

relief while they are in the duct, a return of the former symptoms is very apt to follow their withdrawal. As a substitute for the probe in cases which can remain but a short time under the surgeon's care, they, or styles made of aluminum, may be used. Under such circumstances, however, the writer not infrequently has found it practicable to teach patients to probe their own lachrymal ducts; and for this purpose he has devised the probe shown in Fig. 3102. After the duct has been well dilated by the passage several times of one of the larger probes, it is not difficult for the patient to introduce a probe of this pattern, usually No. 13 or No. 14. With a probe of this size there is practically no danger of making a false passage, and the previous instillation of a few drops of cocaine renders the procedure almost painless. In this way relapses, liable to follow a too early discontinuance of the probing, are obviated and the permanency of the cure is assured.



FIG. 3102.—Modified Form of Lachrymal Probe to be Used by Patients. (Actual size.)

It only remains to be said that the writer has been so well satisfied with the results which he has obtained in the treatment of nasal-duct strictures by the thorough dilatation plan which he pursues that he has not been tempted to make trial of the treatment by division recommended by Stilling. He can scarcely persuade himself, however, that permanent benefit would often result from this operation, unless it were followed by systematic and thorough dilatation. The operations of destruction of the lachrymal sac and extirpation of the lachrymal gland, which have been referred to as measures recommended in intractable cases of obstructive lachrymal disease, are also procedures which he has never resorted to. There may be cases, perhaps, in which it is proper to employ these extreme measures, but he has not encountered them and he believes they are of very rare occurrence.

Samuel Theobald.

<sup>1</sup> Transactions of the Medical Society of the State of New York for the year 1876, p. 150.

**LACTANIN**—Bismuth di-lacto-mono-tannate—is a bismuth compound of lactic and tannic acids which occurs as an odorless, tasteless, yellow powder insoluble in water. For the diarrhoea of infants, or in tuberculous or simple enteritis, Moncorvo uses it in some such combination as: R Lactanin, gr. xxiv.—xxxvi. (1.6–2.4 gm.), syrapi acaciae, ℥ i. (30 c.c.). M. Sig.: One teaspoonful three to five times a day. W. A. Bastedo.

**LACTATION.** See *Breast, Female, and Galactagogues.*  
**LACTEALS.** See *Lymphatics.*

**LACTIC ACID.**—Of the isomeric bodies known chemically by the generic name of *lactic acid*, the common acid, called technically *isolactic acid*, is the one used in medicine. This body is a product of a certain form of fermentation of sugar, a fermentation that occurs very readily in the case of milk. Hence the name and the common source of this acid. Lactic acid is official in the United States Pharmacopœia under the title *Acidum Lacticum*. Lactic Acid, and is required to be of a strength equal to seventy-five per cent. of absolute lactic acid (HC<sub>2</sub>H<sub>3</sub>O<sub>2</sub>). Lactic acid is a syrupy liquid, colorless and odorless, but sharply sour to the taste. It mixes freely with water, alcohol, and ether, is hygroscopic, and should be kept in well-stoppered bottles. The specific gravity of the official acid is about 1.213 at 15° C.

Although strongly acid, lactic acid is neither corrosive nor poisonous. It is contained, normally, in gastric

juice, and accordingly is suggested as an adjuvant to pepsin in atonic dyspepsia. From theoretical considerations it was at one time expected to prove hypnotic, but it has not justified the expectation. Also it was vaunted as an antidiabetic medicine, but again has failed of success. The only really notable properties of the acid are that it dissolves to a considerable extent freshly precipitated calcium phosphate, and hence is useful in the preparation of the so-called *syrup of lactophosphate of calcium*; and that it dissolves false membranes, and so may be employed locally in diphtheria and croup. In the latter application the acid may be used by spraying or gargling, in admixture with water, of a strength of from four to twenty per cent. Lactic acid may be administered internally in teaspoonful quantities or more, well diluted with sweetened water. Edward Curtis.

