

bring in the element of fatigue, muscular action, voluntary effort, superincumbent weight, etc.—factors which are more liable to vary at subsequent measurements. The recumbent position gives a record under conditions less liable to variation and easier to reproduce. The curve is, of course, least marked when the patient assumes this position, but the record is for this very reason not the one which represents the real deformity. The difference in measurements taken by the two methods is approximately an indication of the amount of flexibility.

The problem is to put into some graphic form the various changes which occur, and methods too numerous to mention have been devised for this purpose. All methods have an element of error and bring in the factor of personal skill, and since it is a measurement, not of a mathematical certainty, but of a condition changeable within certain limits, it is well to have a number of forms of graphic representation from which an average may be taken. All the methods may be gathered under a few groups according to the principles which were used. These groups are: (a) Measuring machines, (b) outline tracings, (c) photography, and (d) measurements.

**Measuring Machines.**—Of these that of Zander may stand as the type, being the most complete. The method used in machines of this kind consists in some means of fixing the patient in position by clamps to prevent any movement while the measurements or tracings are being taken, and some device for recording by measurement the relative position of the parts, and transferring the results in such a way to paper as to have a reproduction in drawing of the trunk in either a full or a reduced size. These machines are complete and accurate, but they are expensive and demand some skill in manipulation, which is particularly needed in any device using clamps to fix the patient, the danger being that of displacing the patient from his natural position.

**Outline Tracings.**—Of this the Pantagraph is the best illustration and consists of a device by which the movements of the recording pencil drawn over the patient are reproduced on paper. Other forms of the same method are that of the old-fashioned lead tape, and such tracing machines as that of Weigel which is used only for rotation. These have the advantage of being simple and inexpensive and of not requiring any special skill in their use, but movement on the part of the patient when the pencil is drawn over the skin is apt to impair the accuracy of the record.

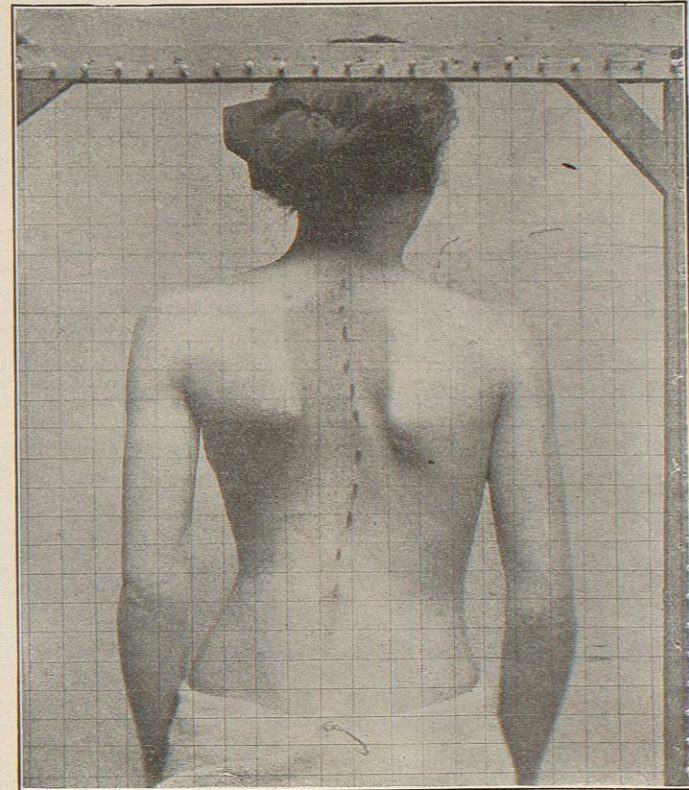


FIG. 3170.—Record by Photography with Screen.

**Photography** has certain advantages to recommend it for general use. It gives all the outlines of the figure and the deviation of the spine which is obtained by other methods. It enables the record to be taken without the clamping of the patient in position, and it has the advantage of rapidity so that the element of muscular fatigue does not come in. If a screen is placed behind the patient, this can also be used for the measurement of such deviations as are in the lateral plane. It is necessary, however, to have the patient stand directly in front of and perpendicular to the camera, otherwise the view is a combination of the back and side positions.

