.

In braiding the hair, braid loosely as possible. In tying at the ends, do not tie the ribbons tightly. Do not dress the hair in a thick mass or coil on any one part

of the head. Aim to distribute it so that the air can readily ventilate it. Avoid all fantastic styles in dressing a young girl's hair. And remember that a child's—particularly a girl's—hair should be very rarely cut. The less cutting, the more likelihood of a finer, softer, silkier, longer growth.

MASSAGING THE SCALP.—The scalp should be massaged with the tips of the fingers. The operator should

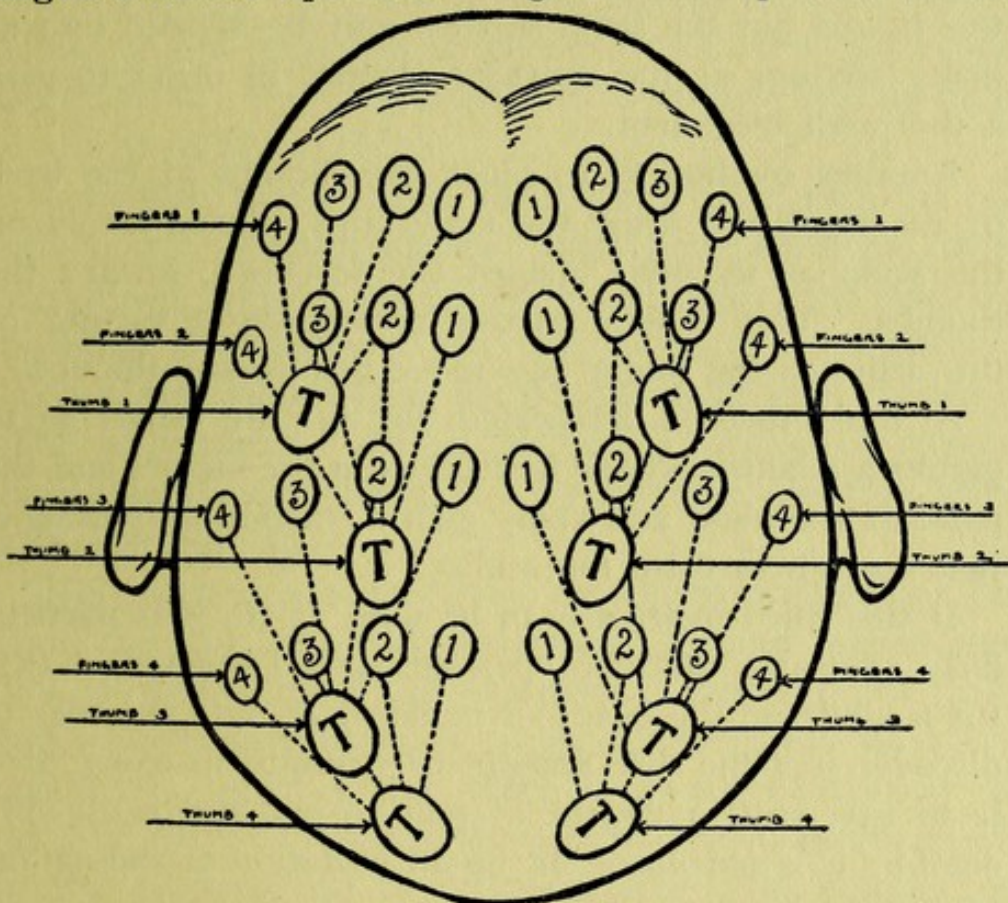


Fig. 47

MASSAGE POSITIONS OF FINGERS

keep her nails short so as not to injure the scalp. To begin with, the thumbs are placed closely together at the back of the head, while the tips of the fingers are made to press firmly, but not harshly, upon the scalp at the front of the head. Each finger tip is then made to move in a circle of about one inch in diameter.

As a section of the front of the scalp is covered in this way, the thumbs of the operator are moved down lower so that a new surface is exposed to the finger tips and so on until the entire scalp has been covered. An idea of the mode of procedure is outlined in Fig. 47, showing the position of the thumbs and fingers in the steps of treating the entire surface.

Four divisions or steps of treatment are indicated in this figure, but the scalp surface may be divided into as many sections as the operator pleases, in order to give a thorough treatment.

Another method is to place the thumbs at the back of the head and draw the finger tips, placed firmly on the scalp at the hair line of the forehead, toward the thumbs. This causes friction and a slight raising of the scalp, as the finger tips move toward the thumbs.

A third method advocated for healthy heads is to gather a quantity of the hair between the fingers and the palm of the hand and apply gentle traction or pulling—just enough to raise the scalp.

If this third method is to be used at all, it is particularly advisable that the operator should practice it first for a while on the heads of personal friends in order to discover just the safe amount of strength to exert; that is to say, such a degree of pull as will not cause discomfort to a patron or set up an irritation of the nerves afterward.

And here it is proper to say that students of this course ought to be conversant with the general principles and practice of facial massage (see page 259), not only to guide them in massaging scalps, but because it may frequently happen that a hair and scalp patient, suffering from facial troubles connected either directly or indirectly with their scalp and hair disorder, will de-

sire, and require, facial attention in conjunction with the special treatment through which they are seeking relief and restoration of their former attractiveness. At any rate, let the common-sense of the operator prevent her from using any violent methods in massaging the scalp.

WASHING THE HAIR.—One of the greatest mistakes of most women and men is to wash the hair of the head too frequently. Nothing is more conducive to baldness. Irritating and perfumed soaps are a menace to any scalp and its hair. The natural odor of clean and healthy hair is finer than any perfume.

Remember that by washing the hair with soap the oil thrown out by the sebaceous glands to soften the hair is removed, leaving the hair dry and fluffy; and that by repeating this at short intervals the hair loses pliancy and softness—cracks and breaks off easily with the least effort at combing. This is one of the commonest causes of baldness, especially with men who are given to wetting their hair daily.

While it becomes necessary, in certain occupations, to wash the hair frequently to remove foreign matter and dirt, it should never be overdone. Washing the hair and scalp once a month is amply sufficient for the average head, except where there is an over-secretion of the oily matter, or where the hair is coarse, and exposed to the elements or to continual fine dust because of special occupation.

But light hair, as a rule, demands to be washed oftener than dark hair, and also requires more rinsings. In the last rinsing water some advise an addition of a few drops of peroxide of hydrogen, but the direct object of this is obscure, and in our judgment a danger lurks that the hair may get a streaky look from such a practice.

The ancients, who prized blondness, are believed to have washed their hair in œnomel (honey-wine), something like the mead of the Scandinavians, and there are some to-day who try to keep their blondness by using a mixture of honey, rhubarb and white wine. These fantastic methods are not to be recommended. The fluffiness and lustre they may temporarily cause are apt to end in an almost incurable muddiness.

If the hair has a tendency to fall out, washing should only be indulged in as a necessity of cleanliness. For such persons, a good shampoo, that not only cleanses the scalp and hair, but also nourishes the hair, is made up of an entire egg, well beaten, to which about one ounce of water is added.

This is rubbed into the scalp and about the roots of the hair thoroughly, beginning at the forehead and gradually working toward the temples and the back of the head or nape of the neck. For this purpose the hair should be parted, and the egg shampoo rubbed or massaged into the scalp with the tips of the fingers. To do this, the mixture should be put into a saucer and the finger tips dipped into it for the amount requisite for use.

A formula that slightly varies this simple egg alone, and will be found better in some cases, is this:

EGG SHAMPOO

℞ <i>One whole egg (well beaten)</i>	
<i>Warm soft water</i>	$\frac{1}{2}$ pt.
<i>Spirits of Rosemary</i>	$\frac{1}{2}$ oz.

Beat well together and rub thoroughly into the scalp. Rinse off carefully in two or three waters. Always be careful not to rub the long hair in such a way as to tangle it. This can be done by holding the long hair up and away from the scalp with one hand, while rubbing in the shampoo with the other.

Some shampooers favor using only the yolks, and others only the white of eggs for egg shampoo. No sufficient reason appears for the latter variant, the oil and sulphur of the yolk being of distinct value. The reason for omitting the white or albuminous part appears to be grounded on its stickiness, but a thorough beating overcomes any objection on that score.

When the scalp is dry the following is recommended as a good

TONIC FOR DRY SCALP

R	<i>Resorcin</i>	3 dr.
	<i>Fluid Ext. Pilocarpin</i>	3 dr.
	<i>Tinct. Cantharides</i>	4 dr.
	<i>Glycerine</i>	4 dr.
	<i>Spts. Lavender (com)</i>	4 dr.
	<i>Castor Oil</i>	1 dr.
	<i>Bay Rum</i>	1 pt.

Add the castor oil to the bay rum, shake thoroughly, and add the other ingredients. Apply nightly by massaging it in.

If the scalp is both hot and dry, the following will be found efficacious:

A COOLING SCALP TONIC

R	<i>Oil of Sweet Almonds</i>	$\frac{1}{2}$ pt.
	<i>Burdock Root</i>	$\frac{1}{8}$ lb.
	<i>Oil of Thyme</i>	$\frac{1}{4}$ oz.
	<i>Oil of Rosemary</i>	$\frac{1}{4}$ oz.
	<i>Oil of Bergamot</i>	2 dr.
	<i>Oil of Lemon</i>	1 dr.
	<i>Oil of Rose Geranium</i>	1 dr.

This can be applied at any time by massaging it in, but is best done at night, covering the pillow with a towel. Do not advise a nightcap to protect the pillow, as a nightcap would be heating and offset the benefit derivable. Nightcaps, anyway, except for persons very bald, are objectionable.

Another formula for dry scalp and hair which has merit, is this:

QUININE TONIC

<i>R</i>	<i>Castor Oil</i>	4 <i>dr.</i>
	<i>Quinine</i>	16 <i>gr.</i>
	<i>Resorcin</i>	20 <i>gr.</i>
	<i>Red Wine (Claret)</i>	10 <i>oz.</i>

Shake well together and apply to scalp with a bit of soft linen.

When the scalp is dry, the following is excellent to massage thoroughly into it the day before giving a shampoo:

<i>R</i>	<i>Lanolin</i>	1 <i>oz.</i>
	<i>Sulphur</i>	$\frac{1}{4}$ <i>oz.</i>

A fine scalp cleaner, but not to be used on gray or graying hair, is this:

SCALP CLEANER

<i>R</i>	<i>Potassium Carbonate</i>	6 <i>oz.</i>
	<i>Borax</i>	2 <i>oz.</i>
	<i>Acetone</i>	1 <i>pt.</i>
	<i>Alcohol</i>	3 <i>pts.</i>
	<i>Oil Pinus Pumilis</i>	$\frac{1}{2}$ <i>dr.</i>
	<i>Water</i>	2 <i>qts.</i>

When the scalp is oily a simple formula like this often suffices:

<i>R</i>	<i>Alcohol</i>	4 <i>oz.</i>
	<i>Witch Hazel</i>	4 <i>oz.</i>
	<i>Resorcin</i>	80 <i>gr.</i>
	<i>Dist. Water</i>	2 <i>oz.</i>

When the scalp is both oily and inactive the following is good:

VERY STIMULATING TONIC

<i>R</i>	<i>Tinct. Cantharides</i>	4 <i>dr.</i>
	<i>Tinct. Capsicum</i>	2 <i>dr.</i>
	<i>Tinct. Nux Vomica</i>	8 <i>dr.</i>
	<i>Cocoanut Oil</i>	3 <i>oz.</i>
	<i>Cologne</i>	10 <i>oz.</i>

Shake well before using and do not rub in too vigorously at first.

ANTISEPTIC TONIC

℞	<i>Capsicum</i> No. 30 powder	$\frac{1}{2}$ dr.
	<i>Quinine Alkaloidal</i>	$\frac{1}{2}$ dr.
	<i>Bichloride of Mercury</i> (powdered)	5 gr.

Dissolve in 6 ounces of alcohol and 2 ounces of water. This is good for oily scalps.

A simple cleanser and tonic is made as follows:

℞	<i>Peruvian Bark</i> (powdered)	3 oz.
	<i>Rum</i> (Jamaica)	1 pt.

When the hair is particularly oily, the following shampoo will be best:

A DRYING SHAMPOO

℞	<i>Bay Rum</i>	1 qt.
	<i>Alcohol</i> (95%)	$\frac{1}{2}$ pt.
	<i>Water</i>	$\frac{1}{2}$ pt.
	<i>Carbonate of Ammonia</i>	2 dr.
	<i>Carbonate of Potash</i>	4 dr.

The carbonates should be dissolved in the water first, and the alcohol and bay rum added when the powders have dissolved. This shampoo should be sprinkled upon the scalp and rubbed into the hair thoroughly. A foamy lather will result which may be wiped off with the pressure of a soft towel. The remaining moisture is allowed to dry on the hair.

This is another excellent and simpler shampoo:

ANOTHER DRYING SHAMPOO

℞	<i>Liquid Ammonia</i>	2 dr.
	<i>Alcohol</i>	2 oz.
	<i>Water</i>	8 oz.

The above is used in the same manner as the other dry shampoo.

A drying shampoo is sometimes given by washing the hair in alcohol without the use of water at all. This

is not advisable, as being too drying for the average scalp.

A dry shampoo will be found useful, when patrons are in a hurry to have their hair dressed.

So-called dry shampoos are made of powder that is dusted into the hair, massaging the scalp thoroughly at the same time. The powder should be brushed out at once. This leaves the hair clean and dry and fluffy, the accumulation of oil and dust having been taken up by the powder. The use of dry shampoos is to cleanse and perfume the hair, at the same time getting the benefit of the exercising of the scalp through the necessary massage. A fine dry shampoo is made as follows:

DRY SHAMPOO

℞ *Orris Root (powder)*..... 8 oz.
Cassia Flowers (ground coarse)..... 3 dr.

Mix well together and rub through a fine hair sieve. Use not oftener than once a week.

Another is made of the following:

℞ *Orris Root (powdered)* ½ oz.
Corn Starch 8 oz.
Oil of Violets..... 10 drops

Mix as the above and rub through a fine sieve or bolting cloth. Use in the same manner.

A dry shampoo for blond and for gray hair is as follows:

℞ *Fine Cornmeal* 2 oz.
Orris Root (powdered)..... 1 oz.

Shake well together, then shake or sift into the hair, Rub in somewhat vigorously and brush out ten minutes later.

Or cornmeal alone may be used. It is well to get it very finely ground and dry it out by placing in the oven a little while.

To tone the scalp it is well to wash the hair once in a month with pure castile soap or tar soap of the best quality. The latter is easily made thus:

TAR SOAP

R Birchwood or Beechwood Tar.....	4 oz.
Castile Soap	6 oz.

In washing the hair with soaps of any kind, warm water should be used, followed by massage or rubbing, and then colder water to stimulate or cause a reaction of the circulation in the scalp. A spray tube, connected with the hot and cold water faucets of the basin, is most serviceable for this purpose. Do not use the water so cold as to shock the scalp, but just cold enough to be pleasant to the patron's head. Use a tar soap only on dark hair, white soap on blond or gray hair. If the hair is inclined to be oily, a little borax, about half a teaspoonful to a basin of cold water, may be used for the last rinsing, but repeated *only once in the month*, as it has a tendency to make the hair brittle. Its use makes the hair fluffy and lighter in color. Liquid ammonia, a tablespoonful to a gallon of water, is used in the same manner; but the same precautions must be taken.

DRYING THE HAIR.—After shampooing, the hair should be well dried with warm, soft towels, the hair being rubbed or rolled in strands between the folds of the towel. The hair, loose and flowing, should then be exposed to the sun, if possible, or to warm air to dry it.

It is better not to dry the hair with a hot air funnel, or at a radiator or open fire-place. Remember that intense heat makes the hair brittle. Drying in the sun is best; with warm, dry towels next best.

Drying will be aided and the possibility of neuralgia prevented by a somewhat vigorous massage given while

drying. Rubbing the hair between the hands makes it more pliant and softer.

Combing and brushing the hair should follow the shampooing. If you are giving a shampoo to a patron at night in her own home, a time and place many ladies prefer and for which they are glad to pay extra, it is well to put up the hair as loosely as the patron will permit so as to assure a perfect drying over night and no ill after-effects, such as cold in the head.

Caution your patron, if the weather is damp or cold, not to expose herself to it, until her hair is thoroughly dry. Do not let her leave your parlors, in case she has very heavy hair, until you are thoroughly satisfied as to its perfect dryness.

EFFECT OF WASHING ON COLOR OF HAIR.—Sage, tar soap, and oily tonics tend to darken very light hair, as does also the egg shampoo if the yolk is used.

Ammonia and soda brighten light hair, but must be used cautiously and sparingly, as they are very drying.

A teaspoonful of salts of tartar and two of lemon juice added to the last rinsing water of light hair will help keep its color and brightness.

A piece of washing soda, the size of the thumb nail, mixed into a paste or jelly with white castile soap and used occasionally as a shampoo will help keep the hair light and fluffy.

Light hair should be washed twice as often as dark hair, and it should be rinsed through more waters after shampooing. The sun is not so good for it as for dark hair, so it should not be dried in or exposed to the sun as long as dark hair.

THE NIGHTLY CARE OF THE HAIR.—Many women fail to understand the great benefit of the proper care of the hair before retiring. Often the hair is allowed to remain

done up during the sleeping hours, and combing and brushing at such time is rarely ever done.

To acquire a beautiful growth of hair the following hygienic laws should be followed without fail:

Take down the hair at night and comb out evenly and smoothly; then brush thoroughly with the proper kind of brush and allow to remain flowing, or do up in one or two loose braids according to the amount of hair.

If the hair is inclined to be dry, some bland oil should be rubbed into the scalp with the tips of the fingers. Pure white vaseline answers very well, as it does not turn rancid, but it should be used in moderation, as it has a tendency to darken the hair, especially that of a very blond color.

A tonic vaseline and oil combination may be used. Where the hair is inclined to fall out, the following answers well:

R	<i>White Vaseline</i>	3	oz.
	<i>Castor Oil</i>	1½	oz.
	<i>Oil of Bergamot</i>	30	drops

The vaseline and castor oil are thoroughly rubbed together until an even mixture is obtained, and the essential oil is then added slowly and distributed by further rubbing.

A little of the mixture is rubbed into the scalp every two or three nights.

When only an essential oil is required to give lustre to the hair, the following is recommended:

R	<i>Oil of Almonds (sweet)</i>	3	oz.
	<i>Oil of Rosemary</i>	1	oz.
	<i>Oil of Lavender</i>	30	drops

Mix as the mixture before given and use in the same manner.

If the hair is naturally oily and a perfume is desired for the hair, any essential oil, such as oil of violet, oil

of bergamot or lavender, may be used in the same manner, though much more sparingly and only once in a week.

Sometimes the least touch of an essential oil and a bland oil may be given, especially after a shampoo, to give sheen to the hair. Such preparations are known as brilliantine. A good composition is made as follows:

R	Castor Oil	4	dr.
	Oil of Sweet Almonds.....	3½	oz.
	Extract of Jockey Club.....	3	dr.
	Alcohol, enough to make.....	8	oz.

Put the ingredients into a bottle and shake thoroughly before using.

Apply with the finger, moistening the hair here and there, and brush out with hair brush evenly.

CARE OF THE EYEBROWS.—The heavy eyebrow usually denotes strength and mental powers. The thin brow highly arched is a sign of the artistic temperament.

The hair of the brows should be kept orderly and in shape by carefully brushing with a fine soft-bristled brush made for the purpose.

A little lanolin, containing a few drops of essential oil, such as lavender or bergamot, should be put on gently with a fine brush twice a day. Very little is necessary.

The eyebrow brush can be bought for fifteen cents, and should be used night and morning.

Brush the eyebrow *upward* from the nose and *outward* to the hair line. In this way, if the eyebrows are too straight, the high curve can be cultivated.

TO MAKE EYEBROWS GROW

R	Lanolin	1	oz.
	Tr. Cantharides	2	dr.
	Oil of Almonds	4	oz.
	Oil Rosemary	15	drops

Melt the lanolin, add the rosemary and almond oil and

then the cantharides. Apply every night with a soft tooth brush and *keep out of the eyes*.

The hair in the lower middle of the arch, sometimes amounting to the condition called "beetle-brows" and giving a sinister look to an otherwise pleasing face, can be removed with tweezers. Lanolin or olive oil massaged at the upper arch will stimulate the growth of hair there. Olive oil has a tendency to darken some hair.

The proper care of the eyebrows includes a cutting of the ends of the hairs once every month or three weeks. Do not cut off more than a sixteenth of an inch. Persistent performance of this invariably results in a marked thickening of the growth; hence, if the eyebrows are naturally too heavy, this should not be done so often, or not till they grow bushy and cutting becomes imperative.

Another formula to make eyebrows grow is as follows:

R	Red Vaseline	2 oz.
	Tinct. Cantharides	$\frac{1}{8}$ oz.
	Oil of Lavender	15 drops
	Oil of Rosemary.....	15 drops

Mix thoroughly and apply to the eyebrows with a tiny tooth brush every night. This will also stimulate the growth of the eyelashes, but it will irritate the eyes if any gets into them.

CARE OF EYELASHES.—If the eyelashes are thin or falling out, simple vaseline or olive oil or lanolin may be rubbed over the edges of the lids. Perfumed oils or preparations containing alcohol are not to be advised, since they irritate the eye. Use the brush under the lashes, always brushing upward. This will cause them to curl slightly. If done with persistent regularity it should help them to grow.

CHAPTER XI.

SIMPLE HAIR DRESSING.

Historical Sketch of Hair Dressing—Wigs—Individuality in Coiffure—Fixed Types of Coiffure—Fundamental Forms of Hair Dressing—Home Coiffure—The Simple Pompadour—The Divided Pompadour—The Psyche Knot—The Swirl or Turban Coiffure.

MODES of wearing the hair among ancient peoples varied considerably, even in the same race. Among the Greeks the men of the more isolated tribes such as the Euboeans wore the hair long, while those of the great cities such as Athens and Corinth made use of the barber's shears. In other races we find a difference of custom in this regard among classes. The ancient Jewish priests were commanded to have their hair cut every two weeks when on duty in the temple. Nazarites, on the other hand, were prohibited from using any instrument on their faces or heads. In the course of time, however, the male Jews took to wearing their hair short, but the Jewesses never clipped their glorious ebon tresses, which they wore comparatively loose, and profusely beset with richly wrought ornaments of silver and of gold, with a great variety of gems or of rare stones.

The Egyptian women, on the contrary, preferred short hair. Cleopatra, so long on charms, was comparatively short on hair. Among the Romans, also, length of hair was not so much prized by women as peculiar or striking color.

In the Northern nations, at the period when the short-haired Romans were conquering Europe, both men and women wore their hair long, and loose, as if to assert their independence. The high esteem in which long hair was held by the Celts and Goths can be inferred from the fact that cutting it off was a favorite punishment for various crimes. The prison clip to-day is a survival of that form of humiliation—the visible mark of the penalty.

A close-cropped head was also, in olden times, a sign of slavery. Cæsar, to take the spirit out of the long-haired Gauls whom he captured, clipped their hair, and when he conquered their country made the inhabitants wear their hair short.

In France, during the Middle Ages, the length of hair was regulated by law to correspond with the many degrees of rank. Before this the French nobles as warriors had long been accustomed to wear their hair short; but as they grew more devoted to courts than camps, they reverted to the style of their early ancestors, and let their hair grow its full length.

WIGS.—Wigs were worn by the ancient Egyptians, not from fashion, but as they are worn now, to cover baldness, or make up deficiency. The British museum has a few specimens of these.

Wigs, as a rule, were not worn by the Greeks, whose native æsthetic instinct revolted against artificiality in beauty. But the ladies of Rome, for the Roman as a race lacked the fine taste and sense of proportion instinctively possessed by the Greeks, exhibited an inclination to imitate the architectural character of their city by piling towers of hair upon their heads.

These masses, built on an invisible frame, embellished with rows of little curls down their sides, and frequently

with long free curls also, gave them a grotesque, top-heavy appearance, and must have caused frequent, if not constant, headaches.

One can believe the statement that the trade in false hair flourished mightily then, and we are informed by Roman writers that the long yellow tresses taken from the heads of maids of Germany were the great staple in the Roman hair market. Descriptions of the fantastic extremes to which the belles of Rome went in the way of hairdressing read like the inventions of fancy.

Hair was not merely piled in towers, but was wreathed and frizzed to represent harps and harpstrings or to imitate the shapes of public buildings in Rome or those cities conquered by Roman arms, when a popular triumph was celebrated. Or, instead of these hair dreams of architecture, sometimes an enormous mass of foreign hair was plaited in with the natural, not over-long, hair of the Roman women, so that these trailing tresses, adorned with fillets of many hues, looped with gold, and bespangled with gems, almost swept the ground.

Against this absurdity and extravagance, even the vigorous voices of the great priests of early Christianity seem to have thundered in vain. The fashion held till the barbarians of the North overran Rome, and took vengeance for ages of oppression.

But even the mad fantasticality of the Roman hairdressing was eclipsed by the freakishness rampant in the seventeenth and eighteenth centuries in France, and, to some extent, in England and the colonies.

The revival of wig-wearing came in France from the fact that Francis I., having received a severe scalp wound, came before his court with clipped hair. Louis XIII. brought back the fashion of length, and, as all men were not fortunate in this respect, wigs became

common. In the next reign this fashion had become so tyrannical and absurd that going without a wig, or wearing only a small one, would subject a man to humiliation. Wigs, then generally made of silk, were worn descending halfway down the back, with ridiculous curls on the sides depending down the breast. In the next reign the wigs were powdered. They finally became of such monstrous size that the trade in false hair grew enormously. Wigs were also made of many things besides hair.

What women and men of fashion carried on their heads in those days gave them slight chance of carrying much in their heads, and finally took many of their heads off entirely. When that red tidal wave of wrathful democracy, called the French Revolution, subsided, wigs, periwigs, and perukes had been almost swept away. Napoleon wore his own hair.

Wigs lingered longer—we mean those of fashion, not of necessity—in conservative England, but began to be abandoned here in America about the same time as in France, if not a little earlier. Yet quite a number of the signers of the Declaration of Independence wore them. They are still worn in England by judges; big, white, full-bottomed wigs, that are supposed to symbolize the dignity of age and mental ripeness that a judge ought to possess. Hence judges are humorously referred to in England as “big-wigs.”

It is amazing as well as amusing to think how some of our great-grandmothers used to dress their hair. A lady of that period who sought to keep pace with Paris fashions may have had her hair—with additions—built up on a frame of silver wires in the form of a frigate, a church with a spiral steeple, a pyramid, a tree, a huge conch, a bird, or a butterfly with wings outspread, or

in the shape of a cluster of flowers, or a fish, or the signs of the zodiac, or anything else that perverted fancy could suggest or perverted ingenuity execute.

Even into the last century one survival of this monstrous style persisted for some time, and the writer remembers to have seen, when a small boy, one very old lady in New England who still had her plentiful white hair folded around an oblong cushion about a foot long, resting on the back of her head and tilting forward. Whenever she moved her head the structure seemed about to topple over.

Nowadays it is the mode to wear wigs that defy detection, and so great is the modern art of the wig-maker that more persons wear them than is popularly supposed. If Mr. Rockefeller, for example, had not had the early light of publicity beat on his bald crown, no one on seeing him now would think for a moment that he was wearing other than his natural hair.

INDIVIDUALITY IN COIFFURE.—A woman should always try to find a style of hair dress suitable to her form of face and features. It is not necessary to make this elaborate. Ofttimes the simplest style is the most becoming.

She should be chary of changing this style when once found, because the growth of the hair will adapt itself to the manner of dressing. This, of course, does not mean that she should not indulge in an occasional ball- or evening-coiffure, but is intended to point out that a frequent switching from one to another style is harmful to the growth and beauty of the hair, because the hairs are twisted out of their natural course of growth, and parts of the scalp overburdened with heavy braids or rolls, pompadours and false pieces.

There are various laws to be observed always, all dependent upon the face and its features. Many women

make themselves appear oftentimes ridiculous and sometimes actually ugly just by freakishly or thoughtlessly adopting a style of coiffure entirely unsuited to them. What is more grotesque than a fat round face covered with a low mop of ringlets?

Women with a round face should adopt a style in which the hair is narrow or close at the sides, and somewhat high at the top of the head, and massing well down the back of the neck.

Those having long thin faces should not wear the hair high, for that accentuates and emphasizes the length and leanness of their countenances; but should wear it wider at the sides and thicker in back, to round out the face.

Those of broad face should dress the hair closely at the sides and quite high.

A sharp-featured, long-nosed woman should dress her hair low and rather full at the sides, but not full in the back at the crown of the head.

As a rule short women should cultivate as high a coiffure as is consistent with the face, while tall persons should dress the hair low and fuller at the sides and neck.

When one takes into special consideration the style of hair dress suited to the individual, naturally a great variety of coiffures, too numerous to describe, suggest themselves. This consideration again is influenced markedly by the quantity of natural hair the wearer has, or the number or style of added pieces she may be willing to wear for the desired effect.

Since the pompadour style has become so much in vogue and gives such pleasing effects, this style of hair dressing may be considered best for home or street wear, when suitable to the features of the patron.

FIXED TYPES OF COIFFURE.—Of course, this implies that any style of hair dress may be adopted, but since the student must follow some fixed course of procedure it is thought best to demonstrate here those styles most generally used as fixed types, as well as guides from which a great number of other coiffures may be developed as the operator becomes acquainted with the effects she can achieve by making slight changes from those herein considered.

Let it be understood first of all that every head differs both in shape and the quantity of hair it carries. Consequently the operator must not be disappointed if, by following the directions given here for the completion of any style, she does not get the desired result—that is to say, when the hair is thin and short or thick and short different results are obtained, but any effect can be obtained by using judgment in the use of the addition of a switch in one, or roll in another, a pompadour, cluster, or any other artificial piece.

The made-up pieces of hair that may be used will be described in connection with their use. They are principally meant to make up for hair that is thin or insufficient, and lastly to give pleasing effects.

In the former class are the pompadours, transformations, rolls, braids and cluster puffs, and in the latter class pin curls, grape and cluster curls.

Before beginning what seems to be a most complicated study, but in reality is a course of pleasant acquirements which any one may follow without confusion, let the author offer one last word of advice, and that is, experiment. Always experiment. Get some lady friend or friends to practise on, and with patience and perseverance the intricacies of hairdressing will vanish like magic, and a sense of assured skill will take their place.

FUNDAMENTAL FORMS OF HAIRDRESSING.—To begin with, the operator must follow some system of nomenclature or naming of the hair as it is divided into parts. By referring to Figure 48 the student may observe four divisions of the hair on top of the head, which divisions are numbered and named as follows: 1. Front section. 2. Left section. 3. Right section. 4. Back section.

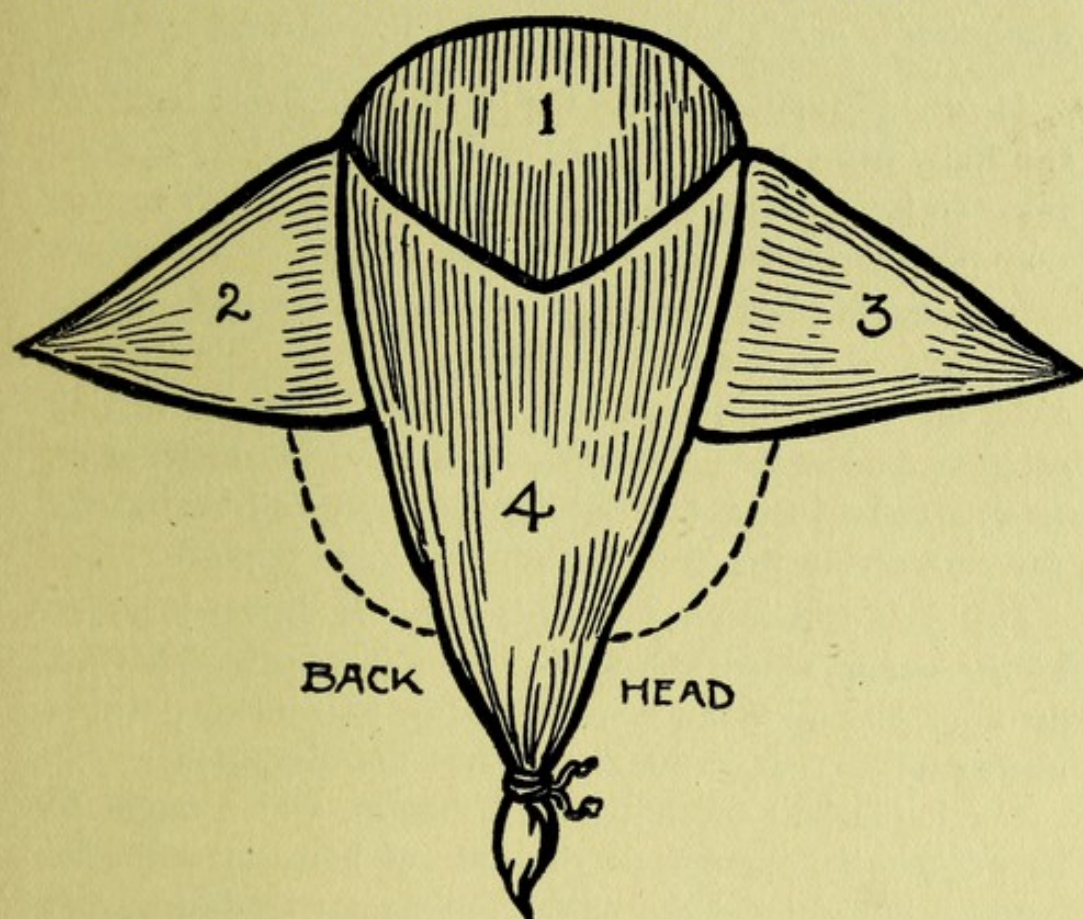


Fig. 48

FUNDAMENTAL DIVISIONS OF THE HAIR

The front hair section may be varied in size by the location of the parting. This may be made very near the forehead across the top of the head, or far back, very near the ears, according to the style of coiffure to be made.

The side hair sections vary also in size according to the amount of hair, but much less so than the front section. They may be made in one or two parts on each side, according to the amount of hair and the style of dress.

The back hair section also varies in size naturally, as the others and for the same reasons. It may be made into one or two braids, one or two loose switches or a number of curls, a cluster or variously shaped knots.

HOME COIFFURE.—For the home or street coiffure the hair, after being combed out thoroughly, is divided into the four sections shown in Figure 48. Each section may now be curled lightly to give it a fluffy or full effect.

This having been done, the operator is ready to adjust the parts or sections.

If the front and side hair is thin, a transformation piece is laid across the top of the head or, better still, from a point just above or slightly above and behind the ear, and across the head to the same point opposite.

It is pinned into place with hairpins at different points by the net to which the false hair is fastened. This net piece or lace foundation is shown in its pinned position in Figure 49. It is numbered 5 in the diagram.

Comb the hair of the transformation, which ought to be of the same color as the natural hair, in with the natural, but not too thoroughly, so as not to destroy the curling that has been done.

Now gather up the front section and adjust it in a sort of roll fashion over the forehead, bringing the free ends over the top of the head. Tie the free end, leaving as much loose end as the length of the hair will allow. A string may be used for this purpose, but a rubber band not too tightly applied will answer better.

Next tie the back hair rather near to the head. This

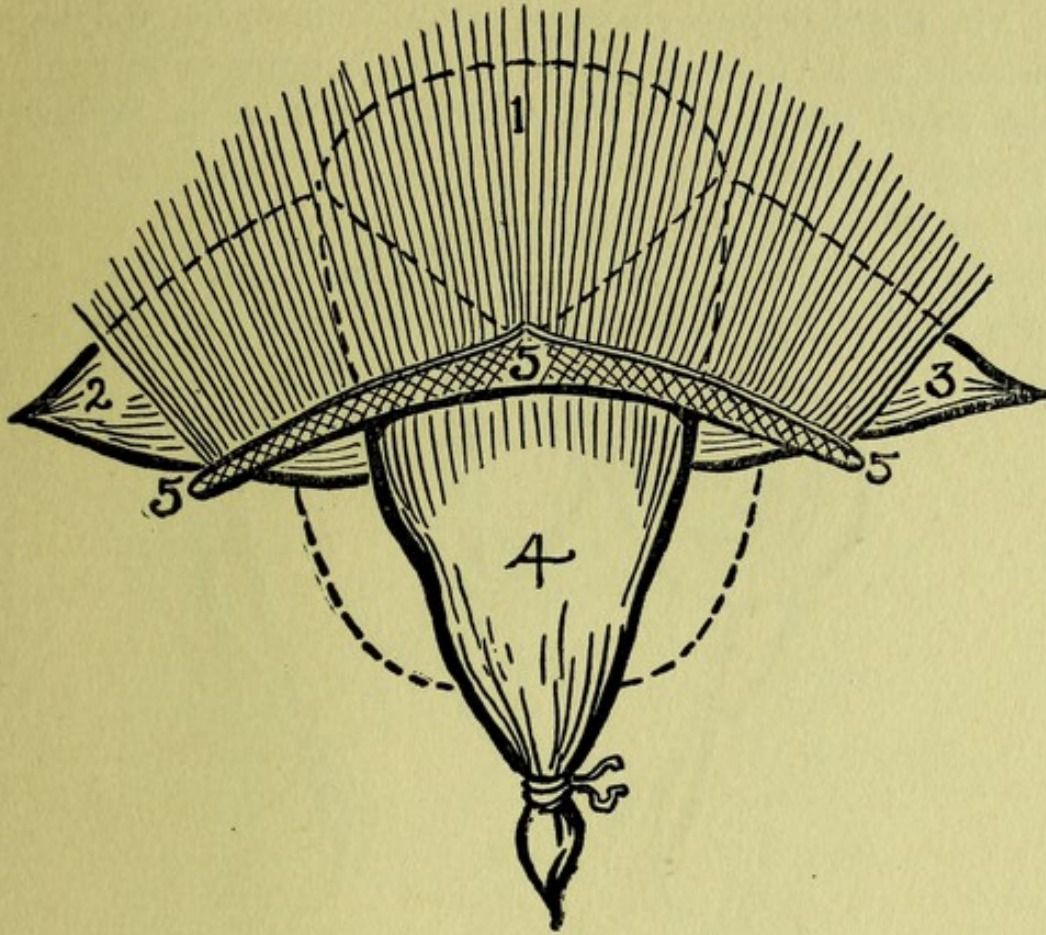


Fig. 49

INSERTION OF TRANSFORMATION PIECE

will keep the hair in place while the sides are being adjusted.

Now take up each side section, rolling it upward and inward if there is sufficient hair as shown at A in Figure 50. Some hair-dressers prefer to roll the hair inward. But this makes it more difficult to fix in place by pinning and much more liable to become disarranged.

The front section is shown at B in the same figure.

Do not roll up the hair tightly, but just firmly enough to give it body or shape. Never tighten the hair very much, for this not only injures it, but gives a flat appearance.

Pin the side into place so that it is firm, but not so firm as to be uncomfortable, and repeat the same with the other side. This done, comb the sections lightly

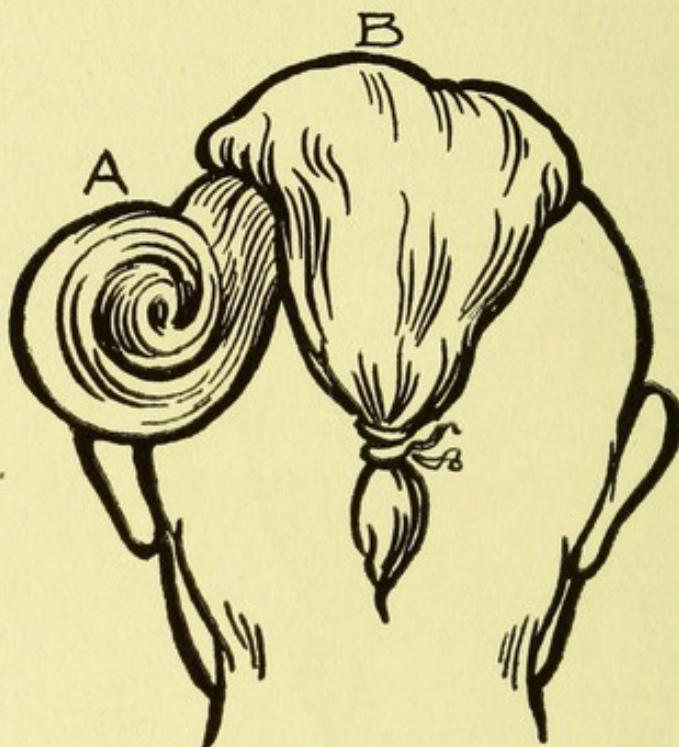


Fig. 50

ROLLING THE SIDE SECTION

from the face upward so that the partings on the sides with the front will not show at the same time, lifting the comb outward further to fluff the hair and give it the easy effect of nature.

This accomplished, insert a back comb of any desired style about the top of the head or a little back of this point, as shown in Figure 51.

This leaves only the free end of the front hair and the back hair section to be adjusted. If the front hair back of the comb is sufficiently long, it may be combed in with the back hair.

The back hair may then be gathered up as a roll similar to the front hair, fixed at the top of the head with

the back comb, and fluffed out as directed with the front and sides, making sure that the loose ends are not shown on top of the head; or, if there is enough hair, the ends may be divided and curled into a number of small curls, which may be artistically pinned into place so that they fall down upon the back of the head, where they are fixed with small hairpins; or the back hair may

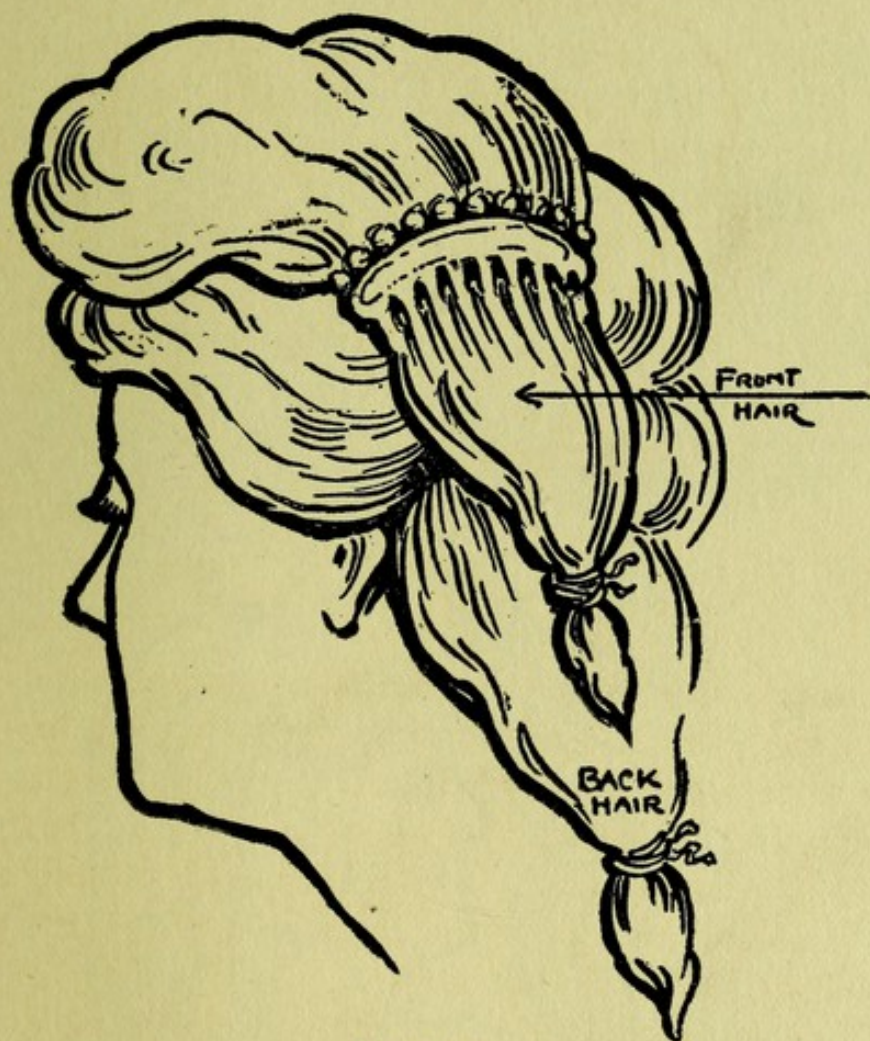


Fig. 51
INSERTION OF COMB

be divided into two or three strands and curled over the fingers and fixed into place at the back of the head in a cluster.

If the hair is too thin in this section, the hair is rolled upward and pinned, and a cluster of two or more puffs is pinned to the back of the head rather low and downward. The finished effect is shown in Figure 52.

In place of the cluster puffs a switch may be added to the back hair with which the same results may be attained as given for the natural hair. A deft touch with the comb here and there will give a finished appearance to the coiffure. The addition of a small pin curl about the left temple often adds much to the general effect.

THE SIMPLE POMPADOUR.—Another coiffure for home wear of much simpler style is that of the plain or parted pompadour.

In this coiffure one part is made across the top or crown of the head extending from back of the ear to the other ear, separating the hair into a front and back section.

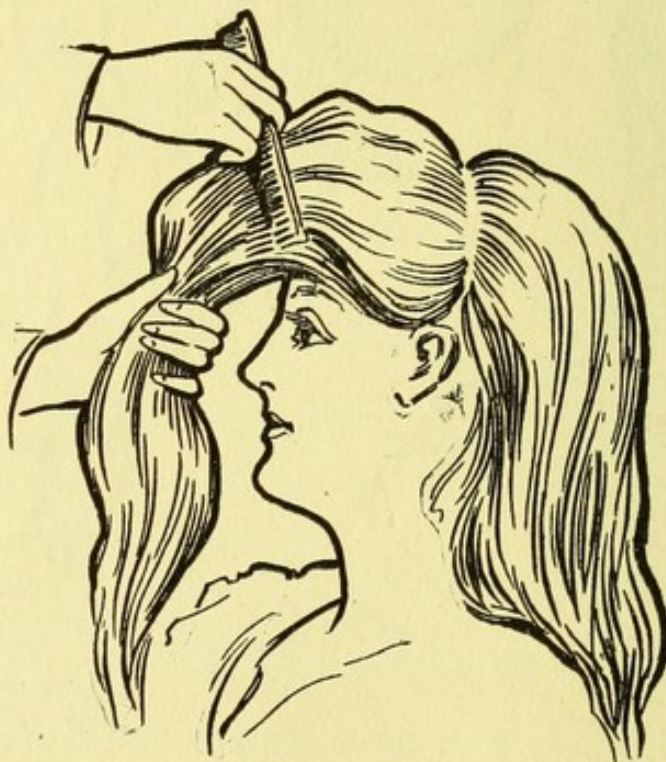


Fig. 53
COMBING THE FRONT HAIR



Fig. 52

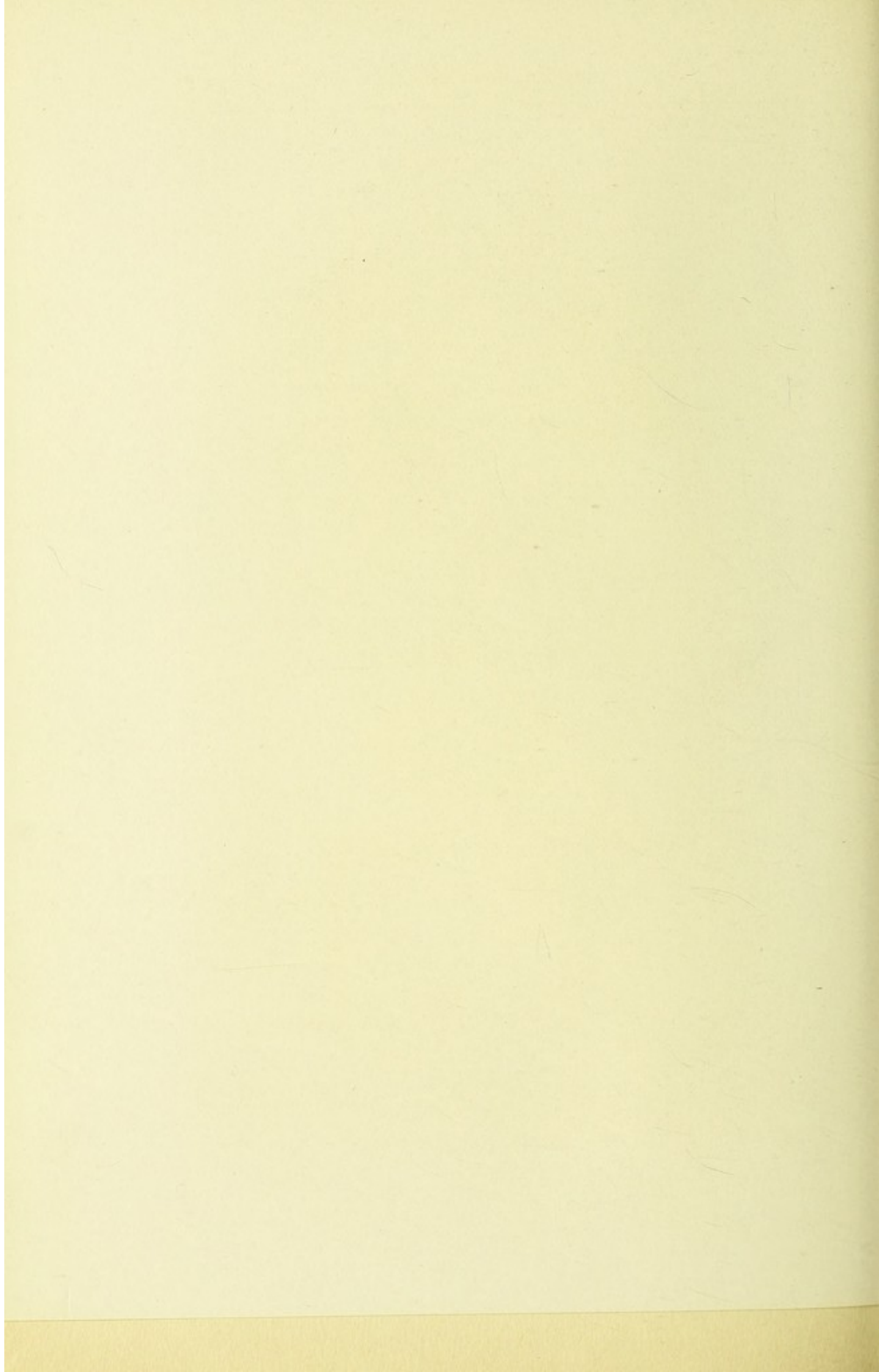




Fig. 54

ARRANGING THE FRONT HAIR

The front hair is combed out as in Figure 53, and is curled or waved and gathered up on top of the head, slightly to the back, and pinned into place. A transformation may be used or a roll placed under the hair, if thin, to keep it in shape and to raise it sufficiently for the desired effect.