**LACTOL**, lacto-naphtol, a lactic acid ester of beta-naphtol, is a tasteless substance which, splitting into its components in the intestine, acts as an intestinal antiseptic. Its dose is 0.25–0.5 gm. (gr. iv.—viiij.).

W. A. Bastedo.

**LACTOPHENIN**, lactyl para-phenetidin (C<sub>8</sub>H<sub>9</sub>OC<sub>2</sub>H<sub>5</sub>.NH.C<sub>2</sub>H<sub>5</sub>O<sub>2</sub>), is produced by the action of lactic acid on phenetidin in the presence of dehydrating agents. From phenacetin it differs only in the substitution of a lactyl group (C<sub>2</sub>H<sub>3</sub>O<sub>2</sub>) for the acetyl group (CH<sub>3</sub>CO). It occurs as a white crystalline powder without odor and with a bitterish taste, is split into its components by acids and alkalies, and is soluble in 300 parts of water (some authorities say 500 parts) at 15° C., in 55 parts of boiling water, and in 8.5 parts of alcohol. It is eliminated in the urine as paramido-phenol, which gives a deep red color with ferric chloride.

Physiologically, it does not differ essentially from phenacetin, except that its sedative and hypnotic tendency is greater. As an antipyretic, it reduces temperature rapidly and without much depression, though sweating may occur. Untoward effects following a dose of eleven grains were: prickly heat, erythema, and swelling of lips, tongue, and vagina. Witthauer reports four cases of catarrhal jaundice, and Wenzel one case of jaundice with clay-colored stools following fourteen grains. Kronig has recorded a case of cyanosis and death, though the amount of drug taken is not stated. Experimentally Strauss produced hemorrhagic erosions in the gastric mucous membrane of a rabbit, and in another congestion and profuse secretion of mucus in both stomach and duodenum.

There is abundant clinical evidence that lactophenin is a valuable antipyretic and analgesic. Franz Riedl, from a careful study in a large number of cases, came to the conclusion that it is a specific for acute articular rheumatism, is antipyretic but not at all a specific for typhoid fever, and has no influence on the intensity or duration of sepsis, pneumonia, or erysipelas. Clevenger finds it analgesic in various acute pains such as toothache from alveolar abscess, but declares it useless in the shooting pains of locomotor ataxia, the pains of syphilis of the cord, and those associated with cancer. Von Jakesch, Martin, Jacquet, Caillé, and many others have used it with good results in various febrile conditions, rheumatism, colic, the pains accompanying the onset of acute fevers, neuralgia, and as a sedative in restless and nervous conditions. Cristiani gave it in over two hundred cases of insomnia in the insane, and from this experience concluded that it was capable of inducing quiet, deep sleep for from four to nine hours. Combined with the extracts of belladonna and stramonium, Martin employs it for ovarian neuralgia. A mixture of caffeine gr. ij. (0.13 gm.), quinine hydrobromate gr. iij. (0.2 gm.) and lactophenin gr. vi. (0.4 gm.), makes an excellent capsule for migraine. The dose is gr. iij. to viij., or even gr. xv. (0.2–0.5–1.0 gm.) for an adult, given dry on the tongue, suspended in syrup, or in capsule or cachet. The dose for a child is gr. ss. to gr. ij. (0.03–0.13 gm.), and several writers speak of its apparent safety for children. W. A. Bastedo.

**LACTUCARIUM.**—"The concrete milk juice of *Lactuca virosa* L. (fam. *Compositae*)" (U. S. P.). Although thus defined, the product is actually obtained from several species of the genus. The one specified is native of Central and Southern Europe and is also cultivated for the sake of the lactucarium. It is a coarse, narcotic-smelling, and bitter-tasting biennial herb, with an upright, prickly, paniculately branching stem a metre or more in height, and long, spreading, ovate or oblong, sinuate-dentate, pointed, and prickly leaves, and flowers similar to those of the common garden lettuce.