The method of measurement is restricted to the recording of the displacement of such bony prominences as can be measured, and is, therefore, practically a measurement of the deviation of the spine as is shown by the line of the spinous processes. This can be measured either as the deviation of the spine from a line drawn between its two extremities—as, for instance, the seventh cervical vertebra and the fold of the buttock, showing the deviation of the spine from its own axis; or it can be measured as the deviation from the plumb line intersecting one extremity of the spine, showing both the deviation of the spine and the amount of displacement of the shoulders on the pelvis.

A record is made of the point at which the spine leaves the straight line, its point of maximum departure, and its point of return; and in the case of a double curve the lower one is measured with reference to the same points. These points may be designated either by the number of the vertebra or by measurements in distance from any fixed point, as, for instance, the seventh cervical vertebra above or the level of the posterior spines of the ilium below. The advantage of this latter is, that in those cases in which it is difficult to count the spinous processes, one has a more ready and practical method of comparing subsequent tracings.

The methods used by different individuals must necessarily vary according to the means at hand and to the individual's preference. When the more expensive and accurate machines can be had there is no question about the advisability of their employment; otherwise it is best to use the means at hand which are most applicable and with which the individual is most familiar.

As an illustration of a practical method the following may be given: Record the outline changes by photography, either with or without the screen. Measure the

distortion of the spine from either the plumb line or the midline drawn between the two extremities. In either case the point of departure from the straight line is noted and recorded, both by its distance from a fixed point, as, for instance, the seventh cervical vertebra, and also by the number of the vertebra; the point of greatest deviation of curve and the point of its return to the midline are also to be recorded in the same terms. If two curves exist, the second is measured in the same way as the first. These measurements are taken with the patient in the erect and in the recumbent positions, the difference between the two results indicating the amount of natural flexibility of the curve. Rotation, as shown by the prominence of the ribs, is recorded by outline tracings taken perpendicular to the horizontal, reproductions of which in stiff cardboard may be verified by application to the body of the patient. Rotation also may be recorded by the goniometer, a machine for measuring the angle of inclination of the most prominent and of the most depressed portions of the trunk at any given section.

**TREATMENT.**—The rational treatment is based upon the application of certain principles to meet needs found in the individual case. In general these needs are uniform and may be said to be, first, an increase in flexibility, so that a straighter position is possible, and second, the maintenance of this improved position by whatever means is most practicable, whether it be that of muscular development, or retention by apparatus, or both.

The treatment should always have a definite object in view and involves the consideration of (1) the various needs to be met, and (2) the means by which these needs may be met. The application of the principles to the individual case will necessarily vary with the facilities at hand.

The measures which may be used in the treatment of lateral curvature are: (1) Preventive. (2) Forcible correction for the increase of flexibility; (a) mechanical or passive, (b) gymnastic or active. (3) Gymnastic exercise for muscle building; (a) for definite weak muscle groups as in paralysis, (b) for general improvement of muscle strength (muscle insufficiency), (c) for readjustment of muscle control. (4) Apparatus; (a) preventive of faulty attitudes, (b) retentive, by the application of pressure to

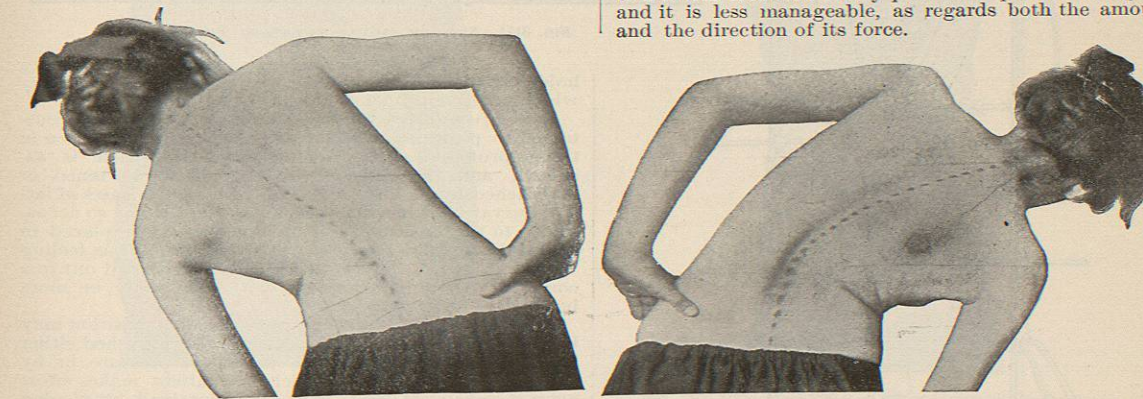


FIG. 3171. FIG. 3172. FIGS. 3171 AND 3172.—Showing Unequal Flexibility.

retain improved positions; (c) corrective application of force constantly applied to maintain correction, as plaster jackets applied with forcible correction.