The back hair is then braided into one braid and gathered into a cluster knot and pinned into place at the back of the head or simply gathered at the top of the



Fig. 55

PARTING HAIR AT SIDE

head by being collected in roll fashion and pinned into place, using a back comb to fix the front and back sections.



Fig. 56

ARRANGING BACK HAIR

A roll or switch may be added to give form to the back section.

The hair is then lightly combed out to cover the side partings.

All the free ends of the back hair must be tucked away, as they give a disorderly look not only to the simplest but to the most stylish and complicated coiffures.

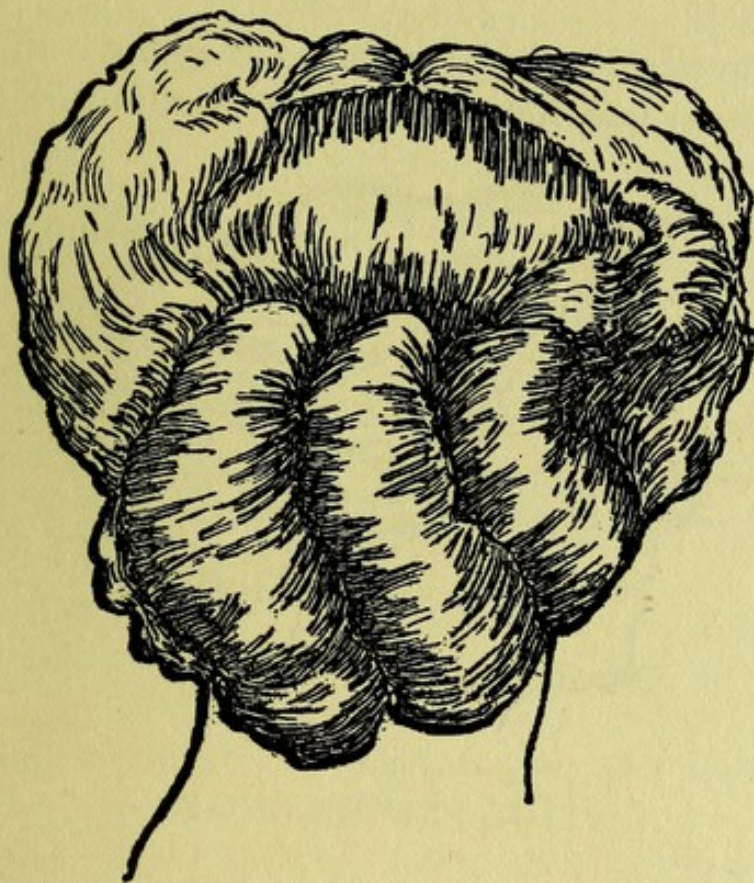


Fig. 57

PUFFS OVER BACK HAIR

THE DIVIDED POMPADOUR.—If the divided pompadour style is desired, the hair is divided either at the centre of the forehead (see Figure 54) or to one side (see Figure 55), the two sides being waved more fully and gathered as in the plain style. A transformation or parted pompadour may be used with advantage. The

back hair may be simply gathered in a roll or be waved and pinned loosely to the back of the head in cluster fashion (see Figure 56), or braided and gathered into a knot and pinned into place. A back comb adds to the effect and helps to hold the whole coiffure.

If desired, a cluster of puffs may be pinned over the rolled-up back hair with very pleasing effect, as shown in Figure 57.

THE PSYCHE KNOT.—For the psyche knot coiffure the hair is parted into four sections, as shown in Figure 58,



Fig. 58

THE PSYCHE KNOT

and waved. The front and side sections are gathered at the top of the head, pompadour fashion, as already fully described; but the back hair is divided into two strands which are combed out and rolled over the finger into two long curls. These are gathered into a cluster knot, pulling the centre section or curl outward. The distance this part of the curl is pulled outward depends, of course, on the amount of hair to be worked with, or on the taste and desire of the patron.

A switch may be used to fill out the back hair sufficiently to accomplish this. A back comb is used and celluloid pins and hairpins to fix the whole into place.

The whole coiffure is then gone over with deft touches of the comb to give it neatness and evenness.

THE SWIRL OR TURBAN COIFFURE.—This new style of wearing the hair is a radical departure from the old methods, and requires study and practice to be done successfully. Its purpose is to give the effect of a loose dressing of the hair which at the same time is sufficiently secure not to come down. If "the highest art is to conceal art," this is the climax of hair-dressing. It is especially adapted to women with small heads, pretty foreheads, low brows, and plenty of hair. If the hair is not abundant, a switch may be used, but with no hope of deceiving the beholder, since the artificial hair, which is swirled around the crown of the head, is in startling contrast to the natural hair, which is parted in the middle of the forehead.

The woman with plenty of hair of her own parts her hair in the middle, brushing it thoroughly to secure a gloss. The hair is now divided into strands, starting just above the parting about two inches higher than the head and separating the hair which falls on each side of the face. This is fluffed and ruffed and drawn back from the face, and knotted over the rest of the hair at the back. All the hair is then drawn tightly together at the back and secured with a tape or a small strand of hair (see Figure 59).

Then the long hair is swirled around the head in turban shape, either without being braided or twisted (see Figure 60), or with a braid (see Figure 61), and is secured at intervals by square combs of tortoise-shell,



Fig. 59
SECURING THE HAIR



Fig. 60
THE SWIRL COIFFURE
WITHOUT BRAID

or with any of the ornamental hairpins which come for that purpose.

When artificial hair is used in this coiffure it is arranged on a wire frame (see Figure 62), with a ribbon



Fig. 61
THE SWIRL COIFFURE „
WITH BRAID

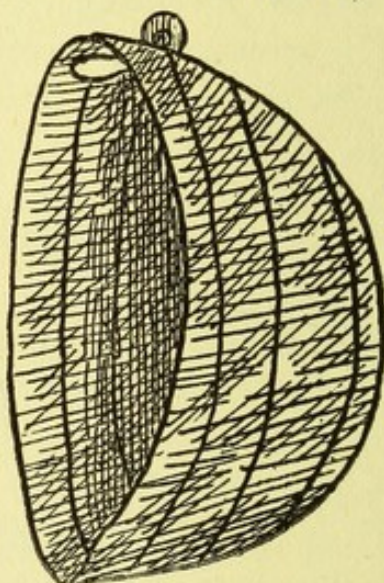


Fig. 62
WIRE FRAME FOR
TURBAN COIFFURE

about the edge (see Figure 63), or a braid of artificial hair.

The wearer's own hair is parted in the middle, drawn

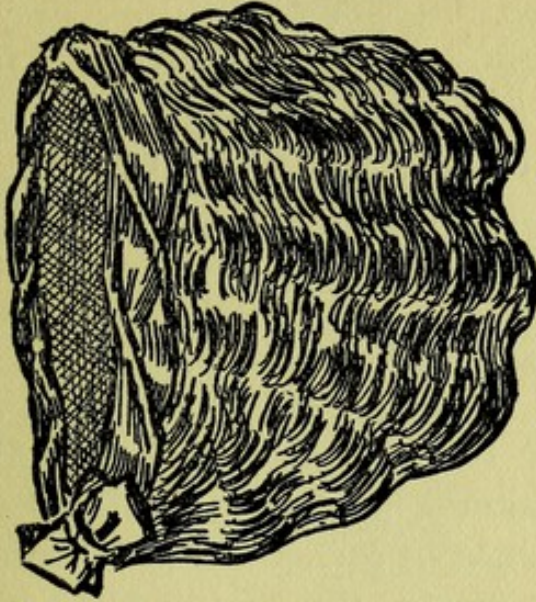


Fig. 63

HAIR ARRANGED ON WIRE FRAME

loosely back, and knotted firmly in the middle of the head. Over this the dressed frame is placed, the false hair, of course, matching in appearance the natural. Figure 64 gives the completed coiffure.



Fig. 64

COMPLETED TURBAN COIFFURE WITH CAP OF
FALSE HAIR

CHAPTER XII.

FALSE HAIR ADJUNCTS.

Kinds and Qualities of False Hair—Switches—Braids—Curls—Chignons—Puffs—Pompadours—Hair Rolls—Nets—Ribbons and Flowers.

THE use of formations of false hair as adjuncts in dressing the natural hair when this is not abundant has already been noted in connection with coiffures which do not essentially require them. It will be well to discuss the subject here at greater length.

It is advisable to refrain from the use of much added hair, because of the danger of its pressure and injurious heating effect upon the scalp. However, when such must be employed to make the patron's head presentable, only live, natural hair pieces should be used.

Hair combings of the patron are to be preferred as being the most hygienic. To make a fairly good product, at least four ounces of the combings should be furnished, as most of such hair submitted to be made up is short and of little use to the maker.

Short, broken ends, it must be remembered, are lighter in color than the longer hairs, hence their use would prove very unsatisfactory to the patron, when made up. It must also be remembered that all false hair pieces made in time, as does the hair on the head, the ends always being lighter in color than the hair near the scalp. Furthermore, such pieces are inclined to lose life and



Fig. 67

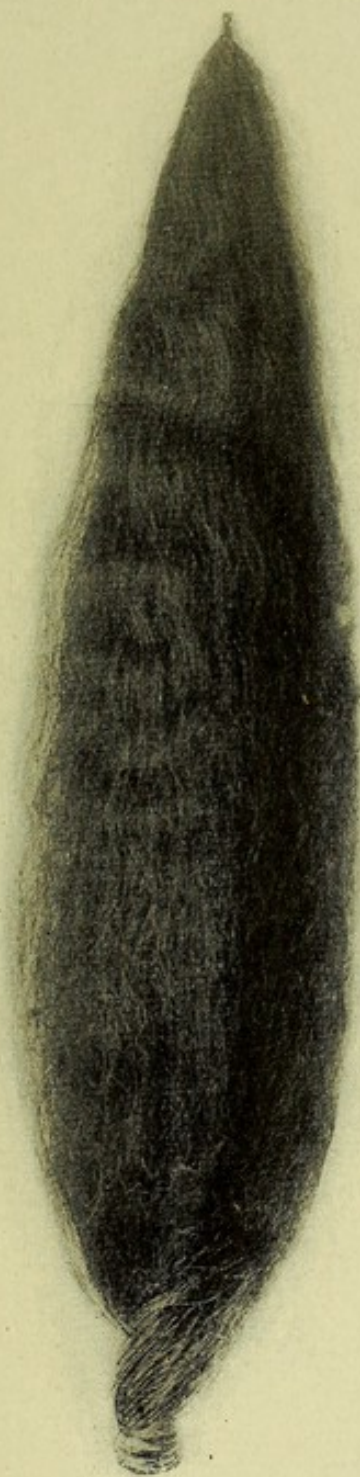
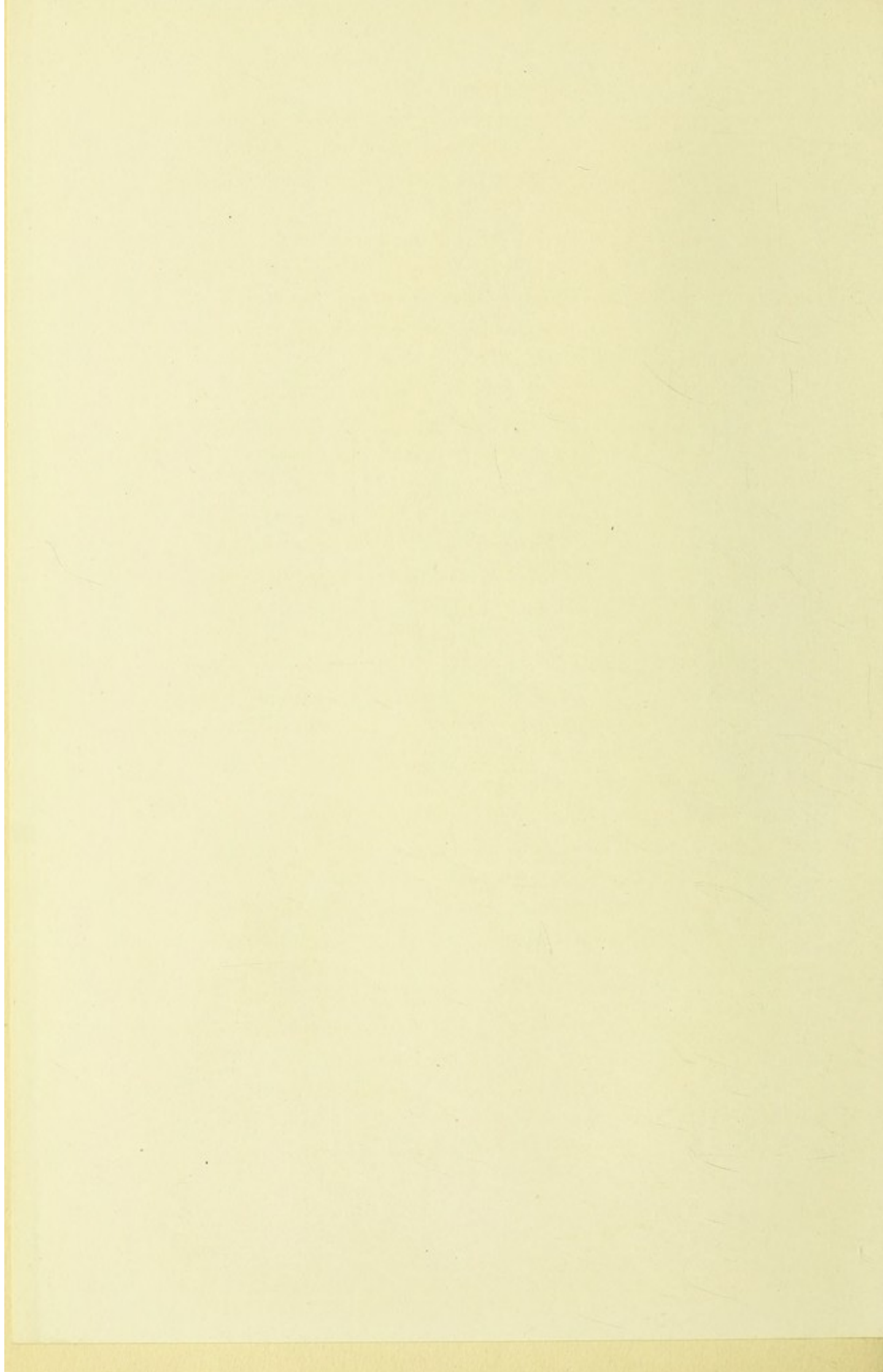


Fig. 65



Fig. 69

SWITCHES



appear dead or dry. To overcome this, one of the oil preparations or brilliantine must be used to make them look life-like.

False pieces must be curled also, particularly those made up in curl clusters. This should be done with the fingers, pinning them down to the net frame upon which they are built. The use of the curling iron in this is not to be advised.

The cost of false pieces varies with the shade of hair desired. Very blond hair and gray are the most expensive, and very "fancy" prices are asked for unusual red shades.

There is a great difference in the quality of the hair thus bought or used. Most of the better qualities are imported into this country from Brittany, Italy, and Germany, and for the coarser variety in recent times from China, where, with the increase of civilization, a great number of the inhabitants have taken to cutting off their queues. Chinese, and still more recently Japanese, hair has a very considerable sale here, but it is under suspicion as being sometimes the communicator of skin diseases of a painful, persistent character.

Any hair-dresser should be familiar with the most essential false pieces to be obtained in the market and used on a patron of critical and appreciative nature.

To acquaint the operator fully with such details as are essential, the following list of false hair pieces is given with a full description of each:

SWITCHES.—Switches are made either straight or wavy, and vary in color, weight, and length.

The weight is from $1\frac{1}{2}$ to $4\frac{1}{2}$ ounces, the length varying from 18 inches to 28 inches. The price differs with the color and quality of the hair. German hair is

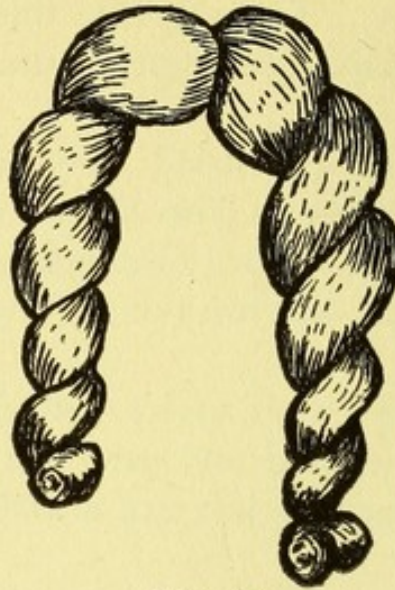


Fig. 70

DOUBLE BACK TORSADE

usually employed. The hair is gathered in a stem with a loop at the end to facilitate pinning on.

Stemless switches are preferred to the above by many

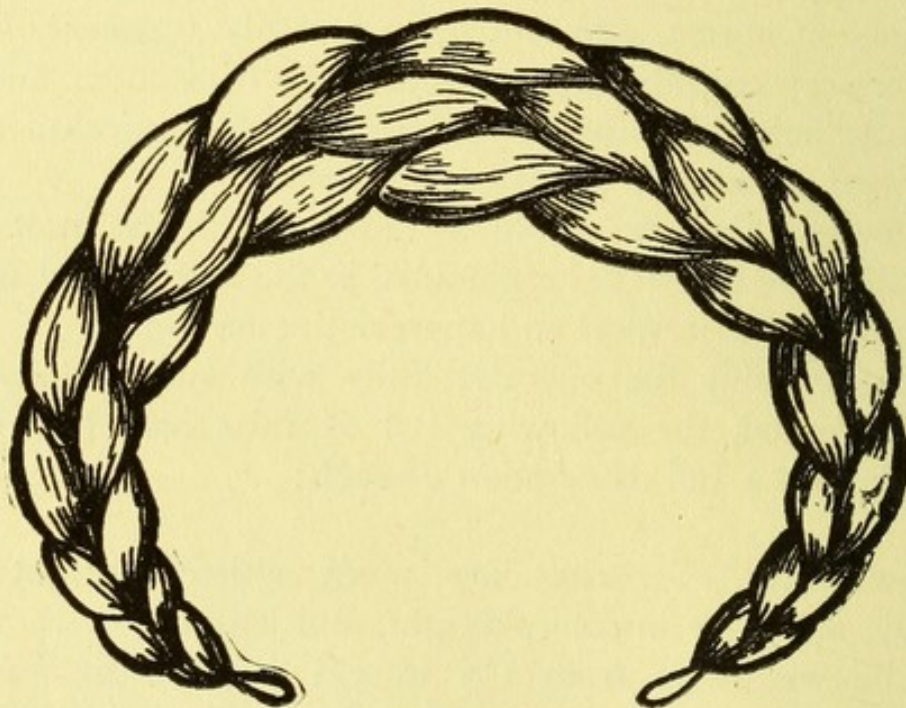


Fig. 71

DOUBLE CORONET BRAID

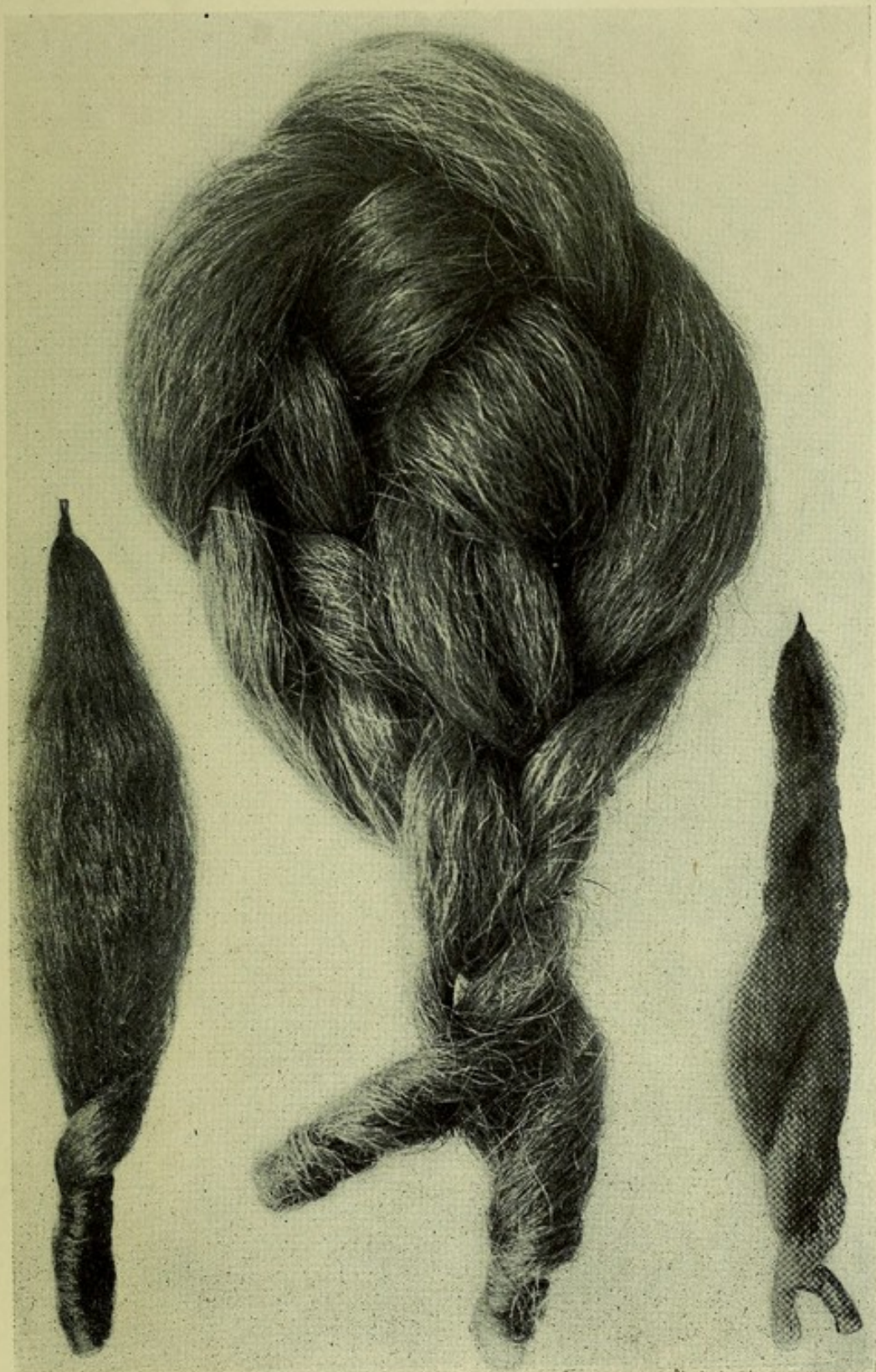


Fig. 66

Fig. 82

Fig. 68

BRAID AND CURLS



women. They are furnished with clasp pins instead of a loop.

There are single straight or waved switches, and knot switches. The latter may be single or double knot, as shown in figures 65 and 66.

There is also a twisted switch of two varieties, as shown in figures 67 and 68.

Another style of switch of the braided type is shown in Figure 69. It has a curled effect at the end and is called the Braid Mignon.

Switches are used to fill the back hair or neck dress, and can be utilized in many ways to obtain different effects.

BRAIDS.—Next to switches, and very near to them in appearance, is the braid. The braid is made in different styles, differing mostly by name and in weight and thickness, as shown in figures 70 and 71.

Braids are employed to fill the crown dress, one side or the back hair. Thus it will be seen that they answer many styles and are of value in giving individuality to the coiffure.



Fig. 72

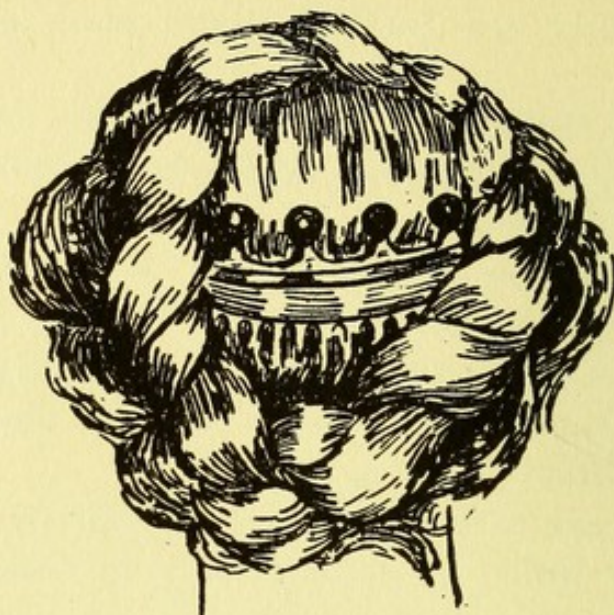


Fig. 73

In figures 72 and 73 the use of these braids is well shown.

There are other braids of this type, but they vary only in length and thickness and the addition of curls at one or both ends.

CURLS.—A great amount of curls is used at the present time, all varying in shape, size, and in the number of the cluster. They are used not so much to cover a deficiency as for purely ornamental purposes, being stuck



Fig. 74

HEAVY PIN CURLS

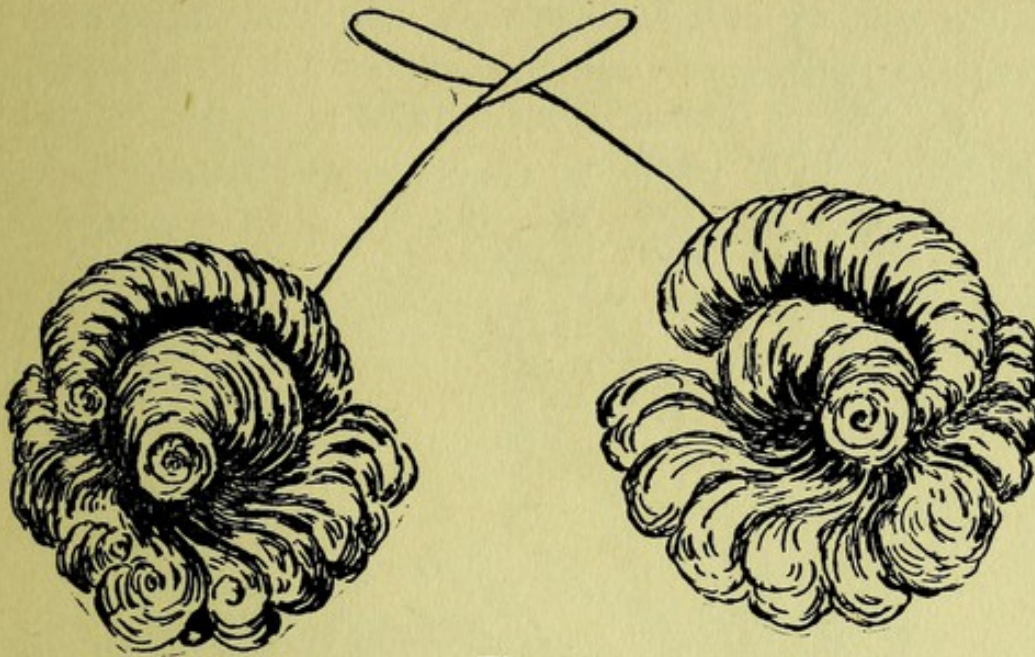


Fig. 75
LIGHT PIN CURLS

here and there to add to the charm or chic of the coiffure. Two, the heavy and light styles, are shown in figures 74 and 75.



Fig. 76
PIN CURLS WITH LIGHT PUFFS

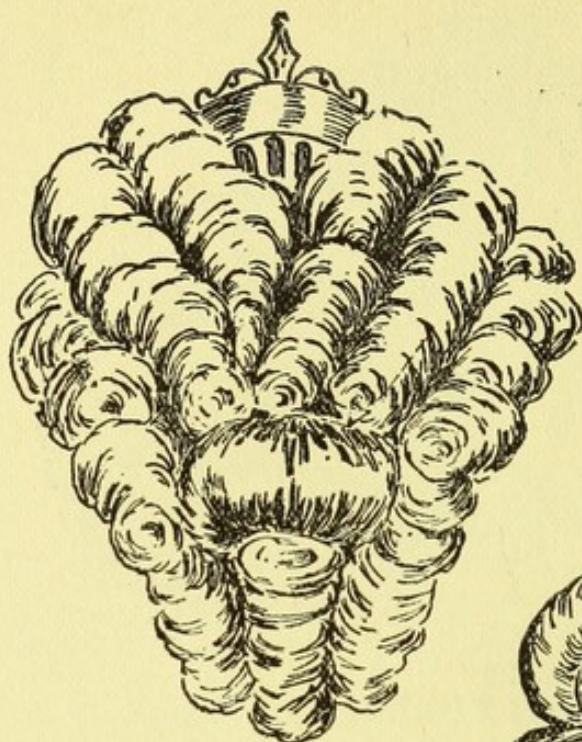


Fig. 77
GREEK CHIGNON



Fig. 78
PRINCESS CHIGNON

There is also a combination of switch and curl, or again there may be a combination of pin curls and a puff, as shown in Figure 76.

CHIGNONS.—Fancy-named curls are shown in the following figures (77 and 78). They need no further ex-

planations here and are simply shown for the sake of acquainting the operator with their names—no small matter with some well-informed patrons:

PUFFS.—Puffs are curls of larger size, much more compact. They are made single, double, etc., or com-

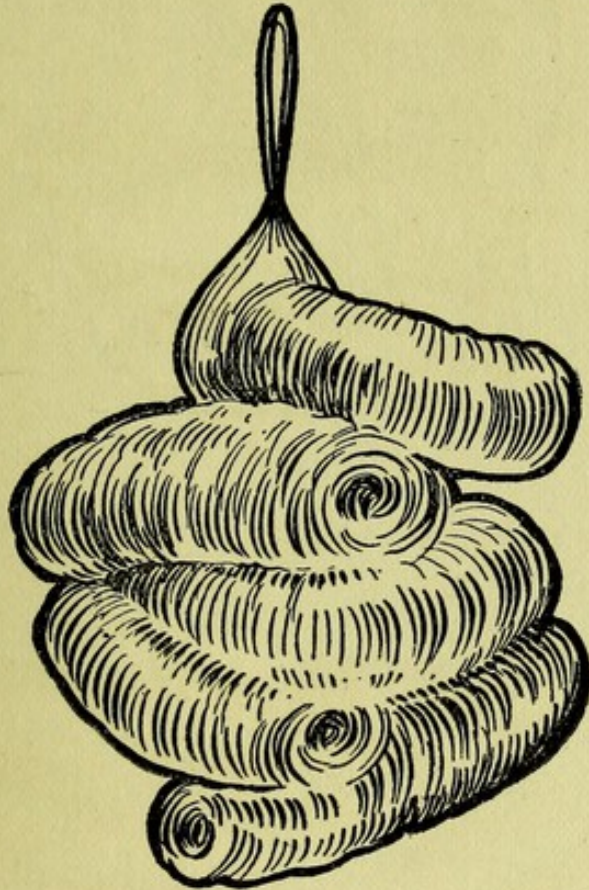


Fig. 79

bined with curls or braids. Some of the types given in figures 79, 80, and 81 are much in vogue. They are usually made on a wire frame or net, to be pinned as demanded by the particular style.

From the illustrations of the combined curl and braid given in figures 82 (on page 165) and 83 (on page 171), it will be seen that a switch, if of sufficient thickness, can be made up in various ways; that is, as braid and puffs,

or braid and curls, or as a cluster of curls or puffs. Some hair-dressers prefer to use switches for these pur-

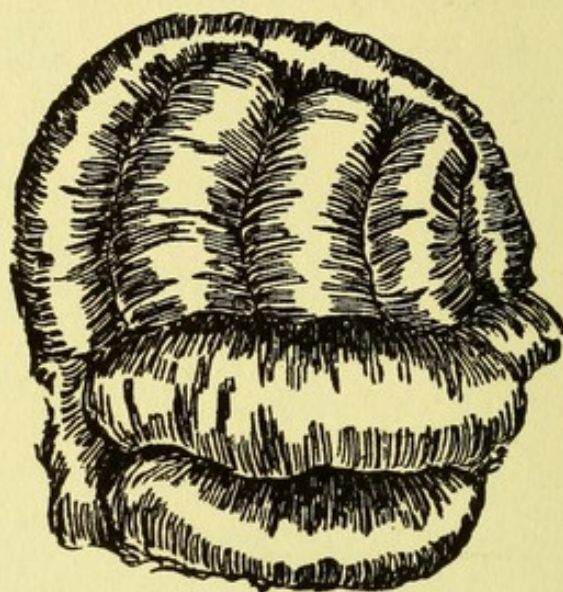


Fig. 80

poses, making them up to suit and holding them in place with fine hairpins.



Fig. 81

POMPADOURS.—The pompadour is one of the most used additions to the coiffure. The reason for its use is that it gives body and form to the front dressing, raises and shapes the whole front, when the natural hair is insufficient, or is made to cover the crown division or front of hair, and give it distinctive style, as in the centre-parted or side-parted form, or those of a dip or depression to the centre or one side.

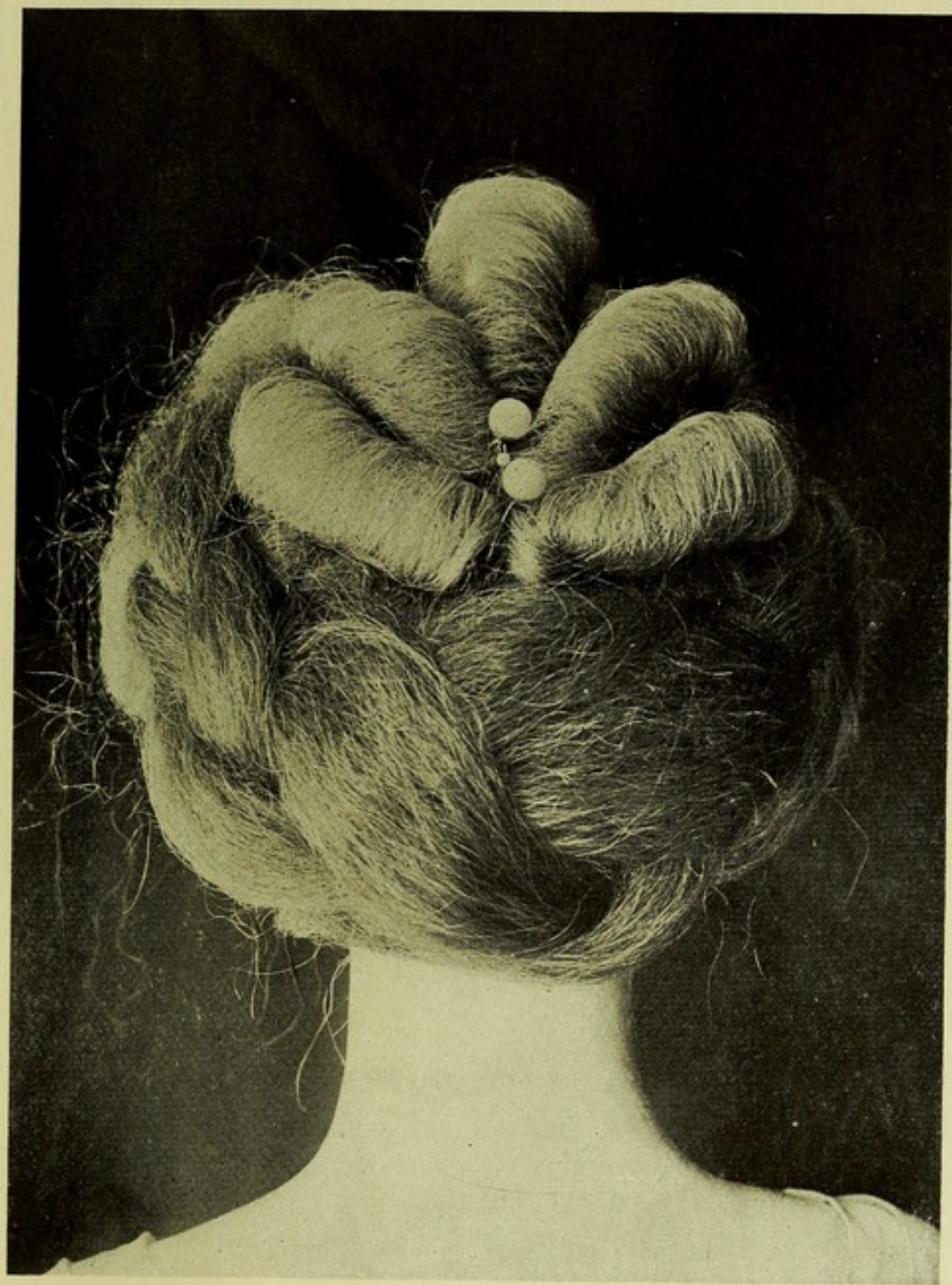
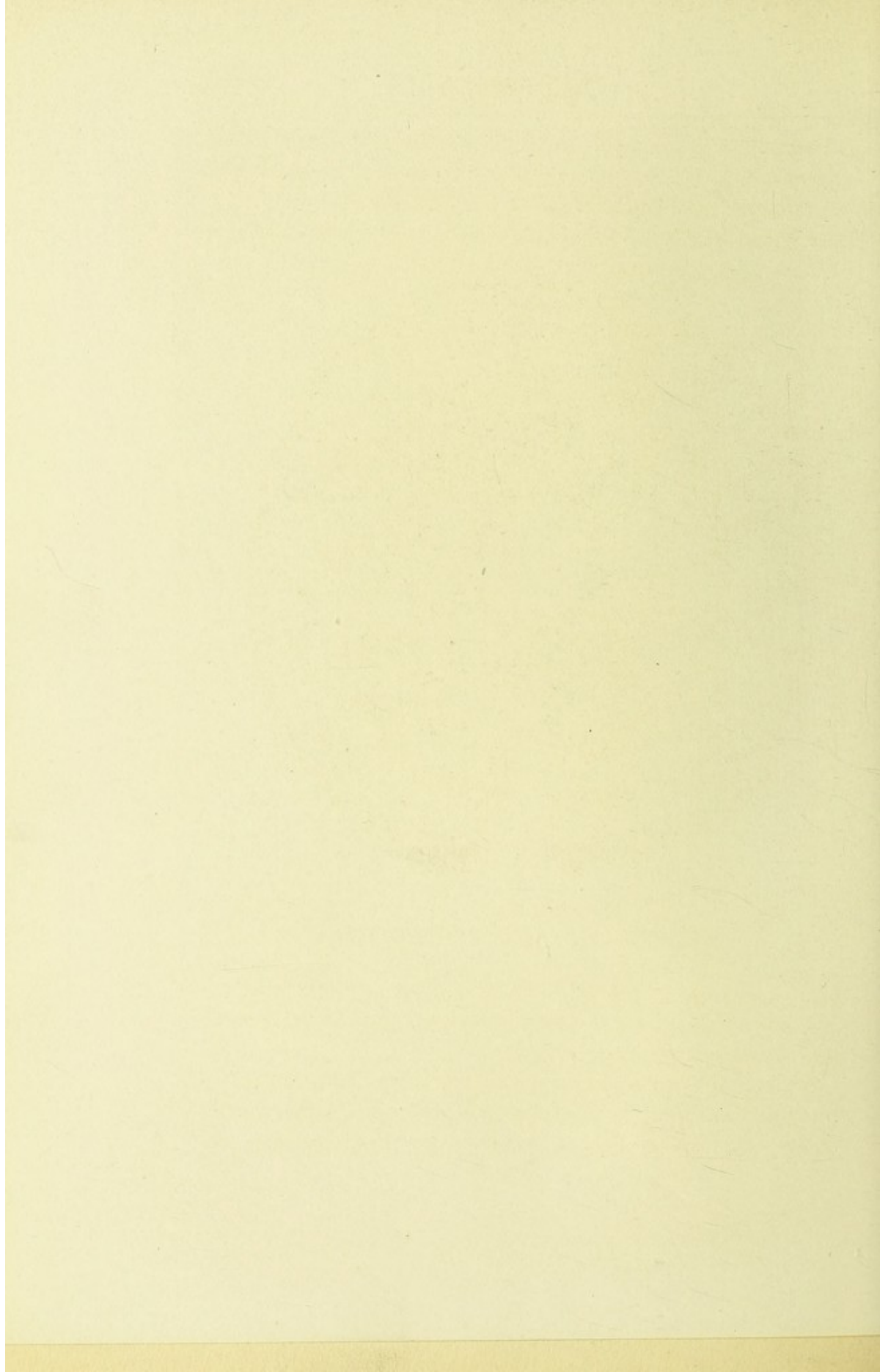


Fig. 83

BRAID AND PUFFS



Pompadours are made to be used under the front and side hair or over it, being pinned into place. If of sufficient length, say ten to sixteen inches, the hair of the false piece is combed in with the natural hair or curled

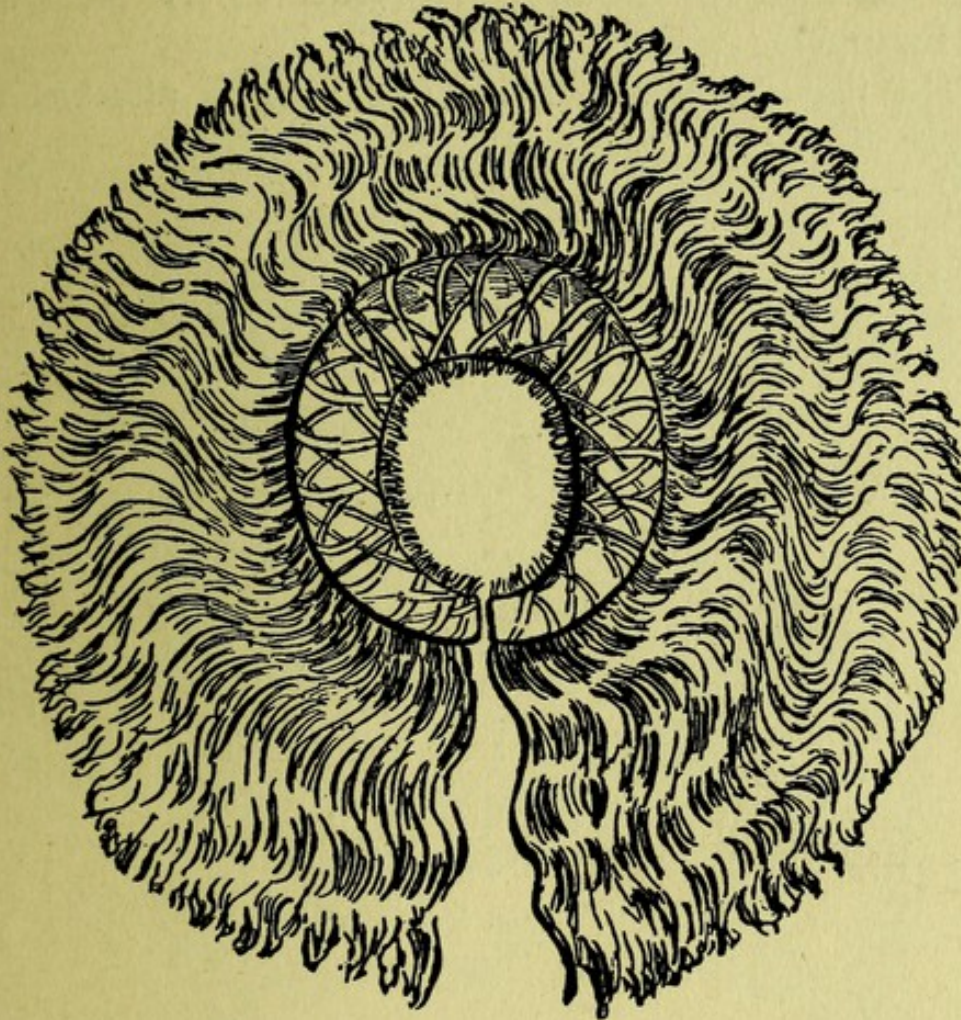


Fig. 84

ALL AROUND TRANSFORMATION

here and there to impart individual style to the coiffure.

They are also used to cover and hide the gray or mixed hair of the front and crown.

There is little difference in the term transformation or pompadour. The best distinction may be plainly said to be that a transformation is a flat arrangement of

straight or curled hair fixed into a strip of net at the root end; the ends of the net to be pinned above each ear and over the crown of the head. If the transformation is made to cover the whole circle of the head or crown, it is called an All Around Transformation, and is shown in Figure 84.

The illustration shown includes a comb attached to

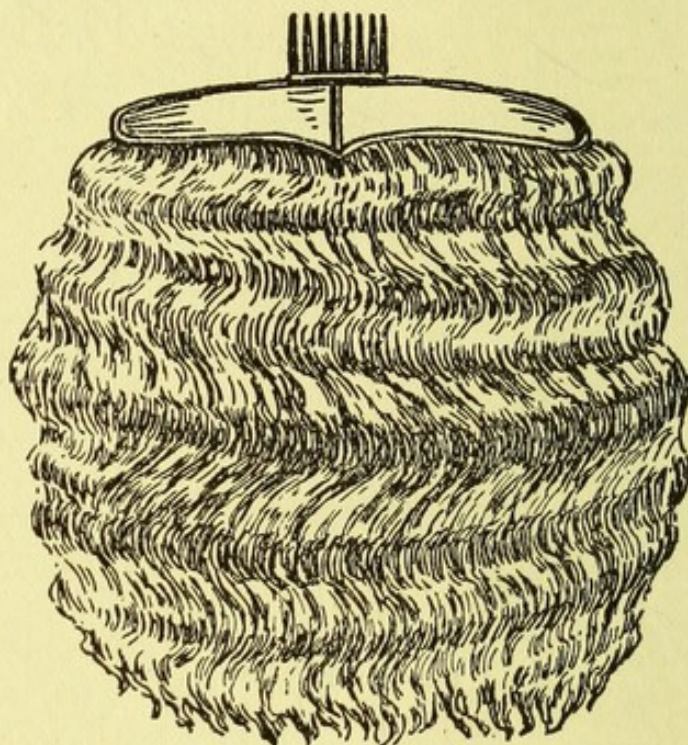


Fig. 85

HALF TRANSFORMATION

the silk net into which the hairs are fixed. It can be worn under or over the natural hair and lends itself to many becoming styles of dress.

The same arrangement, but divided into halves with a space between the long hair over the crown, is shown in Figure 85, and is called the half transformation. The illustration shows the introduction of the pompadour to fit over the crown with a depression at the centre, also the comb and the addition of two rubber bands at each

end of the net to permit of pinning down under the back hair.

We come now to consider the true pompadour. It

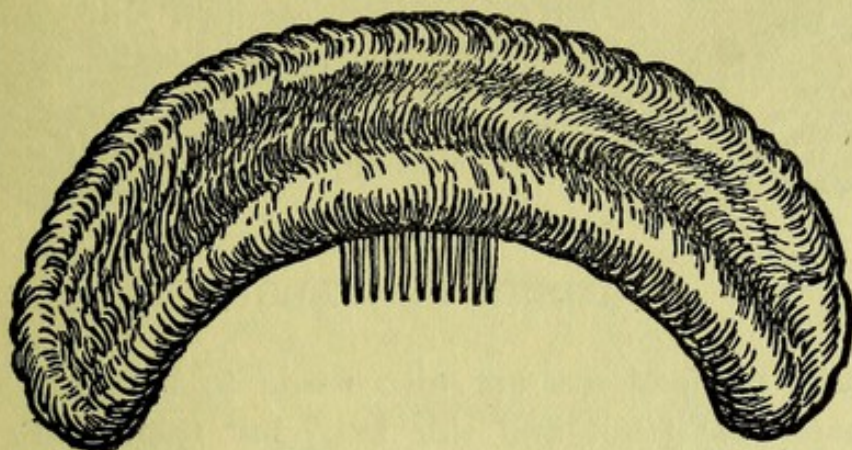


Fig. 86

SMALL POMPADOUR WITH COMB

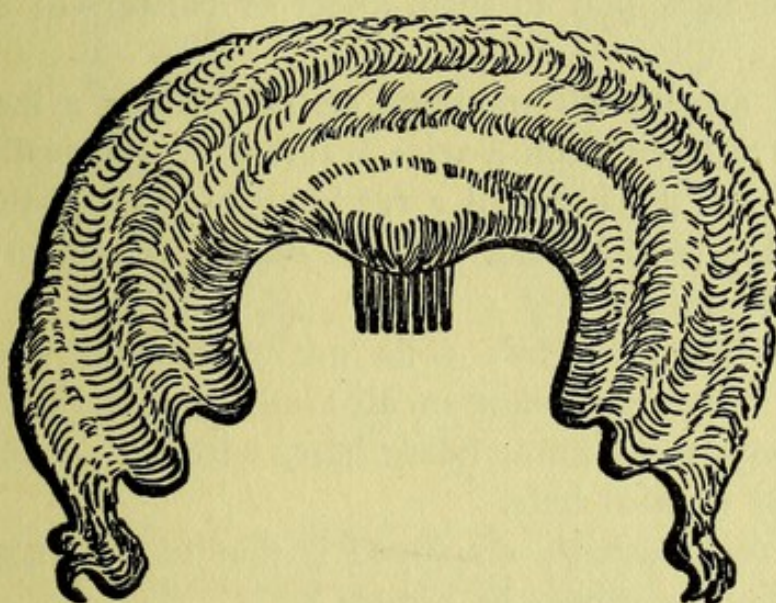


Fig. 87

INSIDE POMPADOUR WITH COMB

is usually made up in shape to go over the front hair and is simply pinned down to it. The shapes vary, as shown in figures 86, 87, and 88, according to the style desired.