The herb itself has been official in the British Pharmacopœia, but is no longer so. *L. altissima* Bieb., of the Caucasus, is a gigantic species cultivated in France for the production of a French variety of lactucarium. *L. scariola* L., another prickly European species, is also said to yield a portion of the drug, as well as *L. sativa* Linn., the common salad or garden lettuce. The American species, *L. canadensis* L., has also been experimented with; it yields a lactucarium of but little bitterness and of inferior quality.

Lactucarium, in its present form, was introduced by Dr. Coxe, of Philadelphia, who collected it from garden lettuce at the end of the last century. Lettuce itself, as a medicine, is of much older date, and garden lettuce, as a salad, has been cultivated for several hundred years.

**COLLECTION.**—After the plants have sent up flowering stems, they are cut off about a foot from the top, when the "milk" flows out freely; this is wiped off with the finger and conveyed to a little cup; the operation being continued with successive stems until the cup is sufficiently filled. Fresh slices are cut off and fresh collections made daily, throughout the season. As first exuded, it is liquid and pure white, but it soon sets upon exposure, and turns yellow and then brown. When it has coagulated, it is emptied from the collecting vessel and dried by gentle heat. The form of lactucarium varies with the details of its collection. French samples are in small circular cakes, the English (Scotch) is in broken fragments, and the German, which comprises most of that imported here, evidently consists of quarters of a plano-convex cake cut up before it is quite hard. It is, however, brittle, and often much broken.

**DESCRIPTION.**—Lactucarium is a brittle, structureless solid, of a gray or dull red-brown color, whitish or yellowish within, as shown by fresh fracture, of a waxy lustre when freshly cut, heavy narcotic odor, and disagreeable bitter taste. It is a composite substance, and not wholly soluble in any one menstruum. Alcohol and ether dissolve portions of it; boiled with water, it forms a turbid mixture.

**COMPOSITION.**—The most abundant ingredient, constituting nearly half of it, is *lactucerin*, or *lactucon*, a wax-like substance, common to other milky juices. *Lactucin* is, however, its active principle. This crystallizes in pearly scales; is soluble in boiling water, cold alcohol, and acetic acid, but not in ether, and is very bitter. Yield, 0.3 per cent. *Lactucic acid* and *lactuopicerin* are other constituents. Besides these, *lactucarium* contains vegetable tissue, caoutchouc, gum, cellular tissue, and other vegetable substances, but no starch.

**ACTION AND USE.**—Common lettuce is well known to be slightly soporific; its effects are occasionally quite marked. The various extracts of lettuce are also more or less so. These apparently contain a trace of hyoscyamine, but it is doubtful if this gets into the lactucarium. Lactucarium has so far shown itself to be an uncertain medicine, often of no value, but, when good, an efficient and pleasant hypnotic; its power of overcoming pain is slight when compared with opium—in fact, almost none,—but simple discomfort or moderate distress is occasionally relieved by it. In cardiac asthma and restlessness it is frequently useful, and it may be tried in numerous cases in which opium is indicated but not well borne. It is free from the subsequent constipation and headache of opium.

**ADMINISTRATION.**—The uncertain quality of this drug makes its dose a tentative one, but 0.5 gm. or 1 gm.

(gr. viij. ad xv.) should show some effect. It may be given in powder or pill, or the fifty-per-cent. official tincture. From the extract, a syrup (*Syrupus Lactucarii*, of ten-per-cent. strength of the tincture, five per cent. of lactucarium) is made; a useful vehicle and adjuvant for opium or other hypnotics. W. P. Bolles.