**Preventive Measures.**—These may be considered with reference to the correction of any physical defect, such as short leg, torticollis, etc., since it is necessary to counteract the influence of any such existing permanent factor. Also with reference to the correction of any con-

ditions in the environment of the child, as improper clothing, school desks, etc., which will tend to induce habits of malposture. In this connection the question of school seating in its effect upon the growing child deserves especial consideration.

**Forcible Correction.**—Forcible correction has for its object the increase of flexibility in definite regions of the spine and in a definite direction, in order to make possible a straighter position of the spine. The principle is the same as that employed, to an exaggerated degree, by contortionists and stage dancers, and is based upon the fact that structures which are rhythmically stretched become lengthened.

The mechanical (passive) correction has for its principle the application of pressure through some mechanical force, and in that it eliminates the body weight and muscular antagonism it has the advantage of being directed more definitely toward ligamentous stretching, and it also allows the application of the force more accurately, both as to its direction and as to the amount used. An example of machines of this kind is that of the screw pressure first originated by Hoffa. In such the patient is partially suspended, the hips and shoulders are held by clamps, and the pressure is applied over any part of the trunk in any direction that is desired, with counter-pressure exerted in front at the proper places so as to exert a lateral or rotating force. It is necessary in this that the two ends of the curves shall be fixed as nearly as possible, that there shall be a certain amount of suspension, and that the rotation pressure shall have its counter-points in such places as shall not cause compression of the chest.

The employment of apparatus for increasing flexibility has been carried to the point nearest to perfection by Schulthess, who has devised numerous machines for the application of pressure, some of which employ the principle of the pendulum movement in which the weight of the body is used as an additional force either to make pressure or to bend the spine at any desired point.

Gymnastic (active) correction involves forcible muscular action combined with gravity, so that the momentum of the weight of the body is used as a force to carry the bending beyond its natural limit. This has a wider range of practical usefulness in that it does not require a complicated apparatus. On the other hand, its application is less localized to any particular part of the spine, and it is less manageable, as regards both the amount and the direction of its force.

In either of these two methods the object is to increase the flexibility of the spine in any special area so as to increase the amount of possible bending toward the position of correction.

**Gymnastic Exercises.**—These may be given for the strengthening of definite weak muscle groups, for general muscular improvement, or for readjustment of muscular control. For the accomplishment of this, gymnastic



exercises may be given either without apparatus, dependence being placed upon the free movements of the body and forced muscular contraction, as in the Swedish methods, or with apparatus—weights and bars, bells, etc., but it would seem that less depends upon the method which is employed than upon the use that is made of it. In other words, the character of the work is of more importance than the method chosen.

The rapid muscle building by the heavy method such as advocated by Teschner has for its principle rapid muscle exhaustion by the use of heavy weights, pushing the muscle to its fully exhausted point as rapidly as possible, and is used in the training of heavy athletes in severe contests. By the use of this method the groups of muscles which are exercised are exhausted before the individual is generally tired, so that recuperation is rapid, while if the equivalent of muscle force were expended in exercise with lighter weights it would require so much more time to exhaust the muscle that the individual would feel this exhaustion in a general way and the recuperation would be less rapid. This method of rapid muscle tire is accomplished by exercise with heavy dumbbells and heavy bars.