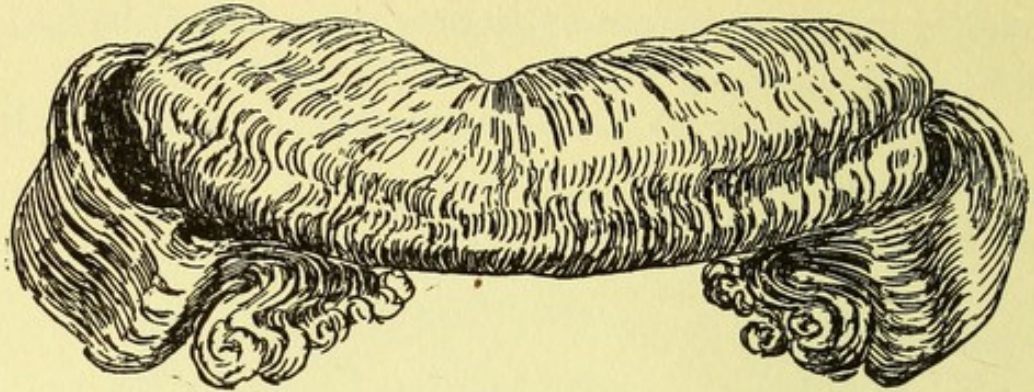


Fig. 88

OUTSIDE POMPADOUR

These pompadours are also made to be worn inside or under the front and side hair, but their office is to add shape only to the front and sides of the head, whereas the full or half transformations are usually combed in with the back hair to form knots or clusters of curls or puffs.

They are usually mounted on silk net or a lace back. Some are fixed upon a wire framework, especially those used inside, to permit of a ready adjustment to the shape of the top of the head. Combs may be fixed to the silk net or mount.

HAIR ROLLS.—Hair rolls are commonly known as "rats." They are made of all kinds of material, such as moss, vegetable fibre, horse hair, wire, crêpe fibre, and lastly of natural hair.

The form usually employed is that in the shape of a horseshoe, as shown in Figure 89.

The length of hair rolls varies from six to twenty-four inches, the latter length being used to form a circular elevation or support for the hair all around the head.

Of course, these rolls, or "rats," are used under the hair and are simply bolsters to make the natural growth appear full and to give body to the style of coiffure em-

ployed. They are invariably injurious to the hair of the head, owing to their tendency to retain heat, which is bad for the scalp and roots of the hair. For that reason the light, open or ventilated frames are best, and next in preference are the natural hair-ventilated rolls. At best, they are uncleanly in nearly all forms and should be avoided whenever possible.

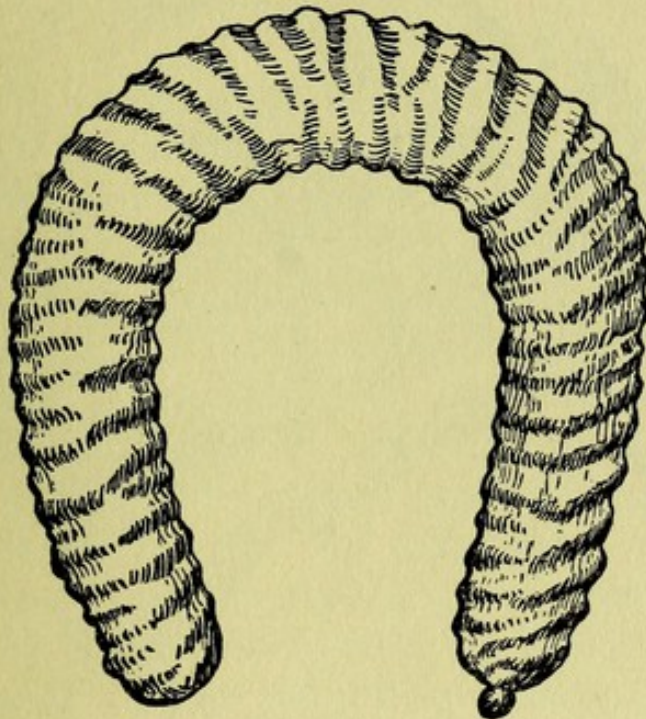


Fig. 89

NETS.—Hair nets, made of very fine silk, fibre, and natural hair in shades to match, almost or practically invisible, are used in different sizes, some to cover the entire coiffure, or the front, or front and side hair only.

Their object is to hold down stray hairs and to prevent the wind or other forces from blowing out or disarranging curls and puffs. Automobiling has greatly necessitated or accentuated their use, but the old nets of heavy woven materials, used principally for the back

hair and so much worn in the Colonial period, are now obsolete, the invisible nets having supplanted them.

RIBBONS AND FLOWERS.—Ribbons and bands of various material, such as silk or velvet, and flowers, natural and artificial, are often used to complete the hair dress. (See Figure 90.)



Fig. 90

COMPLETED HAIR DRESS

CHAPTER XIII

HAIR CURLING AND WAVING.

Hair Curling—Recipes—Marcel Waving—The American Wave Coiffure.

IN the following styles of hair-dressing, the Marcel Wave and the American Wave Coiffure, the curling iron is used, and therefore preliminary instruction will be given in the general principles of hair curling.

Many serious mistakes are made in curling the hair. It is generally believed that hot irons are a necessity to obtain the best results. This is not true. The iron, when used, should never be hot enough to burn the finger tip. It should be of good size and heated evenly over an alcohol stove or in a regulated electric iron heater. The spasmodic heating over a lamp or the gas flame is not only a dirty habit, but one sure to result in burning of the hair and uneven curling.

It is best, if possible, to devote at least from one-half an hour to two hours in curling the hair by the use of kid-covered curlers.

The hair should be combed out all about the head, aureole fashion, and strands of even quantity be rolled upon the curlers loosely to prevent injury to the texture, and pull on the roots. The hair, when rolled in spiral or cork-screw fashion upon the curler, should be wound from above down, not from below upward, to obtain a natural wavy effect.

After the curlers are removed, the hair is combed out lightly and dressed.

The following is a prescription

TO MAKE HAIR CURL

℞	Potassium Carbonate	120 gr.
	Ammonia Water	1 dr.
	Alcohol	12 dr.
	Rosewater, enough to make.....	16 oz.

Moisten the hair; then braid or roll it loosely, and it will curl upon drying.

To keep the hair in curl for a definite period of time, especially in damp weather, curling fluids of a harmless nature may be used. The hair is dampened with the solution before the curler or the iron is used.

These preparations, owing to their gummy character, should not be used very frequently, as they tend to harden and dry the hair and cause it to crack and break in combing.

A simple preparation is made as follows:

℞	Gum of Tragacanth	$\frac{3}{4}$ oz.
	Rosewater	1 pt.
	Oil of Sweet Almond	$\frac{1}{2}$ dr.

Break up the tragacanth into small pieces and soak in the rosewater. Allow to stand in a warm place and shake occasionally, until the gum is softened throughout, making a jelly-like mass. Strain the mass through muslin and a second time through bolting cloth; then add the oil and mix thoroughly. Orange water instead of rosewater makes an agreeable variant.

MOSS CURLING JELLY

℞	Carragen Moss	1 oz.
	Cologne Spirits	1 pt.
	Orange Flower or Elder Flower Water..	1 pt.

Soak the moss in water under gentle heat until dissolved. Strain through cloth as in the above, and lastly add the essential water. Use as above directed.

QUINCE SEED CURLING FLUID

R Quince Seeds	3 dr.
Hot Water	1 pt.
Cologne Water	1 oz.
Oil of Lavender.....	15 drops

The seeds must be soaked in the hot water about three hours. Then strain as in former and add the resulting liquid to the cologne water, to which the essential oil has been added. Shake and use as the other preparations just given.

Another quince seed curling fluid may be made by macerating two tablespoonfuls of dried quince seeds and then soaking them in a cupful of water till the mass is like mucilage. Strain this through a cheesecloth and add a tablespoonful of alcohol for each ounce. Moisten the hair with this and put it up in kid curlers to dry. This will not darken the hair.

When the hair is inclined to be dry and lifeless, the following makes an excellent curling agent:

GUM ARABIC CURLING FLUID

R Gum Arabic Mucilage	1½ oz.
Glycerine	1½ oz.
Carbonate of Potash	1½ oz.
Rose Water	2 pts.
Portugal Extract	6 oz.

The potash must be dissolved in the rosewater. Mix the Portugal extract with the glycerine and shake thoroughly; then add the gum solution to it, shaking to make an even mixture. Then mix the two resultant liquids together and allow to stand one week before using. Employ as the other curling preparations.

MARCEL WAVING.—For some years past the Marcel method of waving the hair has been much in vogue and the charming undulations thus obtained have given the coiffure a style and beauty distinctively at variance with all other forms of hair-dressing.

The method differs from the so-called waving in that the undulations surround the whole head. This is termed hard waving, because the waves or undulations are more permanent and so give the hair a fixed or set look instead of the soft flocculence resultant from other methods.

Many pretty top or back hair effects may be obtained with it by the use of puffs or braids of false or of natural hair, according to the fancy of the individual, the features, and the amount of hair to work with.

Marcel waving has to be studied and practised with great care. The beginner is very apt to get the undulations irregular at first, and therefore it is deemed advisable to practise on a switch or, better still, a wig placed upon a block.

Good judgment, of course, is necessary in heating the iron properly, so as to have the right temperature; not too hot to injure or burn the hair, and not too cool to prevent proper curling. For this purpose the operator should always use a bit of paper first to try the iron, which never should be hot enough to scorch the paper.

For the heating of the proper curling iron the gas flame is not advisable, as it tends to smoke up the metal and thus soil the hair. Electric heaters are best; but usually the hair-dresser must resort to the next best heating device, and the alcohol lamp answers this purpose.

The alcohol lamp should be of ample size and heavy enough to remain in position so that it does not fall over at the least touch, for such an accident might inflict very

serious burns on either patron or operator. The proper kind of lamp to use is shown in Figure 91. It is made of metal, nickel-plated, with an extension arm to hold the handle of the iron. The flame is narrow and long, so that all the parts to be heated are exposed to it. The

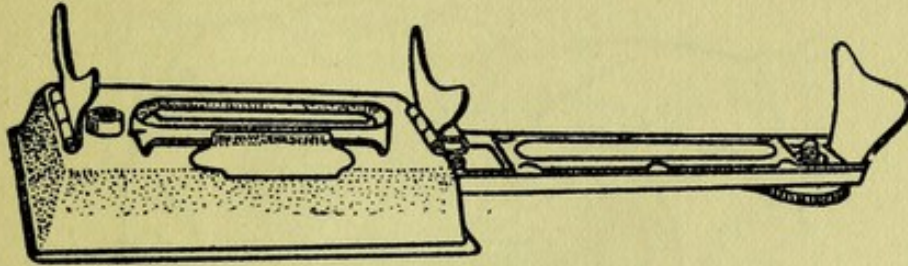


Fig. 91
ALCOHOL LAMP

heating thereby is made practically the same, or regular, along the whole length of the two curling ends. Pure alcohol of the 95 per cent. variety should be used in it, as that burns evenly, and gives the best heat, and throws off no odor while burning.

There are many styles of these lamps on the market, but only those of the above principle and form should be used.

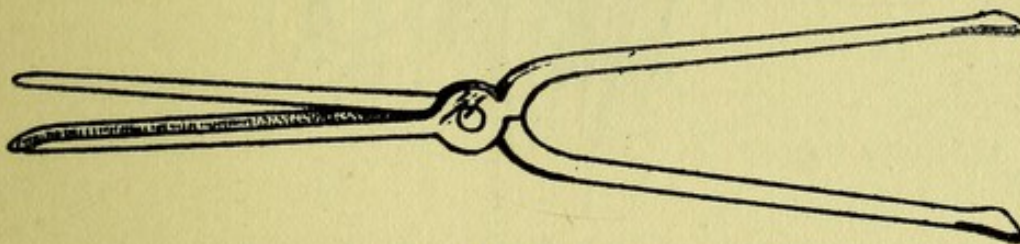


Fig. 92
MARCEL CURLING IRON

The proper curling iron to use is that of Marcel shown in Figure 92. These curling irons come in different sizes, but only the two medium ones are required.

The irons with metal handles are best to use, as they are not only more lasting, but much easier to keep clean.

The foregoing instructions have given the necessary methods of preparing the hair, such as washing the hair free from all dirt and oily matter, and these, of course, should be followed here, as in all cases where curling



Fig. 93

MAKING FIRST WAVE IN RIGHT SIDE LOCK

is undertaken. One of the curling preparations heretofore given may be applied to the hair before curling to render the undulations more permanent.

The hair, having been dried, is now thoroughly combed out evenly, dividing the hair aureole fashion and gath-

ering the hair above the ring of hair to be curled on top of the head, as shown in Figure 54 on page 155.

The operator is now ready to begin marcelling. She should start at the right side of the head. Comb out a



Fig. 94

MAKING SUBSEQUENT WAVES

strand of hair about three or four inches wide. Do not make it too thick, as this interferes with curling. Hold the iron groove inward or toward the scalp in the right hand, and with the left hand hold the strand of hair. Hold the iron in a perpendicular position, begin-

ning the first curl just over the ear, but not too close to the scalp. The hair near the scalp is done last with the smaller iron, after all the hair has been waved.

Press the handles of the iron together, twist half a turn of the iron downward, giving it a downward pull at the same time. The step for the beginning is shown in Figure 93.

Allow the hair to remain in this position for a moment to obtain the curl and remove.

Now slipping the fingers of the left hand further up the strand, apply the iron again, placing in line with the first curl and about one inch above it, and again curl; this time pushing the iron forward as it is twisted downward, which gives the marcel effect (see Figure 94).

Continue along the whole strand quite to the end, making from five to seven of these curls in the strand, according to the length of the hair.

It is best, however, to leave the end of the strand free from curling, as the various strand ends may need to be treated in a different manner when finally gathered on top of the head.

The iron at the third curl should be pulled downward, at the fourth pushed upward, and so on, in zigzag fashion, as it were, to get the proper result.

The first strand having now been completed, the one behind it is taken up and curled in the same way.

The curls must always be made in line with those of the first strand to give the coiffure an even effect; and, to accomplish this, a small part of the first strand is included with the second to serve as a guide in placing the iron properly.

This regularity in the waves must be insisted upon, so that when the strands are adjusted and combed out

finally not only will the waves match, but by their very evenness give a special accentuation to this method of hair-dressing not shown by any other style.

To convey the very best idea of the various steps, elab-



Fig. 95

WAVING THE SECOND STRAND

orate and comprehensive illustrations are presented herewith which, faithfully studied, might themselves fit a student to gain the best results.

The step just described is given in Figure 95. Note, please, the position of the hands and the direction in which the iron is held.

Do not forget the downward and upward movement in curling the second strand and all others thereafter.

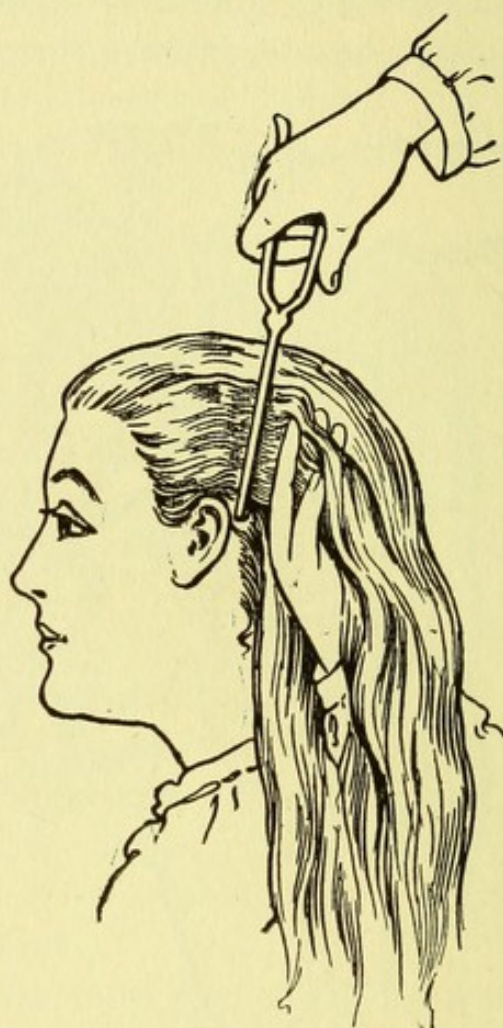


Fig. 96

MAKING FIRST WAVE IN LEFT SIDE LOCK

Having finished the right side of the head, the operator takes up the curling of the hair on the left side.

The strands are combed out and divided as nearly alike in size and place as on the right side. It is held with the fingers of the left hand and iron in the right; but, instead of the handles being turned down, they are now held upward as shown in Figure 96.

The hollow groove should always be nearest the scalp

or under the strand of hair. Make the curl the same distance from the head as on the right side, and continue along the strand, following the zigzag drawing of the iron as already explained.

The side hair having now been waved, take up the strands of front hair next, beginning at the right and continuing across the front of the head until the waves



Fig. 97
WAVING FRONT HAIR

meet those of the left side. Use a small strand of the waved side hair as a guide for the front.

The position of the hands and the manner of holding and applying the iron is shown in Figure 97.

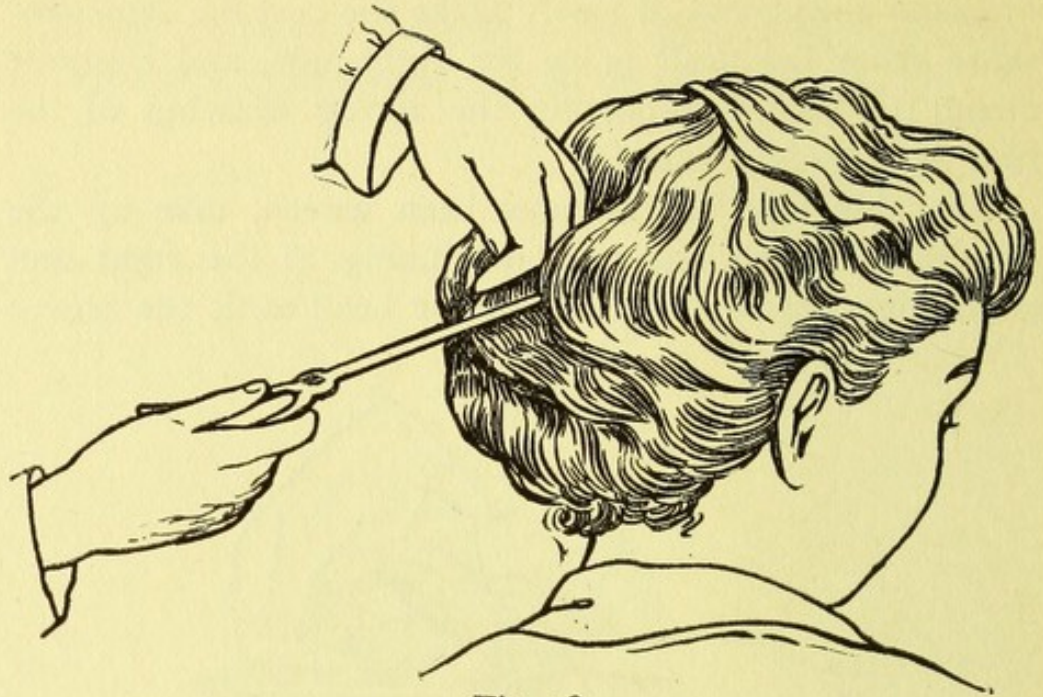


Fig. 98
WAVING BACK HAIR

The front strands having been completed, take up the smaller iron and proceed to wave the strand near to the scalp; with one wave for each strand between the scalp and the first wave made at the beginning.

Do not at any time forget the zigzag movement—the first movement downward, the second upward, and so on, until the waving of the strand, or the part of the strand, is finished.

The waves near the scalp having been finished, proceed with back hair.

Let the patron sit with the head bent slightly downward to allow the operator to work with best advantage.

Divide the hair into strands, after loosely gathering the hair already waved on top of the head. Taking a part of a waved strand from the last right side hair as a guide for the proper distance of the undulations, proceed to wave until all of the strands have been treated.

Then follow with the smaller iron for the waves near-

est the scalp. The iron, during this procedure, as with the front strands, is held with the right hand, as shown in Figure 98.

The hair having all been waved as described, gather the various strands on top of the head, not drawing them too tightly, and pin them into place with the uncurled hair.

This is done by taking up the front section of strands first and pinning them into place.

The method of fixing the front hair must, of course, vary with the amount of hair in hand. A pompadour effect is to be preferred; that is, it should not be brought to the top of the head too tightly, as that would take away much of the beauty of the marcel effect.



Fig. 99
PINNING UP THE SIDE HAIR

The side strands are next gathered up and fastened to the top hair as shown in Figure 99.

The back hair is next gathered up and treated as desired, leaving it preferably a little full instead of drawing it tight to the head.

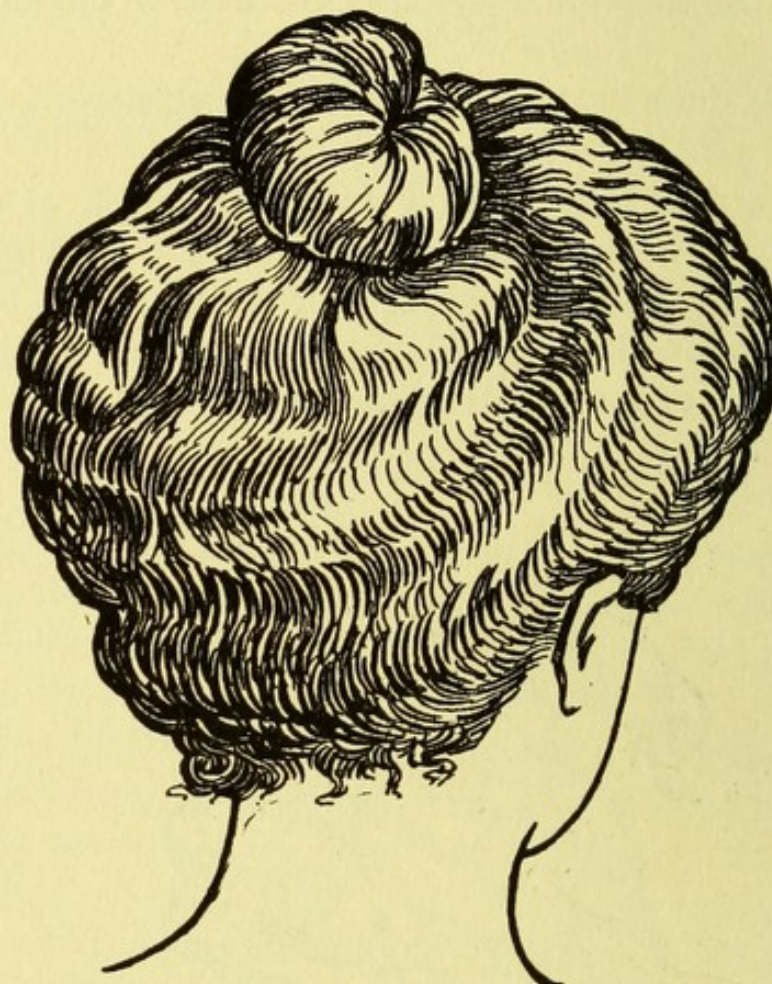


Fig. 100

THE COMPLETED COIFFURE

The dressing of the top of the head may be finished off by making a cluster of small curls composed of the ends of the strands or top hair; or it may be simply twisted into a knot, as shown in Figure 100.

A coarse comb is now passed through all of the hair that has been marcelled, to join the various strands, and



Fig. 101



to overcome the extreme stiffness or tightness of the undulations and give the whole an even appearance.

If desired, a little brilliantine may be put on the hair to give it lustre. This is applied with the finger and should be followed with the comb.

The hair may be marcelled again in a day or two by using the iron while the hair is made up, following, of course, the undulations made at the first sitting.

THE AMERICAN WAVE COIFFURE.—This style of coiffure is similar to the celebrated Marcel wave and differs only from it by being done more loosely. The marcel hair dress is hard and tight. In this the hair is more loosely gathered, even fluffy.

The first step in accomplishing this style of hair dress is to part the hair all about the head in ring or aureole fashion, gathering all of the hair within the circle or on top of the head and tying it as in Figure 54 on page 155.

The outer section encircles the whole head, hanging down loosely over it.

This is now combed out evenly and divided into strands varying from three-fourths to one inch in width according to the thickness of each strand.

The strands must not, however, be very thick, as this will not permit of curling that will last.

If loose waves are required, have the strands wider.

For the very loose waved effect each strand is lifted with the comb in the left hand and the marcel iron is used, having the round part below the strand. This done, close the iron and twist it upward and backward to collect the hair on the curve of the iron, holding it there a moment and removing it.

It is best to begin such curling at the forehead, going toward the back of the head and around to the forehead

on the other side, or doing both front and sides before touching the back.

The method of holding the comb and iron are here shown (Figure 101).

Having made one wave or curl, the iron is slid upward about an inch higher up, the comb receding with the iron, and a second curl is made, and so on, until to within about four inches of the end of the strand in the average person, this depending of course on the length of hair the patron has. Judgment, born of experience, will soon acquaint the dresser where to stop curling.

The curling should be done at regular intervals, so that the waves of one strand fall in line with those of the next.

The one strand having been finished, it is thrown lightly over the top of the head and the next toward the temple is taken up and curled as the first. The relation of the first to the second is shown in Figure 102.

Continue curling each strand as mentioned with the exception that, if the front hair is to be divided, it should all be done first, so that when combed with its part showing, whether in the centre or to one side, all the waves will fall regularly.

The true soft American wave is not done as just described. In this the strands of hair are made about one inch wide, and beginning with the first strand at the forehead it is wound around in cork-screw fashion over the round part of the curling iron, which should be about the thickness of the forefinger. The strand is wound up to about four inches of its end around the iron in this manner, practically filling the iron with a spiral roll of hair.

The iron in this case is held in the left hand and the strand wound on the iron with the right.

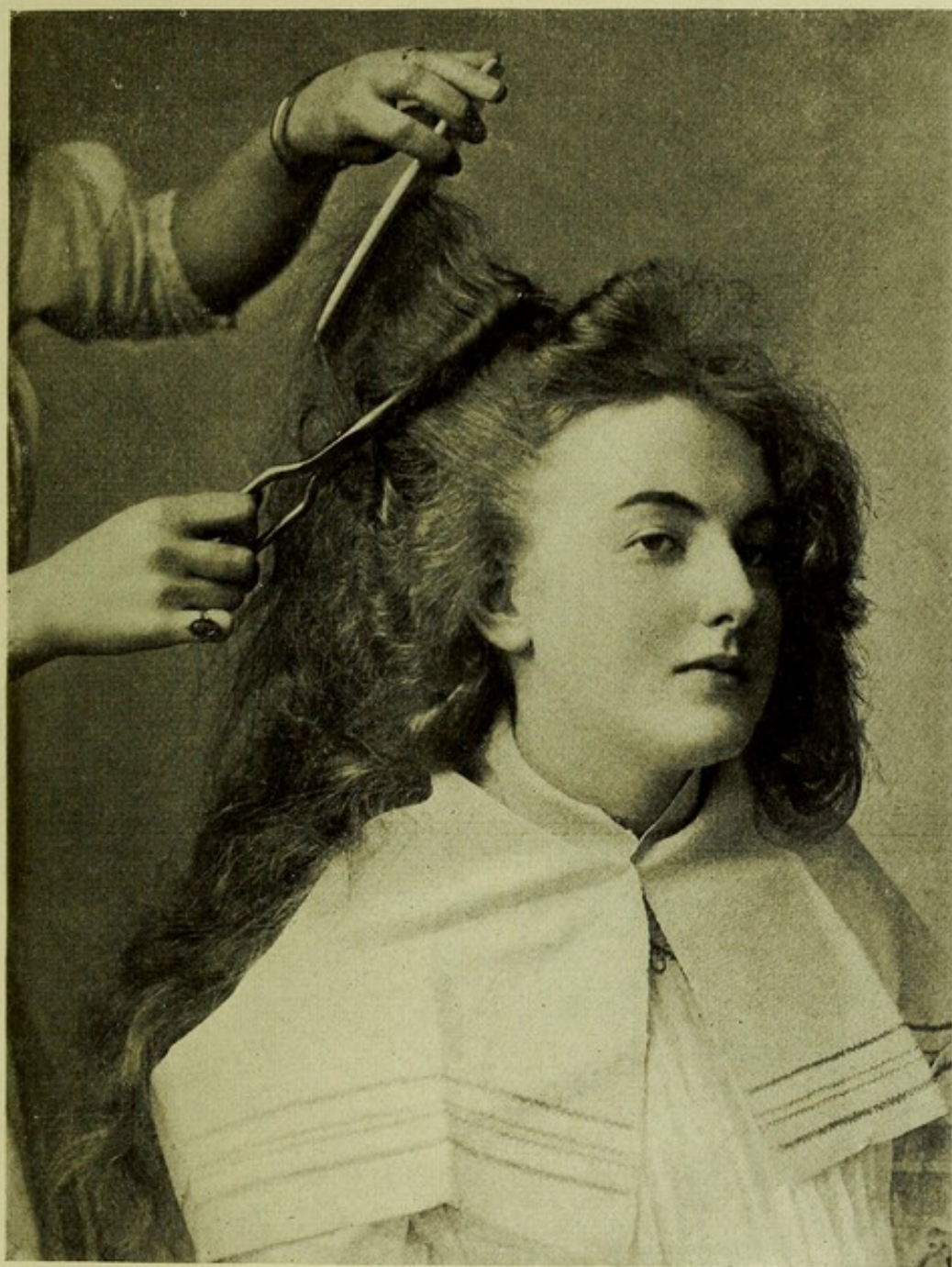
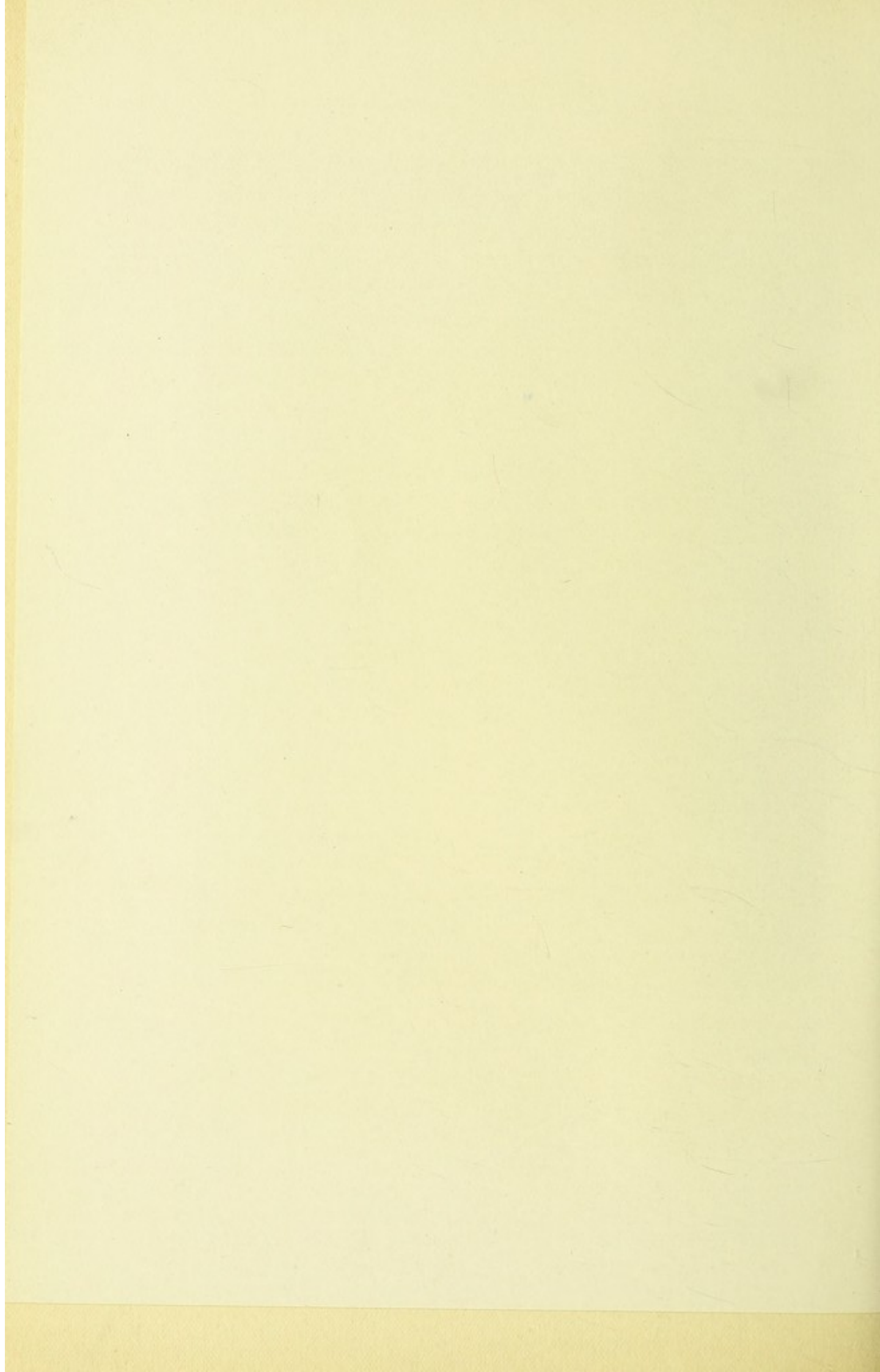


Fig. 102



Curling too near the end of each strand tends to make it tangle.

If now a harder curl is desired, the concave or hollow part of the iron is pressed upon this spiral roll of hair and held there a moment.

The hair is now unwound from the iron and the next strand is taken and treated in the same manner, and so on until the entire aureole of outer hair has been curled. It is evident that the curling must be done regularly and with equal thicknesses as well as distances from the scalp.

The hair having all been curled in either of the ways suggested, a hair roll is placed with its thick roll or part at the back of the head and its points coming over the top of each ear. This is pinned into place and the waved hair is ready to be gathered up for the final dressing.

There now remain the ends and the top hair to be disposed of. These are gathered up and twisted into a knot, somewhat loosely, and pinned at the top of the head as shown in Figure 101.

The back hair or section is divided into three strands to get a better contour and gathered on top of the head next. This leaves the free ends all joining there where they are tied. The resulting switch or tail of hair if long and full enough is divided into two or three or more strands and each is made into a puff by rolling loosely over the index fingers, making finger puffs. Each puff so made is pinned into place, composing a neat cluster at the crown of the head. Use invisible pins for this purpose, bending them upon themselves to hold the hair more firmly, as single pins do not hold. Pins of angle form especially suitable for this purpose can now be found on sale almost everywhere.

A Dutch braid may now be placed beneath the cluster of puffs with its wide part at the back of the head. The thin ends are brought around the cluster and tucked under it where they end at the top or front of the head.

One of the finished styles that includes the braid is shown in Figure 103.



Fig. 103
COIFFURE, INCLUDING BRAID

CHAPTER XIV.

DISEASES OF HAIR AND SCALP.

Dandruff—Recipes for Tonics—General Baldness—
Recipes for Tonics—Localized Baldness—Recipes—Lice
—Hair Splitting and Breaking—Removal of Superfluous
Hair—Recipes—Premature Gray Hair—Recipe.

It is hard to draw the line which separates uncleanness and disease, since the former condition develops imperceptibly into the latter. Scrupulous cleanliness is the natural and the best preventative of disease, and therefore the advice in the preceding chapter not alone applies to the cultivation of beauty, but the promotion of health as well. In treating the diseased hair and scalp, however, the methods of combing and washing the hair and of massaging the scalp need to be modified to suit the abnormal condition.

Dandruff is a natural condition which merges gradually into an abnormal one. The term is probably derived from the Welsh words *ton* and *drieg*, meaning "bad skin." Normally it is nothing more than the shedding off of the little cells of the scarf skin, just as it happens on the exposed skin surfaces of the body. But there are forms of this condition sufficiently serious to compel a consideration of them as actual diseases.

One of these is where an over-secretion of oil from the hair follicles combines with the dirt collected by the hair from the atmosphere and the scales of scarf skin naturally thrown off. This condition induces the formation of yellowish gray crusts upon the scalp at various

places which crowd upon the hair and invite infection of the follicles which they cover.

The next condition is far more serious. In this a crust forms, as just indicated, which contains a germ that has been described by prominent authorities as the *diplococcus*. This germ is particularly destructive to the hair, and causes acute and permanent baldness in many individuals, particularly in men.

To consider particularly the various forms of dandruff that come under the treatment of operators, it is well to classify them as follows:

1. Simple or Dry Dandruff.
2. Oily Dandruff.
3. Infective or Destructive Dandruff.

SIMPLE DANDRUFF.—This is a normal condition of the scalp, though more marked in some persons than in others. The cause is a collection of fine dry scales on the scalp, which can be readily observed in combing or brushing the hair, when it falls like a shower about the shoulders of the patient. This symptom is often annoying to the person afflicted and can be readily cured by proper attention to the care of the scalp.

First of all scalp massage is best. This should be associated with proper shampooing, combing and brushing, and followed by the application of a fatty matter to allay the over-dry nature or state of the scalp. For this purpose, some bland oil may be massaged into the scalp, such as sweet almond oil; but the following formula will give the best results, stimulating the hair growth at the same time.

MASSAGE TONIC

R	<i>White Vaseline</i>	3	oz.
	<i>Castor Oil</i>	3½	oz.
	<i>Gallic Acid</i>	2	dr.
	<i>Oil of Bergamot</i>	30	drops

The above should be rubbed into the scalp with the tips of the fingers.

An oil that has become rancid should never be used, as it is liable to irritate the scalp and cause disease, besides being obnoxious to a patient with sensitive nostrils.

OILY DANDRUFF.—This condition is due to an over-production of the oily secretion of the glands of the hair follicles and is very difficult to overcome. Persistence in rational treatment is the only path to a cure. Proper attention should be paid to washing the scalp with one of the ammonia shampoos. After each of several of these, given at intervals of ten or fifteen days, cold water on the scalp should be used before the hair is allowed to dry. In the meantime, massaging the scalp every three or four days will do much to effect a cure.

A stimulating tonic may be applied to the scalp daily made as follows:

HAIR TONIC

℞ Quinine Sulphate	20 gr.
Tincture of Nux Vomica	2 dr.
Resorcin	1 "
Alcohol	2 oz.
Bay Rum	6 "
Water (enough to make)	16 "

The quinine should be dissolved in the alcohol and tincture of nux vomica; then add the resorcin, bay rum, and water.

To use this, the hair should be parted and the lotion applied with a tooth brush to the scalp.

Another stimulating tonic may be made thus:

JABORANDI TONIC

℞ Quinine Sulphate	20 gr.
Tincture Cantharides	2 dr.
Extract Jaborandi	1 oz.
Deodorized Alcohol	2 dr.
Glycerine	1 oz.
Bay Rum	6 oz.

Add enough elder-flower water to make a pint mixture. Treat the scalp the same way as before with a tooth brush.

Lastly, it is well to remember that there is frequently a disease that points at some fault in the general health of the individual, and medical treatment in the way of tonics and proper exercise of the body should be recommended. Derangement of the nerves, impairment of the digestion, even mere worry, may be affecting the condition of the scalp and hair. Exposure of the bare head to the sunshine and air is one of the best factors toward a reduction of the evil.

INFECTIOUS OR DESTRUCTIVE DANDRUFF.—This condition is one found particularly in men who frequent public places and barber shops that are not beyond a doubt kept sanitary. It is usually brought to the attention of the operator, when the hair falls rapidly, and it is then well advanced. Crusts of yellow or gray will be found here and there about the scalp and scabs also perhaps, where the patient has injured the scalp by scratching. There may be considerable itching of the scalp in places to account for this.

First of all, the use of all hair brushes, unless first cleansed with an antiseptic, should be prohibited.

The scalp should be thoroughly shampooed as before described, followed with a cold-water drenching, but with care as to degree of coldness. *Avoid causing shock to the scalp.*

Massaging should be done twice a week and the daily use of some antiseptic lotion should be insisted upon. The best of these are made as follows:

RESORCIN MIXTURE

℞	Resorcin	1 dr.
	Extract of Witch Hazel.....	8 oz.
	Bay Rum	8 "

Rub some of the above into the scalp every night.

MERCURY MIXTURE

R	<i>Oil of Cade</i>	$\frac{1}{2}$ dr.
	<i>Bichloride of Mercury</i>	3 gr.
	<i>Ether Sulphate</i>	2 dr.
	<i>Castor Oil</i>	$1\frac{1}{2}$ oz.
	<i>Bay Rum</i>	$1\frac{1}{2}$ "
	<i>Alcohol</i>	2 "

Dissolve the mercury first in a little warm water, then add the alcohol and bay rum and the other ingredients. This lotion should be rubbed into the scalp, after shampooing, once or twice a week.

There are many conditions that cause the hair to fall. The falling out may be sudden, as after an acute illness like typhoid fever; or there may be a slow thinning out of the hair, causing a baldness that begins at the forehead and goes back over the head, or on top of the head, whence it spreads outward, leaving only the hair at the temples and the extreme back of the head. This state is called alopecia, or general baldness.

Then again the hair may fall out, usually suddenly, in one or two nearly round patches, when it is called local alopecia or baldness. Both of these conditions will be considered separately, since they require different treatment.

GENERAL BALDNESS.—This affection of the hair follicles, unless following an acute disease, progresses slowly and is caused by pressure from stiff hat bands, heavy hats, lack of ventilation of the hair, sedentary occupations, mental worry, too frequent washing (which often accounts for early baldness in men), improper hair-dressing, as with women who persist in doing up the hair tight or weighting it down with puffs or heavy switches; and with both men and women, most often, from inadequate or improper care of the scalp.

Lastly, dandruff, either when a result of lowered vitality, as in the fine, powder-like scale, or that kind denoted by the thick, oily patches of the simple sort, or the infective variety often carried from one person to another through the employment of dirty hair brushes in public places, is a very active cause of loss of hair.

When this form of baldness is met with in its early stage, there is every hope of curing it.

The treatment is first of all proper hygienic cleansing of the scalp. The operator must be able to recognize the condition present, advise against the cause leading to it, and then attack the case faithfully and conscientiously.

The pale scalp with the powder-like dandruff should be cleansed first of all by one of the shampoos given. Following the shampoo, wash the hair with water growing gradually colder from tepid, but not so cold as to chill.

A thorough massage should follow and then the application of some tonic mixture.

As a rule these cases do best with some oily preparation. Alcoholic mixtures only help to desiccate still more the already dry and brittle hair, and make matters worse. These oily preparations are called hair foods. They act by stimulating the follicles and adding fat to scalp and hair, a thing so necessary to the hair growth.

The following mixture is highly endorsed and has the advantage of being antiseptic:

ANTISEPTIC TONIC

R <i>Salicylic Acid</i>	1 dr.
<i>Tincture of Benzoin</i>	60 drops
<i>Neatsfoot Oil</i>	6 oz.

This is to be rubbed into the scalp with the tips of the fingers or with a soft-bristled tooth brush.

Another and more powerful tonic is made as follows:

PILOCARPINE TONIC

<i>R Hydrochlorate of Pilocarpine.....</i>	<i>30 gr.</i>
<i>Vaseline</i>	<i>5 dr.</i>
<i>Lanolin</i>	<i>30 drops</i>
<i>Oil of Bergamot.....</i>	<i>30 drops</i>

This is an excellent remedy, but more expensive than the former. It is used in the same manner.

The treatment should be continued regularly for eight weeks; that is, a daily application of the mixture, as well as massage, to the scalp at least three times a week.

Daily brushing of the hair with a long-bristle hair brush helps to keep up the massage in the meantime.

The hair should not be shampooed except once every two weeks under this treatment, and only once in four weeks after the treatment has been discontinued.

Stop the promiscuous use of pomades or other so-called hair tonics, at least until you are sure of their ingredients; they are frequently of little value and sometimes increase the trouble.

In the oily or scaly form of dandruff the scalp should be thoroughly rubbed with vaseline or olive oil for several days before shampooing. This will loosen the scales and allow them to be washed away with the shampoo.

Do not let the patient be frightened if considerable hair comes out during the first washings. This condition is frequently remarked, and signifies nothing more than that such hair would have dropped out any way in a few days, because it is dead.

Following this shampoo, it is well to use some anti-septic solution to kill off any possible germs. Perhaps the best mixture is made as follows:

GERM KILLER

<i>R Bichloride of Mercury.....</i>	<i>7 gr.</i>
<i>Water (warm)</i>	<i>1 qt.</i>

Dissolve the mercury in the warm water and allow to get cold before using. This mixture will keep indefinitely, but should not be confused with other mixtures, since it is highly poisonous, when taken inwardly. Label your bottle "*Poison.*"

The scalp is washed with this solution which is allowed to remain on for half an hour, when the hair and scalp are to be rinsed with alcohol. The hair is now dried and one of the oily tonics rubbed into the scalp.

Alcoholic mixtures containing quinine, cantharides, gallic acid, or other stimulating drugs have been recommended, but oily preparations have been found to be the best in the end.

After a course of eight weeks of this treatment, the patron should be provided with some mixture to continue the treatment daily at home. One of these is given in the section on dandruff, or the following can be offered, if an antiseptic is not required:

R	Pure Castor Oil	2 oz.
	Cologne Spirits	16 "

A little of this is to be rubbed into the scalp every night.

LOCALIZED BALDNESS, or ALOPECIA AREATA.—In this kind the hair will suddenly fall off in one or more patches. It is caused by some local nerve trouble in the scalp. Here the treatment naturally is to stimulate the nerve ends in these places, and so is different from that for general baldness.

The disorder, being usually of a chronic nature, recovery may come about at any time, and is marked by the appearance of fine hairs that grow stronger until normal.

Treatment to begin with should be constitutional. A physician should be asked to prescribe internal remedies,

External massage is necessary, followed by the application of an irritant, preferably one containing an anti-septic. Any one of the following can be tried; but do not mix treatments.

℞ *Mercury Bichloride* 2 gr.
Alcohol 1 oz.

This mixture is to be painted on the bald patches with a camel-hair brush every other day.

OR

℞ *Chrysorobin* 30 gr.
Water 1 oz.

Rub well into patches once a day.

OR

℞ *Tincture of Cantharides* (full strength).

OR

℞ *Tincture of Iodine* 1 dr.
Collodion 3 dr.

The latter is painted on the patches once every week.

The hair, if any, should be shaved off the patches every week to stimulate the growth. Static electricity or the negative pole of direct current is also useful.

With patients beyond fifty years of age the results are not always satisfactory. Be careful not to over-encourage a patron of this age. Be perfectly frank, if in your judgment the case looks difficult. The best one can do sometimes is to prevent the baldness from spreading. Persistent treatment in other cases will usually bring about a cure.

LICE.—Lice are often found to infest the head of uncleanly persons. Even in the best regulated families children are apt to have them, having acquired them from their schoolmates. The nits will be seen more or less plentifully distributed about the hair shafts.

The presence of the lice causes more or less scratching with the finger nails which results in the wounding of the scalp and the consequent formation of crusts.

The best method for removing or killing these obnoxious things is to soak the hair and scalp with kerosene oil night and morning for two days. Then shampoo the head thoroughly.

If the use of kerosene is objectionable, the hair may be well wetted with tincture of larkspur. The treatment should be given at night and repeated the next morning and allowed to dry on the hair. A towel should be wrapped about the head during the night.

After twenty-four hours the head should be thoroughly washed or shampooed, and the treatment be again repeated as before in several days' time, if there are any signs of the lice present.

HAIR SPLITTING AND BREAKING.—This condition is usually met with among persons in poor health, or those who have dandruff of long standing.

The split ends of the hair should be clipped off or singed away, and a thorough course of scalp massage as advised for dandruff should be given. One of the stimulating hair tonics is to be used, followed by daily brushing and the application of castor oil in cologne spirits, as given on page 202.