**LADANUM.**—Labdanum. A resin collected in Greece and the Grecian Islands from several species of Rock Rose (*Cistus Creticus* Linn., *C. ladaniferus* Linn., *C. Cypricus* Lam., etc.; Fam. *Cistaceae*), whose stems and branches abound in a sticky exudation. Two methods, both coarse and dirty, are in vogue for collecting it. The first is to whip or rake the bushes by an instrument having a number of leather thongs at the end, to which the resin sticks, and from which it is scraped off; the second, and more common, has been in use for many centuries, viz., to comb and press it out from the beards and wool of goats and sheep which pasture among it. It is then melted and manipulated, and often adulterated with other resins, or mixed with sand, etc., perhaps as much to give it solidity as for falsification. Common Ladanum is imported in snake- or worm-like coils; it is a dark gray or greenish-gray brittle solid, of resinous odor and a bitter balsamic taste. It consists of from twenty to eighty per cent. of *resin*, a small amount of *oil, gum*, and other vegetable products, and the rest of dirt, sand, or other foreign admixture.

**ACTION AND USE.**—The same as those of other resins. As a medicine it is obsolete; plasters, fumigations, etc., sometimes contain it. W. P. Bolles.

**LAKE PARK WHITE SULPHUR SPRINGS.**—Vernon County, Missouri.

POST-OFFICE.—Nevada. Hotels.

Nevada is a flourishing and beautiful little city, located in western Missouri, one hundred miles south of Kansas City. It is accessible by three railroads, viz., the Missouri, Kansas and Texas, the Missouri Pacific, and the Nevada and Minden Railroad. Lake Park, in which the springs are located, is an attractive spot one mile out from the city, and reached by horse-cars, which run every twenty minutes. The three principal springs are known as the "White Sulphur," the "Iron," and the "Clear Water" springs. No analysis seems to have been made, but the springs are beginning to attract considerable attention on account of their medicinal properties. The park is about one hundred and thirty acres in extent, and, besides the springs, contains two lakes which afford abundant opportunities for boating, bathing, fishing, etc. James K. Crook.

**LAKE TAHOE, or CARNELIAN HOT SPRINGS.**—Placer County, California.

**LOCATION.**—These hot and cold mineral springs are located on Carnelian Bay, at the northern end of Lake Tahoe. They form part of the attractions of this famous inland sea. They are reached by rail to Truckee, and from thence by stage over a good mountain road in about two and one-half hours' drive. The scenery en route is grand. The Truckee River is crossed and recrossed, mountainsides and heights are scaled, and fertile valleys, on which graze immense herds of cattle, are traversed. Forests of beautiful pine and cedar rear themselves at intervals, humming sawmills fill the air with life, and wild, romantic views greet the eye at every turn. Lake Tahoe is a noble sheet of water, having an altitude of 6,202 feet above the sea level. It is divided by the California and Nevada State line, has a length of 21 miles, a width of 12 miles, and is 1,645 feet in depth. The appointments at the springs resort are very complete. Excellent bathing facilities have been provided, where all kinds of cold or hot sulphur baths may be taken. The springs are about fifty in number, and are well kept and cared for. The waters are sulphurous and saline, and a few are carbonated. They contain sodium chloride, calcium sulphate, silica, organic matter, magnesium sulphate, and free sulphureted hydrogen gas.

The baths are used with success in rheumatic and gouty troubles and the waters are taken internally for liver and kidney disorders, chronic constipation, and cutaneous diseases. The high altitude and invigorating mountain air recommend the location as a resort for broncho-pulmonary affections. There are excellent facilities for camping, hunting, and fishing in the vicinity.

James K. Crook.

**LAKE VIEW HOT SPRINGS.**—Lake County, Oregon. POST-OFFICE.—Lake View. Hotels in the town. ACCESS.—Via Southern Pacific Railroad to Ager, Cal., and thence by stage. The springs are located one mile and a half south of Lake View, and four miles north-east of Goose Lake, one of the largest bodies of fresh water in the West (50 miles in length, with an average breadth of 15 miles). The elevation is about 5,000 feet above the sea level, and the surrounding country of a mountainous character. The climatic conditions are very favorable. We are informed that the water has a temperature of 164° F., and flows at the rate of about 500 gallons per hour. A partial analysis by Dr. Parnell, post surgeon at Camp Warner, Ore., in 1869, showed the presence of iron, soda, sulphur, magnesia, and other mineral ingredients. The water is said to be beneficial in numerous complaints, especially rheumatism. The attractions at this place afford excellent inducements for the establishment of a first-class health resort.