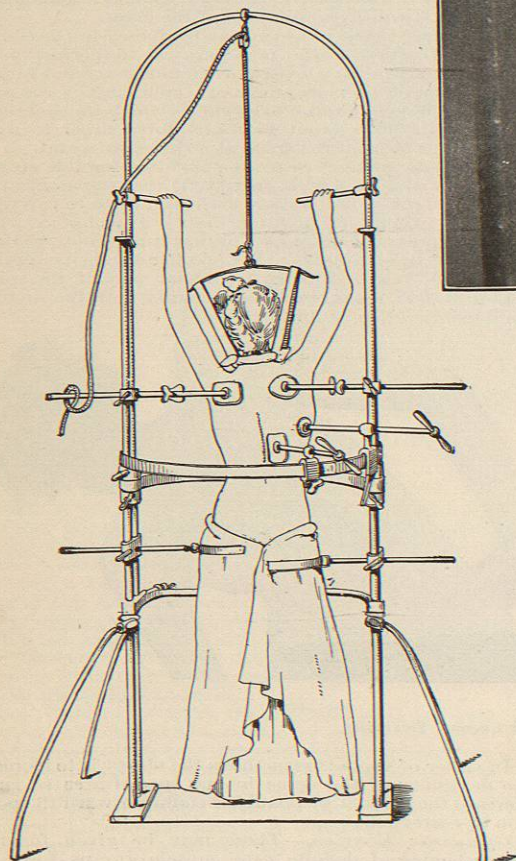


FIG. 3173.—Modified Hoffa-Schede Appliance for Correction by Pressure.

*Gymnastic Exercise in Correction.*—By this term is meant that form of exercise in which the patient is taught a correct standing position, and is then made to

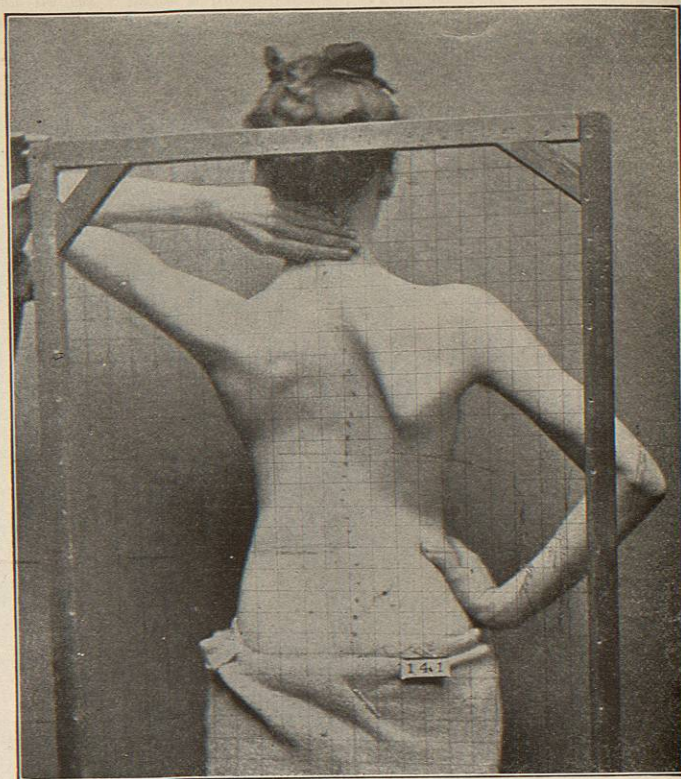


FIG. 3174.—Showing Attitude in Keynote Position.

hold such a position during the time of the exercise, which is discontinued as soon as this position is lost.

It is a recognized fact that the muscles become accustomed to positions in which they are used, as is seen in those professions in which some malposition is assumed, and the muscles become either shortened or lengthened by such use. This is also seen in cases of lateral curvature when the individual has become so accustomed to the position of distortion that when placed in a straight position he at once expresses himself as feeling "crooked." If all exercises are carefully carried out in a corrected position the results will necessarily be more beneficial.

This method of exercising in a corrected position may be maintained by mechanical means, accomplished either by straps, by apparatus with the screw pressure, or by the manual retention in which the patient makes effort against resistance; or it may be maintained by placing the patient in those postures which tend to straighten the spine, and then giving resistive work in this position. This method is advocated by Roth under the name of "keynote" positions, or those by which an improved position of the back is brought about both by the mode of standing and by the position of the arms. In such attitudes the patient is made to exercise the muscles by resistive movements.

The disadvantage of this method is that it necessitates an artificial position on the part of the individual while exercising and thus does not help in the training of the

maintenance of the improved position by voluntary control.

The position of correction, however, may be a voluntary one maintained by the patient's unaided effort, with the object of training the muscles to a maintenance of the desired position. At first the effort of holding an improved position must be purely a voluntary one, but by education, through the constant exercise in this effort, it becomes more involuntary, and in consequence the position is maintained with greater ease.