SUPERFLUOUS HAIR.—Superfluous hair on the face, hands or arms can be removed with so-called depilatories. Their use is similar to the use of a razor, and they effect simply a temporary removal of the growth, requiring a constant use of the mixture as the annoying hairs reappear.

When such a mixture is required the following is the best, since it is the least poisonous:

DEPILATORY

℞ Strontium Sulphide	1 dr.
Zinc Oxide	½ "
Powdered Starch	½ "

These ingredients should be well mixed and kept in a tightly sealed bottle.

To use: mix a small quantity of the powder with water to make a thin paste; spread this upon the parts to be rid of hair and allow to dry on for five to ten minutes. Then scrape off the dried paste with a spatula or a dull knife blade.

As the paste is removed, the hairs will come away with it, leaving the skin perfectly clean.

A little cold cream should be rubbed on the parts after the skin has been gently washed off with water on a pledget of absorbent cotton.

A slight amount of the cold cream is allowed to remain on the skin.

HAIR DISSOLVER

℞ Sodium Sulphide	4 oz.
Distilled Water	1 qt.

Dissolve the sodium in the water and keep well corked and away from the light. Apply to the hair without rubbing and wipe off in not over two minutes.

But the *only way to remove permanently* these abnormal hair growths is by the use of electricity in the form of Electrolysis, which is thoroughly explained in Part Five.

GRAY HAIR.—Grayness of the hair is not necessarily a sign of disease or even of age. To turn gray in time is natural nearly everywhere. There is one very notable exception. In Scandinavian countries the hair of persons verging toward extreme age very frequently turns flaxen.

Proof that grayness is not necessarily symptomatic of disease or weakness is found in the fact that often, when the hair has turned with years, it not only remains as glossy and smooth, but sometimes grows more so, as well as more thick and strong.

Physiologists have not yet definitely determined the immediate cause of the hair losing its color. They fall back on the simple statement that the supply of coloring matter appears to lessen or give out. Dark hair, which, they assert, implies greater physical strength in the possessor, loses color sooner than light hair. Cases of blond men who at fifty have lost half their hair by baldness, and yet have not begun to turn gray as to the other half, are not uncommon.

The physiological suggestion that the supply of coloring fluid is exhausted sooner by dark hair, because of the greater call it makes on the coloring fluid, does not really explain the matter. On the contrary, among the very dark-haired races in tropical and semi-tropical countries, the hair appears to keep its color much longer than among blond or semi-blond peoples.

Perhaps one may say that a more complex civilization, with its indoor life, has considerable to do in determining the time for the approach of natural grayness, as it certainly has much to do with turning hair gray prematurely by worry or excitement.

Gray hair so frequently by contrast with a fresh complexion and bright eyes adds attraction to a woman's face that fashion has often dictated gray, and on the periodical returns of the style many young matrons in Paris and elsewhere may be found actually wearing artificial gray hair. Accordingly women otherwise young in appearance need not indulge in vain regrets, but by keeping their gray or graying hair in the healthiest condition

and arranged in the style most harmonious to their face and figure may make themselves just as attractive as their black-haired and brown-haired sisters. At any rate, keeping the hair clean and healthy will do much to retard its becoming gray.

PREMATURE GRAY HAIR.—Gray hair may appear on the head prematurely, due to neuralgia, fright, grief, or as the result of rapid aging from business cares or prolonged indulgence in artificial excitements or society dissipations.

It is a popular belief that hair may turn white almost instantaneously from these causes, especially fright and nervous shocks. Byron accepts it in his famous lines from "The Prisoner of Chillon":

"My hair is gray, but not with years,
Nor grew it white in a single night
As men's have grown with sudden fears."

Bichat, a famous French physiologist, backs up this popular belief by the assertion that he knew of one case, the cause being a violent mental shock, where the transformation took place in a single night, and he speaks of several other cases of shock where, in about a week, the hair turned gray in mass.

Even with entire respect to so great a name as Bichat, and appreciating, too, the value of a popular belief, one cannot help suspecting that verification in the single case of his very long experience may not have been quite absolute; in other words, the hair might have had a more or less decided set toward gray, or have been on the turn, previous to the sudden mental shock. The most reasonable explanation of the historical incidents of hair suddenly turning gray in prison, as in the case of Marie Antoinette, is that it was already gray, but had been dyed, and, during incarceration, when its owner was de-

prived of the dye or of proper assistance in applying it, had taken on its proper hue.

Treatment for premature gray hair is usually successful. The patron should be advised to consult a physician for the general health, and the operator should at once begin a systematic course of massage, and general tonic treatment of the scalp, using such preparations as have been given and are indicated.

But when grayness is progressive, while much can be done to retard its spread, the final result is permanent, and all that can then be done is to tint the hair or dye it to its former shade, using massage and scalp-cleansing methods to keep the hair healthy and prevent its falling out.

Gray hair should not be shampooed oftener than once a month. The egg and white castile soap shampoo—especially that one in which only the white of egg is used—will be found best for gray hair. In the final rinsing put a trifle of pure indigo, not bluing, just enough to tint the water faintly. This will whiten or silver the hair a little, giving it extra gloss.

The dry shampoo of cornmeal and orris root is good for gray hair. Do not, however, rub this mixture onto and into the scalp. Just sprinkle it through the hair and brush it out in about ten minutes.

To cleanse, cool and freshen the scalp on which the hair is growing gray, the following tonic is recommended:

GRAY HAIR TONIC

R	<i>Oil of Orange</i>	$\frac{1}{2}$ oz.
	<i>Oil of Neroli</i>	20 drops
	<i>Oil of Bergamot</i>	1 oz.
	<i>Oil of Cinnamon</i>	$\frac{1}{4}$ dr.
	<i>Oil of Cloves</i>	1 "
	<i>Olive Oil</i>	2 pts.

This is also a good occasional treatment for gray hair :

R	<i>Gallic Acid</i>	10 gr.
	<i>Tincture Sesquichloride of Iron</i>	1 oz.
	<i>Acetic Acid</i>	1 "

This also will be found of value.

R	<i>Southern Wood</i>	1½ lbs.
	<i>Olive Oil</i>	1 qt.
	<i>Red Wine (Claret)</i>	1 "

Macerate the wood, boil it in the olive oil, strain it through a cloth, add the wine, and let stand several days. Then saturate the hair with it.

CHAPTER XV.

COLORING THE HAIR.

Antiquity of the Practice—When It is Justified—Precautions—Preparation for Hair Dyeing—Necessaries—Mordants—Color Guide—Home Hair Restorers—Herb Recipes—Other Natural Restorers—Mineral Recipes—Hair Stains—Vegetable Recipes—To Darken Eyebrows and Eyelashes—Recipes—Stains for Stray White Hairs—Simple Dyes—Recipes—Silver Hair Dyes—Recipes—Bleaching for Dyeing Purposes—Titian Bleach—Bleaching Dark Hair to White.

COLORING the hair was a barbaric fashion introduced into Rome from Britain, where fair hair was in such esteem that the inhabitants, endowed by nature with locks of light and auburn hue, tried to lighten and brighten them still more by bleaching and dyeing. Following their custom, the Romans adopted red as the fashionable color, and its vogue continued in Italy until modern times. The great painter Titian perpetuated on his canvases in the painting of woman's hair the rich red tone which is called after his name. It is said that he preferred this color because it was that of his lady-love's tresses, but in this matter sentiment must have been subordinate to taste—his artistic sense choosing the color of hair most representative of the full glow and energy of healthy use. Undoubtedly he was attracted to the sweetheart because of her hair, rather than to the hair because of the sweetheart.

At one time in rural communities and in some cities where ignorance is at a premium, there was a tendency to hold in derision a red-headed girl, and the would-be funny papers used to crack absurd jokes about the certainty of seeing a white horse very soon after meeting a red-haired woman. Of course, this nonsense tended to annoy persons with red hair and in some cases, where they were very sensitive, drove them to dyeing. Nowadays that rank absurdity has been cast into the limbo of things that never ought to have been; red hair is justly valued by its possessors and greatly admired by most people.

Dyeing the hair had a great revival in modern times along in the middle of the last century, when the fad of having hair of fashionable shades became common, permeating all classes of society, being taken up not only by women, but even by those men who had more hair than brains. The famous French poet, Charles Baudelaire, who was neurotic in body and degenerate in mind, once had his hair dyed a vivid green.

Hair-tinting and dyeing at present, while very extensive, have a much more reasonable excuse for existence than the caprice of mere fashion, though fashion still dominates it in many places. Not so much the being in fashion is aimed at in availing oneself of the resources of the hair-tinter's art as the restoration of hair to its original color, or the keeping it so, when time or care or sickness has begun to threaten a lessening of its beauty.

Many secret recipes have been used for restoring color to hair that had turned gray either prematurely or as the result of the general change caused by advancing age. There has always been a peculiar anxiety to hide the effects of actual age, especially in the prevention or restoration of gray hair; and in younger persons sud-

denly stricken with grayness either through illness or instant nervous shock, there is a like desire, though in less degree, to regain the lost color.

Indeed, in their case, grayness of the hair often lends a softness to the features, and sometimes perhaps the dyeing of the hair is postponed by them for years in the hope that nature will restore the color in time—which, once in a very great while, does happen. Or some, instead of seeking a competent hair-tinter, have recourse to the use of internal medicines, rarely productive of any good result and often distinctly harmful.

That gray hair can be prevented to a considerable degree is true. The person affected or threatened with it may do much by using every hygienic means to keep the scalp of the head loose and clean of dandruff or excessive oiliness, or to overcome external dryness from a lack of a proper blood supply, and so may delay the gray or make its presence less noticeable.

Proper massage, faithfully followed, does much to give life and lustre as well as a natural color to the hair; and this, combined with proper internal medication, will often help to keep the color of the hair normal for many years.

Once the hair has turned gray as a result of old age or even in those with whom it is hereditary, there is little left to do but to dye the objectionable tresses. One thing, however, must be borne constantly in mind, and that is that, once begun, the act must be kept up to give a natural appearance to the hair.

This is an expensive undertaking in that the coloring matter must usually be applied by a second person, since it is practically impossible to color one's own hair evenly and regularly. It is here that the operator is called upon, and with careful and conscientious work and a

thorough knowledge of the preparations she uses, combined with a steady hand, she can establish a branch of cosmetic culture that will insure great satisfaction and profit to her for as many years as she wishes to continue.

With the dyeing and bleaching of hair that has not turned gray there is also a wide field and the art is highly appreciated, if properly practised. It is needless to say that the operator should cultivate a thorough knowledge of practical hair-dressing as well, for the two go hand in hand.

While bleaching, as commonly understood, refers to the coloring of hair by artificial means directly applied, either by the means of vegetable or chemical preparations, the bleaching of hair apart from artificial coloring is an essential part of the subject, since many effects in shade can be obtained in this way only.

PRECAUTIONS.—In bleaching and dyeing the hair the operator should beware of the use of the average hair dyes obtained in the open market. Most of them contain such chemicals as lead acetate and gallic acid, which are not only destructive to the hair, but dangerous to the health of the patient, often causing paralysis and blood poisoning.

The formulæ herein given are essentially non-toxic and may be used without fear of harming the most delicate structure.

One kind of hair dye should be used for the patient only, since the changing of one to the other will invariably lead to a horrible mixture of tints foreign to any human hair, a condition difficult to overcome even after months of patient treatment.

If a patron presents herself for hair-coloring who has

been attended by some other operator, it is well to take a strand of hair and color it according to your own formula before treating the whole head.

Sometimes it is absolutely necessary to bleach the dyed hair several times before the new dye can be successfully used.

For this purpose pure peroxide of hydrogen, mixed with various parts of water as indicated in the following pages, is generally used and thoroughly allowed to dry before the dye is applied.

PREPARATION FOR HAIR-DYEING.—To dye the hair of the head properly, the hair should be first thoroughly washed with warm water and castile or pure birch tar soap, the recipe for which has been given on page 137.

This is done to remove all the dirt and oil from the hair which would prevent the "taking" of the dye.

After the shampoo, the soap should be washed out thoroughly with several rinsings, of warm water preferably, using the sprinkler or spray attachment and gradually cooling the water to as cold as the patron can comfortably stand for the last rinsing. The hair is now loosely gathered on the head, and mopped over with a dry towel, to absorb most of the water.

After a half hour, or more, the towel is removed and the hair is rolled or patted with fresh dry towels, taking a strand at a time. Rubbing the scalp with the towels is also a good method of drying. If possible, the patron is now allowed to sit in the sunlight to finish the drying, while the operator combs the hair gently to separate the strands and to untangle the hairs.

Rapid drying by artificial heat is not to be commended as it invariably injures the hair.

The hair should not be dyed until absolutely free from all oiliness and entirely dry.

NECESSARIES.—To accomplish the best results and to be hygienic and up to date, every operator should provide herself with the following:

Rubber Gloves.
White Vaseline.
Black Fine Comb.
Soft Tooth Brushes.
Stiff Tooth Brushes.
Black Rubber Cloth Apron.

The black rubber cloth apron is made to fit around the neck of the patron and to fall well around the shoulders, to prevent the dye from staining the dress.

The operator would do well to wear an apron of the same material reaching from the neck to the knees. White rubber cloth, while much neater in appearance, becomes permanently stained too readily. On the black rubber apron these stains do not show.

The rubber gloves are to be worn by the operator to save her hands and finger nails from the same stains. Vaseline answers the same purpose, but is usually objectionable to the refined patron.

The black fine combs are used to take up a certain amount of the patron's hair and to protect the scalp from becoming stained as the dye is applied with the short-haired tooth brushes.

A clean tooth brush should be used for each patron and only one brush for the individual dye used.

MORDANTS.—With the chemical hair dyes a mordant is used to set the color. This is usually a liquid as later described, and should be preferably applied to the hair with a soft tooth brush and before the dye proper is applied, which helps to prevent staining the scalp. The dye is applied a few minutes after the mordant has been used.

The setting of the color is a chemical one containing

an ingredient that combines with the dye to produce a color of more or less permanency. Mordants differ, of course, with the kind of dye used.

COLOR GUIDE.—Let it be understood that to render dark hair lighter in color, it must be bleached to the desired shade. It cannot be *died* to a lighter color.

Light hair or gray hair can be dyed to any given color from light brown or chestnut, to brown, red, dull red, auburn, and black.

The color effect is usually obtained by using certain mixtures or dyes for certain lengths of time as indicated hereafter and then washing the hair to free it of the extra amount of chemicals.

Sometimes certain dyes given to produce a certain shade will not produce the desired result. This is not necessarily a fault of the preparation, but may be due to the fact that the hair does not contain sufficient sulphur in its structure. It then becomes necessary to use sulphur in some form between the times of dyeing, as will be referred to later.

Certain chemicals are used to give only a certain color or a shade thereof. Others may be called "time dyes," giving the shade after having been on the hair for a definite period, according to the strength of the solution.

Most vegetable dyes may be called "progressive dyes" in that the desired shade is attained only by their repeated use.

As a further guide and index to the color produced by the various formulæ, the author has placed the shade of color obtained in parentheses with each formula to facilitate their indication and value at a glance.

HOME HAIR RESTORERS.—Certain harmless preparations may be properly denominated "home," or "house-

hold" recipes, because of the availability of ingredients and the simplicity of their compounding.

They are intended to restore the natural color to the hair that is beginning to turn gray and not to give it a decided shade.

Vegetable preparations naturally stand high in this list. Dried sage, an ounce in a pint of water, steeped for half an hour to make a strong tea is excellent for darkening the hair and has the added virtue of being a valuable hair tonic or stimulant. It should be applied with a tooth brush about once a week, but no such care is needed to keep it from the scalp as with other things. It is really good for the scalp and hair.

In combination with tea leaves, sage leaves form an admirable hair tonic and color restorer.

HERB MIXTURE

R	<i>Green Tea</i>	2 oz.
	<i>Sage Leaves (dried)</i>	2 "

Place the two in an iron pot and pour three (3) quarts of boiling water over them. Cover loosely and let it simmer until the liquid has been reduced to one quart. Allow it then to stand for twenty-four hours so as to get the action of the iron of the pot on the mixture; then strain and bottle.

Apply this mixture to the hair each night. Allow it to dry or put a towel over the hair, since otherwise the mixture will stain the pillow.

OTHER NATURAL RESTORERS.—Preparations which restore hair to its natural color, and of which minerals form the chief ingredients are the following:

SULPHUR RESTORER

R	<i>Sulphur (small lumps)</i>	2 oz.
	<i>Bay Rum</i>	8 "

Dissolve the sulphur in the bay rum by shaking occasionally and use on the hair as a wash once or twice a week, letting it dry.

Since sulphur is an element essential to the healthy growth of the hair, this recipe is also an excellent tonic.

ACETATE OF IRON RESTORER

R Sulphuret of Potash.....	10 gr.
Tincture Acetate of Iron.....	2 oz.
Glycerine	1 "
Water	1 qt.

Put ingredients into open bottle and let stand until odor of sulphur disappears, then add ten (10) drops of oil of bergamot or lavender. Rub a little into scalp daily.

SULPHATE OF IRON RESTORER

R Sulphate of Iron.....	7 grams
Distilled Water	1 ounce
California Claret	1 pint

Dissolve the iron in the water and add to the wine. Allow to stand twenty minutes before using. Apply thoroughly with a soft brush and allow to dry. Cover hair with towel, if applied at night, to prevent staining of pillow.

IRON RUST MIXTURE

R Iron Rust	1 teaspoonful
Old Ale	1 pint
Oil of Lavender.....	10 drops

Mix and cork loosely. Allow to stand twelve days, shaking occasionally. Strain off the liquid and apply with soft brush.

HAIR STAINS.—The following home remedies give a decided stain to the hair:

POTATO STAIN

(BROWN SHADE)

Boil fresh potato peelings in an iron pot until they are soft. Strain the water through a cloth, and bottle.

Apply to hair with a soft tooth brush and allow to dry. Vaseline should be rubbed on your own hands, and on the forehead and back of neck of the patron in using these vegetable mixtures to prevent staining the skin.

The sun is the best mordant to fix the color with the potato mixture, which can be reapplied as often as desired until the proper shade has been attained.

MULLEIN STAIN

(BLACK)

<i>R</i>	<i>Mullein Flowers</i>	1 oz.
	<i>Genista</i>	1 "

Steep the above in water until the latter is black, then strain and apply to hair with soft brush. Use same precautions to prevent staining.

WALNUT STAIN

(BROWN)

<i>R</i>	<i>Juice of walnut shells, green or black..</i>	1 oz.
	<i>Alcohol</i>	6 "
	<i>Table Salt</i>	½ teaspoonful

Place in a bottle and allow to stand for a week, shaking occasionally. Then strain through fine cloth. Keep in a cool place. Apply once a week, using the precautions given to prevent skin staining.

Another Walnut Stain is made as follows:

(BROWN)

<i>R</i>	<i>Green Walnut Shells</i>	2 oz.
	<i>Alum</i>	2 teaspoonsful
	<i>Olive Oil</i>	4 oz.

Heat this in a steamer or an agate pot placed in hot water until the water of the shells has been expelled; then strain, pressing out the remaining liquid from the shells and add a little oil of bergamot to perfume. Apply to hair with a soft tooth brush. Avoid staining as before directed.

TO DARKEN EYEBROWS AND EYELASHES.—The painting or darkening of light eyelashes and eyebrows has been a common artifice among all nations and at all times.

The following recipes will be found effective:

STAIN FOR EYELASHES

R	<i>Gum Arabic</i>	1 dr.
	<i>India Ink</i>	1/2 "
	<i>Rosewater</i>	4 oz.

Powder the gum and ink and mix small quantities of this powder with the rosewater until you get a uniform black. Then add the remainder of the rosewater and apply carefully to the lashes.

STAIN FOR EYEBROWS

R	<i>Gall Nuts</i>	12 dr.
	<i>Sulphate of Iron</i>	2 1/2 "
	<i>Distilled Water</i>	5 oz.

Boil the gall nuts in the water for half an hour, strain through a linen cloth and add to the strained-off liquid 2 1/2 drams of sulphate of iron. Boil again until the quantity is reduced one-half and bottle for use after perfuming if you wish with a few drops of thyme essence. Apply to the brows or lashes with a soft small brush or a pencil, and be careful *not* to get any in the eyes.

A styptic pencil, which may be obtained in any drug store, can be used to darken the eyelashes and eyebrows.

STAINS FOR STRAY WHITE HAIRS.—When there are a few white hairs or a patch of white among the black, this recipe is a good one:

R	<i>India or China Ink</i>	24 gr.
	<i>Gum Tragacanth</i>	50 "
	<i>Rosewater</i>	3 oz.
	<i>Alcohol</i>	3 "

Apply with a tooth brush to the white hair. Do not touch the scalp, forehead, ears or neck. This formula

is absolutely harmless and is especially adapted for the use of young women who have prematurely white hair. It can readily be washed off if necessary; four or five washings being sufficient to make it disappear.

Another formula for patches of gray or white hair.

R <i>Pyrogalllic Acid</i>	$\frac{1}{4}$ oz.
<i>Distilled Water (hot)</i>	3 "

When the mixture is cold add one ounce rectified spirits. When using dilute with twice the quantity of soft water. Apply with a soft brush.

SIMPLE DYES.—The following formulæ are considered as dyes that give fixed shades of color, but are of simple and harmless nature. Some are vegetable and others mineral preparations. Henna forms the chief ingredient of the vegetable dyes. It is an Oriental plant which has been in use for ages to give a reddish or Titian hue to the hair and it does not injure the hair. Whether your hair is light or dark, henna will give it the reddish tinge. Henna tea is made by steeping one-half ounce of the dried leaves in one pint of hot water for about a half hour—let it cool and strain off the liquid. Shampoo the hair thoroughly and dry it. Then apply the tea evenly with a brush—dry in the sun—then wash the hair in clear water and again dry in the sun.

HENNA PASTE

(RED OR RUDDY GOLD)

Reduce enough henna leaves ground to a coarse powder with hot water to make a paste. When cool enough to use, rub the paste thoroughly over the hair and as evenly as possible. Allow to remain on hair for about half an hour, then wash off with warm water and let hair dry. The effect is not only beautiful, but harmless.

HENNA INDIGO PASTE NO. 1

(GOLDEN BROWN)

<i>R</i>	<i>Henna Leaves (powdered)</i>	<i>1 part</i>
	<i>Indigo</i>	<i>3 parts</i>
	<i>Hot water enough to make a paste.</i>	

Apply to hair as before, leaving it on from a half hour to an hour, according to the color desired. Wash hair and let dry.

HENNA INDIGO PASTE NO. 2

(BLACK)

After having used the henna paste before described for half an hour, wash the hair and apply a paste made of indigo and hot water. To make the latter, use just enough indigo and water to make a salve-like mixture. The latter is allowed to remain on for one hour or longer—even as long as three hours. The hair is again washed and dried. The result is a beautiful jetty black. Needless to say that the method is harmless.

After any of the henna or indigo applications, the skin when stained may be cleaned readily with a little soap and water. The latter does not affect the hair.

If possible, the hair after being dyed in the above manner should be allowed to dry in the sun to obtain the best results.

When thoroughly dry, sufficient oil, such as sweet almond oil or olive oil, to which a little perfume has been added, is rubbed into the hair to give it lustre.

PERMANGANATE OF POTASH DYE

(LIGHT BROWN AUBURN TO DARK BROWN)

<i>R</i>	<i>Permanganate of Potash</i>	<i>5 oz.</i>
	<i>Distilled Water</i>	<i>2 qts.</i>

On mixing the two a dark violet solution results. Apply with hard tooth brush to hair. By changing the quantity of the permanganate the varying shades can be

obtained, the hair being dyed at once. Avoid staining as before described. Gloves should be used on the hands.

CITRATE OF IRON DYE

(BROWN TO BLACK)

R <i>Citrate of Iron</i>	4 teaspoonsful
<i>Bay Rum</i>	4 teaspoonsful
<i>Cocoanut Oil</i>	3 teaspoonsful

Mix by shaking occasionally. Apply to hair once a week or two weeks with brush. Avoid staining of skin.

If the hair does not take the color well, there is a lack of sulphur in it. Overcome this by moistening the hair twice a week with a weak solution of sulphuret of potash in water, about five (5) grains of the former to the ounce of water. Do not use the two mixtures at the same time.

TANNIC ACID DYE

(BROWN TO BLACK)

R <i>Tannic Acid</i>	½ dr.
<i>Glycerine</i>	2 "
<i>Oil of Almond</i>	6 "
<i>Oil of Neroli</i>	2 drops
<i>Oil of Orange Peel</i>	20 "

Dissolve the tannic acid in the glycerine, then add the oil of almonds, stirring constantly to make an even mixture. Lastly add the essential oils, stirring them in.

Apply to the hair with stiff tooth brush and allow to remain. The preparation may be used once every ten days or two weeks. It is non-poisonous, but being of an oily nature does not dry as readily as those of aqueous form. Avoid skin staining.

PYROGALLIC ACID

(BLACK)

R <i>Pyrogalllic Acid</i>	2 dr.
<i>Distilled Water (hot)</i>	1½ oz.
<i>Dissolve the acid in the water and when</i>	
<i>cool add Alcohol</i>	½ oz.

Shake and mix with twice its quantity of water and apply to hair with soft tooth brush over fine comb. Avoid staining by using gloves and vaseline on forehead, back of neck and about ears.

This preparation should be used with some caution. When there are wounds or scratches on the scalp, it should not be used.

Pour one quart of water over two or three ounces of saffron and add a half teaspoonful of carbonate of soda. Allow this to steep for about one hour and strain through a fine cloth. Cool and apply to hair with a soft brush and permit the hair to dry.

To set the color, wet the hair with a mordant made of

SAFFRON DYE

(RED)

R	<i>Vinegar</i>	4 oz.
	<i>Water</i>	4 "

Allow to dry. The result will give a beautiful red or reddish-yellow shade, the depth of which can be graded by the amount of saffron used for the infusion. The preparation is harmless. Care to prevent skin stain should be observed.

SILVER HAIR DYES.—While the French, who are adepts in the dyeing of hair, use gallic acid to a great extent, the silver salt preparations are more universally used, and not only with better results but with less danger of poisoning.

It is a fact, however, that the dyeing of hair with silver nitrate must be done very thoroughly, else unevenness of color results.

Only an experienced operator should employ the method and at no time should any one attempt to use it on themselves alone, as the silver salts stain permanently

and may cause considerable danger if they get into the eyes.

All silver hair dye preparations require a fixing solution or mordant.

The mixtures to obtain the best results are made as follows:

MORDANT

WHITE BOTTLE No. 1

(BROWN)

℞	<i>Sulphide of Potassium</i>	7 oz.
	<i>Alcohol</i>	1 qt.

SILVER DYE BROWN

DARK BROWN BOTTLE No. 2

℞	<i>Silver Nitrate</i>	4 oz.
	<i>Distilled Water</i>	1 qt.

The sulphide of potassium should first be dissolved in a little water. It is strained into a bottle and the alcohol added. The bottle is of white glass and marked No. 1.

This is the mordant which is applied to the hair evenly with a soft tooth brush and allowed to remain for a few minutes. Then sufficient of the silver nitrate solution or dye, which has been mixed and placed in a dark-brown bottle marked No. 2, is poured into a saucer and applied with a *new* stiff tooth brush to the hair over a fine comb to prevent staining of scalp.

The brush used for this purpose cannot be used with any other solution and should be kept exclusively for the patron upon whom it is used. It is well to mark or tag your brushes with a patron's name so as to avoid mistakes. Any particular attention shown a patron in the way of exclusiveness is quite sure to be appreciated.

In applying the silver solution, the brush should be dipped gently into it, not soused with it, since too much liquor on the brush will run over the edge of the comb

or teeth, thus moistening the scalp and resulting in decided black stains.

The whole hair is gone over strand by strand until evenly covered, rubber gloves being worn by the operator during the work and a little vaseline should be rubbed upon the forehead, about the ears and the back of the neck to prevent staining.

At no time is a rubber apron for the patron so necessary as with this process.

As the two solutions combine on the hair, black sulphide of silver is formed which gives the desired shade.

The silver solution should be kept in the dark bottle and in a dark place to prevent decomposition by sunlight.

The shade resulting from the use of the silver solution depends upon the amount of silver in the solution. For a black effect the following is an excellent preparation:

SILVER DYE BLACK

NO. 1 MORDANT. WHITE BOTTLE

R	<i>Sulphide of Potassium</i>	8 oz.
	<i>Alcohol</i>	1 qt.

NO. 2 DYE. DARK BROWN BOTTLE

R	<i>Silver Nitrate</i>	5½ oz.
	<i>Distilled Water</i>	1 qt.

Prepare in the same manner as above and apply in like way to obtain deep black color.

If, after the hair is thoroughly dry, a disagreeable odor is found to permeate it, this may be washed out readily later on that day or the next morning.

It is always best to use the sunlight to dry the hair as it fixes the color more evenly and gives better results than when artificial drying means are used.

The objection to the effect of silver nitrate on the hair is that eventually it has a tendency to burn the hair. To

prevent the staining of the skin about the forehead, when vaseline is objectionable to the patron, the parts may be washed over with a solution of table salt in water.

If for any reason the operator would care to experiment with the silver solution method, she may apply the silver solution first, and if only a light-brown effect is desired she might have the color set by exposing the hair to direct sunlight, using no mordant. If, however, strong solutions for darker color effects are used, a mordant made as follows can be used after the silver solution has been applied:

SPECIAL MORDANT

<i>R</i>	<i>Sulphuret of Potassium</i>	<i>2 dr.</i>
	<i>Distilled Water</i>	<i>2 oz.</i>

This applied to the hair with a soft tooth brush directly after the silver solution sets the color at once.

Some operators prefer the effect of this latter method and while the staining of the scalp is more marked the permanency of the color is claimed to be greater.

If a little of the silver solution should drop upon an unprotected part of the skin, the mordant applied immediately will prevent staining.

To overcome the burning of the hair or its becoming brittle from the use of these silver dyes, it is best to use some bland and perfumed oils, as previously referred to, once or twice a week.

The above method of either form will never give a satisfactory result, however, if the hair has not been previously thoroughly washed and cleansed of all oily matter.

The dyeing of hair with the silver solution should be repeated once each month, and this is the rule with mostly all chemical dyes.

Vegetable dyes have to be used more frequently since

their color is not as permanent. In fact some of the simpler mixtures must be used every few days to keep the color of the hair near to a natural tint.

BLEACHING HAIR FOR DYEING PURPOSE.—It is sometimes necessary to bleach the hair of the head, especially when the hair is rusty gray or dirty yellow. The regular use of peroxide of hydrogen, one part to four or five parts of water with the addition of a little liquid ammonia, will give a very satisfactory result, and will permit of an even dyeing of the hair thereafter.

The various shade effects in hair of dark color may be obtained by washing the hair with a solution of hydrogen peroxide (pure) in a definite amount of water—more of the peroxide for the darker hair, less for brown or blond. Experience will teach the operator the normal quantity to be used. A small quantity of carbonate of soda (size of a filbert) to the quart of solution used for bleaching enhances the effect. Ammonia, as before said, is generally employed.

The use of peroxide should never be carried to excess, as it has a tendency to rob the hair of its natural oil, especially if some of the cheaper or impure preparations of the chemical are used. Never be persuaded by a druggist to buy the cheap kinds. The best is not too good for your patrons, and eventually proves the very best for you.

A fine formula for obtaining the auburn or Titian effect in patrons with black or dark brown hair is as follows:

TITIAN BLEACH

R	<i>Hydrogen Peroxide</i>	<i>2 ounces</i>
	<i>Nitric Acid</i>	<i>3 drops</i>
	<i>Ammonia</i>	<i>5 drops</i>
	<i>Resorcin</i>	<i>15 grains</i>

Mix and use as a bleach.

BLEACHING DARK HAIR TO WHITE.—It often becomes necessary, and the operator is often directly called upon, to render dirty appearing, rusty, or grizzly hair white in color. Sometimes only a part of the hair is gray or white and the rest variously tinted.

The object of such desire is not to have the hair dyed, but to have it of an even white color, a recent fad with ladies in the French capital.

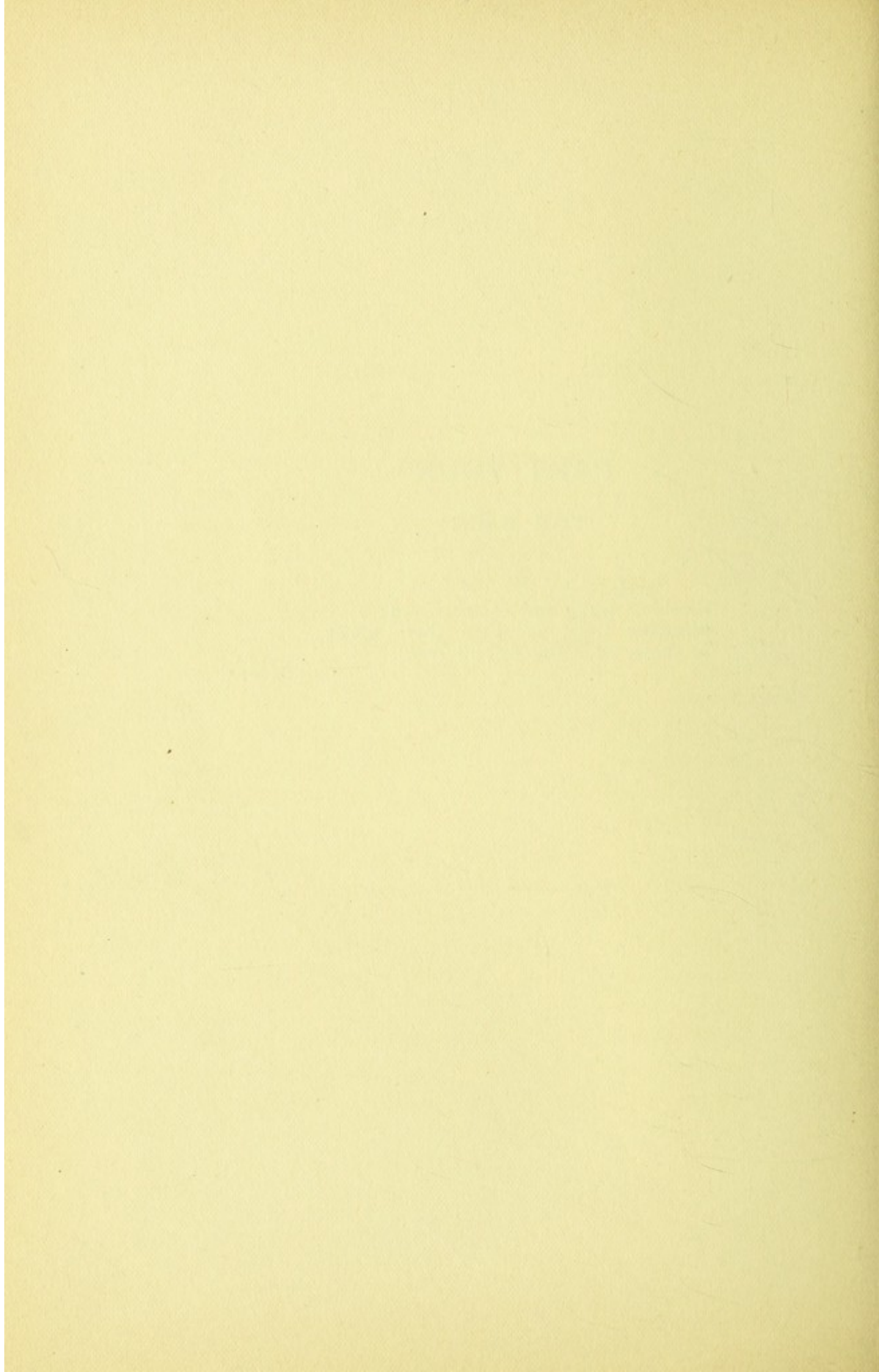
The free use of liquid ammonia, one tablespoonful to the basin of water, will usually accomplish the desired result in several applications and leave the hair an even snowy white. With judicious care and proper shampooing, such a head of hair is, indeed, very attractive.

PART FOUR

THE FACE

Cheek * * * *
Flushing white and softened red;
Mingling tints, as when there glows
In snowy milk the bashful rose.

—*Moore.*



THE FACE

CHAPTER XVI.

PHYSIOLOGY OF THE SKIN.

As in every other department of Beauty Culture, so in this the operator to be efficient must have a clear conception of the structure and function of the special part of the body under consideration. In treating the face this knowledge should be primarily of the nature of the skin, and secondarily of the nature of the muscles lying underneath it. Some idea of the structure and function of the skin has already been obtained in the discussion of hair, and the reader is referred to the diagram of the anatomy of both skin and hair (Figure 46) appearing on page 118 in this discussion. The anatomy of the muscles of the face will be illustrated and explained later on in the discussion of Facial Massage, where it is especially applicable.

THE STRUCTURE OF THE SKIN.—The muscles of the face are covered by a layer of fat upon which the skin proper rests. This layer of fat gives the graceful contour to the face. When it is lacking, the skin falls inward, producing hollows or causing the formation of folds or wrinkles.

While the skin is more or less elastic, it has not the power to overcome entirely the loss or falling in of weakened muscles or loss of fat, and eventually loses its own

vitality for want of a proper blood supply and takes on a dry, shrivelled appearance.

On the other hand, such fault may be in the skin itself while the muscles are comparatively well formed; it may harbor infectious germs as a result of improper cleansing, causing eruptions or skin diseases, or it may have been subjected to other irritants like sunburn, causing discolorations or reddening and chipping or scaling. Similar results follow the use of impure, rancid or irritating soaps, a very common cause of skin trouble.

As will be seen in Figure 46, the skin has two layers—the scarf, or outer skin, and the derma, or true skin.

The scarf skin has no blood vessels, but is made up of numerous fine cells, which give it its smooth surface. Its object is one of protection. The upper cells are thrown off as fine scales and are replaced as rapidly by new ones.

The true skin is highly sensitive. It is made up of many minute bundles of fine threads, among which lie blood vessels, nerves, the sweat and sebaceous glands.

Below the true skin lie the fat cells and below these the muscles.

Through the outer and true skin run many pores or tubes. Some are hair follicles, others sweat or sudoriferous. The latter end in the coils of the tube. Their function is to remove water or perspiration from the blood. The number of these pores varies from 500 to 2,800 to the square inch at different parts of the body.

The sebaceous glands secrete an oily matter which is to keep the hair and skin soft. They are sacs like grape bunches, emptying by ducts into the hair follicles and are generally very plentiful about the face and scalp.

The blood vessels are particularly numerous in the skin of the face, and it is from the circulation that the

flush or color of the skin is derived. The blood gives nourishment to the skin and supplies the sebaceous glands, giving oily matter or sebum, and the sweat or sudoriferous glands, giving off water and poisonous matter and certain chemicals in the form of perspiration.

Both of these secretions are necessary to the health of the skin and hair, and it can be readily seen that a poor circulation or an interference of their function would naturally affect the skin both in its color, texture, and health.

On account of the constant exposure of the facial skin to the impurities of the air, it is necessary to cleanse the skin to remove such foreign matter as might stop up these pores and interfere with their function, as well as to prevent any irritation it might cause therein. The use of irritants such as impure soap and lotions containing harmful chemicals has practically the same effect.

CHAPTER XVII.

CARE OF THE SKIN IN HEALTH.

Washing the Face—The Evening Cleansing—Recipes for Skin Creams, Foods, Cleaners, and Powders—The Morning Cleansing—General Advice to Operator.

THE study of the care of the skin in health is of primary importance not only for its own sake, but because it gives information essential to the proper treatment of diseased conditions of the skin.

WASHING THE FACE.—It seems almost foolish to have one's attention called to the washing of the face, and yet it is a fact that a vast majority of our people do it improperly. This fault is due to the habit of days of ages past and no correct or satisfactory reason can be given for the fact that the face is washed principally in the morning and very rarely at night before retiring.

Just the opposite method should be followed, as any one will see, who pauses a moment to reason upon it.

A light washing of the skin of the hands and face is usually sufficient to brighten it, to make it glow, not with the effect of the water alone but the rubbing and gentle pressing of the hands—the unconscious massage we all practise.

The correct method of cleansing the face is to cleanse it thoroughly at night. The reason is obvious. The person is exposed to the air all day more or less and whether at work in the factory or store or following outdoor

duties, there remains the fact that much exposure results in the accumulation of dirt, dust of all kinds, germ life, and other impurities too numerous to count, upon the skin of the parts of the body exposed.

The skin of the face is particularly loaded with this filth on account of the many pores and the form of the contour.

If now the person is satisfied with simply rubbing off this dirt with a kerchief or as in most cases permits it to remain overnight—washing of the hands for the night meal being considered sufficient for decency's sake—then this person openly invites any of several of the skin diseases so often caused this way.

THE EVENING CLEANSING.—Instruct all your patrons to wash the face at night before retiring; and to do this thoroughly, not as a mere habit, but as a health-giving rule of absolute necessity. To fully carry out this, have the patron use a neutral clean soap such as white castile. This should be applied to the face with a fine camel's hair brush dipped into fairly hot water. A Turkish towel glove is best for coarse skins or when the patron is exposed to extreme dirt or smut as in factory life. Never allow the use of sponges. They are uncleanly and invite infection.

The face is thoroughly cleansed, every part being gone over with the brush, rubbing vigorously all the time. The soap is then rinsed off with clean tepid water, using two or three changes of water and the skin dried with a soft towel by tapping it dry in an upward direction always. Fanning, first very softly, then more briskly, is often found a pleasing and refreshing method of drying the skin. If a perfumed fan be used, take care that the scent be not strong, but very delicate. Never rub the face in

any and all directions. Such rough usage would only help to undo the massage results you have been trying to attain by gentle scientific means.

Of course, some patrons with exceedingly fine or delicate skins may use a suitable cream to cleanse the skin with instead of soap. There is no need for doing this if a pure or bland soap is used, but the cream may be used in the morning instead of the more thorough washing method of the night before.

The use of aromatic vinegars or toilet waters, particularly those containing irritants or alcohol, is to be avoided. These rob the skin of its fat and eventually leave it dry and hard and wrinkled.

Never in the process of washing the face irritate the skin; if the soap you use does so there is some impurity present and it should be changed at once.

The addition of a few drops of tincture of benzoin to the rinsing water gives it a slight aromatic odor and a tendency to contract the pores and to whiten the skin.

After drying the face, delicate cream is gently rubbed over the face with the tips of the fingers, rubbing upward. This should be left on overnight, using only sufficient to just cover the skin with a thin layer.

PREPARATIONS.—The following recipes for skin creams, skin foods, and skin cleaners will be found harmless and effective:

FOR VERY THIN, DRY SKIN

<i>R</i>	<i>Almond Oil</i>	<i>I oz.</i>
	<i>Olive Oil</i>	<i>I "</i>
	<i>Spermaceti</i>	<i>I "</i>
	<i>Benzoinated Lard</i>	<i>I "</i>

FOR COARSE SKIN

<i>R</i>	<i>Anhydrous Lanolin</i>	<i>2 1/4 drams</i>
	<i>Oil of Citron</i>	<i>1 drop</i>
	<i>Oil of Bergamot</i>	<i>3 drops</i>
	<i>Spirits of Mignonette</i>	<i>8 drops</i>

SKIN FOOD

℞ Benzoinated Lard	1½ pd.
Lanolin	½ "
White Wax	¼ "
Boric Acid	¾ oz.
<i>Perfume to suit.</i>	

TISSUE BUILDER

℞ Olive Oil	1 pd.
Spermaceti	2 "
Cocoa Butter	4 oz.
White Vaseline	8 "
Benzoic Acid	1 "
<i>Mix in 10 ounces of water and perfume to suit.</i>	

SKIN CLEANER NO. 1

℞ Acetic Ether	2 dr.
Alcohol	4 dr.
<i>Water quantity sufficient to make 8 ounces. Perfume to suit. This simply cleans the skin.</i>	

SKIN CLEANER NO. 2

℞ Acetone	4 dr.
Boracic Acid	2 dr.
Alum	20 gr.
Alcohol	5 dr.
Water	8 oz.
<i>Perfume to suit. This has triple effect: cleans, makes firm, beautifies.</i>	

A little pure rice or potato starch finely powdered may be dusted on over the cream. A first-rate simple powder is made as follows:

PURE FACE POWDER

℞ Rice Starch	8 oz.
Rice Flour	8 "
Orris Root, finely powdered.....	2 "
Magnesia Carbonate	4 "
Oil of Lavender.....	40 drops

The oil of lavender or any other perfume is rubbed into the magnesia and then the other parts are added by constant stirring until the whole is evenly divided.

Face powders have been decried as harmful. They are harmful only when made of chemicals such as lead,

arsenic, and bismuth or mercury. A powder made of proper ingredients acts as a protective to the skin, and its use will be later explained.

If an antiseptic powder is preferred, the following is excellent:

ANTISEPTIC POWDER

<i>R</i> Talcum Powder (pure).....	4 oz.
Rice Starch	4 "
Orris Root	2 "
Boric Acid (powdered).....	1 dr.
Essence of Violet	20 drops

THE MORNING CLEANSING.—In the morning the face may be washed as in the evening, but less thoroughly. The use of a fine face cloth should take the place of the flesh brush, as it is not intended to widen the pore openings by mechanical means, but simply to cleanse them of fatty matter.

In place of the benzoin tincture used in the evening cleansing a tablespoonful or two of fresh almond meal added to the first rinsing water adds luxury to the process. The latter makes a creamy white mixture, very agreeable both in effect and odor.

The cream and powder follow next. While the powder is not essential at night, it is particularly indicated for a skin about to be exposed to harsh winds or the hot sun.

One precaution is to have the face thoroughly dry before using the cream and powder, otherwise an unevenness of the application appears while the danger of chafing is thereby invited.

Some persons have a very loose skin, not merely on the neck where looseness of skin is common, but on the cheeks and occasionally on the forehead. In such cases hold the skin gently with one hand to prevent its rolling about, while you massage with the other. After a few

operations much of the looseness or flabbiness as a rule will disappear, unless the patron is of advanced age or of persistently irregular habits.

Again, you may meet with some skins of unusually delicate texture. In such cases advise the use of a gelatinous soap. The same applies to skins irritated by exposure or by the wrong manipulations of incompetent masseuses.

The operator should take particular pains to keep her hands in exquisite condition, soft, smooth, dry.

GENERAL ADVICE TO OPERATOR.—Health, positive health, magnetic health, the kind that you feel so strongly in yourself you are tempted to fancy you could communicate it or radiate it to others, is an asset every operator should aim to possess, not only for its own valuable sake, but for its moral effect on your patrons. If they see you glowing with health and feel the vibrations of it under your fingers at once firm and supple, they are sure to have more confidence both in your skill as an operator and in any advice you may give them in a general way regarding the care of their own health.

But never thrust advice on a patron; if you must offer it, do so at first by way of roundabout suggestions, unless it is asked or unless you have been so long on familiar terms that your advice will not seem a piece of presumption or forwardness.

Also remember that some of the faults you are asked to correct have been brought about by direct carelessness or habit of the patron. Induce her to study facial repose; to stop wrinkling her face as much as possible in laughing; not to frown; to use her mouth normally, etc. Of course this must be insisted upon very diplomatically, as most women will tell you such a thing is impossible, and

that they come to you for relief and beauty. But how can you build out the hollows of cheeks if the back teeth of both jaws have been removed and the space has not been filled by artificial ones? How can a frown be corrected if the patron has a faulty eyesight that causes her to screw up the features to frowns and squinting lines and crow's feet? Much can be done to correct these faults and earlier results be attained if the operator will firmly and honestly insist upon the patron doing for herself at least in part.

The health of the patron, her diet and mode of living must be noted, and she should be advised to see a physician to put her health into such state as to give her every advantage to secure early and pleasing results.

CHAPTER XVIII.

TREATMENT OF SKIN DISORDERS.

Pimples or Acne—Red Nose—Dry, Scaly Skin—Oily Skin and Enlarged Pores—Blackheads—Milium—Ringworm—Chapped Lips—Sunburn—Freckles and Tan—Liver Spots and Moth Patches—Warts—Scars and Smallpox Marks—Birthmarks—Superfluous Hair.

WHILE the beauty culturist should make no attempt to practice medicine, and should refer all cases requiring constitutional treatment to a physician, to one in particular who is a specialist in the disorder in question, there are many common affections of the skin which she may with propriety treat in her office. In the following directions a knowledge of simple massage is assumed, for instruction in which the reader is referred to the chapter on facial massage found on page 259.

PIMPLES OR ACNE.—One of the commonest of these disorders is pimples, or acne. This unsightly condition of the skin is very frequently noticed in young people. There are many causes that produce it, of which lack of cleanliness, carelessness in looking after the skin, faults in exercise and diet, and blackheads are the most common. The use of improper lotions and ointments is another cause.

A great many cases can be cured by simple external measures associated with proper hygiene. Of course the diet and method of living must be looked into. Foods that are heating, fresh bread and pies, condiments, in-

dulgence in candy, meat two or three times a day, must be forbidden. Plain food, meat once a day, fresh fruit, especially oranges, and vegetables, are needed. The skin of the whole body requires stimulation and cleansing, and so a warm bath three days is to be recommended, followed by a quick, moderately cold douche, brisk rubbing and thorough drying. Outdoor exercise and regular hours of sleep are essential.

From a persistent cleansing of the skin a recovery soon results, unless the unfortunate condition has been caused by impoverished blood or some internal derangement, usually of the digestive apparatus.