James K. Crook.

**LAKWOOD.**—The village of Lakewood, formerly known as Bricksburg, and situated in Brick Township, Ocean County, N. J., has attained a world-wide reputation as a winter resort for pleasure and health; and among the physicians of this country it is widely known as a place where the climatic conditions influence most favorably, during the winter and early spring seasons, those people who go there while convalescing from disease, whether acute or chronic.

Reference to the large geological map of New Jersey, accompanying the report of the State Geologist for the year 1881, shows that the village is situated forty-four miles south by west from New York City, nine miles back from the Atlantic coast-line on Squan Beach, and five miles back from the mainland shore of Barnegat Bay; and that it stands upon a tongue of sandy "pine-land" soil which runs back from the latter to a point some two and a half miles beyond Lakewood, has at Lakewood a breadth of a mile and a half, and is inserted, wedge-fashion, between two portions of an extensive "oak-land" district. Both the "pine-land" and the "oak-land" soils are sandy; the "pine-land" being especially so. The geological map just referred to shows us a very large extent of country, triangular in shape, which reaches from the Atlantic coast at Long Branch (twenty miles north-east of Lakewood) almost to the very shores of Delaware Bay, having an extreme length of about ninety miles and an extreme breadth of about forty-five miles. This area is made up exclusively of "oak-lands" and of "pine-lands," in the proportion of about two parts of the former to one part of the latter. The greater portion of the "pine-land" or "pine-barren" soil is to be found in the northern half of this great triangle; so that for this half the relative proportions of "oak-land" and of "pine-land" soils are exactly the reverse of those just stated—that is, the very sandy "pine-lands" are, throughout this northern half, twice as great in area as are the less sandy "oak-lands." It has already been stated that the village of Lakewood is built upon pure "pine-barren" soil, but the "oak-land" predominates over the "pine-land" in the immediately surrounding country. Nevertheless, by far the most extensive region of unbroken "pine-barren" country to be found in the State, comprising an area which may be roughly estimated at no less than four hundred square miles, lies to the southward of Lakewood, and at a distance from the village of less than twenty miles; while the intervening "oak-land" region is intersected by tongues of "pine-land" similar to the

one upon which Lakewood itself stands, but of decidedly greater area than this one. Other strips of "pine-land" country are dove-tailed into the "oak-land" region to the northward. From this account of the geology of the New Jersey southern interior it must be evident to the reader that the soil, for many miles about Lakewood, is of an exceptionally sandy and dry nature.

Its distance back from the coast excludes Lakewood from the category of seaside stations; for, in Professor Smock's appendix to the "Report of the State Geologist of New Jersey" (1881), we read that "the influence of the ocean's waters is felt very decidedly to a distance of four to eight miles from the line of beach or outer coast-line, from Sandy Hook to Cape May," and that the climatic limit of the Atlantic coast belt in Monmouth County "is thought to be four or five miles; in Ocean County" (the county in which Lakewood is situated) "it follows closely the line of clearings or settlements, not going beyond the line of woods or into the forest belt. It is here from four to seven miles wide."\*