The kind of gymnastic exercise used for the development of the muscles is not so essential as the character of the work. One may use the lighter forms of gymnastics, depending upon the body movements with forced muscle contraction, or the lighter forms of weights and pulleys, or, if desired, the severer forms of exercise with heavy weights with the aim of accomplishing the muscle development more rapidly. The essential of all is that the position of self-correction or over-correction should be held during the time of the exercise, and that the exercise be discontinued when the patient is so tired that it is impossible to keep it longer.

*Method of Conducting the Exercises of Self-Correction.*—It is essential to correct as much of the faulty position as the patient's flexibility will allow, which is done by observing the amount of the displacement of the head, shoulders, and scapulae, and the sagging of the trunk from the lateral deviation, and then teaching the child to take the improved position. This is done not only by instructing the child in the points to be corrected, but

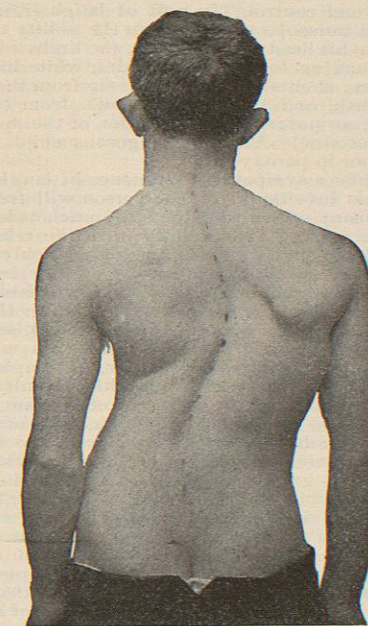


FIG. 3175.—Lack of Symmetry in Contour in Lateral Curvature of the Spine.

also by manually placing him in a better position. It is a fact that a better position can be held than it is possible to take unaided.

The various methods of conducting a case are so numerous that it would be impossible to give a detailed description of them all, and, therefore, in this article an attempt will be made to describe only one which will serve as an example of the corrective form of exercise.

The first step is the taking of the improved position,

and this may be accomplished by first encouraging the effort toward straightening the spine, by telling the patient to make himself tall, which must be done without raising the shoulders. Then, in order, the position of the head, the level of the shoulders, the relative position of the scapulae, and the displacement of the shoulders over the pelvis are corrected, and the patient is encouraged to hold this improved position by his own effort. After being allowed to relax, he is again put in the same position and exercises are given while the correct position is maintained. Care is taken that as soon as the child relaxes from this position in any particular the exercise is stopped, until the position is again resumed.

The first grade of exercises in the position can be taken with the arms moving in the lateral plane which displaces the position least of all, and bells may be used or manual resistance made according to the patient's strength. The next stage consists of exercises in the forward as well as the lateral plane, the two being combined, which necessitates a greater effort on the part of the patient to hold the back in the new position. The third stage consists in having the patient change the position of the feet, as in the Swedish fall-out position, so that the centre of gravity of the body is changed, and then go through with the same exercise with the arms and with the moving of the trunk on the pelvis, and returning to the standing position while holding the back in correction.

It is seen that, at first, a patient is able to hold by his own effort a much better position than that which he is able to take voluntarily, but it soon becomes possible for

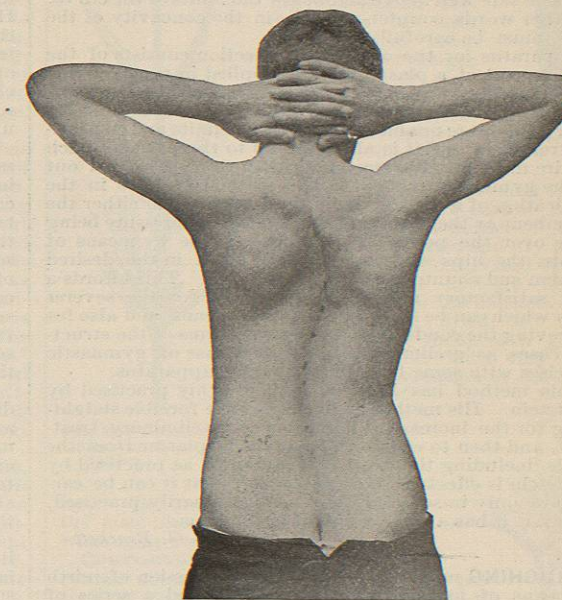


FIG. 3176.—Showing Effect of Effort to Straighten the Spine.

him to take this same position and to hold it himself during the exercise. It is necessary that the person should not keep the muscles of the whole trunk rigid during the exercise, but should localize the effort upon the spine. To this effect the patient is made, between any two forms of exercise, to relax all muscles with the exception of those which hold the spine in position, and between any two movements of each exercise he makes an additional effort to straighten the spine.