The cleansing creams (Nos. 1 and 2) given on page 239 will be found of exceptional value.

Massaging the face of the patient is not at first advisable. After using the hot towels, the pimples should be opened with a small lancet that has been properly sterilized by boiling and dipping into peroxide of hydrogen. The matter is gently pressed out of each pimple and the face cleansed with an antiseptic lotion.

Of these lotions there are many; the highly antiseptic ones give the best results, of which the following is excellent:

ACNE CLEANSING LOTION

R	Mercury Bichloride	7 gr.
	Zinc Sulphate	15 "
	Tinct. Benzoin	2 dr.
	Water	4 oz.

Dissolve the mercury in the water; then add the zinc sulphate and lastly the benzoin.

This lotion is poisonous and should *not be allowed to get into the eyes*. A thorough application should be given by daubing it on the face with absorbent cotton and allowing it to dry and remain on. It should be used daily, or every other day, if it proves very irritating.

Before the second or third treatment the face may be washed with tincture of green soap, well rinsed off and cleansed of any pus that may be in the pimples, then treated with the above lotion. If the lotion is too severe and irritating, it should be applied every other day.

Sulphur is an excellent remedy to apply, in some cases, instead of the above, and can be made and applied as follows:

SULPHUR ACNE LOTION

R	Precipitated Sulphur	1 dr.
	Tragacanth Powder	20 gr.
	Spirits of Camphor.....	2 dr.
	Water	4 oz.

Mix and apply with cotton daily. This lotion cannot be used with mercury or any other sulphur lotion.

If the skin is oily and covered with pimples the following is better:

OILY SKIN ACNE LOTION

R	Precipitated Sulphur	1 dr.
	Ether	4 "
	Alcohol	2½ oz.
	Water sufficient to make 12 ounces.	

Mix and shake well and apply with cotton twice daily.

Sometimes in very obstinate cases the following ointment is found excellent:

SULPHUR ACNE OINTMENT

R	Beta Naphthol	½ dr.
	Precipitated Sulphur	1 oz.
	Green Soap	1 "

Apply once a day, preferably at night. Or the following:

R	Precipitated Sulphur	½ dr.
	Benzoinated Lard	2 "
	Lanolin	2 "

Apply once a day at night.

Finally a good lotion to use as the condition improves is made as follows:

<i>R</i>	<i>Resorcin</i>	20 gr.
	<i>Witch Hazel</i>	2 oz.

Mix and apply with absorbent cotton after cleansing the face with hot towels once a day.

As the parts become cleared of the pimples gentle massage is needed to stimulate the skin to better activity.

RED NOSE.—This unfortunate condition, giving the person a drunkard's appearance, can be readily cured if taken under treatment before the veins become so large that only surgical means or electrolysis will remove them.

The cause is usually internal, but may be hereditary or the result of chronic acne. All causes must be looked into and a vigorous treatment be used externally. Hot towels are not good to use, as they tend to enlarge the blood vessels, therefore cold are best. Externally apply cotton moistened with the following lotion each night, letting the wet covering remain:

RED NOSE LOTION

<i>R</i>	<i>Muriate of Ammonia</i>	2 dr.
	<i>Tannic Acid</i>	3 "
	<i>Glycerine</i>	2 oz.
	<i>Rose Water</i>	3 "

Or this lotion can be advantageously used:

RED NOSE

<i>R</i>	<i>Powdered Calamine</i>	1 dr.
	<i>Zinc Oxide</i>	30 gr.
	<i>Glycerine</i>	1/2 dr.
	<i>Cherry Laurel Water</i>	4 oz.

Shake well and mop on nose morning and evening.

For a medium case, that is, one not aggravated, but incipient, the following formula will be found efficient:

<i>R</i>	<i>Sulphate Potash</i>	3/4 oz.
	<i>Sulphate Zinc</i>	1 "
	<i>Distilled Water</i>	1 qt.

Dissolve the first in one-half of the water and the zinc in the other half, using separate bottles. After each is thoroughly dissolved, mix together. This is to be applied on a red nose, or can be with good results also to a pimpled skin, twice a day, preferably night and morning. After washing the parts thoroughly with warm water, dab on a little of the mixture with absorbent cotton.

For an aggravated case of red nose or for pimples of obstinate character, this has been frequently successful:

<i>R</i>	<i>Sodium Sulphide</i>	<i>I</i>	<i>oz.</i>
	<i>Sodium Hyposulphite</i>	$\frac{3}{4}$	"
	<i>Zinc Sulphate</i>	$1\frac{1}{2}$	"
	<i>Acetone</i>	$2\frac{1}{4}$	"
	<i>Alcohol</i>	$4\frac{1}{2}$	"
	<i>Glycerine</i>	<i>I</i>	"
	<i>Distilled water sufficient to make 1 quart.</i>		

Dissolve the sodium sulphide and the hyposulphite together in some of the water. Then filter through cotton. Then add the rest of the ingredients as per formula. This preparation is expected in its first effects to irritate the skin. If, as in case of some skins, it burns severely, it should be diluted with more water.

For non-alcoholic red nose the following are good, spread over the nose at night and allowed to remain:

<i>R</i>	<i>Refined Chalk</i>	$\frac{1}{2}$	<i>ounce</i>
	<i>Glycerine</i>	<i>12</i>	<i>drops</i>

OR

<i>R</i>	<i>Rose Water</i>	<i>I</i>	<i>ounce</i>
	<i>Carbolic Acid</i>	$\frac{1}{2}$	<i>of 1%</i>

Exercise in the open air; look to the digestion; raise the body on the toes a few times thrice a day, or twice as often, if need be.

A good nasal douche, to snuff up each nostril, night and morning, is a half teaspoonful of table salt in a tumbler of warm water.

For the reduction of enlargement of the nose occasionally seen, only surgical means are effectual.

DRY, SCALY SKIN.—This condition is always due to a lack of good circulation and the consequent want of fat in the skin. Constitutional treatment must be undertaken and daily massage given with the application of a food-giving cream at home. The tissue-building and skin-food creams will give a happy result. All lotions and washes containing alcohol or ether, or such chemicals as borax, ammonia, mercury, zinc, etc., are to be avoided. Lotions containing glycerine and rosewater perfumed to suit agree with most cases.

Hygienic laws must be followed and the diet should be made as nutritious as possible. Outdoor exercise helps a great deal.

The following may be tried after the steam towels and massage and applied again at night:

FOR DRY SKIN NO. 1

R	<i>Iodide of Potash</i>	1 dr.
	<i>Glycerine</i>	1 "
	<i>Lanolin</i>	1/2 oz.
	<i>Neatsfoot Oil</i>	1/2 "

FOR DRY SKIN NO. 2

R	<i>Lanolin</i>	1 oz.
	<i>Cocoa Butter</i>	1 "
	<i>Glycerine</i>	1 "
	<i>Rose Water</i>	2 "

Glycerine burns some skins; cocoa butter irritates others. A formula without these should then be used.

Some cases do well on the following:

FOR FLABBY SKIN

R	<i>Spermaceti</i>	2 oz.
	<i>White Wax</i>	2 "
	<i>Sweet Almond Oil</i>	6 "
	<i>Lanolin</i>	2 "
	<i>Witch Hazel</i>	2 "

FOR WRINKLED SKIN

R	Olive Oil	3 oz.
	White Wax	2 "
	Spermaceti	2 "
	Lanolin	2 "
	Sweet Almond Oil.....	3 "
	Orange Flower Water.....	2 "

Melt the spermaceti, white wax, lanolin, and olive oil together. Add the almond oil. When cool, pour in 6 ounces of water and, after stirring, add the witch-hazel or orange-flower water and about 20 drops of benzoin to each lotion.

R	Glycerine	4 dr.
	Orange Flower Water.....	4 oz.
	<i>Mix and apply to skin daily, letting it absorb.</i>	

OR

R	Oxide of Zinc.....	4 dr.
	Rose Water	6 oz.
	Lime Water	2 "
	Glycerine	1 dr.
	<i>To be dabbed on with fine sponge and NOT massaged in.</i>	

OILY SKIN AND ENLARGED PORES.—This condition is exactly opposite to that just mentioned. Here there is an over-active condition of the sebaceous glands. The skin appears thick and coarse and shiny, and the pores are usually prominent.

Vigorous massage daily should follow the use of hot towels. A simple cream should be used, followed by hot and cold towels and one of the wrinkle lotions be applied twice daily. Creams with wax should be avoided, as they help to clog the pores still more, thus adding to the trouble. Some of the astringent lotions referred to in the treatment of blackheads usually help to reduce the pores. The treatments are usually of several months' duration, and given daily to make the skin what it should be.

FOR COARSE SKIN

℞	<i>Pulverized Camphor</i>	20 gr.
	<i>Powdered Talcum</i>	$\frac{1}{2}$ oz.
	<i>Oxide of Zinc</i>	2 dr.
	<i>Starch</i>	2 "

FOR OILY SKIN

℞	<i>Rose Water</i>	45 gr.
	<i>Sweet Almonds</i>	8 "
	<i>Bitter Almonds</i>	2 "
	<i>Benzoate of Soda</i>	$\frac{1}{4}$ "

An astringent cream that bleaches and softens some coarse skins is the following:

℞	<i>Milk of 50 Crushed Almonds</i>	
	<i>Rose Water</i>	1 pint
	<i>Alum</i>	$\frac{1}{2}$ ounce

Strain through fine cheese cloth, and dab on a skin that is inclined to large pores, after having squeezed out any blackheads.

AN ASTRINGENT LOTION FOR LARGE PORES

℞	<i>Rose Water</i>	6 oz.
	<i>Elder Flower Water</i>	2 "
	<i>Tinct. Benzoin</i>	$\frac{1}{2}$ "
	<i>Tannic Acid</i>	10 gr.

ANOTHER ASTRINGENT LOTION FOR LARGE PORES

℞	<i>Alcohol</i>	12 gr.
	<i>Tinct. Benzoin</i>	2 "
	<i>Liquid Borax</i>	2 "
	<i>Balsam of Judea</i>	5 drops

BLACKHEADS.—This unsightly affection of the skin is one of the hardest to overcome. Blackheads are not worms, but plugs of sebaceous matter retained in the lazy and inactive pores. To remove them the face should be thoroughly cleansed with hot towels to soften the skin, and the blackheads be squeezed out with the finger tips or an instrument made for that purpose. Here, too, the cleansing lotions, especially No. 2, given on page 239, will be found excellent. An astringent lotion which may be applied with good results is composed as follows:

ASTRINGENT BLACKHEAD LOTION

R	Sulphate of Zinc	1 dr.
	Sulphuret Potash	1 "
	Rose Water	4 oz.

Mix and after shaking apply once daily with absorbent cotton. If the case is of a chronic nature the following ointment may prove of value:

BLACKHEAD OINTMENT

R	Salicylic Acid	6 dr.
	Benzoinated Lard	2 oz.

OR

BLACKHEAD OINTMENT

R	Vaseline	30 gr.
	Oxide of Zinc	7 "
	Ergotine	3 "

Mix into a smooth paste and apply to parts after the steaming process once daily, or massage the skin with green soap, tempering its severe action by bathing freely with rosewater.

Here is about the best formula for the green soap, if you wish to make it yourself:

GREEN SOAP

R	Potash or Green Soap	10 parts
	Sulphur Precipitate	10 "
	Naphthol	1 "

The following two formulas are found to produce good results in some cases:

FOR BLACKHEADS

R	Rosewater	2 oz.
	Glycerine	1/2 dr.
	Tincture of Camphor	1/2 "
	Precipitate of Sulphur	1/2 "

OR

FOR BLACKHEADS

R	Potassium Carbonate	1/2 pd.
	Acetone	1 pt.
	Alcohol	2 qt.
	Glycerine	1 1/2 qt.
	Water	1 gal.

MILIUM.—This peculiar blemish, commonly called whiteheads, as contrasted to blackheads, is ignored by some as a thing too trifling to treat, and indeed the appearance of milium is in many cases of so slight a character as to be hardly noticeable. Milium may be described as a series of minute elevations in the skin, white, or gray, or yellowish, which vary in size from a pinhead or less to a third the size of a rice grain. Occasionally these projections actually resemble small grains of rice. They may be found on any part of the face, but are most frequently just below the eyes, and their size for years may remain the same. It is only when they get numerous or grow large that they can be deemed a special disfigurement. Exactly what causes them is a puzzle. The proper way to treat them is to open each with a very fine lancet and by gentle pressure expel the contents. Be sure that your lancet is sterilized, and after you have pressed out the contents, although this condition hardly constitutes a disease, and may be quite a natural one, it is well to use a little peroxide of hydrogen on the part treated.

RINGWORM.—This affliction, which, however, the facial operator is not likely to be called on very often to treat, can be dispelled by a treatment exceedingly simple. Paint the part every other day with a camel-hair brush dipped in decolorized tincture of iodine until cured.

CHAPPED LIPS.—A simple, easily made remedy is a combination of mutton or lamb tallow and camphor. Melt a piece of gum camphor about the size of a walnut with two ounces of the tallow. Keep in a porcelain or glass jar.

This is also good for chapped hands.

SUNBURN.—This painful inflammatory condition results from undue exposure to the sun. The patron should not receive massage until the irritation of the skin subsides, but treatment of a cooling nature such as mild glycerine and rosewater lotions should be applied. Glycerine and witch-hazel usually act beneficially.

A cooling massage cream without wax or the employment of white vaseline or benzoinated lard, as prescribed by the United States Pharmacopœia, gives comfort.

After the skin begins to scale off gentle massage may be followed with the application of a pure cream, leaving sufficient on at night to keep the skin soft and cool. A good powder may then be used to protect the new and delicate skin from the elements until entirely restored.

While it is well enough to treat sunburn, it is of value to know how to prevent it. A delicate cream, like the sweet cream from milk or a rosewater cream (cold cream) without wax, as has already been referred to, rubbed on the skin before going into the hot sun, is the best safeguard. Over the cream a cooling face powder should be dusted on. Those powders having coloring matter, especially the Brunette, are most suitable for this purpose. Over this veils of blue or red should be worn to counteract the piercing rays.

For those whose skins burn very readily the following lotion should be applied to the skin thoroughly and allowed to dry on:

CALAMINE LOTION

℞	<i>Calamine Powder</i>	20 gr
	<i>Oxide of Zinc</i>	½ dr.
	<i>Glycerine</i>	½ oz.
	<i>Lime Water</i>	6 dr.
	<i>Rose Water to make</i>	4 oz.

Mix the powders with the glycerine into a paste and add the lime and rosewater. Shake well before using.

The use of this mixture leaves a powder upon the skin which acts as the protective agent. No face powder need be applied over it.

For the hands the same methods as for the face are to be used. Open-work silk gloves are to be avoided, but gloves of even weave and solid texture should be worn. To wet the hands and allow them to dry in the sun is a sure way of producing not only painful burns, but also large and ugly freckles and discolorations.

FRECKLES AND TAN.—Freckles and tan are the result of pigmentation brought to the skin by the action of the sun or wind. They can be readily removed, but will appear again if the skin is exposed. Bleaching agents remove them, of which the following are good:

FRECKLE AND TAN LOTION

<i>R</i>	<i>Lactic Acid</i>	<i>1 oz.</i>
	<i>Glycerine</i>	<i>1 "</i>
	<i>Rose Water</i>	<i>6 "</i>

or

FRECKLE LOTION

<i>R</i>	<i>Rose Water</i>	<i>2 oz.</i>
	<i>Oxide of Zinc</i>	<i>1/2 "</i>
	<i>Glycerine</i>	<i>1/2 dr.</i>
	<i>Oil of Rose</i>	<i>6 drops</i>

Mix and apply to the face with absorbent cotton two or three times a day.

For summer freckles the following simple mixtures will often prove effective, the degree, of course, varying with various skin textures.

They are to be dabbed on with a bit of cotton or a soft rag or sponge or a camel-hair brush, several times a day, if possible.

<i>R</i>	<i>Peroxide</i>	<i>1 oz.</i>
	<i>Ammonia</i>	<i>1 "</i>

OR

R	<i>Peroxide</i>	$\frac{1}{2}$ wine glass
	<i>Witch Hazel</i>	$\frac{1}{2}$ wine glass

OR

R	<i>Rose Water</i>	$\frac{1}{2}$ wine glass
	<i>Ammonia</i>	6 drops

OR

R	<i>Glycerine</i>	1 oz.
	<i>Lemon Juice</i>	1 "

For winter, or strongly intrenched freckles the following is effective:

R	<i>Bitter Almonds</i>	$1\frac{1}{2}$ dr.
	<i>Blanched Jordan Almonds</i>	$\frac{1}{2}$ oz.
	<i>Sol. Bichloride of Mercury (1/1000)</i> ...	6 drops
	<i>Distilled Water</i>	$\frac{1}{2}$ pint

Apply with camel-hair brush; keep away from the eyes; allow to remain on five minutes, and wipe off with soft cloth.

Another suitable but poisonous lotion which should not be allowed to get into the eyes is made as follows:

MERCURY FRECKLE LOTION

R	<i>Mercuric Chloride</i>	7 gr.
	<i>Zinc Sulphate</i>	90 "
	<i>Almonds (blanched)</i>	60 "
	<i>Rose Water</i>	8 oz.

Make an emulsion with the almonds and rosewater. Dissolve the mercury therein and add the oxide. Shake well before using and apply with cotton once daily. If it irritates skip a day.

The same lotions as for freckles are used to eradicate tan.

To prevent the reappearance of the freckles, before exposure to the sun and wind, use a little cream on the skin and cover with one of the face powders. On very hot days wear a red or blue veil. Freckles are much

rarer among brown-skinned individuals and races than among the blond.

LIVER SPOTS AND MOTH PATCHES.—These unsightly spots of yellowish brown and brown appear on the face, arms and hands, and do not respond to freckle lotions readily.

The pigmentation here is deeper and harder to reach. A direct application is necessary. A capital lotion applied to the spots once daily with a little bit of cotton wound around a tooth-pick is made as follows:

LIVER SPOT ERADICATOR

<i>R</i>	<i>Bichloride of Mercury</i>	7 gr.
	<i>Acetic Acid Dilute</i>	2 dr.
	<i>Borax</i>	20 gr.
	<i>Rose Water</i>	4 oz.

Mix and apply as directed. If the spots become irritated and scaly, skip for one or two days. Lighter blotches or spots may respond to the daily use of peroxide of hydrogen, in full strength.

WARTS.—These ugly excrescences are likely to appear on the handsomest faces. They sometimes, but very rarely disappear of their own accord. The electric needle will remove them, as described fully in the course on Electrolysis. The internal use of a tablespoonful of lime-water twice a day will often give good results, especially when the warts appear on the hands of young persons.

The careful daily application of glacial acetic acid with the point of a tooth-pick will sometimes cause them to disappear, but the healthy skin must not be touched therewith since it will cause ugly sores and consequent scars in the skin.

The external use of a stick of lunar caustic, carefully applied, will gradually kill them off. The warts turn

black after the application. This black covering is to be peeled off and the caustic again applied in a few days, repeating the process until the wart disappears.

The two latter methods are liable to leave small white scars where the warts have been.

The following has been found in skilful hands to be a highly effective

WART AND MOLE REMEDY

R <i>Ferri Chloride of Iron</i>	2 oz.
<i>Tincture Chloride of Iron</i>	1 pt.

Mix and put in glass bottle with glass or rubber stopper. Apply to the wart by dipping a tooth-pick into the mixture and dabbing it on the wart, without pricking it. Be careful to protect the tissue surrounding the wart from the iron mixture. This can be ensured by covering it with a piece of paper or adhesive plaster. After applying the mixture to the wart for a few minutes, dip a bit of absorbent cotton in the best cider vinegar and squeeze a drop slowly on the wart. It is better to make this iron application very lightly the first few times one performs this operation, for the iron might eat too deep. When skill has been gained by experience, one application will suffice; the wart will blacken and drop off soon.

This same application can be used for a mole; but, in the case of a hairy mole, it will not kill the hair. That must be extirpated by electrolysis, either before or after, preferably after (see page 323).

SCARS AND SMALL-POX MARKS.—Scars are difficult to eradicate—children usually outgrow them. Sometimes a large scar can be made much smaller by surgical means, and in some cases the scar tissue can be broken down and the appearance very much improved by electrical means. This is fully described in the chapter on Electrolysis (see page 326).

BIRTHMARKS.—We would not advise an attempt to treat a birthmark. Where the mark is rough or raised, facial surgeons have had considerable success—but birthmarks that are smooth and well implanted into the skin and flesh yield very slowly if at all to treatment, and should not be touched except by an experienced physician. What can be done for their eradication is described in the chapter on Electrolysis (see page 325).

SUPERFLUOUS HAIR.—This facial disorder has already been discussed in the part of the book treating of hair (see page 205), and will be still more fully treated of in Part V, on Electrolysis.

CHAPTER XIX.

PHYSIOLOGY OF FACIAL MASSAGE.

Scientific vs. Unscientific Massage—Distribution of the Facial Muscles.

"THE term *massage*," says Dr. H. G. Wood in his "Therapeutics," "is used as the generic name for external manipulations which are employed for the purpose of affecting the nervous and muscular system and the general circulation." This implies that a knowledge of the structure of the parts affected must be obtained before the operation can be conducted properly. Especially must the position of the muscles and the direction in which their fibres extend be known in order that the manipulation may be beneficial. Yet of all the persons claiming to give massage, especially of the face, only a small percentage possesses the faintest trace of this knowledge, or even realizes that it is necessary. They are merely "skin-rubbers," producing no beneficial result beyond the slight increase of the circulation in the skin, and doing positive harm to the muscles by distorting the natural lines of their development.

Massage is of high antiquity, as indicated by the etymology of the word, which is derived through the French *masser* from the Greek *massein*, meaning "to knead." Not only in Greece and Rome, but in ancient Persia, India, and China it flourished as a curative process and as a form of gentle exercise for invalids.

Our progress in knowledge of the relations between the functions of different bodily organs has raised mas-

sage almost to the rank of an exact science. But still it is an art, for into it each well-taught operator can infuse individuality and can thus achieve a special personal skill in it that makes and keeps patrons.

Massage has been found to be the best means to restore the contour of a withering face and a drooping complexion. By its means the skin is cleansed of retained sebaceous matter intermingled with dirt and infective germs that cause inflammatory skin lesions, such as pimples, blackheads, discolorations, shrivelling and premature wrinkling, and at the same time a new life is given to the sluggish circulation with a persistence that eventually builds up the sunken hollows and produces a healthy glow and texture.

Massage must, however, never be depended upon alone. Any physical faults that tend to lower the vitality of the body must be corrected as well, and habits that lead to lowered states of the system must be avoided and in their place outdoor exercise, physical culture, and proper and regular eating are to be insisted upon.

Above all, the masseuse must insist upon the discardance of all unwholesome means used to make the face appear natural. Nearly all cosmetics eventually lead to complete ruination of the texture of the skin. Besides, they generally make even a very fine-featured face look vulgar, and the user's social status is apt to become a subject of suspicion.

Furthermore, the use of external applications to the skin to cure it of discolorations and other blemishes is rarely sufficient to effect a satisfactory result. Such may seemingly mitigate conditions or improve the looks for a time, but their value is ephemeral, even when they are not decidedly harmful. Massage should always accompany the treatment to obtain permanent results.

The fault on the other hand of many physicians and skin specialists has been to prescribe only internal remedies or perhaps a combined internal and external mode of treatment, leaving it to the patient to attend to the application of such lotions as are given. It is needless to say that failure results in most of such cases, since the patient does not understand the actual object of the medicines to be applied to the skin or the method in which they are to be applied. So she becomes quickly discouraged, only to go to another and still another physician with the same outcome.

It is in the power of the masseuse to satisfy these patients, and, thanks to progress, patients are beginning to learn this fact.

Not only can the operator dispel the affliction of the skin, wherever it may be, but can also restore the health and beauty of a hideous skin, give a graceful contour to the shrunken parts of the face and make an anxious patient happy.

Thoroughly to prepare the operator for the fulfilment of her duties it is well to enter upon a systematic consideration of the treatment and massage of the face, for without a knowledge of the structure and function of its muscles much harm can be done.

Accordingly the author has prepared a diagram showing the distribution of the muscles of the face and the direction of their contraction (see Figure 104).

The arrow heads drawn along the lines of the muscles show their directive function or action. With a little study of this picture it will be seen that each muscle is attached at its two ends; and a little reflection suffices to show that these muscles contract or shorten on themselves so as to bring these ends nearer together.

It is understood that both sides of the face are alike

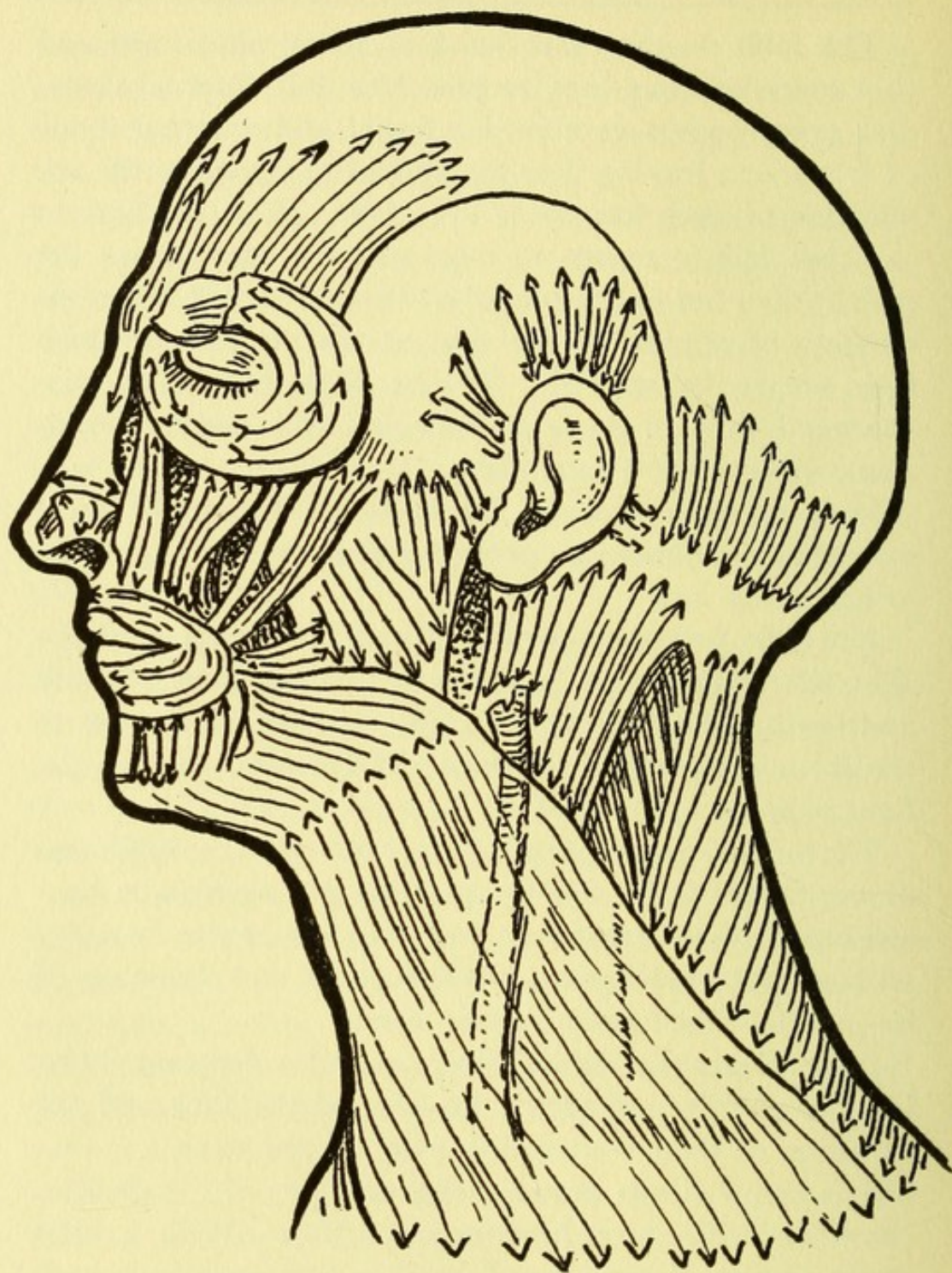


Fig. 104

THE MUSCLES OF THE FACE AND THE DIRECTION
OF THEIR CONTRACTION

in health, or are very nearly so. Slight differences are remarked in every person, due to hereditary causes, chewing on one side of the mouth, speaking incorrectly from the mouth to one side, wiping the nose to one side always, habitually laughing more on one side than the other, and other acquired causes of facial deviation, not to include differences caused by disease of the nerves and muscles.

These muscles of the face are as prone to relaxation and consequent flabbiness as any other muscles of the body, hence a sagging of the cheeks, a double chin, etc., etc.

On the other hand, the improper and persistent use of a muscle will strengthen it and cause abnormal development with consequent obliteration of fat and wrinkling of the skin near it as in the frown or the lines at the outer angle of the eye called crow's feet.

Wrinkling in general may therefore depend upon an unnatural use of the muscles, but also upon a lack of this use, with the result that the muscles become flabby, sinking below their natural level, and allowing the skin to fall with them, thus causing hollows, furrows and folds.

It is well known that exercise strengthens faculty, and this applies particularly to muscular structure. Care should be taken, however, not to over-exert a muscle or group of muscles since that leads to the same fault as inactivity. A muscle is built up by gentle systematic massage and rendered entirely useless by rough unnatural manipulation. Furthermore, without a knowledge of the use of any muscles, the incorrect massage thereof will result in a continuation of the fault and only go to lengthen it instead of shortening it, or, in other words, improving its contractile power.

CHAPTER XX.

GENERAL FACIAL MASSAGE BY HAND.

General Instructions—Massage Cream—Vacuum Massage—Cautions.

MASSAGE should be given regularly and for a given period of time at each sitting. A single massage treatment a week does little good. The best results are attained by giving at least three treatments a week for two or three months. A half hour's work includes preparation, washing, massaging and the application of the necessary creams and lotions.

Massage, if properly applied, improves the skin greatly by increasing the sluggish circulation, emptying out the occluded pores of harmful secretions, gives tone to the skin itself through the agency of proper exercise so commonly neglected by many persons, and finally builds up the lazy, tired and unused or wrongly used muscles of the face. Merely by improving the circulation many skin troubles can be overcome because the pores are forced in this way to receive better blood and by the movement of the skin to throw off poisonous secretions not removed by ordinary means of cleansing.

To prepare a patron for massage, begin by presenting yourself as cleanly and attractive as possible in simple dress and protective apron of white material. The hands should be hygienically clean, the nails manicured and their edges slightly shorter than for social purposes, as they are apt to scratch the skin. There should be a reclin-

ing chair so placed that the light will fall upon the patron's face from over the forehead down, yet not so that the operator will stand in her own light. A side light is always satisfactory. A direct light into the face of the patron is objectionable.

The proper chair is one with leather cushions, adjustable from a sitting to a reclining position with a headrest if possible. This latter fixes the head and is particularly useful, when slight pain is caused in opening pimples, etc., in preventing the patron from pulling her head away.

Fresh laundered towels of soft texture should lie within easy reach. Satisfactory porcelain or movable wash-basins of white agateware are needed. The fixed basin should be supplied with hot and cold water. Two movable basins are necessary if the fixed basin is not supplied with hot and cold water. A small table should stand to the right of the head of the chair upon which the towels, bottles of lotions, cream jars, absorbent cotton and other needed things are placed. The patron is now laid into the chair with her head about the height of the operator's elbows. A clean towel is pinned around her hair, the pin in front just at the hair line of the forehead. This prevents the wetting and greasing of the hair. Another towel is placed over the chest; closely tuck this about the neck to prevent soiling of clothing, and have plenty of hot and cold water handy.

Immerse two towels in the hot water just hot enough not to feel uncomfortable to the hands. One is wrung out fairly dry and is placed upon the face of the patron, giving space for the nose to allow breathing. Let this remain on a minute while preparing the second towel as the first. Remove the first and apply the second. Repeat this until ten or twelve towels have been used on the

face, using, of course, only two towels, the one taking the place of the other.

This softens the cuticle, brings the blood to the skin and softens the oily or fatty plugs in the pores. Then dry off the face with a soft towel, mopping or gently rubbing upward, or lay the towel on the face and rub the towel.

The operator is now ready to massage. To have the fingers glide easily over the skin a little pure almond oil or pure white vaseline is smeared on the skin or over the inner side of the fingers and palms of the operator. Too much oil or cream spoils the effect, since it makes the fingers slip too easily.

Now stand back of the patron, place the fingers of both hands upon her cheeks with the tips of the fingers a little beyond the chin and draw your hand upward, using gentle pressure with the tips only.

Make this movement an upward and backward one, so that at the end of the stroke the finger tips will be at the hair line over the temples. Repeat this movement with the fingers of both hands at once for about twenty strokes.

Then begin another series of strokes in the same position, but now make the finger tips form circles about as big as a half dollar, upward and around one line of circles above the other until the forehead is again reached. Repeat these movements five or ten minutes, always using gentle upward pressure.

This finished, take up the forehead. Place the tips of the fingers so that they meet at the centre above the eyebrows and move them outward and upward to the temples for a given number of strokes. The circular movement is then taken up as before described. Always remember that in this method the tips must press most as

they pass upward. Never rub downward toward the eyebrows or inward from the temples toward the middle of the forehead; and remember that only after the direct rub should the light, rapid, rotary movement be used. This can begin at the corners of the nose on the cheek, or at the chin, and the massage should be upward and outward as far as the corners of the eyes, repeated several times. Then above the eyes between the eye and

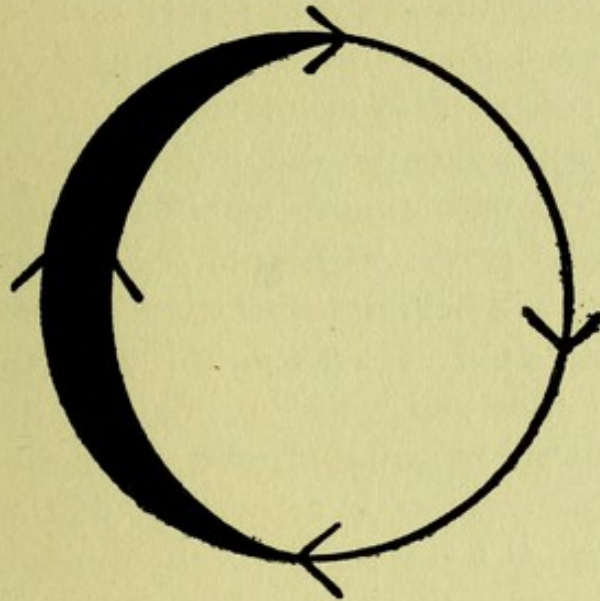


Fig. 105
DIAGRAM OF MASSAGE PRESSURE

eyebrow, placing one thumb on lower lid and the other just below the brow. *Avoid the eyeball.* The above circle (Figure 105) will give the idea best perhaps. Where the curved line is thick most pressure is used; that is, going upward; and when thin, the least possible pressure; that is, downward.

Then, before massage of the chin, place the hands so that the finger tips meet in front under the chin, and draw them backward and upward toward the back of the ear. On the neck the fingers are drawn backward until they meet at the middle of the neck. Better to

accomplish this, the patron may be allowed to sit up. Repeat these movements as on the face; follow with the circular movements. Now a word as to the force to be given to the finger tips. Never press hard, never hurt the patron. Use force enough to stimulate the skin, to exercise it and not to bruise it. Hard pressure drives away the fat from the face, thus spoiling the contour or smooth outline so much desired. Instead, hard massage hardens the muscles and makes them stick out like cords, stretches the skin and produces wrinkles—the very things you want to overcome.

If the patron's face be sallow and thin or sunken, a slight pinching with thumb and first finger, or thumb and first two fingers, when the operator's fingers are very tapering, will help much to stimulate circulation and bring the cheeks out. Do not do this more than two minutes the first time and work up gradually to five or six. The same delicate pinching process under the chin, if well done, helps to remove or to prevent that unsightly accumulation called a double chin. In this, massage from the neck upward toward the chin and outward toward the base of the ears. Never downward. That would tend to increase the deformity.

The face now having been massaged in the manner described in a general way, it is again cleansed with several hot towels, followed by several wrung out in cooler water, softly dried and a proper cream thinly applied. A pure cream is necessary and the following is satisfactory with healthy skins:

MASSAGE CREAM

R	<i>Elder Flower Water</i>	4 oz.
	<i>Almond Oil</i>	4 "
	<i>Spermaceti</i>	1 "
	<i>White Wax</i>	1 "
	<i>Tincture of Benzoin</i>	1 dr.

Gently melt the wax, spermaceti and almond oil together in an earthen pot until every sign of the wax has disappeared. Then stir with a glass rod, mixing the three parts thoroughly. Stirring quickly, now pour the elderflower water into it in a fine stream. Continue to stir to get the creamy appearance and finally add the tincture of benzoin. Allow to cool gradually; put up in wide-mouth porcelain jars and cork tightly. Screw-caps on the jars are best.

Use only enough cream to moisten the skin or so it will hold the powder next applied. One of the powders described on page 239 is satisfactory. Remove the towels from the head and about neck, concluding the treatment.

Other recipes for massage creams will be found on page 238.

VACUUM MASSAGE.—As an assistant to massage by the hand an instrument embodying the principle of vacuum massage may be employed, especially when treating sunken or shrunken parts of the face. There are a num-

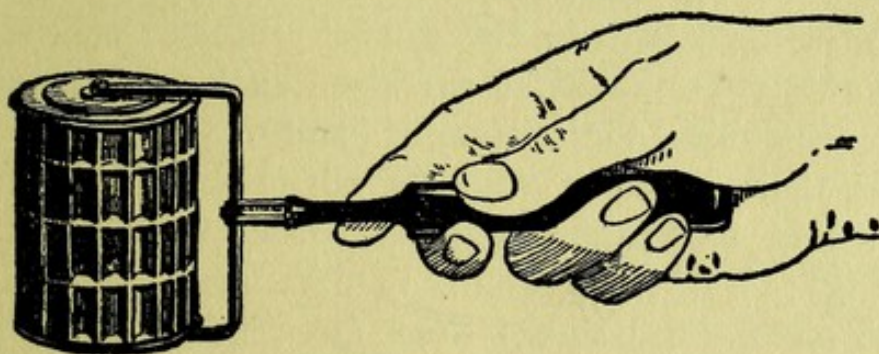


Fig. 106

/ VACUUM MASSAGE ROLLER

ber of forms of this mechanism, but all are based on the cupping idea.

In Figure 106 one of these is illustrated.

It is a soft-rubber roller whose surface is indented

with rectangular depressions. Rolled over the skin, firmly and slowly, it stimulates the circulation by suction.

In Figure 107 another form of machine is illustrated.

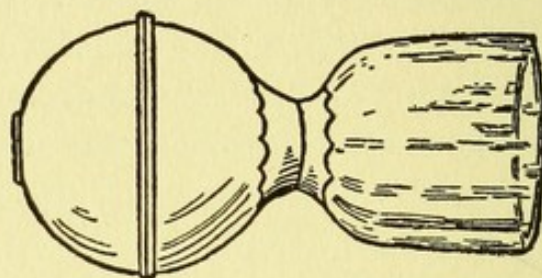


Fig. 107

VACUUM MASSAGE CUP

This consists of a glass cup inverted and surmounted by a soft-rubber bulb with which it is connected by an air passage. By squeezing the bulb, placing the mouth of the cup on the skin and releasing the bulb, the skin is sucked up in a circular section, and the blood drawn to it. The cup is then slowly pulled from off the skin in an upward direction. This is repeated over the entire surface needing massage. The action is more constant and prolonged than in the rolling process. Neither of these machines should be employed exclusively or without a controlling conjunction of hand massage. In other words, they should be adjuncts, not principals.

Used in alternation with the delicate pinching and striking processes by hand, vacuum massage helps to round out the contour of some faces more rapidly than simple hand massage alone—and to do this more evenly, for the reason that the force is more evenly applied and distributed.

For exceedingly delicate “rose-leaf” skins it is not recommended, as it might tend to make them too ruddy, but for sallow or muddy skins this drawing of the blood supply to the surface is beneficially effective.

The cheeks and neck furnish its chief field for operation, and it should not be employed if there happen to be any hard sore spots or lumps or sores of any sort.

Used in moderation, it aids in cleansing a skin that has been washed in warm water and pure soap, by drawing foreign matter out of the pores, in addition to its stimulation of the circulation which makes the cleansed skin perform its natural excretory functions more freely.

Vacuum massage is also employed for bust development (see page 360).

CAUTIONS.—In giving massage, the trained operator will finally come to know the muscles and nerve network of the face as an expert pianist knows the keyboard of a piano, and, following out the simile, will understand, by that familiarity the operations of which are like those of instinct, just when and where to give pianissimo touches and fortissimo strokes.

But as for the latter, always bear this point clearly in mind: While massage in some cases and places may properly be vigorous, it must never be rigorous. The proof of its beneficence is a sense of refreshment on the part of the patient. Soreness or weariness is a wrong result.

Pay no heed to those blind leaders of the blind who confidently tell you in the newspapers that over-fat cheeks, pendulous chins, or thick and flabby necks must be pounded by lead balls or cannonaded away, as it were.

These violent methods are fit only for barbarians, True artists attain their objects by gentle means in the beginning, increasing in vigor by easy gradations, but never rising to severity.

None of the massage motions should be continued so long as to drag the skin or set it at odds with its under-

lying muscles. Some of the old-time hit-or-miss operators used to have a jargon about "ironing" the wrinkles out of the skin. They ironed more into it than they ever ironed out.

Wrinkles are often caused, not alone by years or special worry, but simply by an atrophy of the muscles underneath from lack of sufficient exercise. Never maul these muscles by pounding. Tapping and soft pulling, along the line of tension, not athwart it, is all that should ever be done. For, whatever the cause of the wrinkles, the task is to rebuild their underlying muscles to pristine size and power—not to batter them flatter still. This may require, in some instances, delicate and patient manipulation day after day and week after week before definite results begin to appear.

Where the wrinkles are not of long standing, the task is generally much easier. Where they are just beginning to show, a few treatments will suffice to convince the patron of your ability to coax them away.

When this has been accomplished, you must impress upon the patron the sensible notion of taking two preventive treatments each week, in order to keep them away. And, besides the preventive treatments, which your scientific skill enables you to give, it is well to make the patron understand that she or he must co-operate with you by avoiding those irregularities which invite a return of the disfigurement, and particularly by cultivating a sunniness of temper, or acquiring the priceless mental habit of looking on the bright side of things.

CHAPTER XXI.

REGIONAL FACIAL MASSAGE BY HAND.

Cheek Massage—Tissue Food—Wrinkle Lotion—Under Eye Massage—Nose Massage—Mouth Massage—Temple Massage—Forehead Massage—Chin Massage—Ear Massage—Neck Massage.

To undertake regional massage or the upbuilding of parts of the face or improvement of the skin of such parts, the student is referred first of all to the muscular structure of the parts and the direction of action in them shown in diagram on page 262.

The operator, being ready to proceed, may take up a regular way of massaging the face; may begin with the cheek or the forehead, etc., but perhaps the following order will be found most practical:

- | | |
|---------------------|------------------|
| First, cheeks. | Fifth, temples. |
| Second, under eyes. | Sixth, forehead. |
| Third, nose. | Seventh, chin. |
| Fourth, mouth. | Eighth, ear. |
| Ninth, neck. | |

In massage of the cheeks, consider first what is necessary to do. Are the cheeks drooping and saggy or too prominent and puffed? In one case the cheeks are to be nourished and strengthened; in the other the fat is to be removed.

SUNKEN AND WRINKLED CHEEKS.—Given then a pair of sunken cheeks, drooping with signs of jowls, proceed to massage in the direction of the lines shown in Fig-

ure 108. The three lines show the upward path of the fingers.

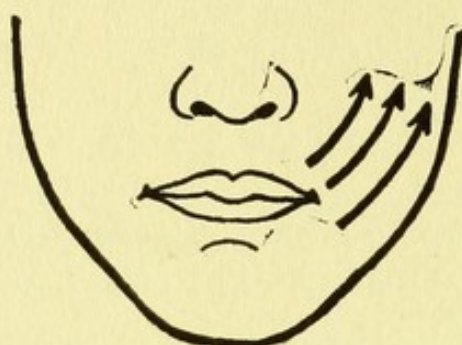


Fig. 108

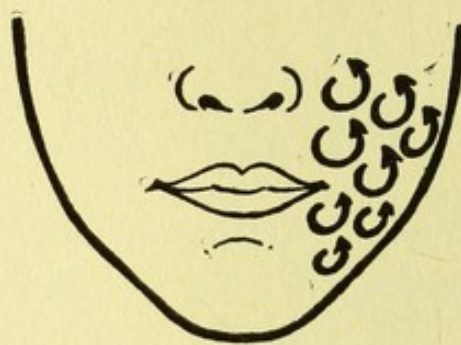


Fig. 109

Follow this with the circular movements as shown in Figure 109.

If the parts are poorly nourished, the usual thing in such cases, you must aid the upbuilding work by using a tissue-builder like cocoa-butter or tissue food, a cream of high nourishing value, a little of which is massaged into the parts with the palms of the hands in circular movement at each sitting. It is understood of course that the health of the patron is looked after internally as well.

Perhaps the best tissue food to help build up poorly fed parts is pure cold-rendered leaf lard. It absorbs readily, is cheap, clean and can be had at all times. For the purpose it may be perfumed with any of the essential oils. The following is a fine preparation:

TISSUE FOOD

R	<i>Lanolin</i>	1 oz.
	<i>Pure Leaf Lard</i>	1 "
	<i>Boric Acid</i>	3 gr.

This is mixed together into a smooth paste, and a quantity the size of a hazel-nut is rubbed into each cheek daily. This procedure may follow a general massage of the face or be rubbed in with the palms of the hands

moved in a circular way directly after the use of the hot water towels which have opened the pores of the skin and made them ready to absorb fatty matter. Give the patron some to use at home, if not taking daily treatment.

When the cheeks show less flattening or do not require the use of tissue food, massage should be resorted to alone, using the massaging cream, and if the skin shows a tendency to wrinkle, the use of a wrinkle lotion is advantageous.

This lotion is best applied at home daily after the evening wash, when cream and powder are not necessary. The lotion is daubed on with absorbent cotton and allowed to dry on skin and remain over-night.

WRINKLE LOTION

R	<i>Alum (powdered)</i>	1	dr.
	<i>Milk of Almonds</i>	1½	oz.
	<i>Rose Water</i>	6	"

Dissolve the alum in the rosewater, and while stirring add the almond milk. Another mixture is made of:

R	<i>Tannin</i>	30	gr.
	<i>Glycerine</i>	2	dr.
	<i>Rosewater</i>	1	oz.

Dissolve the tannin in the rosewater and add the glycerine. This lotion is applied at night with a small piece of absorbent cotton and allowed to dry on. These wrinkle lotions can of course be applied to any part of the face or neck. It is understood that they help to remove the wrinkles only when coupled with faithful massage. When occurring in elderly patrons little can be done but to improve the lines generally, although a process termed face-skinning may be undertaken.

FAT OR PUFFED CHEEKS.—The fault here is an over-production of fat which can be readily removed with massage. Having too much fat, it is of course not nec-



Fig. 110

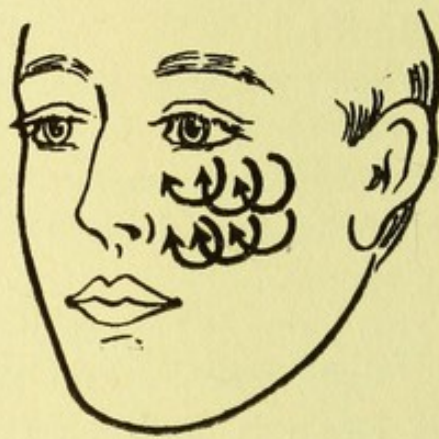


Fig. 111

essary to mention that as little cream is used as possible ; in fact, just enough to permit the movement of the finger tips over the parts. The pressure can be heavier and the treatment prolonged to a degree that tends to wear down the surplus fat. The movements, stroke and direction are shown in figures 110 and 111.

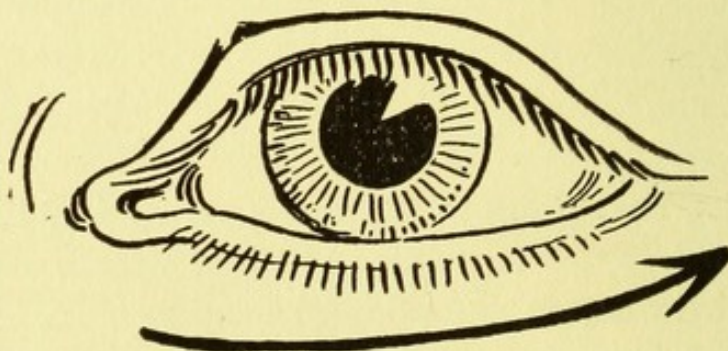


Fig. 112

UNDER EYE MASSAGE.—Massage of this part of the face is usually employed to remove laughing wrinkles or lines, the result of bagginess under the eyes, a fault that is not so easily corrected because there is so little

muscular tissue below the thin skin. Persistent and daily massage, using the finger tips of the index fingers only, will, however, give good results. One of the wrinkle lotions may be used also. The movement of stroke is the most successful. Its direction is shown in Figure 112.