Of the 3,284 square miles of forest area in the State of New Jersey, Ocean County contains 313,087 acres of forest land; to this and the prevalence of the pine in great abundance in this vicinity the salubrity of the place is greatly due. For decades past the balsam-laden air of pine-woods regions like Aiken, S. C., and Arcachon, France, has been looked upon by physicians as particularly beneficial for their convalescent patients, and Lakewood, which bears such a close resemblance to the former place, owes its reputation primarily to the beneficial influences of the climate upon invalids of various types—not merely those with pulmonary complaints, but that far more numerous class of neurasthenics and convalescents from all acute diseases. In localities where the pines grow a sandy soil may always be looked for. Borings from the many artesian wells in the village proper show strata of almost pure sand down to a depth of six hundred feet below the surface. Consequently the dryness of the soil is one of the most noticeable features of this region. Fogs are rarely seen, and the relative humidity is always low. Government meteorological records for Lakewood are unfortunately wanting. However, the actual thermometric readings for New York and Lakewood will be found to differ to only a slight extent, but the greater dryness of the atmosphere in the latter region conveys the impression that its temperature is noticeably higher than that of New York. At times there are very high winds, and, were it not for the protection afforded by the forests, walking and driving would on such occasions be very unpleasant. Rains occur with about the same frequency as along this section of the New Jersey coast. During recent winters snow has covered the ground for only short periods of time; sleighing can rarely be enjoyed for one week's time, and occasionally an entire winter may pass without any sleighing. There is one peculiarity of the climate which deserves notice. I refer to the fact that a marked lowering of the temperature takes place at sunset and is associated with considerable dampness of the atmosphere. These conditions last for only two or three hours. During the winter months, therefore, invalids should be within doors by sundown.

Originally intended for a health resort Lakewood has rapidly outgrown the dreams of its promoters and has developed into one of this country's most noted winter pleasure and residential resorts. Its population is now 3,200, and it is capable of caring for more than 2,500 transient guests in its hotels and numerous boarding-houses. Luxurious accommodations and an excellent cuisine are afforded by the leading hotels, while for those who prefer a quieter and less expensive mode of life there are many pleasant boarding-houses. The majority of both the hotels and the boarding-houses now decline to accept as guests those who are suffering from pulmonary tuberculosis. Quite recently one of the larger hotels

\* These two paragraphs are from Dr. Huntington Richards' article on Lakewood in the former edition of the HANDBOOK.

has increased its attractiveness and usefulness by installing a complete plant for hydrotherapy.

The season begins on October 1st of each year, and by the middle of November all the hotels are open and the cottages full. Daily morning and evening concerts are given at the hotels. The walks around the lake and into the woods are kept in the best condition possible; even after a heavy rain the soil absorbs the water so rapidly that in the course of a few hours it is possible to walk out without getting one's feet wet or muddy. Well kept roads foster the spirit of outdoor life and driving, bicycling, and automobiling are thereby made more enjoyable. Bridle paths add to the charms of the more vigorous horseback exercise, and cross-country riding may be watched at stated intervals each season. Polo games and tournaments prove the most attractive feature of the season and may be witnessed every spring and autumn on one of the finest polo fields in this country. A speedway, one mile and a quarter in length, brings many a gentleman with his trotting horses to the village. Then, besides, there are a country club, a golf club, and facilities for boating on the lake, for bowling, and for lawn-tennis. There is an abundant water supply, chiefly from artesian wells, and the sewers empty into a rapidly flowing stream at some distance outside the village proper.

Lakewood to-day offers every inducement and advantage to parents who wish to bring their children up in the country. There is no lack of schools and churches.

Lakewood is one hour and thirty-five minutes from New York City by rail, and two hours from Philadelphia.

Irvin Honell Hance.