**Apparatus.**—Apparatus has for its object either the prevention of faulty attitudes, or the retention in improved positions, or else the application of a force constantly exerted to maintain correction beyond the point of flexibility.

The use of apparatus in the first two instances is to supplement other treatment. If one could be sure that, after an increase of the flexibility by the methods of forcible correction, the improved position would be held by muscular action, there would be no need of further retention. If, on the other hand, exercise treatment can be carried out but a short period of each day or less, and during the remainder of the time the child is continually assuming its habitual malpositions, there is then evident need of some means of retention during the interval.

When used for the first object, that of preventing faulty attitudes, the apparatus should be very simple, and no attempt should be made to exert pressure, its use being rather as an aid or as a reminder. It may be that only a crutch, fastened to the child's waist to prevent the dropping of the shoulder, may be necessary, or a light upright to prevent the child from sagging either in the antero-posterior or in the lateral direction. In any case it should be adapted to the individual need.

When applied for the second object, that of retention, the aim of the apparatus is to hold the patient in a better position than he can maintain by his own unaided efforts. In these cases as much force as is compatible with the patient's comfort is used and is applied either in the antero-posterior or the lateral plane. In this the pressure must always be made over the points of greatest curve, and there must be two points of counter-pressure on the opposite side well above and below the limits of the curve. In other words, counter-pressure in the concavity of the curve must be carefully avoided.

Apparatus for the object of correction consists of the employment of a plaster jacket applied in the over-corrected position. Such a method is applicable in the treatment of patients who come from a distance, or who for other reasons are unable to carry out a definite and continuous treatment, and it is also adapted to those cases which require more forcible stretching than can be carried out by the gymnastic method. The method consists in the application of a jacket while the patient is in either the recumbent or the semirecumbent position, pressure being made over the points of convexity, while by means of clamps the hips and shoulders are fixed in the desired position and counter-pressure is applied. This affords a most satisfactory method of treatment for the severer cases which can be helped by no other means, and also for improving the condition in the lighter forms of the structural cases, as preliminary to the later use of gymnastic exercises with some form of removable apparatus.

This method has been most thoroughly practised by Wolfstein. His method is to employ the forcible straightening for the increase of flexibility as preliminary treatment, and then to encase the patient in plaster from the pelvis, including the head. The method as practised by Wolfstein is effectual, but is so severe that it can be carried out only in selected cases. As ordinarily practised, however, it has a wide range of application.

Elliott G. Brackett.

**LAUGHING** may be defined as an expression of mirth by means of altered facial expression and a series of forcible intermittent expirations with the production of characteristic inarticulate sounds. When excessive it is accompanied by lachrymation. Although an involuntary act, it is to such an extent under control of the will that ordinarily it may be suppressed or rendered inaudible. It is imitated with difficulty.

Laughing is peculiar to the human species. Some of the lower animals and birds have the power of producing sounds like those of laughter, but the facial expression is lacking and there is no evidence that the sounds are employed to express mirth.

In point of time the respiratory movements are preceded by the change of facial expression, the smile.

This consists for the most part in an elevation of the angles of the mouth, an increased prominence of the cheeks, and slight elevation of the outer extremities of the lower eyelids; the mouth is then opened and the explosive sounds begin to issue from it. A series of a more or less distinct "ha-ha" is the usual audible expression, and the word itself has been adopted by the North American Indians to signify laughing:

"And he named her . . . Minne-ha-ha, Laughing Water."

Laughing varies much in character in different individuals and in persons of different nationality, and there is a no less difference in individual propensity to laugh. Some seem to possess an instinctive inclination to laugh, while others are so morose as rarely to enjoy it. Some never laugh beyond moderation, others are all but too readily thrown into paroxysms.