The pressure used here is somewhat gentler than that used with any other part except the ears. Circular movements may also be tried, but here the circles are made to unite in a spiral form as shown in Figure 113.



Fig. 113

The pressure of the spiral is made in a semi-circular upward and downward direction.

NOSE MASSAGE.—The nose generally needs less massage than any other feature, its skin being practically fixed on the bone and cartilage. Use thumb or thumb and forefinger with a rotary motion to a point just above inner corner of eye. Take care to cleanse thoroughly the natural wrinkle on both sides, a place where dirt collects.

MOUTH MASSAGE.—The massage about the mouth includes both upper and lower lips. The movements are index finger strokes as shown in Figure 114.

The build of the mouth does not permit of very efficient circular massage, but it can be done especially to remove fine lines, using the spiral direction given in Figure 115.

It is well to call patrons' attention to a frequently met habit of pursing the lips or contracting the mouth mus-

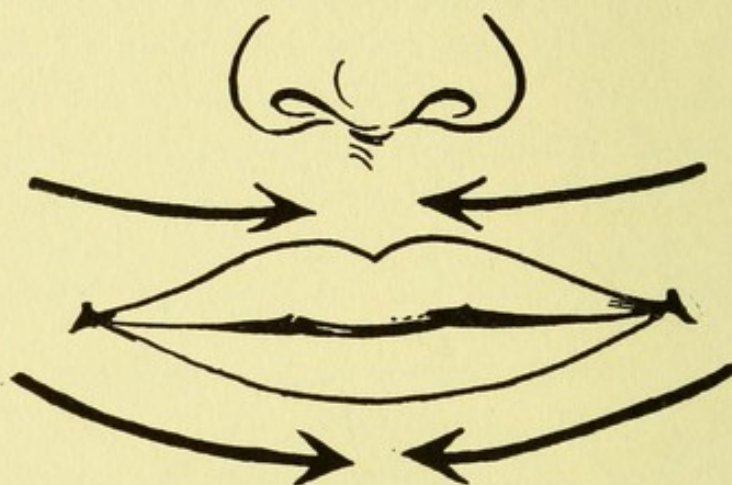


Fig. 114

cles—this should be overcome and the muscles relaxed when the mouth is in repose.

If the lips are thick and require reduction, the simple stroke movement, moving outward and upward instead

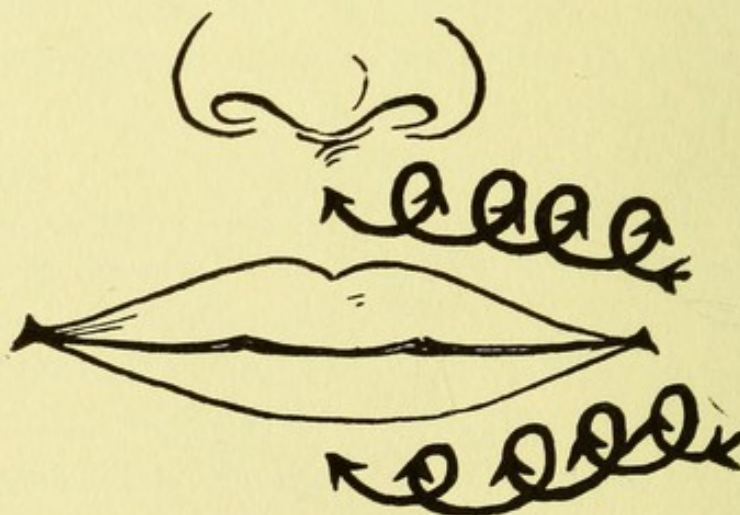


Fig. 115

of inward, as shown in Figure 116, is used. Here also is employed the use of the operation for thick lips explained on page 354.

Drooping angles at the mouth are worked upward, using the same direction as with sagging cheeks.

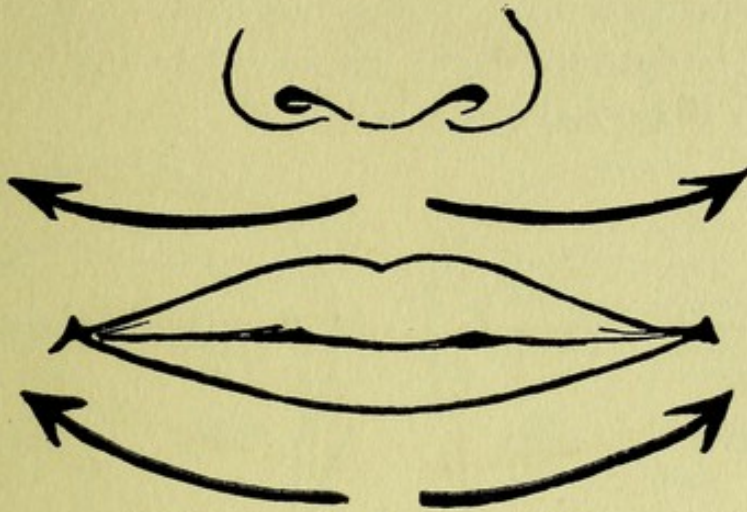


Fig. 116

TEMPLE MASSAGE.—The best individual movement here is the circular made with the second and third fingers, although the stroke massage for cheeks is used first. The movement in the former is shown in Figure 117.



Fig. 117



Fig. 118

The same movement used lower down over the outer corner of the eyes helps to remove crow's-feet.

FOREHEAD MASSAGE.—Here there is usually a frown to overcome. This is to be worked from the centre, ra-

diating upward and outward somewhat in the shape of a palm-leaf as shown in Figure 118.

For transverse lines of the forehead the direction of massage is outward from the centre to the temples as shown in Figure 119.



Fig. 119



Fig. 120

The outward circular movement is also used here with advantage, being carried out as shown in Figure 120.

CHIN MASSAGE.—Much can be done to reduce a heavy or growing double chin. The pressure used should be quite hard beneath and gentler in front of it. The best movement is the stroke in either case as shown in figures 121 and 122.

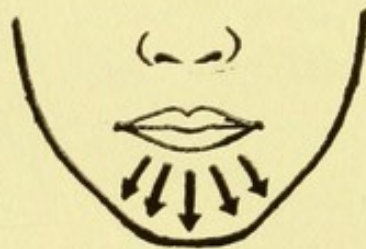


Fig. 121



Fig. 122

Massage very heavy chins somewhat heavily beneath the jaw. Absorbent cotton, saturated with the wrinkle lotion and held in place by a strip of muslin, should be worn during the night. Chin straps, worn at night, also

help to check the growth of fat both by pressure and sweating. These are caps of knitted cotton or silk made to fit the chin with tapestrings or wide rubber bands tied under the chin and over the head. Further instruction for the prevention and treatment of double chin is given on page 339.

EAR MASSAGE.—Into the inner curves of the ear the fingers cannot easily go. These ought to be gently rubbed with a small orangewood stick on which wind a small cap of absorbent cotton. A drop of olive oil on this is both pleasing and beneficial. Then take that part of the ear in front of the lobe and just above it, using first the tip of the forefinger, with an upward movement and a slight pressure inward toward the skull. When the forefinger reaches the beginning of the upper curve, use the thumb with it, following up and around and down very gently to the tip of the lobe. Never manipulate the ear outward, but always toward the skull. Never rub the lobe up. Ear massage should be the most delicate of all.

NECK MASSAGE.—The skin here is usually very loose, requiring many treatments to get good results. Stroke the parts with the finger tips meeting in front, at the middle of the throat under the chin and drawing them with part of the applied palms as well, backward and upward toward the back of the ears. Follow with the circular movement often repeated, using all three fingers, both sides at once. Sometimes use of one of the tissue foods helps much to again round the drooping wrinkled skin.

CHAPTER XXII.

VIBRATORY MESSAGE.

Mechano-Vibratory Massage—Electric Vibratory Massage—Applicators—Effects of Vibratory Massage—Cautions.

HERETOFORE facial massage has been considered chiefly as given by the hand. While this method is doubtless the best of all in the management of an expert who can apply his or her art to each part of the face under treatment, there is much in vibratory or mechanical massage to commend these methods, also, even to an expert, for occasional use.

Vibration, effected by mechanical means, may be given almost as gently, almost as carefully, as by the well-trained human hand, or it may be so carelessly and recklessly applied as to seriously injure the patient.

Its efficiency lies in the fact that the individual space treated in regional massage is of small area and that the movement—a gentle or a medium-strong concussion of circular nature, helps more rapidly than by hand to restore the relaxed tissue to a normal tone by increasing the blood supply of the part, and by causing passive movement of lazy muscles or those that have undergone fatty degeneration.

Furthermore, the massage thus applied is more even, more regular, than that given by the hand, and is less tiresome to the operator, who may be called upon to

treat such a number of cases in a single day, as would, if treated with honest thoroughness, be likely to tire out a practitioner.

The vibratory instruments mostly in use hitherto have been those operated with an electrical current, but now the merely mechanical, percussive kind appear to be gaining favor, possibly because a great many persons are still afraid of electricity; although no direct contact of electricity is involved in the operation. Probably the rise in favor of the non-electric vibrators is due more to their simplicity and cheapness, since the very best electric vibrators are initially expensive, and—another point to be considered—are not easily transported. Besides, there is always the chance that even a very skilful operator may be suddenly inconvenienced by his electric vibrator getting out of order or the source of supply of his current being temporarily cut off.

NON-ELECTRIC VIBRATORY MASSAGE.—In vibratory manual massage (putting aside the varying factor of the amount of personal magnetism which a masseuse may be able to exert and impart) only a few hundred vibrations a minute can be given, and a speed like this, as intimated, is apt to be not only wearing on the operator, but of irregular effect on the patient.

The best non-electric vibrator attains a far greater speed with far less exertion, and maintains it at uniform rate. When the operator becomes master of the instrument he can accurately control and definitely adjust the amount of "dosage," to borrow a term from the medical vocabulary. In this it possesses an advantage over the vibrators run by the electric current.

This kind of mechano-massage is of two sorts, in one of which the plane of vibration is parallel to the surface

of the body; in the other perpendicular. The positions are illustrated in figures 123 and 124.

The operator holds the handle in the left hand and

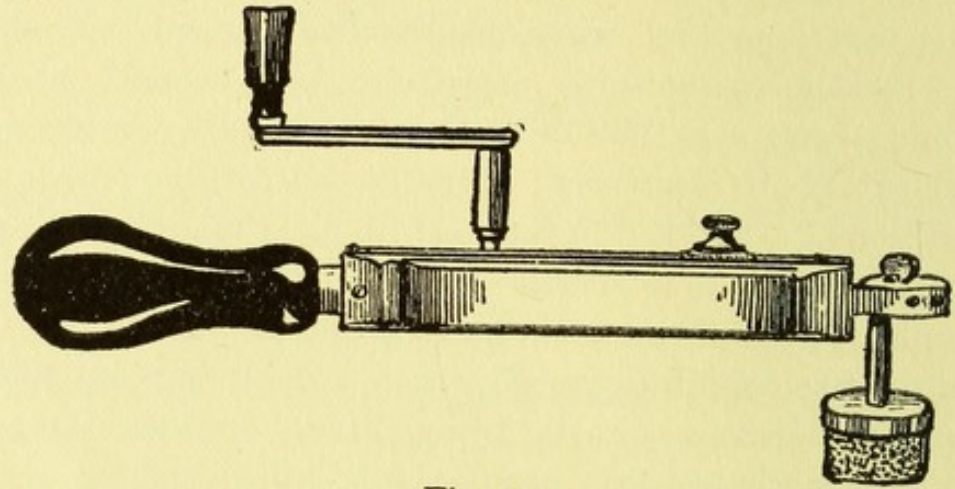


Fig. 123

PARALLEL NON-ELECTRIC VIBRATOR

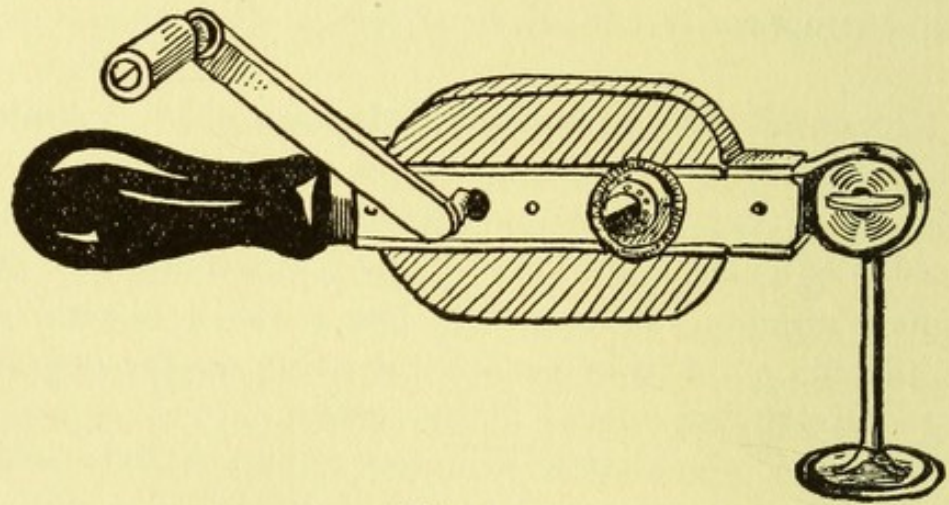


Fig. 124

PERPENDICULAR NON-ELECTRIC VIBRATOR

turns the crank with the right, applying the vibrating *pelot* or applicator, to either the bare or clothed skin of the patient.

ELECTRIC VIBRATORY MASSAGE.—The instruments giving this treatment have electricity merely as a motive

force; the current does not enter at all into the body of the patient.

The direct application of electricity itself belongs to the realm of therapeutics, and is therefore only touched upon here. That branch of science is in its infancy, the full physiological effects of electricity being not yet absolutely known. It may have after effects somewhat similar to those of frequent drug-taking. In other words, it may establish a habit, and artificial habits, when of a subtle nature, oft become fetters difficult to break as a ball and chain that a man must drag about with him till they drag him into his grave.

The famous electrician, Nikola Tesla, once told the writer that, when tired, he was in the habit of taking "an electric cocktail"; that is, of administering to himself a certain number of volts. But no direct current comes from the electric vibrator, although it seems to give shocks by the great force of the vibrations produced, especially when the operator is unskilful.

In the more expensive electric vibrator, the motor is suspended from a bracket, or stand, and the vibrator to which it is connected with a flexible shaft is held in the hand.

In the more compact and cheaper kind the motor is part of the instrument, the whole being held in the hand, as shown in Figure 125.

This instrument is not only less expensive, but gives as good service as those of larger and cumbersome size, which cost more to operate because of the higher current consumption. Another fault of the larger machines is that the motor is so connected to the vibratory mechanism that it causes friction, twisting of the shaft and often breakage of the latter, when bent at sharp angles, as often is the case.

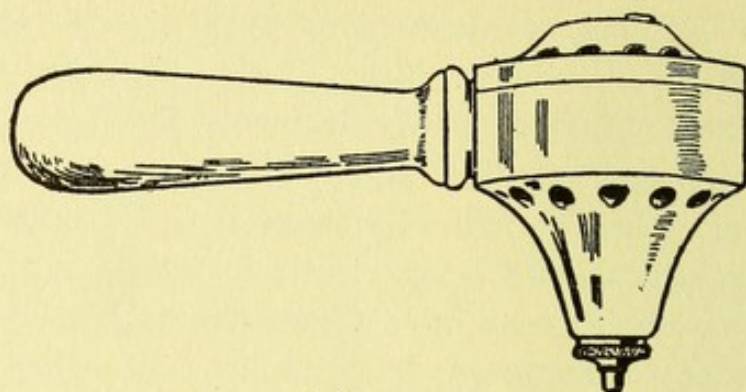


Fig. 125

VIBRATOR CONTAINING ELECTRIC MOTOR

APPLICATORS.—The vibration given off by any of these instruments, whether moved by crank or by motor, is transmitted to the face by applicators or *pelots* of various form. That most suitable for general facial massage consists of a hollow soft-rubber cone (see Figure 126).

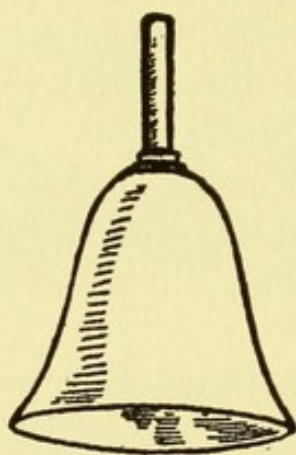


Fig. 126

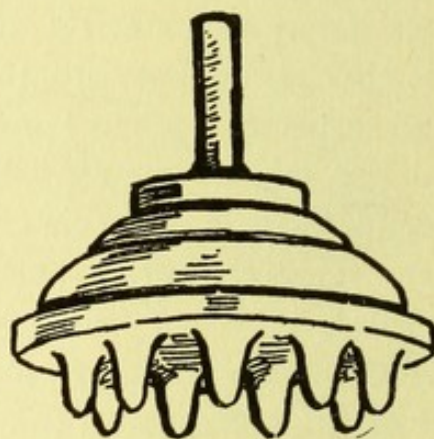


Fig. 127

For this cone a sponge may be substituted (see Figure 123 on page 284).

The face is prepared for massage as heretofore described, leaving a thin coating of massage cream on the skin to facilitate the sliding about of the rubber applicator.

The applicator should never be used on the dry skin,

as it will tend to erode or break the delicate scarf skin or epiderm.

For harder facial massage other applicators are used, as, for instance, to build up hollow or sunken cheeks or drooping, lifeless muscles in any part of the face, an applicator of fairly hard rubber, but flexible, and having a number of tips or projections upon its lower surface, is indicated. This is exhibited in Figure 127.

For the scalp the same applicator is used, or one having short, hard bristles, like a hair brush, may be substituted for it.

The movements for such facial vibratory massage should be similar to those given in hand massage, but the rules need not be followed quite so rigidly, since the amplitude of the vibrations is much shorter than the circular movements given by finger massage. In other words, the face, neck, and bust may be gone over generally, giving greater attention or more concentrated force directly to the parts requiring it.

Vibratory movements first of all stimulate the circulation, which, in turn, feeds the muscles and thus gradually develops them to their normal or a desired size and firmness.

Where the parts are to be reduced because of fatty

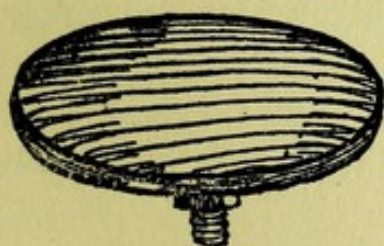


Fig. 128

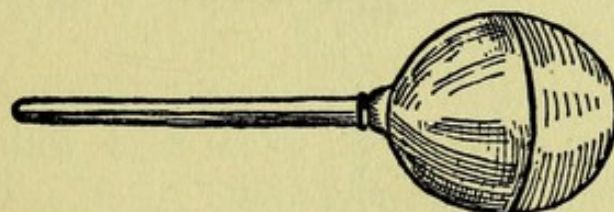


Fig. 129

deposits or over-development, the medium hard vibrations, with the applicator shown in Figure 128, or one consisting of a fairly hard rubber ball top, as in Figure

129, are to be used, the soft-rubber one being for the rest of the face and the bust. Hard vibratory massage quickly reduces the fat and brings about a healthy and normal condition.

Each treatment should last about fifteen or twenty minutes. It should be repeated at certain frequent intervals, according to the physical condition of the patient, and kept up from one to three months. One or two treatments, aside from the exhilaration they temporarily impart, have little value.

The hard concave disc applicator, Figure 130, by the

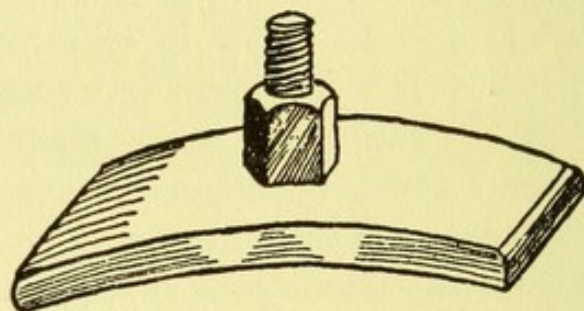


Fig. 130

shape naturally suggests itself as a thing to use on all well-rounded surfaces, such as the stomach and limbs, but is frequently employed with excellent effect on heavy throats, baggy cheeks or double chins. The vibrations from this appear to have a sort of concentrated penetrativeness.

A roller, not unlike the ordinary garden machine (see Figure 131) is often used with good effect on the cheeks, neck, and scalp.

When used on the cheeks, the direction of motion should be upward and inward a little, following the curve of the jaw. On the temples, it should be used also with an upward movement, but with more of a curve to the side hair, beginning the application of it just between

the eyebrows. It may also be used very gently directly across the forehead from side to side. On the scalp

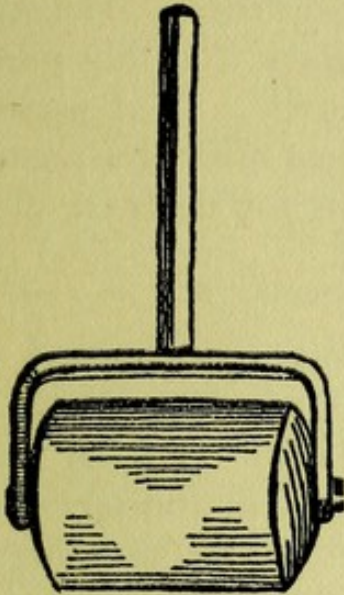


Fig. 131

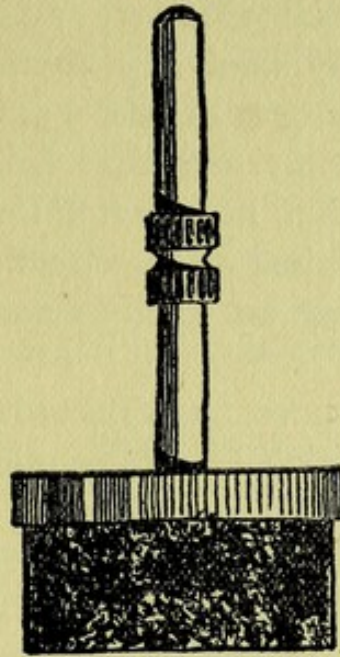


Fig. 134

proper it may be used in all directions. On the throat it should be worked around with a slightly upward trend, and more than slightly upward in case of pronounced double chin or hanging cheeks.



Figs. 132 and 133

The pestle-shaped applicator shown in figures 132 and 133 is employed for massaging the smaller parts of

the face under the eyes, the alæ of the nose, and occasionally the ears.

Special vibratory massage around the ears is practised by some as a treatment for deafness. The sponge applicator (Figure 134) is excellent for this purpose.

Possibly this does help temporarily a deaf person or make him hear better for some time after treatment, but any claims of its effecting a cure for deafness of long standing are open to much doubt.

EFFECTS OF VIBRATORY MASSAGE.—A common characteristic of both of these forms of vibrators calls for comment, namely, that the applicator or *pelot* (which corresponds to the actual hand) is in constant contact with the bodily surface, which renders the vibrating pressure entirely different to that resultant from the repetition of tapping blows, or beating massage, technically called *tapotement*.

Vibratory massage, according to the claims of its champions, also possesses this advantage over the rubbing and stroking kind, that one does not need to put any lubricant on the body; grease is not a necessity, or semi-necessity, for purposes of easy manipulation.

Yet it may be replied to this that in many cases the lubrication of the skin with some cream or special skin food is a valuable adjunct in itself to the massage by hand.

Another claim of superiority for vibratory massage cannot be disputed, however. It is that the treatment can be given through one's apparel, as in the case of a tired back or a bust that demands development.

Then, too, the vibrator is a very handy thing to have about the house when one cannot easily reach a skilled operator.

It is also a very useful thing for a professional masseuse to have at hand, either for the sake, as before hinted, of saving herself from over-fatigue, or for employment as a variant, in conjunction with manual massage in some special case, or to apply in cases where clothing cannot with propriety be removed. However, the direct contact of the instrument with the bodily surface to be treated is better whenever practicable, since on delicate tissues the pressures, or repeated imprints of the fibres of the clothing worn, might have, in course of time, a bad effect.

Moreover, just as the skin often shows to the trained eye of a hand-massage operator, skilled and bubbling over with high vitality of perfect health, that the massage has been prolonged enough, and that more might be distinctly inadvisable at the time, so to the skilled manipulator of a vibrator, the skin, when exposed, might often indicate clearly the same condition; which could only be guessed at through clothes.

It cannot be doubted that the vibrations produced mechanically are not only more rapid in their superficial effect, but are more deeply penetrating than those produced even by the most skilled and potent hand. This being so, caution as to over-use at once suggests itself. A too vigorous application may not only defeat the real object of the massage and so be a nullity, but it may go beyond and cause mischief. In beginning, it is well to practice extreme moderation and to work up gradually to a certain definite goal or maximum of treatment.

The local sensation caused by this kind of massage is that of a somewhat warm animation, in clear distinction to the sharp stimulation produced by the electric vibrator. There is never any stab of pain, except where the part operated on may itself be actively sore, and generally

after a short application the soreness or stiffness disappears as by magic—and may never again return.

The general sensation, or sum of local sensations, or sometimes the effect obtained on the whole system from one local application, differs from the general sensation produced by other treatments more in depth than in any other way. The minute, swift, penetrant vibrations apparently work more on the internal organs, are more radical in their reach; that is, get deeper into and linger longer in the more secret parts of the system, producing a reflex action on the blood, skin, and nerves, in addition to the direct action they exert by first contact.

The specific action on the nerves is great. The sensory nerves are influenced to such an extent that impressions of pain vanish or diminish markedly. In other words, the sensory nerves are soothed. The motor nerves, on the contrary, appear to be stimulated, a thing of importance in cases of fatigue, or of prolonged nervous depression tending toward paralysis.

Other excellent effects that may be noted are:

Improved nutrition is given to the tissues by the acceleration of circulation in the lymph and blood vascular systems.

The lungs more easily absorb oxygen and more easily excrete carbon dioxide and other waste products.

Digestive capacity is considerably augmented, and muscular tone is visibly improved.

Glandular secretions are stimulated as also are the functions of the skin.

Several organs, practically unreachable by other forms of massage, give evidence of being well affected by mechano-vibration.

As to abnormal deposits and accumulations of the metabolic process, those indicated by gout, rheumatism, and

certain chronic inflammations, it appears that vibration acts both directly and indirectly, either toward an elimination of them or an amelioration of the condition. Inasmuch as these infiltrates in skin, nerves, muscles, and joints often produce headache, vertigo, insomnia, or general debility, the preventive virtue of vibration is worth considering.

Besides the general toning up of the system, vibratory massage is directly valuable as a cure for obstinate constipation, supplanting the many pernicious cathartics now taken for this purpose.

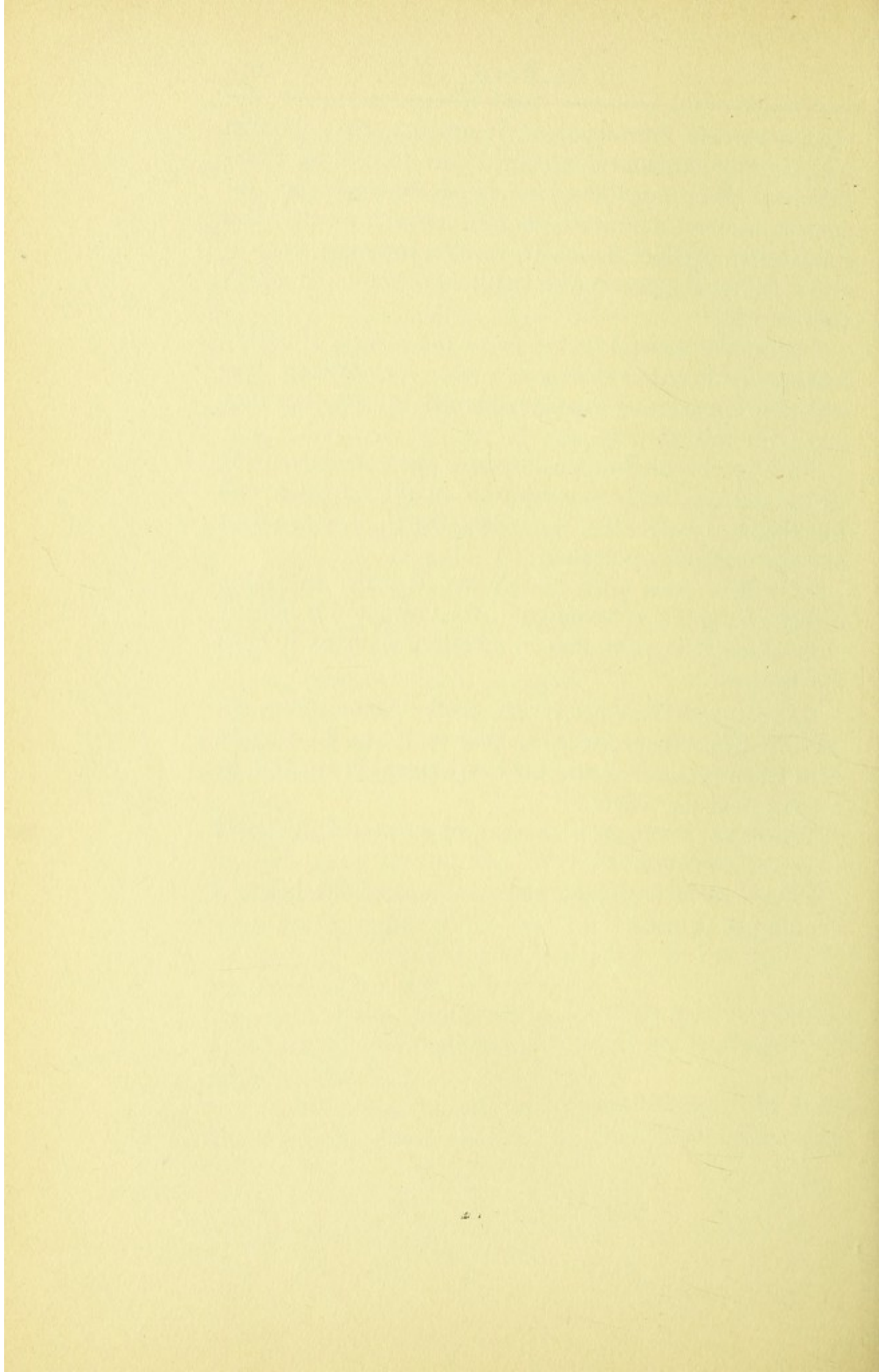
Since mechano-vibration increases the vascular supply to the surface, with improvement in the nutrition and functioning of the skin, it renders the skin more pliant and youthful in appearance.

As will be seen, after considering its action in health, namely, a general stimulation of the blood and lymphatic circulation, it is clear that in certain conditions it must not be used.

CAUTIONS.—These are fevers, acute inflammations, abscesses, hemorrhage, œdema, etc., or it should only be used when prescribed, and the exact extent prescribed, by a competent physician.

Where consumption is present, or suspected, it should never be employed.

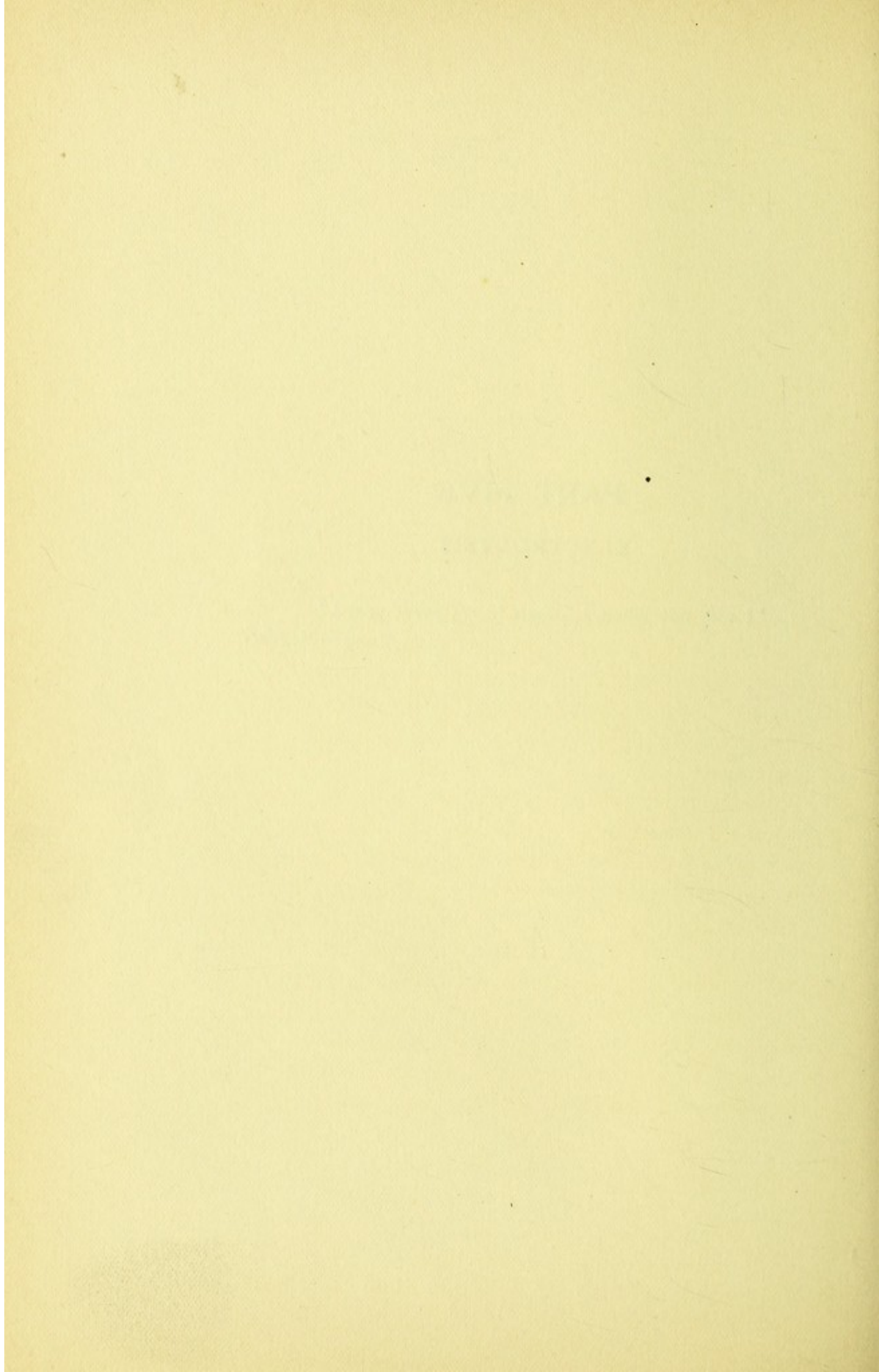
Where there is pronounced weakness of the heart, it should not be used.



PART FIVE
ELECTROLYSIS

"I like not when a 'oman has a great peard."

—*Shakespeare.*



ELECTROLYSIS

CHAPTER XXIII.

ELECTROLYSIS.

Hairy Growths on the Feminine Face—Electrolysis the Only Effective Depilatory Process—Apparatus—Hypertrichosis, or Superfluous Hair: Causes of Abnormal Growth, Method of Removal, Returning Hairs—Moles—Red Veins and Capillaries—Birthmarks—Scars.

SCIENTISTS assert that both the primitive woman and the primitive man were entirely covered with hair, which in the process of evolution gradually disappeared from most of the body, although in the case of the man, more exposed to the elements, it remained on the chin and cheeks, and even became intensified, by natural selection operating through the woman's admiration, as an index of masculinity.

There are many instances recorded from the days of Hippocrates, "Father of Medicine," to the present, of women who possessed beards that caused the men to blush beneath their less luxurious whiskers. These, however, have been freaks of Nature, the exceptions that prove her rule. But slight, soft growths of hair on the feminine face, especially upon the upper lip, are so common in many countries that they cannot be classed as freaks. In the countries of Southern Europe, where the peasant women live much in the open air and join in the labors of the field, such growths are frequently

found, being, indeed, considered by the peasant men as not at all detracting from feminine beauty.

There is, however, nearly everywhere else in the world a well-established feeling that any superfluous hair on a woman's face gives a disagreeable look of masculinity, and is a distinct misfortune which every woman ought to be freed from permanently. Beauty specialists, therefore, have made the removal of such growths a matter of chief concern. Unfortunately, as already stated on page 205, their devices have generally been only temporarily remedial, leaving the roots of the hair in the skin to produce new and equally abundant growths requiring the continual use of the device to remove.

Of recent years, however, there has been found in the use of a current of electricity applied through a special needle, a means of killing the root, and so forever removing the hair which grows from it. This is the only effective depilatory, or hair-remover, that has yet been devised, and all readers are warned against pretenders who claim to remove superfluous hair permanently by any other device.

While electricity in dermatology has been in use only forty-five years, so far has the art advanced and so easy of acquirement has it grown that now even an amateur with a fair tuition and exercising due care can effect results both pleasing and lasting.

The term Electrolysis means the application of an electric current to remove or destroy by electro-chemical means any growth or tissue with which it is brought in contact.

Electricity is a force the very suggestion of which inspires a feeling akin to fright in many minds. But this fact need not disturb an intelligent student, for the methods employed in this branch of Beauty Culture are ex-

ceedingly simple—so simple, indeed, that any one possessing an average education should be able within a few days after a little study to prepare and connect the apparatus properly, and very soon after a small amount of practice to take up with confidence one of the best-paying specialties in the wide, rich field of Beauty Culture.

There are some things in general about this method of treatment which it is fundamentally important to know, and some of these are so important that they will be repeated several times in the course of this chapter so as to impress them thoroughly on the reader's mind.

First, the galvanic current is the only one to be employed. Second, the negative pole is the one to be used by the operator. Third, the strength of the current must be varied to suit different cases. Fourth, the size and shape of the needle must be altered. Fifth, it may be necessary to vary the method of application to suit the idiosyncrasies of particular patients. Sixth, there must be a definite form of treatment to obviate any slight lesion, however caused.

These points will be developed in fuller explanation subsequently, and are mentioned now in order to get them primarily in the mind of the student.

The current of electricity is capable of the most delicate handling. Its effect may be limited to an almost microscopical point or it may be carried to any depth beneath the surface of the skin.

THE APPARATUS.—This current of electricity can be best understood by likening it to a flow of water, running from a pool, or what in electrical parlance is called a battery. Let us say then that this flow of water is downhill, and that the positive is at the beginning of the stream and the negative at the other end.

To illustrate this in simpler fashion still is to imagine the stream flowing from the pool in a circular way as shown in Fig. 135, so that it eventually flows back into the pool again.

It can then be readily seen that the positive is where the stream flows out and the negative where it flows in.

The reader is now to consider the pool a cell or electric battery, as it is commonly called, and that the point where the electric current flows *out* is called the positive pole. This pole is marked with a cross (+) in electrical science. The point where the electric current flows *into* the cell or battery is called the negative pole and is marked with the minus (—) sign. The two signs are used for brevity's sake, and will require little effort to memorize.

In place of the stream we now place a copper wire connecting it to both poles and a *closed circuit* or flow is established.

If now the wire is cut at the middle of the circle, we break the current or circuit and we have an *open circuit*. So long as these wires are cut, no electricity will flow

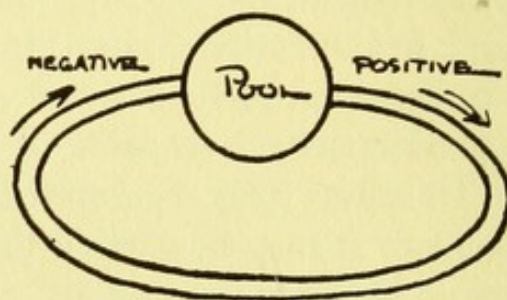


Fig. 135

through the wires; but as soon as they are joined the electricity will flow on again from the positive pole to the negative one. If now again we place a finger between the cut ends of the wire and allow the wires to

touch either side of the finger, as in Figure 136, the one side will receive the positive and the other the negative current.

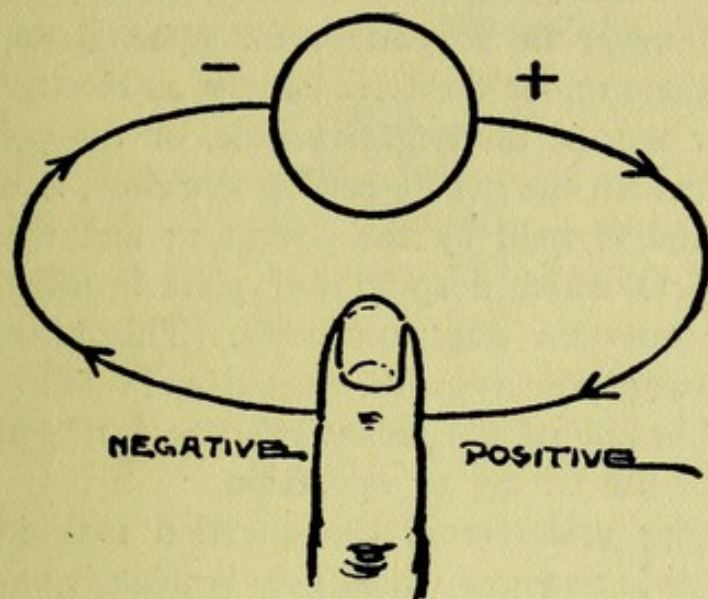


Fig. 136

Now it is a peculiar fact that each one of these wire ends or poles has a decidedly different effect on the skin of the finger. This could be better shown if we connected a fine needle to each end of the wire and stuck the needles into the skin.

The positive pole or needle would show slight or no effect for a little while, but in a few minutes the skin around the needle would turn black, as if it were tattooed; and after the withdrawal of the needle the spot would show plainly and perhaps remain for some days, or *forever, if the current used was strong enough.*

With the negative pole or needle it would be entirely different. The skin would at first become red, then quite pale, and presently a little white foam would bubble out alongside of and around the needle where it entered the skin.

The appearance of this foam shows that a chemical action is going on in the skin; and from experience we

know that such action is destructive to the skin or tissue into which a negatively charged needle is thrust.

This chemical action, often referred to as a burning effect, must never be forgotten, for upon it depends all the work done under the term known as electrolysis.

In other words, the negative pole, or the pole of the battery to which the needle used is attached, is the working pole and is held by the operator; and the positive is the pole to which a sponge or plate is attached with which the operator does not work. This latter sponge or plate, called the positive electrode, in either case is to be held in *one of the patron's hands* during the entire duration of the sitting or operation.

This being understood, the question may arise how the operator is to know which pole is negative and which positive without sticking the needle into the patron's skin at the beginning of each sitting. This natural, sensible question can be easily answered thus:

If you will notice a battery or cell, you will find the two poles plainly visible. Each has a little nut or thumb-screw at its outer and upper end to which the wires may be attached. These are called *binding posts*. It is obvious from what has been said that one of these poles is (+) positive and the other (—) negative.

If now a battery is selected in which the one pole or part within the jar is a cylinder of carbon, and the other a stick of zinc, then we may know directly or by experimenting that the *carbon pole corresponds to the positive and the zinc to the negative*. Such a battery is used in electric work as answering the purpose best. They are called *Le Clanche* cells, and are made up of

I glass jar.

I carbon cylinder or porous cup containing carbon.

I zinc rod.

And a solution of sal ammoniac, in clean water to about two-thirds full. There are several makes of this cell, the latter differing only in the shape of the zinc rod and a cover to keep out the dirt. See Figure 137.

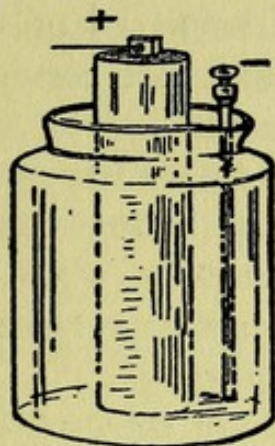


Fig. 137
SAL AMMONIAC CELL

These cells are also called *wet cells*, since they are operated with solutions. Other cells may be called *dry cells*. The latter are more easily transported from place to place without danger of spilling and thus ruining

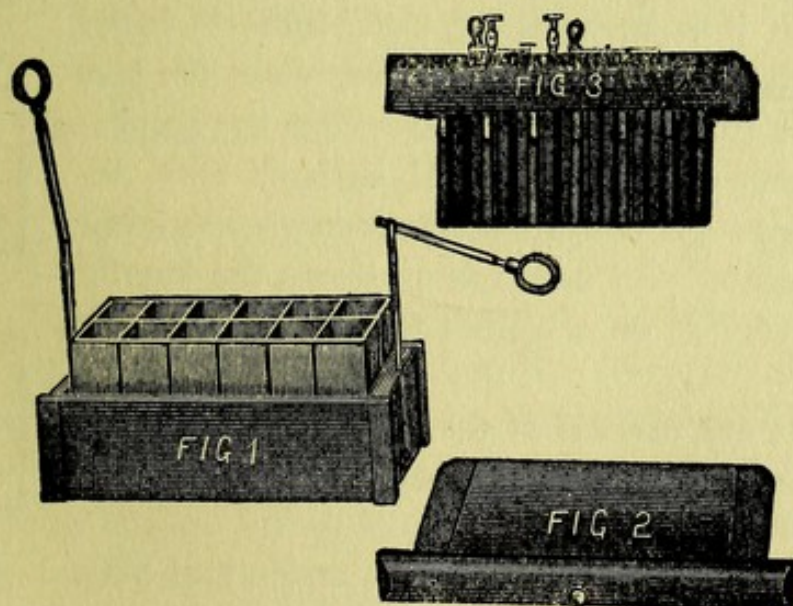


Fig. 138
PORTABLE BATTERY

carpets or floors. Of the dry cells the best and most compact is known as the Chloride of Silver cell.

These have the disadvantage of being rather expensive, and since 10 to 16 of these cells are necessary, it would cost considerable to procure such an apparatus.

To carry sixteen ordinary dry cells besides a container would be rather cumbersome; hence for *portable batteries*, when needed, a distinctly different apparatus is made. One of these is shown in Figure 138.

In this illustration are shown (Fig. 1), a box of hard rubber containing a series of small compartments containing the solution called *electrolyte* (Fig. 2), and a long compartment into which are placed, when the battery is not in use, the zincs and carbons, which are attached to a hard rubber cover (Fig. 3).

When it is to be used, the handle is lifted up so that the zincs and carbons clear the box and it is turned so that in lowering the respective parts of the zincs and carbons may descend into the small compartments containing the solution. By now letting down the handle the battery at once begins to give out its current.

There are several of these portable batteries on the market, each having its peculiar advantage.

So much for the types of batteries that may be used in Electrolysis.

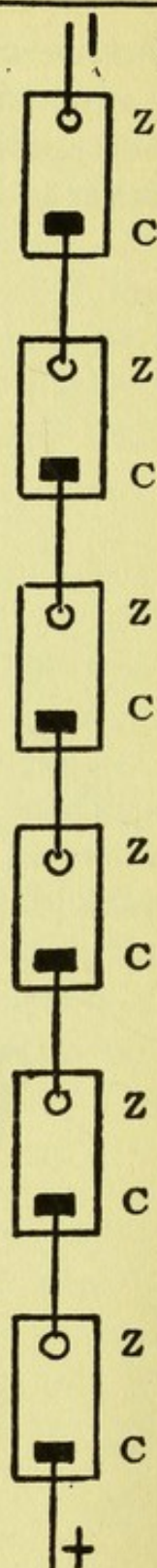


Fig. 139
A BATTERY

THE NECESSARY BATTERY.—As has been said, from 10 to 16 cells are necessary to properly make up a working apparatus. Such a group of cells is called a battery. This battery may be made up of any kind of cells the student may select, but they must be connected properly to give out their current. To do this the student is referred to Figure 139, in which the zincs of the cells are marked (Z) and the carbons (C).

It will be observed that in the above illustration the

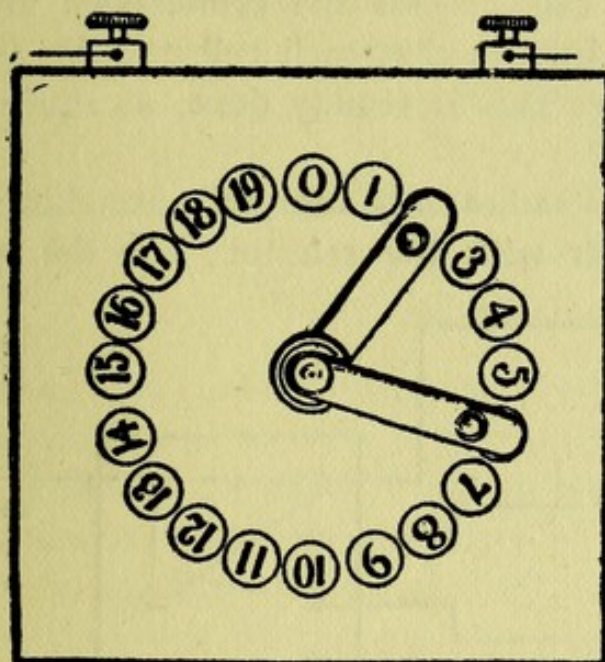


Fig. 140
CELL SELECTOR

carbons are connected with a wire to the zincs, one cell after the other, leaving one negative (—), or zinc pole, and one carbon or (+) pole, positive open. The manner of this connection is called a series connection. By so connecting one cell adds its electric force to the next, and so on, until the end, so that if there are six cells the current then obtained at the free poles would be six times stronger than one cell.