The impulse is generally received through the sense of sight or that of hearing, but more susceptible persons may be moved through any of the other senses, especially by tickling or even by suggestive motions and not infrequently by their own thoughts and recollections. To a certain extent a person's laughter, and still more his susceptibility to it, is an index to his character, for a lack of control in this regard may signify weakness in other faculties. Loud laughing is looked upon as rudeness in a woman and tittering is indicative of femininity in a man. A good, whole-souled laugh is generally a passport into society; its counterfeit is readily recognized. But laughing may become so impulsive, even in one not abnormally excitable, as to be for a time at least entirely beyond control. In a fit of laughter, a person may lose all muscular control, even the ability to stand. He sits with his head thrown back, the limbs extended, the arms hanging limply at the sides, while his whole frame shakes; shouts and screams issue from the widely opened mouth, and tears trickle down from the half-closed eyes; an unfortunate relaxation of the sphincters sometimes occurs. A happy, vigorous child will roll upon the floor in paroxysms.

There is also a sympathetic influence in laughter; we say that it is infectious, for one person will frequently incite it in many others who do not so much as know the cause of the merriment. So intimate is the relation between laughing and crying that one may quickly succeed the other or insensibly merge into it. In the hysterical seizure, laughing and crying are interchangeable modes of expressing the abnormal emotions. Under the influence of mixed emotions or great excitement, sobs may suddenly give place to violent laughing, as was illustrated in Victor Hugo's character, Gwynplaine; or sounds may be emitted which can with difficulty be distinguished as belonging to one or the other class.

The impulse to laugh may be intense, concentrated, or diffuse and cumulative. The more intense the impulse, as a rule, the more violent is the outburst, but the enjoyment may be no greater. More pleasure may be experienced, for example, in the possibly silent laugh which follows the reading of a humorous description with suitable climax than in the sudden outburst at sight of something ludicrous. Laughing is not devoid of inherent pleasure, yet few ever laugh simply for the pleasure of it, except as the child that asks to be tickled. Real laughing is in fact impossible in the absence of a proper stimulus.

The nervous mechanism of the act is not fully understood. Like that of crying, it is probably not under control of a single nerve centre, but rather under the group of centres concerned in respiration and facial expression. All the muscles of respiration are doubtless involved, but more particularly those of the diaphragm. The act consists of a succession of rapid contractions of the diaphragm with more or less forcible expulsion of the air from the lungs through a widely opened glottis, the vocal bands being held tense. The sound is often produced in part also by the vibration of other tissue folds in the larynx and pharynx. The muscles of the face concerned are chiefly the several elevators of the angles of

the mouth and of the lower eyelids and to some extent the orbicularis oris and palpebrarum. By voluntary effort, however, other muscles may be brought into play for the expression of wonder, surprise, or even of disapproval, astonishment, or disgust.

Benefit is unquestionably derived from laughter. Every physician is sensible to its influence upon his patients, for "A good laugh is better than medicine." The fact that fleshy persons are generally hearty laughers has given rise to the adage, "Laugh and grow fat," but it is probable that both these qualities are favored by the same temperament.

Laughing becomes difficult or impossible in paralysis or painful affections of the respiratory muscles and in inflammatory affections of the thoracic or abdominal tissues or viscera. An inability to laugh, in the absence of such conditions, is often a valuable indication in symptomatology, for, although a person who is seriously ill is naturally disinclined to mirth, persistent disinclination may indicate to the physician some mental distress, lasting, poignant grief, a pricking conscience, or domestic infelicity. The neurasthenic patient is slow to laugh and nothing more certainly indicates improvement than a restoration of this faculty.

The overexertion attendant upon an uncontrollable paroxysm is not devoid of danger. Death has repeatedly occurred, probably from cerebral hemorrhage or rupture of the heart or of an aneurism induced by it, and it is stated that the death penalty has been executed by means of tickling.

James M. French.

**LAUREL.**—**ROYAL BAY.** The true Laurel of Europe, *Laurus nobilis* L. (fam. *Lauraceae*) is a handsome, fragrant-leaved evergreen shrub or small tree, from two to six metres in height, with numerous slender, smooth, green, very leafy branches, and dark-green, shining, leathery, oblong-lanceolate or lanceolate, entire, but often wavy or slightly revolute-margined leaves, and producing an ovoid berry, with soft flesh and a large, fleshy seed.

This laurel is a native of Asia Minor and Syria. It has long been grown in and is probably a native also of Greece and the islands of the Eastern Mediterranean. Further, it has been cultivated in Italy, at least as long ago as the days of classic Rome, and in the southern part of Europe generally, in England for several hundred years, and recently in Mexico and the West Indies. It is supposed to be the plant dedicated by the ancient Greeks to Apollo, and regarded by them as an emblem of purification, peace, victory, and good luck in general. It is the laurel of sculpture, painting, and literature. The leaves have been described in the article entitled "Bay." The fruits are about 1 cm. long ( $\frac{3}{8}$  inch), and when dried are dull-brownish-black, slightly withered, with a brittle papery exterior and a brown, smooth kernel, splitting easily into two large cotyledons. Odor peculiar, strong, spicy; taste balsamic and bitter.

The fruits are rich in fragrant and fatty constituents, the latter principally in the embryos. The *essential oil* (0.23 per cent.), a colorless or yellow liquid, gives them their odor. The *fatty oil* is obtained by pressing or boiling; it is a yellowish-green, buttery soft-solid, fragrant with some dissolved essential oil; it is soluble in ether, but only partially so in alcohol. Laurel fat is a composite substance, consisting of glycerides of oleic and stearic, as well as palmitic, myristic, lauric, and probably other acids. The leaves, which are used abroad as a kitchen flavor for soups, etc., contain *essential oil*, *tannin*, a bitter substance, etc.

**ACTION AND USE.**—The leaves and essential oil have no peculiar action to distinguish them from other fragrant substances (see *Cinnamon*, for instance). The impure fat of the seeds is moderately stimulant to the skin, and is used as an ointment in rheumatism, paralysis, etc., internally as an aromatic. It is a medicine of great antiquity, but at present it is nearly obsolete so far as the practice of physicians goes. Neither the fruit nor the leaves have any consumption in the United States.

Certain brands of "stick liquorice" are packed in Bay leaves.

*Essential Oil of Laurel* is an article of commerce, and, except for refined distinctions as to odor, etc., is the same from both fruit and leaves. The latter has a specific gravity of about 0.924, the former 0.925. The principal constituents are pinene and cineol.

W. P. Bolles.

**LAVENDER.**—**LAVANDULA:** *Lavandula angustifolia* (L.) Miller (fam. *Labiatae*).

A perennial, partly shrubby plant, with short, crooked, branching stems, and numerous slender, upright, simple branches, from one third to more than one metre in length. Leaves opposite, linear with entire, slightly revolute margins. Flowers in small opposite cymes, closely aggregated into spike-like clusters at the ends of the slender branches. All the green parts, calyx, branches, and leaves, are covered with a tomentum of stellate hairs and stalked glands. Calyx tubular-ovoid, with only one lobe (the upper) developed. Corolla tubular, curved, with spreading two-lipped border, lobes of both lips rounded, those of the upper longer and straighter than those of the lower, color pale violet; stamens four, inserted in the corolla tube, ovary four-celled and four-seeded. Lavender is a native of the southern part of Europe and the northern border of Africa, growing in elevated and dry places. It has also been cultivated for centuries, and the herbage, flowers, and oil are all in the market.

The flowers, dried, are about 5 mm. long ( $\frac{1}{4}$  inch), of a general blue-gray color, with very hairy calyx. The retention of the bright blue color of the flowers is an indication of careful drying, freshness, and fine quality. The fragrance is delightful, the taste bitterish, aromatic, somewhat camphoraceous.

**COMPOSITION.**—Lavender flowers contain about one or one and a quarter per cent. of *essential oil*, which they retain, if properly kept, for years; the stems also contain a similar but less agreeable oil. With this oil there is a little tannin and resin.

**ACTION AND USES.**—The action of lavender is purely that of an aromatic stimulant and carminative, like its relatives in the family. Its odor is highly esteemed by almost every one. It is not strange, therefore, that aside from the oil, both the plant and the flowers should have an extensive use, especially in domestic practice. Both have been official in our own and other



FIG. 3177.—Flowering Stem of Lavender. (Baillon.)



FIG. 3178.—Lavender; Single Flower. (Baillon.)

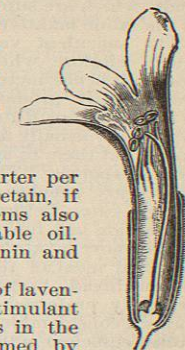


FIG. 3179.—Lavender; Longitudinal Section of Flower. (Baillon.)