This series connection is used for the entire 16 cells which make up a battery according to electrical terms.

But a current from sixteen cells would be at first too severe to begin with; so something must be done to regulate the force of these cells, or to use only as many as are required to carry on the work. To accomplish this, a cell selector is used in which a number of metallic discs or buttons correspond to the number of cells used. This is shown in Figure 140.

With the cell selector the connections must now be changed slightly so that each cell may be added to the next at will. This is readily done, as shown in Figure 141.

In the illustration only four cells are shown connected in the circuit with the selector; but the arrangement

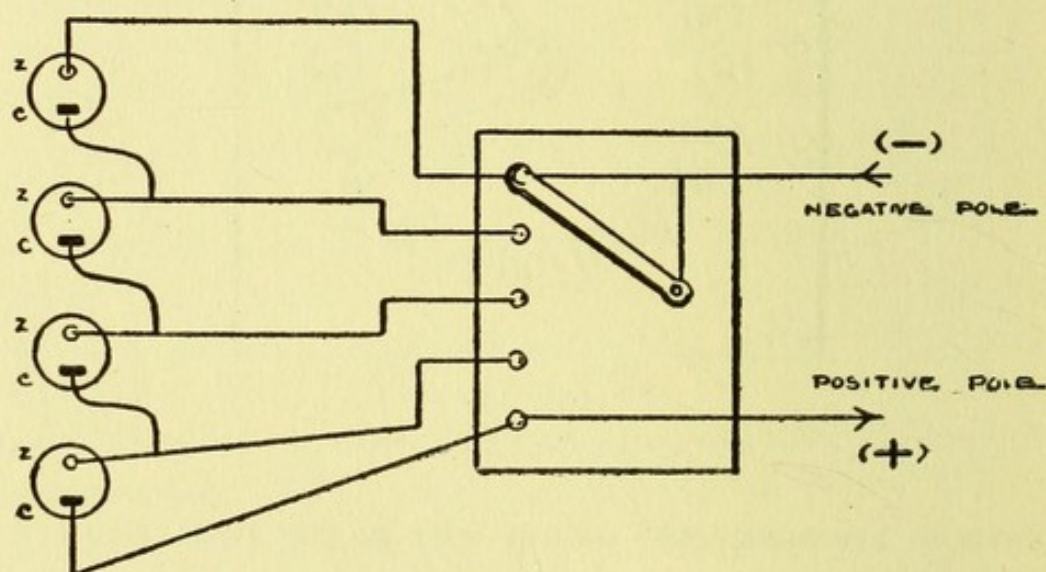


Fig. 141

for sixteen would be the same, provided, of course, there is a disc for each cell furnished for its connection and one extra for the outlet of the last or free wire.

To make sure of the connection, the student should place all the cells upon the floor so that she may plainly

see what she is doing before placing them into a cabinet or closet in more compact space.

When it is preferable to use a *rheostat* in place of the cell selector, it can be connected as shown in Figure 142.

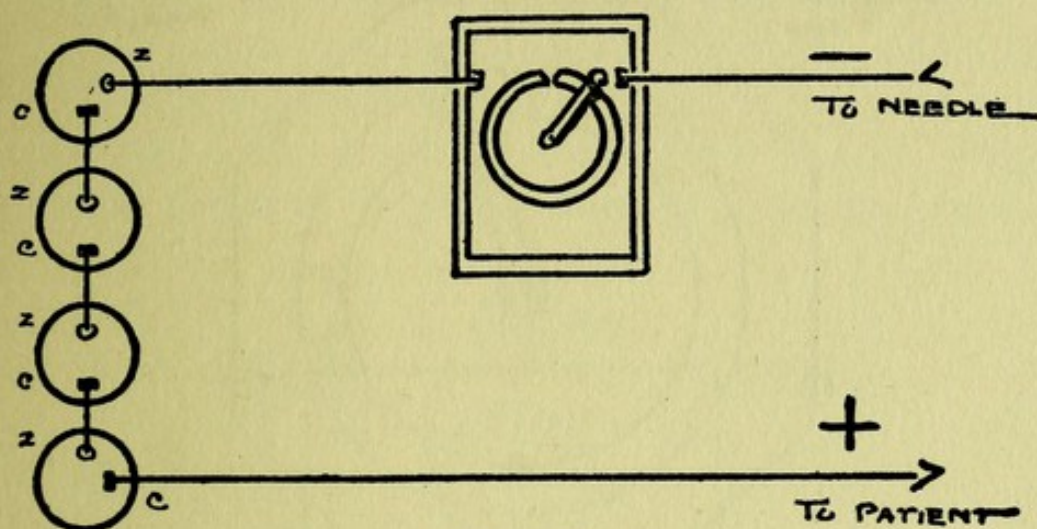


Fig. 142

Rheostats are now made of graphite or other material, and are so arranged as to offer a varying resistance to the current as the handle is moved from one end of the ring of graphite to the other. The use of the rheostat gives a more even current than the cell selector, inasmuch as the first cell of the battery wears out first. Hence the operator must advance the switch handle of the selector another disc in order to procure the necessary current, and even then his current will be uneven, since it is hampered or interfered with by the resistance of the broken-down or used-up cell.

A standard form of graphite rheostat is shown in Figure 143.

If the operator is fortunate enough to have electric light service a great deal of trouble and expense can be saved by procuring a wall plate containing a rheostat, a lamp resistance and perhaps a milliamperemeter by

which can be measured to a nicety the amount of current used. While the initial expense is perhaps more than that of a home-made battery apparatus, it pays in

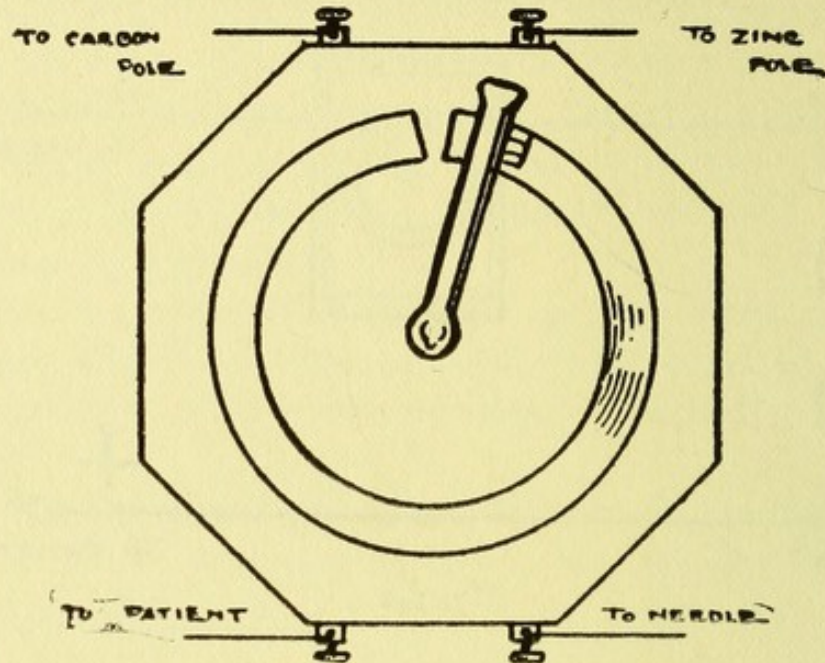


Fig. 143

GRAPHITE RHEOSTAT

the end, since the batteries must be refilled from time to time and the zinc rods be renewed as fast as they are consumed.

Such a wall plate is shown in Figure 144.

In the connection with the street lighting circuit all that is necessary is to screw a connecting plug to which two wires are attached into an empty electric light socket, making sure the street current to the lamp socket has been turned off. Then connect the wires from the plug to the two upper binding posts of the plate placed at either side of the milliamperemeter. It is understood that the board, usually of marble or slate, has been securely fastened with proper screws to the wall.

This being done, the operator is ready to turn on the

switch at the lamp socket, first making sure that the *switch* on the wall plate is open. This switch must be left open at all times when the operator is not using the current, since an accidental crossing of the cords or electrode ends might injure the delicate milliamperemeter.

This switch is usually made to be closed at either side. This is done so that the circuit, going to the patient and from the needle, can be reversed when so desired. While not so useful in the performance of electrolysis, this is

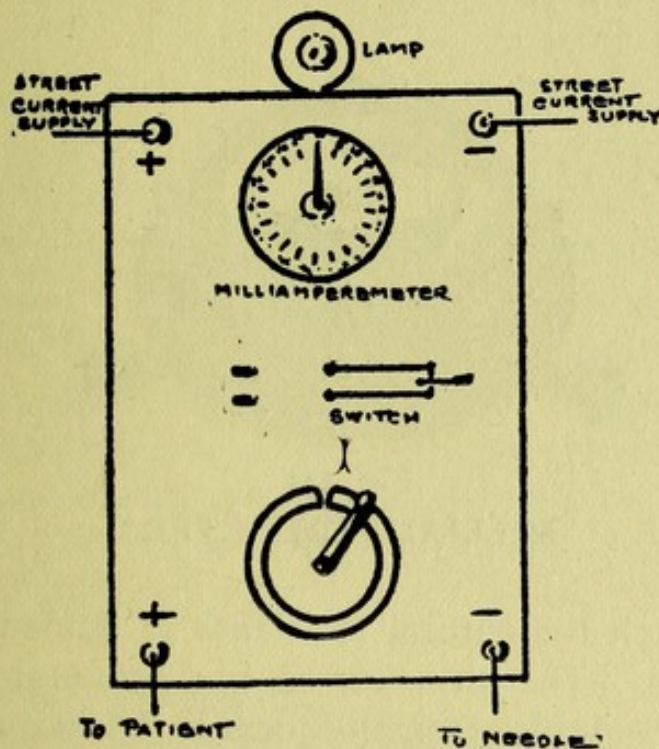


Fig. 144
WALL PLATE

an important adjunct, when electric massage apparatus is used.

This switch, because of its function, is called a *pole changer* which implies just what it does.

Since the milliamperemeter has been mentioned as being very essential for the accomplishment of the best re-

sults in electrolysis, it might be well to state its particular use.

The milliamperemeter is a delicate instrument much like a compass and having a dial. The marks on this dial or scale (see Figure 145) divide it into sections, representing 5, 10, 15, 20, etc., etc., milliamperes, or so many thousandths of an ampere. The term ampere is given in electricity to signify the amount of current.

Now since the tissue of the body is very sensitive to electricity of high power, it is necessary to reduce it fur-

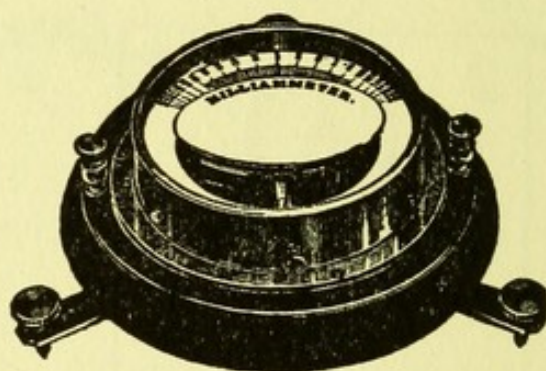


Fig. 145

MILLIAMPEREMETER

ther, although the natural resistance of human tissue is considerable. The rheostat, as has been said, accomplishes this and this accomplishment is shown on the scale of the meter.

With a cell battery alone this would be impossible, as the current of each cell varies more or less over the rheostat, and will permit only a fair knowledge of the amount of current used as indicated by the effect on the tissue.

Furthermore, a standard had to be established whereby the required amount of current or dose could be accurately prescribed so that the measuring device or milli-

amperemeter or milliammeter (as it is now technically called) became necessary.

The milliampere, one-thousandth of an ampere, is the

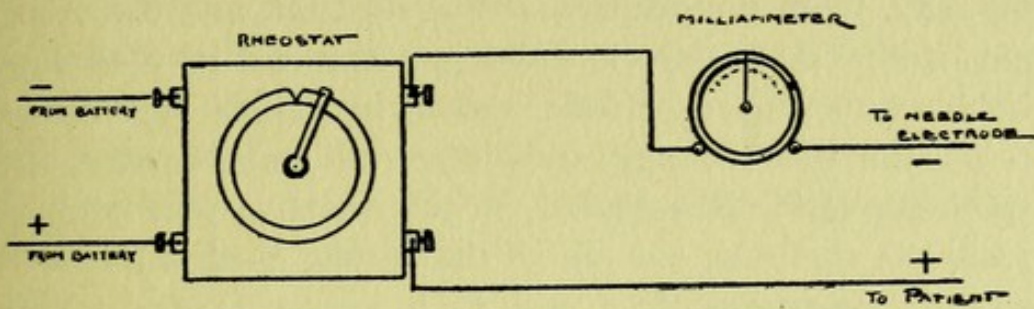


Fig. 146

measure of dose for the use of electricity on the human being, while in the commercial world the ampere is applied.

If now the operator wishes to equip herself with such an instrument, it can be easily procured and connected in circuit with her battery and rheostat apparatus. The connections are easily made, as shown in Figure 146.

A first-class instrument should be procured and be properly mounted on a fixed wall or a cabinet that is not easily jarred, for these instruments are delicate and very sensitive to abuse.



Fig. 147

SPONGE ELECTRODE

The student is now to be familiarized with the method of connecting the needle electrode and patient electrode.

For this reason the connecting agent is preferably silk-covered insulated *cord*, an insulated bundle of very fine wires that render it flexible and light. Two cords are

necessary, one for the positive and one for the negative. At each end of the cord will be found a pin end. One of these pins is put into the hole of the binding post, coming, say, from the positive of the rheostat, and the other pin of the same wire is fixed into the end of a sponge holder or sponge electrode, shown in Figure 147.

To the pole coming from the milliamperemeter, or, when the latter is not used, to the negative pole coming from the rheostat, one pin of the second cord is attached and its remaining free end to a *needle holder*. This is an insulated handle of hard rubber or wood having

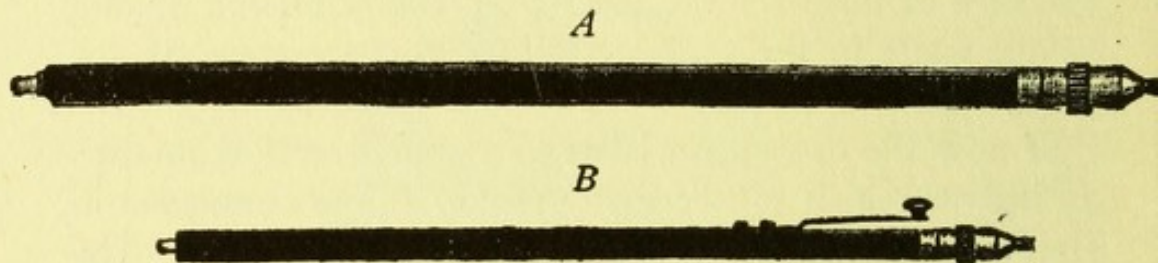


Fig. 148

NEEDLE HOLDERS

a hole or screw device at one end to receive the flexible cord pin and an arrangement to hold a fine needle at the other end as shown in Figure 148.

In (A) the needle holder is plain, allowing the current to flow through the needle continuously, while in (B) a little springlike arrangement has been added which permits of the current being broken or closed at the will of the operator.

The practical use of either of these forms will be considered later. In the selection of a needle holder take one of light weight and size. It should have about the diameter of a slate pencil, but never thicker than the ordinary lead pencil. Clumsy instruments are the cause of clumsy work and in electrolysis delicacy and a steady

hand are of the highest importance. So much for the complete apparatus.

Now with a wetting of the sponge electrode in water rendered slightly salty by the addition of a pinch of table salt, and with a cleansing of the needle to be used by a pledget of absorbent cotton soaked in listerine or an antiseptic of like nature, the operator is ready to begin the interesting branch of electricity termed Electrolysis in its various applications.

HYPERTRYCHOSIS, OR SUPERFLUOUS HAIR.

This is one of the most annoying and humiliating blemishes that can befall the fair face of woman. The writer personally knew one beautiful girl who became so obsessed with the dreadful fancy that she was going to be disfigured by superfluous hairs that it unsettled her mind and she committed suicide.

The condition of hypertrichosis is far more prevalent than usually supposed, because many women so afflicted are unfortunately addicted to the pernicious habit of pulling out the hairs as fast as they appear, or to the equally futile and sometimes fatal habit of using one of the many widely advertised "positive and permanent" depilatory pastes or washes. These alleged depilatories in reality never accomplish anything more than to remove the hair as far as the liquid or paste can penetrate, which is just slightly beyond the plane of the skin. In this connection, Professor P. S. Hayes, M.D., very pointedly remarks: "Application of any chemical which will penetrate deeply enough to destroy the hair papilla must of necessity destroy the skin as well." But if this be not destroyed, the hair is bound to grow again.

The wrong methods employed for removing superflu-

ous hairs have a double effect: They stimulate the growth of the offending hair, making it increase in size and depth of root, and they irritate the skin. The following are the principal wrong methods, always to be avoided and advised against:

Use of forceps.

Pumice stone.

The razor.

Caustics that shave closer than a razor.

Singeing off by candle.

Wholesale depilation by adhesive plaster.

All of these are painful and of no permanent value. There is only one way known to science of removing superfluous hairs permanently, and that is electrolysis.

CAUSES OF THIS ABNORMAL GROWTH.—Some cases are undoubtedly the products of heredity. Scientists have found that in several instances the mother of a girl so afflicted had a hairy growth on the face, or that the daughter resembled in features the father very strongly, as if she had been intended for a son and accidentally was born a girl. In such cases, if the father had a decidedly heavy beard, traces of his facial hirsuteness would appear on his daughter.

One practitioner has noted a case of heredity that went farther back. His patient had such heavy eyebrows—"penthouse" brows, as they are commonly called—that they were more than a deformity—a monstrosity. She told him confidentially that her grandfather was so marked in this way that he was nicknamed "the man with the eyebrows."

Abnormal growth of facial hair is often noticed in young women when approaching maturity of the development of their physical functions. This appears to correspond with the appearance of the beard or mustache

on the face of a young man, and may be, probably is, one of the reflex results of the establishment of a hitherto dormant function. In many of these cases, however, on the complete establishment of regular functions, the growth begins to diminish and may of itself gradually disappear—particularly if the girl marries early.

One noted practitioner states that the majority of his cases have been women of thirty or more, who had never married, "many of them being school teachers," and adds that married women who are childless incline, as they mature, to take on this unbecoming hairiness. The same phenomenon is observable in women who are approaching or undergoing what is termed the menopause, or "change of life." All these facts tend to show that, apart from the cases clearly attributable to heredity, the growth of superfluous hairs depends to a considerable extent in women on uterine reflexes. The causes of this growth in men are obscure. Balzac, probably the greatest observer as well as the profoundest writer that has hitherto appeared, noted that men who lead immoral or extremely sensual lives are likely to be marked by this growth on the nose and in the nostrils.

The most extraordinary growth on record among women due to reflex is one recorded by Dr. W. S. Gottheil. The lady was a young Jewess and suffered from amenorrhea, or suppression of natural functions. During the continuance of this a stout beard grew upon her face and more than ten thousand hairs had to be removed. After this, when she had been cured of her affliction, she "noticed that the few remaining hairs on her face fell off and that there was a slight *deflusium capillorum* (shedding of hair) from the other normally hairy portions of her body."

To these causes, inherent in nature, may properly be

added another very frequent one; namely, the irritation and stimulation of the skin by the improper creams and washes widely advertised, some of which have been recently exposed as costly humbugs by the United States government.

The operator is hereby cautioned against using any preparations or allowing the patron to use any preparation that has not received the sanction of experts and is particularly advised to find out what the patron has been in the habit of using, or may, during treatment, be using at home, upon her face or person for any purpose. In many cases it may be something which would directly nullify the good obtainable by your treatments; may be a thing highly deleterious on general principle, and in any case, even if harmless, is likely to be utterly useless or superfluous. If the operator cannot at once decide as to the character of the thing the patron may be habitually using, it is better to insist on a complete cessation from it during the course of treatment.

Allusion has been made to an extreme case of sensitiveness, a case of real phobia, or exaggerated foundationless fear as to the coming of superfluous hairs that once came under our observation. Such a thing, of course, is very rare, but on the other hand it is by no means uncommon for high-strung women, when these unsightly superfluities begin to appear on an otherwise comely and attractive countenance and grow coarser and far more numerous in proportion to the amount of mistaken efforts at removing them, to become exceedingly sensitive. Such women gradually shun their former companions, often eventually avoiding even their relatives, and not a few very serious cases have resulted in such deep mental disturbance as to necessitate confinement in an asylum or a sanitarium.

Thanks to electrolysis there is no longer any need for women to suffer from the consciousness of this grotesque disfigurement, this mock masculinity of facial appearance. The needle, which has been woman's most faithful weapon in warfare of the painful ages, now endowed with the tamed lightning of the electric current, can forever annihilate this foe to her peace of mind.

METHOD OF PROCEDURE.—The patient to be operated on is to be placed in a reclining position with her face on a level with the operator's chin, who sits or stands slightly to one side at her head. The light falling on the face of the patient should be sufficient to show distinctly the hairs to be removed and yet not enough to irritate her eyes. A north light or southeast light is usually pleasant to work by.

To the patron in the chair is given a wooden-handled sponge electrode to hold in the right hand. To this sponge electrode the positive pole from the wall or battery should be attached. The sponge should at first be moistened with a little salt water as already described. The switch of the apparatus to turn on the current is now closed. The handle on the rheostat is moved down as little as possible to give the least amount of current, or where no rheostat is used, the cell selector is moved to the first disc.

The operator now takes up the needle holder into which a fine steel or gold electrolytic needle has been placed. Cambric sewing needles should not be used as they are too coarse. Very fine jeweler's broaches answer very well.

With the needle holder attached by the cord to the negative pole of the apparatus in the right hand, and with the eye fixed on the hair to be removed, introduce the point of the needle into the hair follicle and move

it down into this follicle until there is a feeling of obstruction. The needle is allowed to remain in place, holding the right hand steady.

Then the patient is asked to touch the wet sponge surface of the electrode held in her right hand with the palm of the left hand. This completes the circuit, and there will at once be felt a stinging sensation where the needle has entered the hair follicle. If now a milliamperemeter has been added to the apparatus, the delicate pointer will begin to move to one side of the centre of the scale.

The handle of the rheostat is then moved forward, little by little, until either a little *white* froth issues from the mouth of the follicle around the needle shaft at that point, or until the pointer of the milliamperemeter rests over the line under the figure 10.

This means that you are using 10 milliamperes, which is usually enough for the average kind of hair to be removed. For coarser hair 12 to 16 milliamperes may be found necessary. If no milliamperemeter is used, advance the rheostat handle until the frothing begins; and if neither of these parts are added to the apparatus and only cells are used, move the handle of the cell selector forward from the second to the third disc and so on until the foam appears.

The current from six cells will usually suffice at the beginning, but this number has to be increased for coarser hair, and as the battery is used up.

It is understood, of course, that no cell selector is necessary, if the rheostat has been employed, since that answers the same purpose. The needle having now remained in the hair follicle for six to ten seconds, the patron is asked to take her left hand off the sponge. This breaks the current.

The needle is now withdrawn and with the left hand the operator takes up the depilating forceps and with a gentle pull withdraws the hair from the follicle. The hair thus worked upon should come away readily. If it requires even the slightest effort, the electric needling process as just done should be repeated for several seconds, when the hair may be readily removed with the forceps.

The best kinds of epilating forceps are those having slender blades flattened at the lower and inner ends.

And now about the kind of needle holders to be used. *When the patron connects the current by pressing her left hand on the sponge, the plain needle holder is required*; but if the patron is allowed to hold the sponge disc in the palm of her right hand, or the arm sponge electrode is attached to her right arm just above the wrist, then naturally the connection is made the moment the needle touches the skin of the patient.

This causes slight shocks, frightens the patron and may make her so nervous as to refuse continuance of the treatment after three or four hairs have been removed. It is best, therefore, in these cases, to use the interrupting current needle holder.

The spring on the holder is left up, as the needle is introduced into the follicle, and then pressed down with the forefinger of the hand holding the holder. This closes the circuit and, although there is the same stinging sensation and a slight shock, the latter is not so severe.

In Figure 149 the incorrect and the correct methods of inserting the needle are illustrated. In *A* the needle misses the root, and the hair is not killed. In *B* it follows the hair shaft down to the root, which it pierces, and thereby kills the hair.

As one hair is removed another is treated, and another, and so on, until about 40 or 50 have been removed.

This number is usually enough for one sitting, and is about as much as the operator will want to do without a rest of her eyes, for this kind of work is quite a strain even on the best eyes.

With patience, however, a moment's resting of the eyes between every 10 or 15 hairs, the operator can work unweariedly on six or seven persons a day. Each sitting at first lasts about three-fourths of an hour, but,

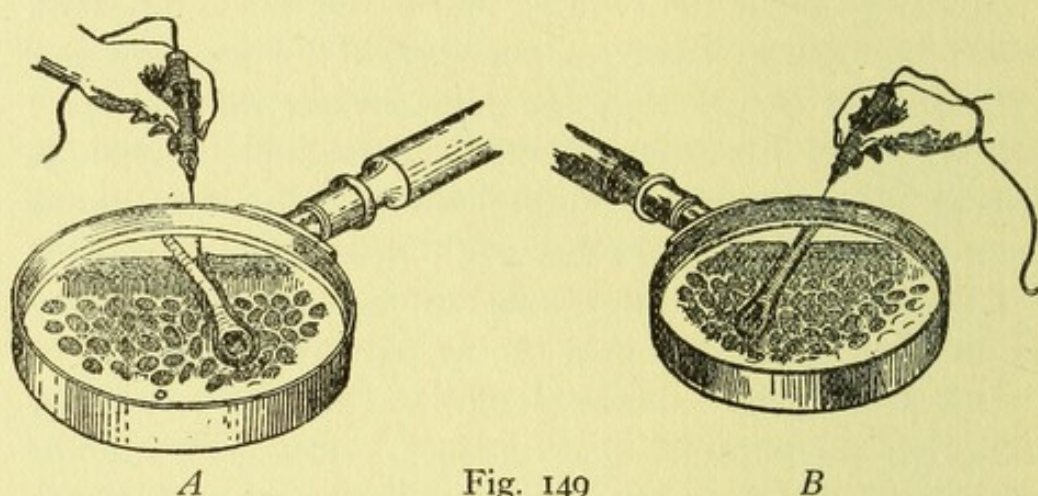


Fig. 149

INSERTION OF THE NEEDLE

A—Incorrect manner. *B*—Correct manner.

as the operator becomes more skilful, she will be able to remove fifty hairs in half an hour, and do the work well.

In removing the hairs of the face the operator must be cautioned not to remove at the same sitting hairs too close to each other, for this is liable to break down the skin between the hairs and leave a pit or scar.

At each sitting select the largest and darkest hairs first. Do not let the patient pull hairs out thereafter. If the growth is very strong, she may be allowed to cut them off with a scissors, letting enough of the hair re-

main to allow you to get hold of it with the depilating forceps.

If the number of hairs is not great, one sitting a week should be sufficient.

If, of course, the disfigurement is a decided one, the hairs being dark and coarse, two or even three sittings may be given in the week, the operator working on different parts of the face, so that by the time the place treated at the third sitting is done, the area worked on at the first sitting is healed.

After each sitting a little antiseptic lotion is rubbed on the parts operated on, listerine being satisfactory, and the patron is requested to apply a cold solution of witch-hazel and water, each equal parts, with a little absorbent cotton. This need not be repeated on the following day.

Sometimes the parts operated on get rather sore and swollen, showing a number of scabs the size of pin heads. If this condition appears, it shows the operator has used too much current or has allowed the needle to remain in the follicle too long.

While this condition is not necessarily dangerous, it is annoying to the patron and keeps her from taking the next sitting as readily as otherwise would be done.

RETURNING HAIRS.—It is impossible to remove permanently at first every hair thus operated on. Some of the hairs will return. The number returning after each sitting will vary with the experience of the operator. The best operators expect a return of five per cent. With others ten to twenty per cent. of the 50 hairs treated will return.

This is due to the fact that the papilla upon which the root of the hair rests cannot be seen, but must be felt with the fingers through the needle holder and needle,

and either the touch of the operator is not delicate enough or not enough current has been used to destroy the hairs.

These failures must never depress the operator. They happen to the most skilful. And because they are bound to happen it is well to tell the patron frankly that a percentage will return and have to be treated a second time. But, while frankly imparting this information, which will forestall any complaint on the patron's part that you have not done your work thoroughly, you can with convincing truth of tone assure her of this fact: *There is absolutely no doubt that even the worst hair growth on a woman's face can be absolutely removed to stay away.*

And here let the author earnestly advise each operator not to agree to remove all the hairs on a woman's face or mustache or growth of hair on the chin, for a fixed sum. Nine times out of ten the number of hairs is not easily guessed at. It is better to work on a stated number of hairs at each sitting. The propriety of this method of work usually appeals to the patron.

After each sitting open the switch first, clean the needle in an antiseptic, wash the sponge in the same solution and lay it aside to dry.

It is the habit of the author to use a plain metal disc position electrode, and in place of the sponge part of it to use a piece of absorbent cotton moistened in the same way as the sponge. The cotton is thrown away after each sitting.

As the battery of cells wears out, if these are used, the rheostat handle or the handle of the cell selector must be moved farther on over the next disc, etc., to get the same results. When it is found that the current is just barely sufficient or when the 16th disc has been used, the whole battery should be renewed by putting fresh solution into each jar and a new zinc rod in place of the

consumed one. This will make the battery as good as new.

With a fairly busy practice this renewing of the battery may be necessary only once a year. The operator must study each individual case as well as the behavior of the apparatus and will find that in a very short time she will have mastered various little points which will individualize the work and experience, and will come to regard the practice of electrolysis as a pleasurable pastime instead of a nerve-racking task.

MOLES.

The removal of moles of various kinds, whether flat or pigmented or fleshy, is best accomplished by electrolysis. Acid or other caustic methods are not only unreliable, but are likely to leave unsightly and depressed scars, because it is impossible to regulate the burning effect of these agents.

To remove moles the same method as for the removal of hair is used, the needle attached to the negative pole is thrust through the mole on a level with the skin, going in at one side and out at the other. The amount of cur-

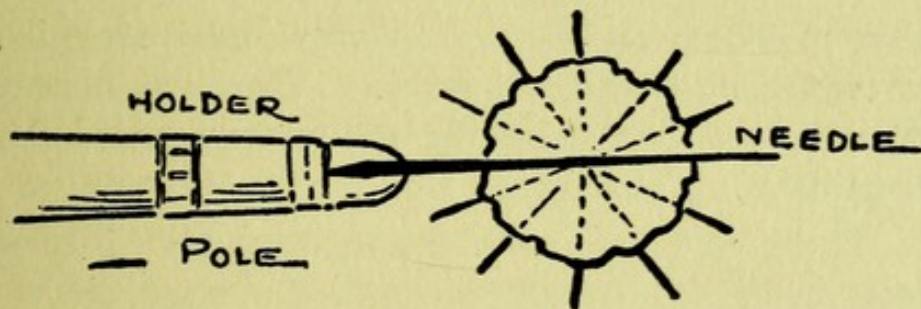


Fig. 150
PUNCTURING A MOLE

rent needed to destroy this tissue varies with the fleshiness or hardness of the mole. In flat moles and liver spots the same current used for destroying hairs is suf-

ficient as a rule, but for the fleshy kind 12 to 20 milliamperes or the current from 10 to 12 cells are required.

The guide is the frothy appearance about the needle and a general loosening of the tissue around the latter.

Several punctures are usually necessary, made in criss-cross manner, leaving about one-eighth inch between the needle entrances. See Figure 150.

After needling thoroughly, the mole is dried off with a piece of absorbent cotton and dusted with an antiseptic powder. Aristol will be found most satisfactory.

The scab that will form as a result of the mole drying and shrivelling must not be *picked* off, but allowed to fall off, which takes place between five and ten days, or even longer, according to the size and hardness of the mole treated.

If after the scab has fallen off there is still a roughness of the parts it should be needled again lightly to make it even. The pink color of the parts after the scab has fallen off will gradually whiten, leaving little or no appreciable scar.

RED VEINS AND CAPILLARIES.

Enlarged blood vessels are usually found about the wings of the nose and the cheeks. They are best removed with the electric needle much the same as superfluous hairs.

The needle connected with the negative pole is made to puncture the skin directly downward through the vessel, which can in the average patient be plainly seen.

In a little while the skin becomes pale around the needle and tiny bubbles will be seen to travel through the blood vessel. The operator must judge how long to leave the needle in place by the effect. From 10 to 15

seconds with 20 milliamperes are usually required and often more current for the larger vessels. It is well to puncture the vessel in two places so as to cut off a certain portion of it entirely on healing.

For very fine vessels, the needle may be introduced right through the skin into and through the canal or lumen of the vessel, thus breaking it up in its course. This usually in healing will give a splendid result. *Spider-like vessel* formations are treated in the same manner.

BIRTHMARKS.

Nævi, birthmarks, or port-wine marks, so called, if not too large or elevated, are treated as follows:

A cluster of needles, say from six to ten, may be tied together and connected to the negative pole, or an electrode of that form may be procured for the purpose. This cluster of needles, having their points all on the same level and connected to the negative pole, is thrust into the mark here and there and allowed to remain long enough to thoroughly destroy the mark about each needle, it being understood that the patient holds the positive or sponge electrode in her hand, the color of the tissue and the froth and experience being the guides.

After the scabs, as in the case of moles, fall off, a second sitting and more may be given until the entire patch has been rendered white or pale in color—a condition much to be preferred to the deep red or purplish appearance before treatment.

Antiseptic powder should be dusted on the parts after each treatment.

SCARS.

Scars, particularly of a linear character, can sometimes be much improved by cutting the line up into small sections with the electrolytic needling process.

To do this, the same method as for the removal of hairs is followed.

The needle attached to the negative pole is thrust through the scar, directly downward at points along the scar line about one-quarter inch apart until the whole scar has been worked on.

After the scabs that form fall off, the needle at the second sitting is thrust into the scar at the place between each of the former points treated, so that the whole scar presents in the end a sieve-like appearance.

Two or more sittings may be necessary to accomplish this result.

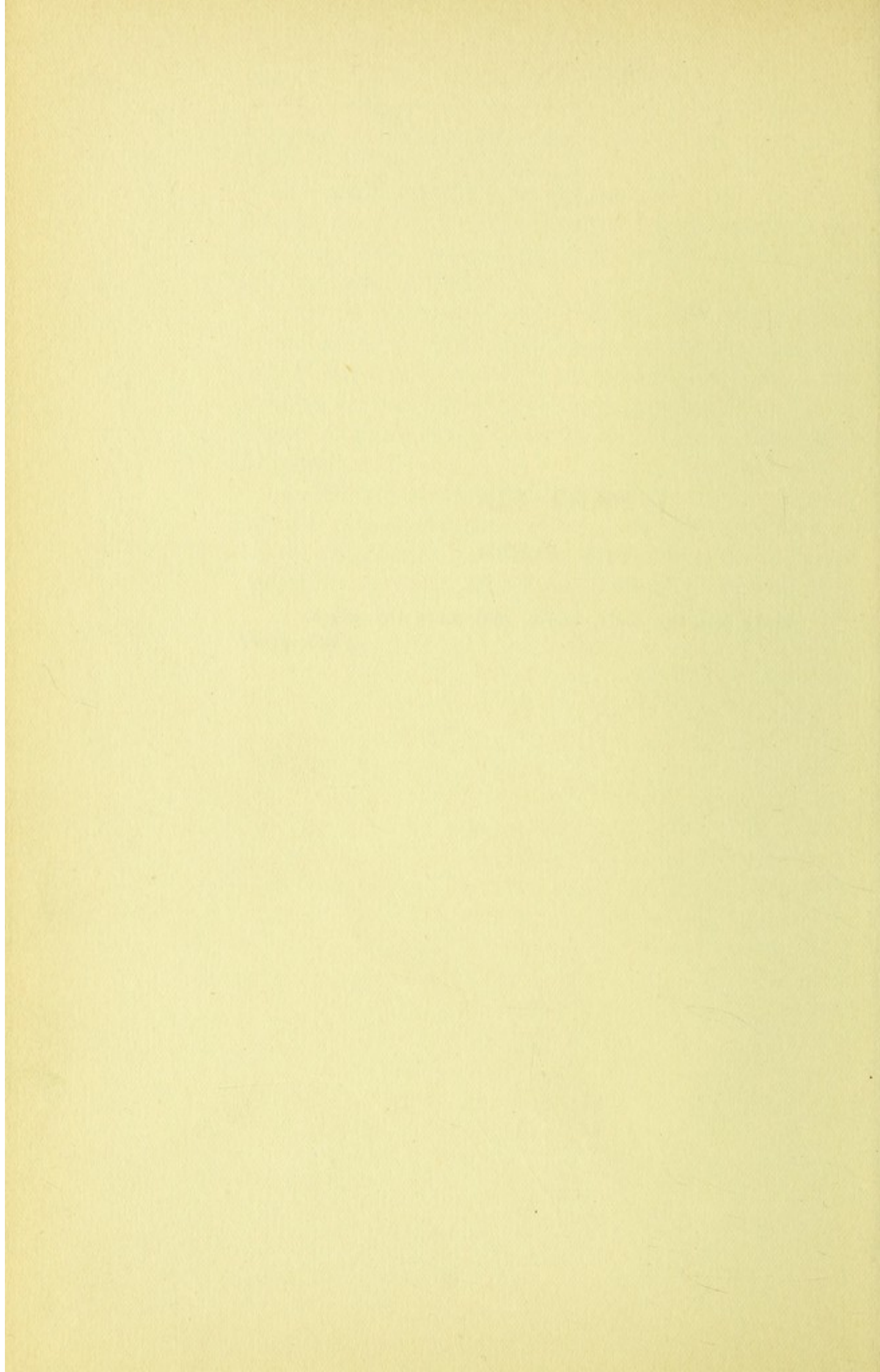
The effect is a cutting up of the scar line, as it were, and will prove very satisfactory to the patient. In reality, the object is to form a scar within a scar, the former causing by its contraction a reduction of the latter.

PART SIX

THE FLESH

Make less thy body, hence, and more thy grace.

—*Shakespeare.*



THE FLESH

CHAPTER XXIV.

FLESH REDUCTION.

Dieting—Systems: Banting's, Ebstein's, Oertel's, Cathell's, Schweninger's—Three Weeks' Course to Reduce Corpulence—Cold Baths—Sweating—Sassafras Tea—Summer the Best Time to Reduce Flesh—Sleeping Less—Erect Carriage—Walking—Rolling—Massage: Japanese Pinching Massage, Mechanical Massage (Zander's Method)—Reduction of Double Chin: Massage, Exercises, Use of Appliances, Plastic Surgery—Reduction of Thick Lips: Astringent Lotions, Plastic Surgery—The Nose—The Ears—Reduction of Bust: Diet, Pomade, Exercises—Reduction of Forearms: Exercise—Reduction of Hips and Abdomen: Rubber Bandage, Perspiration, Lotion, Exercises—Reduction of Calves: Exercise.

FOR the prevention of corpulence and the reduction of superfluous fat, many expedients have been resorted to and numerous remedies recommended. It is impossible here to give the details of all of them, and besides it is unnecessary. They embrace such regimen as bleeding, blistering, purging, starving, beating, rolling, sweating, the use of different kinds of baths, and of innumerable drugs, yet none has been found to accomplish the desired effect in all cases.

The more successful plans of treatment have been based on systems of exercise and diet, the most notable

being those of Banting, Ebstein, and Oertel. These systems have for their object the regulation of exercise in such a way that oxidation may proceed in a normal manner and the diet be so regulated that a less quantity than normal of the fat-producing elements is taken into the system. This object is attained in various ways:

In the method of Banting the total quantity of food is reduced, the liquids restricted, and the fats and carbohydrates excluded.

Ebstein's method permits the use of fats, but eliminates the carbohydrates.

Oertel's system is specially intended for individuals with cardiac complications, and consists of three parts:

1. Reduction of liquids, with promotion of perspiration by baths or other means.
2. Restriction of the diet largely to proteid substances.
3. Taking graduated exercises in walking uphill.

Some years ago Cathell proposed a method which was entirely independent of diet and exercise. This was the taking on alternate days of Kissingen and Vichy mineral waters, with the addition in obstinate cases of lemon juice to the Kissingen, and aromatic spirits of ammonia to the Vichy.

Thyroid extract enjoyed for a time a reputation as a fat reducer, but its tendency to interfere with the heart, which is apt to be weak in obese persons, makes it a somewhat dangerous drug.

Among other substances which have been used for the reduction of fat are iodine, bromine, mercury, lead, arsenic, lemon juice, sour wines, vinegar, phytolacca, gulf-weed, and bladder-wrack. But many of these, while having an influence in reducing the fat, act as slow poisons,

and damage the assimilative organs so that the ultimate effect of the intended remedy is injurious.

The drinking of vinegar was long popularly supposed to be a remedy for obesity. There is, however, no evidence that this liquid has any power to remove fat, while its pernicious effects upon the health when taken in large quantities are well known to medical men.

BANTING'S SYSTEM.—Some years ago William Banting of London addressed a letter on corpulence to the public in which he described the method by which he had reduced his own excessive weight by many pounds. After trying various methods then in vogue without success, he adopted a form of diet which consisted chiefly in the removal, as far as possible, of all saccharine, starchy, and fatty foods, and the substitution for these of meat or fish and fruit in moderate quantity at each meal, together with the reduction of the amount of liquids consumed, and the daily use of an antacid draught. Mr. Banting's published experience induced many to follow his example, and the effects in many instances were all that could be desired, but in some cases the diminution in weight was found to be attended with such a serious impairment of health as to render the carrying out of his system impossible.

It is probable that in some of these cases the unfavorable effects might have been avoided if the change in diet had been more gradually brought about.

"Banting's system," says the *Encyclopædia Americana*, "in reducing the consumption of starch, sugar, and fat to a point less than is necessary to maintain the heat and energy of the body made a draft on the stored-up fat of the body, thus using up the accumulated fat in the body. The main principles are the avoidance or sparing use of

potatoes, white bread, rice, sago, tapioca, corn flour, sweet fruits, and sweet vegetables (like carrots, turnips, parsnips, beets), fat, butter, and cream, and the abstinence from sweet wines and ales. On the other hand, there are allowed all kinds of lean meats, lean fowl, and fish, eggs, game, green vegetables, succulent fruits, natural wines, bitter ale in small quantity, and spirits. Brown bread should be substituted for white. According to more modern methods the use is allowed of asparagus, spinach, and cabbage."

BANTING'S DIETARY.

Breakfast (between 8 and 9 A.M.):

4 or 5 oz. of beef, mutton, kidneys, broiled fish, bacon, or cold meat of any kind except pork.

A large cup of tea without milk or sugar.

A little biscuit or dry toast (1 oz.).

Dinner (between 1 and 2 P.M.):

5 or 6 oz. of any fish except salmon; of any meat except pork; of any vegetable except potato.

1 oz. dry toast, fruit, or pudding.

Any kind of poultry or game.

Two or three glasses of claret or sherry or Madeira; champagne, beer, or port being forbidden.

Tea (between 5 and 6 P.M.):

2 or 3 oz. fruit, a rusk or two, and a cup of tea, without milk or sugar.

Supper (at 9 P.M.):

3 or 4 oz. of meat or fish similar to dinner, with a glass or two of claret.

SCHWENINGER'S SYSTEM.—Dr. Schweninger of Munich won great repute by his cure of Count von Bismarck. His method was based on a careful analysis of each case and upon a study of each patient's previous ailments. In short, he recognized that corpulence is usually a result of various abnormal conditions which must be remedied as a preliminary to direct treatment.

Dr. Schweninger's plan of noting the habits of each patient and prescribing accordingly seems most reasonable. Some fat people are very active, and a slight regulation and reduction of the diet accomplishes the desired result. Others are indolent and inactive, and need a bit more of some kind of exercise. In the majority of cases the intake of fat-forming food must be reduced, while the expenditure of energy must be increased.

One great help in the treatment of obesity is that the three classes of foodstuffs, the proteins, the carbohydrates, and the fats, can be substituted for one another. A fat person who has a desire for a large quantity of food can take it of the less fat-forming variety rather than starve in the generally accepted sense. For instance, we know that one ounce of butter is equivalent in heat- and energy-producing value to about nine ounces of potatoes.

Fat persons, with good appetites, then, may eat large quantities of some things without the increase in fat that would come from the eating of other things in the same quantity. They may take a reasonable allowance of lean fish, lean beef, mutton, lamb, chicken, game (sparingly), boiled or poached eggs, toast, stale bread, spinach, lettuce, celery, cresses, asparagus, cauliflower, cabbage, onions, tomatoes, radishes, olives, ripe fruits (acid kinds preferably), skimmed milk, buttermilk, tea or coffee without cream or sugar, vinegar, lemon juice, mineral water—a variety not to be despised.

The following should be avoided or taken sparingly: all fatty or greasy foods, thick soups, sugar, candy, pies, puddings and all sweets or syrups, white bread, butter, crackers, biscuits, dried peas or beans, dried fruits, cereals, macaroni, salmon, bluefish, mackerel, eels, salt fish, pork, veal, sausage, made dishes, carrots, turnips, par-

snips, rice, beets, spices, malt or spirituous liquors, beers, sweet wines, champagne.

THREE WEEKS' COURSE TO REDUCE CORPULENCE.

The following rules may be observed for a three weeks' course in reducing corpulence:

"Rise at 7 A.M.; rub the body well with coarse gloves; have a cold bath, and take a short run in the open air.

"Breakfast (alone) at 8 or 8:30 on the lean of beef or mutton (cutting off the fat and skin), dry toast, biscuit or oat-cake, water, or tea or coffee without milk or sugar, or made in the Russian way with a slice of lemon.

"Lunch at 1 P.M. on bread or biscuit, Dutch cheese, salad, water-cresses or toasted apples, lean beef, or anchovies or red-herring, or olives and similar relishes. After eating, drink unsweetened lemonade or plain water in moderation.

"Dine at any convenient hour. Avoid soup, fish or pastry, but eat plain meat of any sort, except pork, rejecting the fat and skin. Spinach, haricots, or any other green vegetables may be taken, but no potatoes, made dishes, or sweets—a jelly, or a lemon water-ice, or a roast apple must suffice in their place.

"Between meals, as a rule, exercise must always be taken to the extent of inducing perspiration. Running, when practicable, is the best form in which to take it.

"Seven or eight pounds are as much as it is prudent to lose during the three weeks. If this loss is arrived at sooner, or indeed, later, the severe parts of the treatment may be gradually omitted, but it is strongly recommended to modify the general habits in accordance with the principle of taking as small a quantity as possible of fat and sugar, or of substances which form fat and sugar, and of sustaining the respiratory function. By

this means, the weight may be gradually reduced for a few months with safety."

Once the diet has been decided upon, the next step is to increase the expenditure of the energy of the body.

Any form of manual work, exercise, rapid walking and deep breathing, is a reliable means of increasing the output of energy. As was indicated before, stout persons are liable to a weakness of the heart, so that no violent exercise should be undertaken except under a physician's advice.

Cold baths and douches are good. By the application of cold water, the surface of the body gets chilled, and, to warm it up, some body fat is burned up.

Hot baths and sweating are not now considered good; there is a loss of weight secured, but this is now thought to be merely a loss of water that is sweated out, which is soon replenished by the intake of water.

As nearly everybody insists on taking something to reduce the fat, here is one simple formula that has been found to give good results in many cases, and can do no harm:

R	<i>Sassafras root</i>	$\frac{1}{2}$ pt.
	<i>Water</i>	1 gal.

Boil for a half-hour. Take a wineglassful after breakfast and another after dinner.

Where a person is of marked obesity and seems to grow, if anything, stouter under ordinary treatment, then more exact means must be applied. A diet is prescribed based on careful caloric calculation; that is, of the amount of food exactly necessary to maintain the person. That established, a prescribed proportion is daily omitted, and, if the patient is kept about his duties in his usual manner, some of the energy required must come from the fat already stored up.

SUMMER THE BEST TIME FOR REDUCTION.—The mid-summer is a good time to teach or train the stomach what to welcome and what to reject for the purpose of reduction.

A stout person who shrinks from cold baths can in the summer get accustomed to them, and, if taken daily, they will assist in forming muscle instead of fat in the body.

Lack of sleep is a good reducer, and as one needs less sleep in summer, then it is a good time to get used to spending an hour or two less in bed.

Out of door sports in summer make for lesser bulk, since perspiration takes off the fat, and the oxygen of the out-door air helps burn it up.

WALKING.—Long, brisk walks, at a five-mile-an-hour pace, will take down the flesh rapidly.

The safeguard for a stout person is an erect carriage, head up, chest up, abdomen in. This helps keep down the fleshy back; and makes for lightness of foot without loss of dignity. Keep the feet parallel, and let the legs swing out freely from the hip-joint. When a bit tired, change your gait.

ROLLING.—Rolling has many advocates, partly because of its simplicity. A sheet on the floor, and little or nothing on the body, is all the preparation needed. Take ten to twenty turns over the first time, and gradually increase to two hundred.

The first effect is to stir up a sluggish liver—a much more satisfactory way than with purgatives, since it makes the liver do its natural work well, and shows a quick clearing effect on the complexion.

Rolling acts more quickly and powerfully on the liver and stomach than any of the usual exercises that are

possible outside of a gymnasium. By making the limbs lighter, it makes walking lighter and more graceful. It reduces the upper arm, and is especially good to make the hips smaller.

To get any lasting effect, the rolling must be done daily and systematically—it does no harm to roll once in a while, but to roll off the fat a lot of rolling must be done daily for weeks.

MASSAGE.

Heavy massage and pinching of the folds of flesh help to reduce the flesh.

Place the hands on the sides of the body under the arms and smooth the flesh downward in firm, long strokes, going over the hip line. If the hips are large, move the fingers from front to back, pushing the flesh away.

The following exercise comes from Japan. It is the pinching and nipping massage of that country, and if persistently given is most effective. With both hands pinch the flesh at the waist line between thumb and fingers. The vigorous treatment will first soften the flesh and gradually it will disappear.

Do not use creams or unguents of any kind on the hands for this massage, though the hands may be dipped in alcohol if there is need of something to moisten them.

THE ZANDER METHOD.—The Zander Method of mechanical massage is very effective for reducing flesh. It is simply a vigorous tapping with electrically driven leather-covered hammers. There is a variety of machines comprised in the Zander system for tapping, beating, rubbing, jiggling, and exercising almost every part of the body. The fingers of the pianist and the forearms

and wrists of the racing automobilist, are made supple by special machines. By another machine the cushion of flesh on the back of the neck is beaten down, and by still another the tendons are loosened that give stiffness to the arms or limbs recovering from fractures.

These machines were devised by Gustave Zander of Stockholm some fifty years ago. They are in use in many hospitals, health resorts, and public institutions in Europe, and have been introduced into one of the big hospitals of Boston, where for a small fee treatment is given to many people a day.

In New York some years ago an establishment was equipped to carry on the work, but the high prices charged confined its use to the rich, who took it up only as a fad, and then dropped it, like other fads.

The mode of using one of the forms for reducing the



Fig. 151

REDUCING HIPS BY ZANDER APPARATUS

hips is here illustrated (see Figure 151). The machine far surpasses the hand in manipulating power, giving as high as 450 manipulations a minute.

PENDULOUS OR DOUBLE CHIN.—Dashing cold water on the chin and neck and rubbing lumps of ice over them will tend to drive away deposits of fat.

Don't let the chin bury itself in the neck, but keep it high. This reduces the fat and smooths the neck wrinkles. Learn to sleep with the head on a small pillow.

Massage is also beneficial:

Put fingers of each hand on back of neck near base of brain with thumbs under the chin and palms up. Massage heavily by moving the thumbs with rotary movement over the rolls of flesh from the chin to each side toward the ears, at same time working the fingers on the muscles at back of the neck and under the ears, often throwing the head far back while working across the rolls of the chin.

To aid the fingers in this massage the following is good:

R	<i>Camphor water</i>	3 parts
	<i>Alcohol</i>	1 part

A longer formula, but one readily prepared is

R	<i>Mutton Tallow</i>	4	oz.
	<i>Glycerine</i>	1 1/4	"
	<i>Benzoin</i>	1/2	dr.
	<i>Spirits of Camphor</i>	1/4	"
	<i>Powdered Alum</i>	1/8	"
	<i>Russian Isinglass</i>	1/4	"
	<i>Rosewater</i>	1/2	oz.

Warm the rosewater in a cup set in hot water and dissolve the isinglass in this after blending the mutton tallow and glycerine by gentle heating. Mix with the rosewater and isinglass, and stir in the other ingredients to make a cream. This is an astringent that tightens the skin without allowing it to become flabby, which often happens in reducing a double chin.

Another exercise is as follows: Stand erect, military

fashion; place the hands lightly on the hips, fingers forward; drop the chin slowly on the collar bone, then throw the head back with a quick, even movement that is not a jerk, but yet puts all the muscles into quick play. Repeat ten times. Then turn the head quickly till the chin is just over the right shoulder; then, facing forward, turn it back again. Repeat ten times. Then turn the head to the left in same way, repeating ten times. Do not tire the muscles over-much, but daily increase the number of exercises until you can practise each one fifty times without after discomfort.

A rubber bandage (see Figure 152), placed under the chin and fastened on the side or on top of the head, not only holds the flesh in place, but, by causing free perspiration, gradually reduces the size. A thin, soft towel can be used if no rubber bandage is at hand, or even folds of cheese cloth.



Fig. 152

THROAT STRAP FOR CHIN REDUCTION

The rubber throat strap is sometimes used with similar bandages, one over the nose and cheeks, and one over the eyes, brow, and temples, for reducing the flesh of

the entire face. The mode of wearing these is illustrated in Figure 153.

Before putting on these bandages, which are usually worn at night, it is well to wash the face thoroughly in



Fig. 153
FACE HARNESS

warm soft water to which 10 to 20 drops of benzoin have been added. Once the fatness of the face and chin show signs of disappearing, it is well to discontinue the use of the face harness, and apply instead once or twice a day a towel soaked in alum, alcohol and water.

An alum-water bandage often gives good results in tightening the flabbiness of a double chin. Every woman who is nearing middle life dreads a stringy neck, and many a woman whose neck has begun to show flabbiness is down in the lowest depths of despair, for she somehow feels that all the vivacity has gone out of life when the firmness of the neck muscles vanishes. This particular treatment is a wash consisting of one dram of pulverized alum and one ounce each of alcohol and water,

dissolved and applied to the chin on a towel saturated with the mixture twice daily.

The reduction of the fat of a double chin is readily accomplished, but the great problem is how to dispose of the folds of skin that are often left.

If the application of astringent lotions as described fails to produce the desired results, and exercise and holding the chin well up do not fully satisfy, recourse should then be had to the plastic surgeon who removes the superfluous skin much as a tailor would eliminate a wrinkled fulness in a coat. This method is described in the following chapter.

THE LIPS.—If the lips are too thick or too prominent, they can be somewhat reduced by applying freely at night and before going out this pomade:

<i>R. Pulverized Tannin</i>	1 gr.
<i>Oil of Sweet Almonds</i>	150 "
<i>Spermaceti</i>	35 "
<i>Virgin Wax</i>	15 "
<i>Rosewater</i>	30 "
<i>Cologne</i>	10 "
<i>Balsam of Mecca</i>	1 "

Or this milder astringent cream:

<i>R. Camphor</i>	3½ dr.
<i>Spermaceti</i>	1 "
<i>White Wax</i>	1 "
<i>Oil of Almonds</i>	4 oz.
<i>Rosewater</i>	4 "
<i>Oil of Rosemary</i>	9 gr.
<i>Oil of Peppermint</i>	5 "

Or this very much simpler mixture may be all that is required:

To one ounce of any simple cold cream add one ounce each of pulverized tannin and alkanet chips. Let stand

five hours, and strain through cheese cloth. Apply to lips frequently.

The plastic surgeon can very readily reduce the too thick lips by dissecting out an elliptical piece of the vermillion and bringing the edges carefully together and bandaging the mouth up around a tube so that liquid food can be taken without moving the lips for about three days.

THE NOSE.—The nose can be changed in shape by the plastic surgeon as will be explained in the following chapter. Redness of the nose and kindred diseases have been treated in Part Four on the Skin. The one thing to be impressed here is that the nose should be cleansed daily preferably at the evening toilet. This is a simple matter, consisting in snuffing first up one nostril then up the other a mild solution of salt and water, the water being preferably lukewarm.

THE EARS.—There is little that can be done to beautify the ears except to keep them clean and the wax from hardening. The plastic surgeon is successful in setting back as close as desired to the head ears that project. He can also reduce the size of the too large ear, and, if necessary, loosen the lobe that may be attached to the head. This is explained in the following chapter.

THE BUST.—To reduce the bust is very difficult, since the parts are entirely too delicate to permit of heavy massage, while the sweating down is very likely to leave them flabby.

Diet has here, as on the face, a quickly noticeable effect. Drink less liquids, give up sweet and starchy foods, wear a tight-fitting corset—cover and bathe the parts with cold water, to which add either 15 drops of benzoin or a half teaspoonful of alum.

The following pomade will help if rubbed over the fatty parts twice a day:

R	<i>Iodide of Potassium</i>	50 gr.
	<i>Vaseline</i>	2 oz.
	<i>Lanolin</i>	2 "
	<i>Tincture of Benzoin</i>	25 drops

Exercise, however, is the best means of bust reduction. Stand erect and try to make the elbows meet in the back. This is to remove the superfluous fat upon the back. Stretch the arms in front of the chest as far as possible, palms together. Raise them above the head, stretching well; carry them back of the body as far as possible, always with the elbows straight, gradually coming round to the front. This exercise must be done very slowly and with energy, but with evenness. Stand before a mirror and notice the play of the bust muscles. It is one of the most effective exercises for vitalizing the upper part of the body. It will eliminate superfluous fat and strengthen the muscular tissues, giving firmness to the flesh.

THE FOREARMS.—Many women who have paid little attention to their physical condition develop large and ungainly forearms. These forearms will have to be reduced to fit in with the hipless figure. Perhaps the best and at the same time the simplest exercise ever devised for this purpose is the following: Clench the fists as tight as possible and then revolve them slowly on the wrists until they ache. It will be found at first that this exercise is very tiring, but after a few days' practice it can be done with ease. In a very short time the size of the forearm may be thus reduced one or two inches.

THE HIPS AND ABDOMEN.—One of the easy ways—and it seems to be easy ways that all are looking for—to re-

duce the hips and abdomen, is to wear a rubber bandage or corset, as it were, over the hips. This works automatically, even when you sleep, though its most effective results are the excessive and reducing perspiration of the parts covered while one is walking or otherwise exercising.

The following external application is effective in reducing the flesh. It is to be painted on the fleshy parts of the hips.

<i>R</i>	<i>Tincture of Iodine</i>	60 min.
	<i>Iodide of Potassium</i>	120 gr.
	<i>Distilled Water</i>	14 oz.
	<i>Anise Seed Water</i>	170 min.
	<i>Hyposulphate of Soda</i>	20 gr.

Simple exercises closely connected with daily life will aid in the good work. Not to speak of washing clothes and scrubbing floors, any exercise that causes a woman to bend downward from the waist is beneficial. Thus she may wash her hands and face in the morning from water in the bottom of the bath tub, or may button or lace her shoes with her feet on the floor.

Vigorous calisthenic exercise, however, is by far the best means of reducing the hips and the abdomen. The "sitting up" exercise used in the army is particularly effective. Start in a perfectly straight position, with heels together, toes out and palms to the sides. Then, keeping the back perfectly straight and bringing the arms up level with the shoulders as the knee movement is made, bend the knees so as to assume a squatting position. Then take the original position, bringing the arms down to the sides.

Other exercises that may be recommended are the following:

Free the hip muscles by giving them a good shaking.

This is accomplished by placing the feet together. Bend first one knee and then the other, keeping the alternate knee straight. This exercise should be done as rapidly as possible, as though running, but without lifting the feet from the floor. After freeing the muscles give the hips a vigorous slapping with the back of a hair brush; also knead them well. Then give them the use they so much need, and so seldom receive because of stiff corsets and the present mode of dressing.

Place the heels together, raise the right arm high over the head and let the hand fall over the left ear. Bend the head and the body at the waist line to the left and stretch the left arm down as far as possible, the right arm still over the head. Do not bend the knees. Repeat to the right. Do this from five to thirty times every morning.

Feet together. Knees straight. Bend the body forward at the waist line, then slowly rotate it to the left, to the back, to the right, and again to the front. Do this five times and then repeat to the right. Gradually increase the number of rotations until it is done from twenty to thirty times twice each day.

Place the left foot at right angles to the right instep, take a long step, back (right) leg straight. Bend the left knee and bend the body at the hip until it rests over the left thigh; then bend the body backward without changing the position of the legs or straightening the knee. Repeat several times and then come slowly to position. Place the right foot forward and bend the body over the right knee, etc. Begin with only a few times every morning, gradually increasing the number as the muscles become stronger.

Raise the left leg at the side of the body until on a level with the hips. Do this from ten to fifteen times,

until there is a sense of fatigue in the muscles. Repeat with the right leg.

Swing the left leg in a circle as high as possible, slowly. Repeat with the right.

Stand firmly on the left foot, knee straight. Raise the right hand above the head and stretch. Bend the body at the hips until at right angles with the leg, arm still stretched above the head. Raise the right leg until



Fig. 154

LEG EXERCISE TO REDUCE HIPS

the head, arm, body, and foot are all on a level and horizontal with the floor. Hold the position a few seconds and then come slowly to a vertical position. Repeat by standing on the right foot and raising the left hand and leg, etc.

Another exercise, illustrated in Figure 154, may be taken upon the bed, but it is better to take it upon the floor, since the bed yields with the body, while the solid floor offers resistance. Lie flat upon the back. Raise the right leg slowly until the leg forms a right angle

with the trunk of the body. Imagine that the sole of the foot touches something. Press the foot with all your strength against that imaginary something. Repeat this a half dozen times. Then make the same movement with the left foot. Then alternate. Then repeat them together. There is no easier and scarcely a more valuable exercise for reducing the hips and abdomen.

The following exercises strengthen the abdominal and back muscles, reduce the size of the abdomen, and keep the body supple:

Stand firmly on the feet. Raise the arms high over the head, palms together. Fill the lungs, and then sway the body around in a circle, moving the body only at the waist. Then with the arms raised above the head, palms forward, take a deep breath; bend forward at the hips, and try to touch the floor with the finger tips, keeping the knees stiff. With hands on hips bend forward, swaying the upper body in a half circle; also, with hands on hips, bend from side to side as far as possible. Then, alternately raising the hands, bend from side to side.

Press the too large abdomen backward with the palms of the hands. Take a deep breath, holding in the abdomen. Repeat this several times; the chest should expand with every breath, but don't let the abdomen dilate.

Another exercise is leaning forward with hands clasped tightly upon the abdomen, drawing it in as far as possible. Then incline the body forward at the hips, draw a deep breath, and, while slowly raising the figure until erect, expel the air.

Deep breathing, especially during exercise, will help reduce the waist and enlarge the bust.

Again, standing erect, with hands on hips, raise and lower each knee. Draw up the right and then the left

(see Figure 155). Repeat this until a general flexibility of the muscles is felt. The line at the side is lengthened by this "prancing" motion, and muscles become harder, while fat disappears.

Still another exercise is to lie flat on the back on the floor or hard bed with the arms at the sides. Raise one



Fig. 155

EXERCISE FOR REDUCING HIPS AND ABDOMEN

leg and then the other straight from the floor as high as possible, keeping the legs stiff and unbent at the knees. Then, with legs still unbent, try to raise the body to an upright or sitting position. At first you may be able to raise only the head, but with a few efforts the shoulders will yield, and you will be able to raise the body and sit erect (see Figure 156).

Again, lie upon the stomach, and with body rigid raise yourself slowly by your arms alone to their full length (see Figure 157).



Fig. 156

EXERCISE FOR REDUCING HIPS AND ABDOMEN

Rolling is an effective way to reduce the hips and abdomen. This must be done at least once a day, twice is better, especially if the whole body is to be reduced as well as the hips.

THE CALVES.—The “sitting-up” exercise set forth on page 345 for the reduction of the thighs will accom-

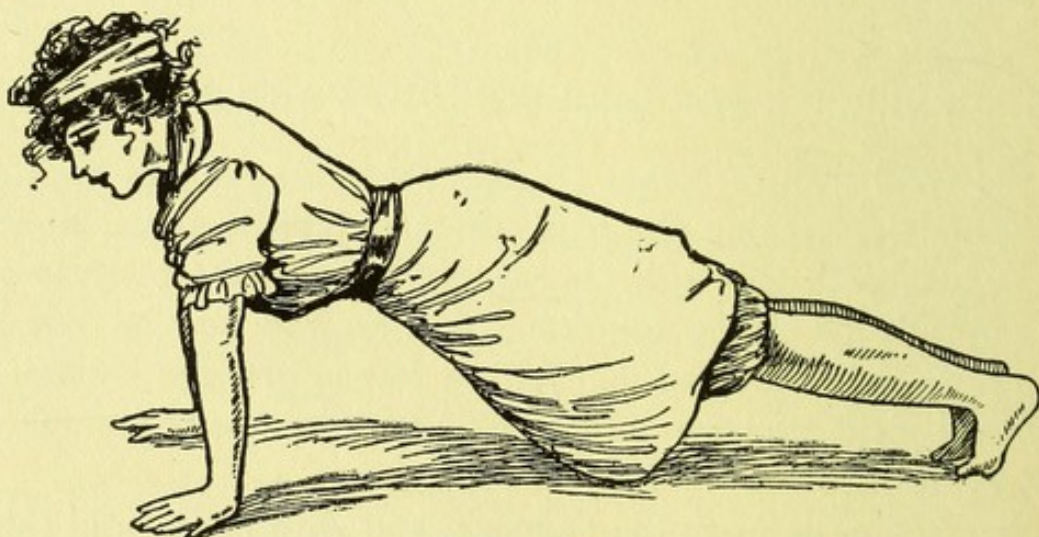


Fig. 157

EXERCISE FOR REDUCING HIPS AND ABDOMEN

plish much for big calves. It may be supplemented by the following special exercise: Stand up straight and kick out with each foot in turn, bending the knee so as to draw the heel of the foot back as far as it will go. Repeat this exercise from fifteen to twenty times every day, and you will be surprised how soon the girth of your too fat calves will diminish

CHAPTER XXV.

PLASTIC SURGERY.

How Facial Features are Changed by Surgical Operations—Humped and Hollow Noses—Drooping Eyelids—Wrinkles—Protruding Ears—Hare-Lip—Thick Lips—Dimples.

PLASTIC, or, as it is sometimes called, Cosmetic Surgery, is a part or branch of Beauty Culture which is confined strictly within the province of the licensed surgeon. A brief account of the work is given here simply that the reader may know something of the nature and variety of the operations that are performed, and the remarkably successful results that follow.

THE NOSE.—On account of its structure and shape the nose lends itself easily to the plastic surgeon's art. If there is too much nose, as, for instance, a prominent hump, a slight surgical operation removes the surplus bone or cartilage. In the case of flaring nostrils, or a drooping septum, or too much flesh at the end, forming what is known as a bulbous nose, these defects are overcome in such a manner that no scar is left, and not much pain suffered nor inconvenience experienced in the way of detention from usual duties.

It is also a comparatively simple matter to add a bit to a saddle- or pug-nose, or to fill out the two hollows, one at the bridge and one near the tip of a nose, which often disfigure an otherwise good face. A hypodermic needle specially constructed for this work is filled with hydrocarbon or paraffin at a temperature somewhat in

excess of blood-heat. This needle is injected under the skin at the point to be made larger; the paraffin is projected into the hollow beneath the skin; the needle is withdrawn, and, while the paraffin is cooling down to blood temperature, it is pressed into the desired shape with the fingers, and there allowed to remain—itsself unseen, but adding very greatly to the symmetry of the face and the resultant expression of beauty and character.

The really difficult feats of plastic surgery in the restoration of noses appear where there is virtually no nose at all. Here a finger is opened up, and bound on the place where a nose is wanted, or a bit of the skin is brought down from the forehead or grafted on from the forearm. These operations have been performed successfully and, while the results are not what might be called a perfect nose, the patient is supplied with what a casual observer takes to be a nose, and is to every eye a great deal better than no nose at all.

THE EYELIDS.—A surgical operation that has a marked effect in brightening a face is the lifting of a drooping eyelid.

WRINKLES.—The fullness or bagginess under the eyes which makes a woman look old and a man appear dissipated is taken up much as a tailor would take out the surplus cloth that makes a coat wrinkle. This also is the process of lifting drooping cheeks or a wrinkled, flabby condition of the skin of the neck. For the deep wrinkle that sometimes forms from the wing of the nose to the ends of the mouth an injection of paraffin is the usual treatment.

THE EARS.—Ears that stick out prominently are set back as close to the head as desired. An elliptical piece

of the cartilage at the back of the ear is dissected out without cutting clear through the ear; the raw edges are brought together with a few sutures; a bandage is fastened about the head to hold the ears undisturbed when the patient sleeps; and in a few days the flamboyant ears are as subdued and retiring as one could wish. If an earring has been torn through the lobe of the ear, the slit can be brought together without a trace, while if the lobe is attached to the skin at the upper edge of the jaw it can be successfully separated.

HARE-LIP.—That hideous deformity, a hare-lip, is readily overcome. A child born with this terrible disfigurement may be operated on at almost any time, but preferably about the third year.

THICK LIPS.—Occasionally the operation of reducing lips that are too thick may be performed, but only with the exercise of great care and patience on the part of the patient. The fullness is removed from the inside, and, as the success of any surgical work is, in large measure, dependent on keeping the part operated on perfectly still, it requires no great imagination to realize the difficulty of supplying food to a person whose lips must be kept perfectly quiet.

DIMPLES.—The production of a dimple in a smooth cheek is occasionally performed, but this is an operation that, while surgically a success, is a practical failure; the dimple can be made and made well, but something happens that was not thought of till after the first hand-made dimple became a fact: it is a dimple that is always in evidence. Now the beauty of a natural dimple is that it appears when the face lights up with pleasure, and it keeps out of sight when trouble comes to the face. But

a person who has an artificial dimple is in a position similar to that of Victor Hugo's "Laughing Man," whose mouth, gashed into a grin in childhood, caused him to appear to be grimacing even when enduring the greatest anguish of soul. The woman who has sought to improve on Nature in an unnatural fashion by cutting a wrinkle in her smooth cheek always repents of her thoughtless action. She appears to beholders as always smiling; at the performance of a tragedy as well as of a comedy, at every funeral as well as every wedding, and (with material disadvantage in respect to the amount of alimony awarded) at her own divorce suit,—which such a woman is pretty sure to experience if she has been able to entrap some man into marriage by the surgical dimple and similar artifices. A conscientious Beauty Culturist will dissuade from her purpose any patron who is so foolish as to consider enhancing her charms by acquiring an expression which is not normal to women in general, and with which Nature never intended exceptionally to endow her.

CHAPTER XXVI.

FLESH DEVELOPMENT.

The Philosophy of Bodily Development—General Development of the Body: Proper Diet, Bathing, Deep Breathing, General Exercise, Massage, Rest—Prescriptions to Aid Appetite and Flesh Development—Bust Development: Massage, Deep Breathing, Walking—To Make a Flabby Bust Firm: Massage, Massage Lotions—To Develop the Arms: Housework, Bathing, Massage, Lotions—To Develop the Legs: Exercise for the Calves, Exercise for Both Arms and Legs—To Develop the Face: Tapping or Pinching Massage, Skin Foods, Recipes, Vibratory Massage—The Lips: Lotions.

THE human body is constantly undergoing changes, the processes of waste and repair being in continuous operation. We are not the same to-day that we were yesterday, and to-morrow will find us different from to-day. The tissues that supply power for the use of our muscles and brains to-day will to-morrow be useless, worn-out material. Every thought, action, feeling, or emotion consumes the vital force of certain particles of body and brain. When the life and vitality have been used out of the tissues they become useless and as dead matter are taken into the circulation and expelled from the body through the skin, the bowels, the kidneys, and the lungs.

Growth is an accumulation of the repairing material. New tissues are constantly being formed to take the

place of the used-up or worn-out matter. The materials for these new tissues are obtained from the blood and have been produced by the digestion of fresh supplies of food.

When any limb or part or the whole body is put in motion an increase in waste in its substance immediately takes place, followed, however, by a powerful reaction.

The blood is repeatedly purified during exercise by the exhalation of its noxious compounds in perspiration, and by being exposed at each inspiration to the action of pure, fresh air, which builds up the lost substances and adds good sound material for future use and exertion.

The states of reaction which arise with renovating power after exertion must follow each other in close and regular succession to produce any marked effect upon the development—in other words, the exertion must stop short of fatigue if development is the object, while for the reduction of adipose tissue, exercise beyond the point of fatigue will over-balance the ability of the blood to restore the loss, and there will be a breaking down or waste of flesh in proportion to the strain put upon the processes of repair.

Water is the agent by means of which our food is digested and the nutrient portions carried to the various parts of the body for the formation of new tissues. It is the expansion of water when vaporized by the heat of the body that affords the motive power to circulate the blood.

It is this constant waste and repair that is taken advantage of to increase or diminish the quantity of flesh or muscle in any desired part of the body.

GENERAL DEVELOPMENT.—If the face is thin, the cheeks hollow, the skin pale and dry, the causes are usu-

ally (1) mental anxiety, the result of a high-strung, nervous temperament, (2) mal-assimilation of the food eaten, (3) lack of proper mental recreation, resulting from following one pursuit too continuously or eagerly, or (4) too much activity for the amount of relaxation or rest allowed.

The first thing to do is to give less thought to what you eat or its amount, eating what tastes best in reasonable quantity, chewing it well, drinking two to four extra glasses of clear, cool water per day. Take daily a quick cold sponge bath instead of a hot bath; breathe deeply at frequent intervals when out of doors; stir up the liver by exercising the back, loins, and hips; manipulate the face thoroughly, but lightly, with the finger tips daily, using as much olive oil or cocoa-butter every other day as the skin will absorb. Also take daily olive oil, either by itself or with a salad.

Be sure enough cool water is taken daily, especially before retiring at night, and on getting up in the morning. Stop worrying. Allow plenty of sleep. As a rule thin persons should go to bed and rise early. A cold quick sponge bath every morning followed by a few minutes of brisk friction or rubbing the entire body, and especially the feet, either with a moderately coarse towel, or the palms of the bare hands, is better than getting into a tub or under a shower.

Rinse the mouth and clean the teeth before going to bed, as well as when arising in the morning, and wash the hands and face before retiring, for this has a calming and soothing effect.

DIET.—Many thin persons have good appetites and eat large quantities of food—in fact, eat more than their digestive apparatus can care for easily and dispose of

properly. It would be folly to advise these people to add to the amount of food consumed. Here, then, is indicated two things necessary if such a person is to add flesh: First, fat-forming foods should be substituted for those that simply satisfy an empty stomach; and, second, exercises and stimulation must be given the processes of secretion of the digestive ferments.

Butter, olive oil, cream, rich cheese, puddings, candies, ice cream, fat meats, such as beef and mutton rather than poultry; mackerel and fat fish, thick pea, bean, or barley soups, nuts and raisins and the like, are to be eaten in as liberal quantities as the appetite will allow. Take care not to overload the stomach, however. Eat often rather than much at a time. Deep breathing, well ventilated sleeping apartments, moderate exercise, and, if then necessary, prescriptions like the following, will help add power to the digestive machinery:

<i>R Diluted Hydrochloric Acid</i>	3 dr.
<i>Tincture of Nux Vomica</i>	3 "
<i>Peppermint Water</i>	2 oz.
<i>Distilled Water</i>	2 "

Take a teaspoonful three times a day in a half glass of water.

The following is a celebrated formula for aiding flesh development. It is to be taken internally three times a day before meals. The dose is two tablespoonfuls in a quarter tumbler of water.

<i>R Liquid Extract of Galega (Goat's Rue)</i>	3 fl. dr.
<i>Lacto-Phosphate of Lime</i>	154 gr.
<i>Tincture of Fennel</i>	10 "
<i>Simple Syrup</i>	15 oz.

If the food is thoroughly masticated and the patient does not take on flesh, a physician's advice should be

sought to locate some personal physiological idiosyncrasy.

TO INCREASE THE BUST.—Strange though it may seem, it has been found that the bust yields to treatment and will show marked development much more readily than the face.

In developing the bust the muscles must be strengthened and stimulated to increase the deposition of adipose tissue.

This is accomplished by very gentle rubbing in either a straight or a circular manner. Begin with the under half of the bust, and work toward the nipple. The use of the vacuum massage cup as described on page 270 is often better and more gently effective than manual treatment of this very delicate area.

The treatment should be given daily and plenty of cocoa-butter, olive oil, or lanolin should be used.

Care must be exercised not to touch or press hard upon or in any way compress the skin or flesh, as the glands are very delicate and easily injured. The object is to stimulate in a gentle manner the circulation of the blood, causing it to deposit new tissue in the part of the body manipulated, and developing it to almost any desired size.

In addition to the massage manipulation, the following directions should be followed:

Before the massage, warm water should be applied to soften the skin and open the pores; after the massage a cold spray should play for a moment or two on the part, or, if this is not convenient, cold water should be dashed on it.

• Spend five minutes every morning and evening at the open window inhaling the fresh air with the mouth shut,

and the hands holding the window sash on a level with the shoulders. Take a deep breath, lifting the shoulders, as it were; hold the breath several moments, and let it go slowly. Repeat this for five minutes. This breathing can also be practised during the day while walking whenever you think of it.

Then in walking try to forget the feet as much as possible. Keep an "up" feeling, the head up and back, the chest up and forward. This will attract the vitality to the head and chest, and the habit established will not only help to develop the chest, neck, and shoulders, but will give lightness of foot and easy grace in walking.

TO MAKE A FLABBY BUST FIRM.—For a flabby condition of the bust the massage is done somewhat differently, and not so much cocoa-butter or oil of any kind is used. The strengthening of the muscles and the hardening of the flesh is now the object, rather than the increase of the amount of adipose tissue.

The manipulation should cover the whole of the bust. The strokes should be longer, and include several inches of the surrounding area. The pressure can be somewhat harder or firmer, and a greater amount of cold water dashed on the parts after each treatment, which should be given daily. A reclining position gives better opportunity for treatment, and for the deep-breathing exercises practised.

The following is an excellent preparation to be used during the massage:

R	<i>Oil of Sweet Almonds</i>	6	oz.
	<i>White Wax</i>	3	"
	<i>Tincture of Benzoin</i>	1½	"
	<i>Rosewater</i>	1½	"
	<i>Pulverized Tannin</i>	6	dr.

A lotion of more ingredients is highly regarded by

French women who pride themselves on their ability to keep a lasting firmness to their rather large busts:

R	<i>Tincture of Myrrh</i>	3 dr.
	<i>Tincture of Benzoin</i>	3 "
	<i>Galega Water (or Goat's Rue)</i>	1 oz.
	<i>Rosewater</i>	15 "
	<i>Almond Milk</i>	2 "
	<i>Essence of Bergamot</i>	1 dr.
	<i>Essence of Neroli</i>	1 "
	<i>Powdered Alum</i>	90 gr.

A simpler remedy is the following cream:

R	<i>Lanolin</i>	50 grams
	<i>Vaseline</i>	50 "
	<i>Benzoin</i>	20 drops
	<i>Iodide of Potassium</i>	3 grams

Portuguese women are said to get satisfactory results from the following simple treatment:

Boil two whole small oranges in a pint of olive oil for three to four hours—the boiling to be done in a water jacket, that is, the oil and oranges are put in a pan set inside of another pan that contains the water. At night a piece of the boiled orange is gently rubbed over the bust. A few weeks' treatment, it is said, makes the bust much firmer and harder.

TO DEVELOP THIN ARMS.—Light calisthenic exercises taken daily and regularly, and a vigorous rubbing every other day with olive oil or cocoa-butter are usually all that is necessary to put the desired flesh on the arms. Since there is nothing to be injured by rough treatment, the work can be done with much less formality or care than in increasing the bust.

One who does housework should take a tight grip on the broom, clench the fists frequently, and make tense the muscles in both the forearm and the upper arm.

Because thin or scrawny arms are often plentifully

supplied with coarse, dark hair, the fear of exposing this, if the arms become plump enough for sleeveless gowns, often discourages women from making an effort to improve them. This need not be, for the hairs can readily be removed wherever they appear by the use of one of the depilatories for which formulas are given on page 205.

Arms that are rough and red should be scrubbed nightly with soap and warm water—neither hot nor cold. Rub briskly with a coarse towel if the arms are rough, and a soft towel if they are red.

A little mixture of equal parts of glycerine and rose-water rubbed in after the bath is good. It must be borne in mind that before massaging with oils or creams the skin must be dry.

Bathing the arms in hot water and drying thoroughly before applying the creams or oil will help the skin to absorb it.

The best way to massage the oil into the arm is to fill the palm of the hand with oil, grasp the opposite arm, and rub round and round.

Bandages soaked in the oil and wrapped around the elbows at night will aid in fattening the arm and help beautify a rough elbow.

TO DEVELOP THE LEGS.—Flesh and muscle can be added to the legs both by exercise and the liberal use of olive oil in massage.

If the calves are to be increased, rise on the toes, count five, and lower the body till the heels almost touch the floor. Repeat ten times; touching the floor with the heels on the tenth count. By repeating this exercise several times a day for a few weeks a noticeable increase in the muscular strength will be observed. Then do it

but twice a day, and every other day give a massage, rubbing in as much olive oil as the skin will absorb.

The following exercise develops both arms and legs: Standing erect, with arms extended at the sides and parallel to the floor, bend alternately to right and left, letting the fingers touch the carpet (see Figure 158).



Fig. 158

EXERCISE TO DEVELOP ARMS AND LEGS

TO DEVELOP THE FACE.—To increase the plumpness of the face or neck, a very gentle exercise, like massage or pinching or tapping of the portions to be developed is to be given twice daily. Care should be taken not to develop the *muscles* of the face or neck, but only so to stimulate the circulation that new fat cells are deposited a little faster than the waste is carried off. Tapping the cheeks with the tips of the fingers is perhaps the best for the delicate development of the face. The free

use of cocoa-butter while manipulating the face will materially help the fattening process. Melt the edge of the cake of cocoa-butter over a candle or gas jet, and apply as much to the cheeks with the fingers as the skin will absorb, pinching gently the skin between the thumb and the upper edge of the first finger.

If no cocoa-butter is at hand use olive oil or lanolin.

A more elaborate formula for a face massage unguent and flesh producer may be made of the following:

R	<i>Spermaceti</i>	$\frac{1}{4}$ oz.
	<i>White Wax</i>	$\frac{1}{4}$ "
	<i>Almond Oil</i>	$\frac{1}{4}$ lb.
	<i>Lanolin</i>	2 oz.
	<i>Cocoa-butter</i>	$\frac{1}{2}$ lb.

Melt all together and stir in one dram of Balsam of Peru. After it settles, pour off the clear portion and add two drams of orange-flower water, stirring until it hardens.

Another cream that will fatten the face is composed as follows. It is to be kneaded into the skin.

R	<i>Oil of Sweet Almonds</i>	4 oz.
	<i>White Wax</i>	6 drams
	<i>Spermaceti</i>	6 "
	<i>Borax</i>	2 "
	<i>Glycerine</i>	$1\frac{1}{2}$ oz.
	<i>Orange-flower Water</i>	2 "
	<i>Oil of Orange Skin</i>	15 drops
	<i>Oil of Neroli</i>	15 "

Melt the first three; add the glycerine to the orange-flower water, and dissolve the borax in the mixture; then pour slowly into the blended oils, stirring thoroughly.

Besides those that come from the gentle hand massage and tapping, excellent results in filling out a thin face may be obtained through the regular use of the vibratory massage apparatus described in Chapter XXII, and also the vacuum massage cup illustrated on page 270.

THE LIPS.—Thin lips may be made a bit fuller by the use of this:

℞	<i>Simple Cerate</i>	10 grams
	<i>Essence of Cinnamon</i>	15 drops
	<i>Red Pepper</i>	½ gram

Biting the lips is the expression of a nervous temperament, as is also the habit of constantly wetting the lips with the tip of the tongue.

This wetting tends to dry them and rob them of their fresh color. The following salve often delightfully moistens and freshens them:

℞	<i>Olive Oil</i>	10 grams
	<i>White Wax</i>	10 "
	<i>Alkanet Chips</i>	1 "

Melt the wax and olive oil together; tie the alkanet chips in a bit of muslin, and dip into the mixture for an hour or two. Strain through cheese cloth and add a few drops of perfume. This is also good for chapped lips.

A good pomade for chapped lips is made as follows:

℞	<i>Spermaceti</i>	½ oz.
	<i>Oil of Sweet Almonds</i>	1 "
	<i>White Wax</i>	¼ "
	<i>Cochineal</i>	1 drop
	<i>Oil of Roses</i>	2 "

PART SEVEN

THE EYES AND TEETH

I see how thine eye would emulate the diamond.
—*Shakespeare.*

Those cherries fairly do enclose
Of orient pearl a double row,
Which, when her lovely laughter shows,
They look like rosebuds fill'd with snow.
—*Allison.*



THE EYES AND TEETH

CHAPTER XXVII.

THE CARE OF THE EYES.

Bathing—Lotions—Tonics—Strained Eyes—Watering Eyes—Inflamed Eyes—Puffiness Under the Eyes—Dark Circles Under the Eyes—Styes.

FREQUENT bathing of the eyes, either with or without the use of the eye cup, will make them clear and brilliant, and keep the tired lines away. Use hot water, and rinse with cool water containing a pinch of salt.

Rosewater used in the eye cup is a pleasant and beneficial variant of the above.

If the eyes feel tired or irritated, a half tumbler of warmish water into which a little powdered boric or boracic acid is added should be gently and carefully applied.

In making any liquid that is to be put into the eyes it is a good precaution to filter it through brown paper or two or three thicknesses of cheese cloth.

Camphor water eyewash is made by putting two grains of borax in two ounces of camphor water. Drop into the eyes several times a day.

Strong tea, cooled and filtered, makes a splendid eye bath, especially if the lids are becoming flabby.

A tonic for strained eyes that smart and have a heavy feeling is made from 10 grains each of powdered alum and sulphate of zinc in a half pint of boiled, cooled water. Put into the eyes with an eye cup.

Eyes that water easily often yield to a compound made of one grain of borax, ten grains of quince seed mucilage, five grains of cherry-laurel water, and 100 grams of boiled water. When using dilute with three times the quantity of water.

The inflammation caused by tears can be drawn out by applying over the lids a cloth soaked in hot water, renewing several times as the inflammation subsides.

For removing the puffiness under the eyes this is recommended:

℞ *Tannic Acid* 20 gr.
Glycerine 1 oz.

Paint the skin beneath the lower lid, using a fine camel-hair brush. Accompany this treatment with a gentle massage as described on pages 276 and 277.

The dark circles under the eyes are usually caused by an impairment of the chemical constitution of the blood or an impoverishment of the system by prolonged study, lack of sleep, or dissipation of any kind. External treatment is sometimes effective, but not permanent while the cause exists. Bathe frequently with cold water and use friction. A little turpentine liniment may be rubbed into the skin daily, or weak ammonia—one part to four of water—care being taken not to let either get into the eyes.

STYES.—Styes usually indicate an impoverished condition of the system. Attention should at once be given. The following pomade applied at night will help the eyelids: Four grams of white vaseline and five centigrams each of white precipitate and oil of birch.

An old-fashioned remedy is a drop of belladonna on a lump of sugar bound on the styne when it is first seen.

CHAPTER XXVIII.

THE CARE OF THE TEETH.

Increasing Attention Paid to Teeth—Care of an Infant's Mouth—Bacteria—The Tooth Brush—Tooth Powders and Washes—Recipes—Massaging the Gums—Eating Candy—Tartar—Sweetening the Breath—Recipes—Receding Gums—Breaking the Teeth.

THERE is no evidence that the soundness or strength or usefulness of the teeth is degenerating. Our teeth are as good as human teeth ever were so far as we definitely know.

We do know now, however, better than was ever understood before, that it pays in several heretofore unsuspected ways to take care of the teeth. The importance of this knowledge is so great that active measures are being taken in most civilized parts of the world to implant it in the minds of the people. Thirty-five towns and cities in Germany now maintain dental hospitals and infirmaries, and German insurance companies find it profitable to care for the teeth of their policyholders, and in many cities of the United States regulations are being adopted for teaching school children how to care for their teeth, and for compelling them to follow such teaching.

Every child in good health who is two and a half years old has twenty healthy teeth; at six years of age

the first permanent teeth appear, which, if taken good care of, should last as long as the person lives.

The proper toilet of the mouth should begin before the teeth appear. The infant's mouth should be washed out with cool water after each nursing. No rings or other so-called helps should be given the child to cut his teeth on. They are not required, and are frequently a source of infection from the fact that they are dropped on the floor by the child, or mopped on the cat and dog.

As soon as a number of teeth have appeared in the child's mouth, systematically brush them and the gums after each meal with a small soft brush dipped in cool water to which may be added once a day a pinch of table salt or a small quantity of boracic acid.

Now, if he is properly fed, and his mouth protected from external infection, the child will safely pass through the period of teething into that of milk teeth, and through this into the stage of permanent teeth. The complete development of the permanent teeth may be effected by the same means without trouble, toothache, or gumboils.

The permanent teeth being once fairly ushered in in good workmanlike condition, say at fifteen years of age, opinions somewhat differ as to what we then most have to dread. It is, however, generally conceded that a very large share of the ills to which our teeth are liable are due to neglect of definite and preventable causes.

Careful attention to the toilet of the mouth; thorough brushing and cleansing of the teeth at bed time, and after each meal, including the massaging of the gums with the brush; and a diet that includes things that must be chewed, are sure to prevent a majority of the forms of decay of the teeth and ulcerations of the gums.

A word here to show a real source of danger from bad and neglected teeth will be a sufficient warning.

An individual with a set of partly carious teeth and spongy gums is probably mixing with his food at every stroke of his jaws enough of some varieties of germs to produce several of the most serious diseases of the alimentary canal.

Many a chronic dyspepsia and persistent bowel trouble may be kept up by constant self-infection of the stomach and intestines by the foul septic discharges from decaying teeth and ulcerated gums, and the reason for the development of various bacteria in the mouth is plain when one realizes what a thoroughly supplied breeding ground it is offering to germs in the way of lurking places permeated with heat, moisture, and nutrient material.

During the day many things we do—eating, talking, laughing, all tend to release the saliva and largely aid nature in making the mouth self-cleansing. The one best time then to clean the teeth and mouth is before going to bed at night. While we sleep nature works, and whatever particles of food have been left in the mouth between the teeth or in any crevices are fermented by the heat and acids of the mouth, and set upon by various germs which, finding themselves in such agreeable surroundings, increase and multiply with great rapidity.

The visible or most exposed part of the teeth is not the weakest, though it does practically all of the work.

The point where the teeth begin to decay is just where the edges of the gums touch them, known as the neck of the tooth. The enamel of the grinding surface here ends, and the bony socket of the tooth that extends into the jaws begins. Here then is the weakest spot. Here the lining margin of the gum should be kept healthy and firmly attached to the necks of the teeth.

THE TOOTH BRUSH.—To accomplish this is one of the

principal functions of the tooth brush. It is really more important to brush the gums than to brush the teeth, for if the gums are kept clean, strong, and healthy, and all particles of food removed from between the teeth or in any crevices that may be in the teeth, the most important work of the tooth brush has been accomplished.

One point should be kept in mind, that is it is not necessary to assist the teeth in any way. Keeping them clean is all they require.

Tooth brushes must be soft enough not to irritate the gums and the brushes should be changed often and kept thoroughly clean.

The teeth should be brushed in an up and down direction, not across. Then open the mouth and brush the grinding surfaces—and lastly brush the inside of the teeth next to the tongue.

After the brushing the whole mouth should be rinsed out with cool water, to which can be added a little bicarbonate of soda or lime water, or salt, or boric acid.

The slow and thorough chewing of food helps to clean the teeth.

When away from home, it is not always convenient to brush and clean the teeth, but if the habit is once formed of rinsing out the mouth with water every time anything is eaten it will help nature keep the teeth and mouth clean.

The acids of oranges, lemons, apples, and other fruits, while cleansing to the teeth in the process of chewing, should also be rinsed out of the mouth when the eating of the fruit is finished.

These are the chief substances used as aids in cleaning the teeth:

TOOTH POWDERS AND WASHES.—Charcoal and cuttlefish bone powder, detergents both; chalk as a soft pow-

der for daily use; pumice as a hard, gritty substance for occasional use when the teeth are unusually discolored; catechu cinchona and rhatany, employed to give astringency to the tooth powder; myrrh, used to impart odor, and bole armenian to add a red color; common salt; cream of tartar; phosphate or bicarbonate of soda, and sulphate of potash and lime, used to overcome acidity.

About the simplest, cheapest, and most agreeable tooth powder—one that can be used practically as often as needed, which is at least twice a day—is made of precipitated chalk and a few drops of peppermint for flavor.

One that requires a little more care in the preparation, but is effective as a cleanser and harmless to use often, is

<i>R</i>	<i>Gum Camphor</i>	$\frac{1}{2}$ oz.
	<i>Precipitated Chalk</i>	$2\frac{1}{2}$ "
	<i>Orris Root (powdered)</i>	$1\frac{1}{2}$ "
	<i>Castile Soap (powdered)</i>	1 gram

To this may be added a few drops of oil of peppermint for flavor.

Here is a charcoal powder which is very whitening:

<i>R</i>	<i>Pulverized Charcoal</i>	50 grams
	<i>Red Cinchona Bark (powdered)</i>	50 "
	<i>Carbonate of Magnesia</i>	5 "
	<i>Pulverized Camphor</i>	5 "

A mouth wash or elixir is valuable with which to get between the teeth as well as in all parts of the mouth. The simplest thing for this purpose is one-half teaspoonful of bicarbonate of soda in a half tumbler of water, to be used after the teeth have been brushed with one of the powders—

A more elaborate elixir is made of:

R	<i>White Castile Soap</i>	2 oz.
	<i>Tincture Cardamom</i>	5 drams
	<i>Tincture Assarum</i>	5 "
	<i>Oil of Peppermint</i>	1 "
	<i>Oil of Cloves</i>	5 drops
	<i>Oil of Cassia</i>	5 "
	<i>Glycerine</i>	6 oz.
	<i>Alcohol</i>	1 qt.
	<i>Water</i>	2 "

To correct the unpleasant result of a feverish condition of the mouth:

R	<i>Glycerine</i>	4 dr.
	<i>Carbolic Acid (5% sol.)</i>	2 "
	<i>Rosewater</i>	10 "

Sometimes this feverish condition is relieved by the simple washing of the mouth with a strong solution of table salt and warm water, and rinsing out with cold water.

An astringent mouth wash that may be used twice a day for a time for loosening teeth:

R	<i>Tannic Acid</i>	2 dr.
	<i>Rectified Spirits</i>	2 "
	<i>Glycerin</i>	2 oz.
	<i>Rosewater to make</i>	10 "

If the gums are pale massage them gently two or three times a day with this:

R	<i>Wonderwort Water</i>	100 grams
	<i>Horseradish Extract</i>	12 "
	<i>Oil of Cloves</i>	1 drop
	<i>Water to double the quantity.</i>	

EATING CANDY AND SWEETS.—If there is any one thing in which modern young folks excel it is their ability to get candy money from parents who nevertheless know better than to let them have it. As Nature has a way of providing a remedy for every disease, so we will endeavor to find the means of offsetting the harmful acids accumulated in the mouth by the eating of sugar.

Here is a simple alkaloid wash that will neutralize the acids:

<i>R</i>	<i>Bicarbonate of Soda</i>	$\frac{1}{2}$ <i>teaspoonful</i>
	<i>Warm Water</i>	$\frac{1}{2}$ <i>glassful</i>

If the mouth is rinsed out with this after eating candy or other sweets, much of the harm they might do the teeth will be prevented; and to rinse the mouth with it after the teeth are brushed at night is an excellent preservative practice.

TARTAR.—Tartar is made up of lime and other salts from the food; of mucus and cells from the mouth; of microbes. The best method of prevention is the cleansing of the mouth and teeth directly after food has been eaten. Sometimes, besides the daily cleansing, it is necessary to take extra measures to prevent its accumulation, and keep the teeth white and sound.

For this purpose once a month go over the teeth in the following manner: Wind a bit of absorbent cotton around the end of a good-sized tooth pick; dip it into a few drops of lemon juice and then into a small quantity of powdered pumice. Rub the adhering pumice over the edges, sides and tops of the teeth, and at the gums, but not necessarily on them. After going carefully over all the teeth in this way, rinse out the mouth with clear water. Do not immediately brush the teeth, for the gritty pumice might scratch the enamel.

The daily use of bicarbonate of soda—half a teaspoonful in a half glass of water—to rinse out the mouth every night after the brushing will usually prevent the accumulation of tartar.

TO SWEETEN THE BREATH.—Four per cent. of chloride of lime added to the tooth powder removes the fetid

character of the breath, and also tends to whiten the teeth—but it is not safe to use on the teeth often.

A grain of permanganate of potash dissolved in an ounce of rosewater makes a good elixir to be used several times a day for two days, but it should be rinsed out thoroughly with clear water each time used. This is not agreeable to the taste but can readily be so made by the addition of a few drops of oil of peppermint.

Bicarbonate of soda is often prescribed by physicians to cure a fetid breath—a half teaspoonful in a half glass of water, taken after meals for two days.

Charcoal tablets blacken the tongue, but are good for both the mouth and the stomach.

FOR RECEDING GUMS.—After brushing and rinsing the teeth at night before going to bed, rub with the finger tips some precipitated chalk on the tops or necks of the teeth, permitting it to remain there overnight.

BREAKING THE TEETH.—The warning not to try to crack nuts and bones or hard substances with the teeth will be better understood if it is explained that human teeth are comparatively square, having a rather flat surface, while those of animals that crack nuts are pointed or wedge-shaped.

An illustration showing how the teeth may be injured by being too suddenly cooled or heated is the quickness with which a glass will break if ice is put in it and then boiling water poured on. So, too, to switch quickly from ice cream to a hot demitasse or *vice versa* may result in cracking the teeth.