**LAMINARIA.**—The prepared stipes of *Laminaria digitata* Lam. (fam. *Fucaceae*). This species is a large, foliaceous, olive seaweed, which from a branching and stout foot ("root") sends up a long, terete, strong stem, surmounted by a flat, leaf-like, lanceolate, oval or more or less divided and crispy-margined thallus. It attains a great size, often measuring six or eight metres long, with a blade one metre or more in breadth. Laminaria is not used in medicine, but its cylindrical, and, when dry, horn-like stipes are cut and filed into suitable shapes for tents, for dilating the os uteri and sinuses, which they do by their capacity of swelling exceedingly when soaked in watery fluids. These tents are generally cut in cylinders from 3 to 8 mm. ( $\frac{1}{4}$  to  $\frac{1}{2}$  inch) in diameter and from 25 to 50 mm. (1 to 2 in.) in length; they are filed and sand-papered smooth, and the ends are carefully rounded. A hole made in one extremity holds the loop of silk for removing it. Its swelling capacity is developed in three or four hours, and often enlarges the tent to two or three times its original diameter. It was introduced into medical use but a few years ago, as a substitute for the sponge tents, which had in a number of instances already shown how apt they were to hold or develop infectious material, and cause chills, septicemia, and even death. Laminaria, in consequence of its close texture, presents no apertures in which such material could be permanently held, and practice has shown it to be much safer.

W. P. Bolles.

**LANE MINERAL SPRINGS.**—Calaveras County, California. These springs lie thirty-five miles east of Stockton. They are 1,000 feet above the sea level, and are surrounded by hills and valleys clad in forests of pine. The main spring flows from 50 to 75 gallons per hour. The following probably incorrectly reported analysis is said to have been made by the San Francisco Refining and Analytical Association:

LANE MINERAL SPRINGS.	
ONE UNITED STATES GALLON CONTAINS:	
Solids.	Grains.
Iron carbonate	122.00
Magnesium carbonate	38.51
Epsom carbonate (?)	29.76
Alumina	2.01

Solids.	Grains.
Sodium carbonate	8.52
Free sulphuric acid	15.24
Silica	15.20
Potassium carbonate	18.01
Organic matter	2.72
Total solids	251.97

Free sulphureted hydrogen gas, 105 cubic inches.

This water has been in use for several years, and is said to be beneficial in constipation, dyspepsia, chronic malarial poisoning, and in kidney and liver complaints.

James K. Crook.

**LANOFORM.** See *Formaldehyde*.

**LANOLIN.**—Under the title of *lanolin*, Oscar Liebreich proposed, to serve as a basis for ointments, the peculiar body that results from the mixture of a *cholesterin* fat with water. The cholesterin fats are peculiar, in comparison with ordinary glycerin fats, in not decomposing, in "taking up" and holding in intimate blending an equal quantity of water, in mixing also with glycerin, and in possessing a high diffusion power. By reason of the latter power, lanolin used as an inunction ointment is supposed rapidly to impress the system with any absorbable active drug substance that may be incorporated with it. Lanolin is obtained from the natural fat of sheep's wool, and such fat, purified and mixed with not more than thirty per cent. of water, is official in the United States Pharmacopœia under the title *Adeps Lanae Hydrosus*, Hydrous Wool-fat. This wool-fat, or lanolin, as it is still commonly called, is a yellowish-white material of ointment-like quality and a faint characteristic odor. It is insoluble in water, but yet will mix with twice its weight of water and still retain its unctuous quality. It melts at about 40° C. (104° F.). It is somewhat sticky, but this quality can be removed by the addition of from twenty to twenty-five per cent. of some ordinary oil, such as castor oil, or of vaseline.

Clinical experience with lanolin does not seem fully to realize the expectation of unusual power on the part of the substance to penetrate the skin, on inunction. Nevertheless, lanolin makes a very serviceable material for inunction purposes, either by itself or medicated.

Edward Curtis.

**LAPPA.** See *Burdock*.

**LARCH BARK.**—The bark of the trunk and branches of the European Larch, *Larix europea* D. C. (fam. *Coniferae*), was formerly largely used for its rather mild terebinthinate and astringent properties, and was at one time official in the British Pharmacopœia. It has now almost disappeared from the *Materia Medica*, in favor of the more definite products of that family.

It contains *volatile oil*, *resin*, a peculiar *tannin*, and *larixinic acid*. The turpentine and tannin make larch and other fir barks astringent and stimulating to the renal and bronchial mucous membranes. It is used to a slight and diminishing extent in bronchitis, vesical and urethral catarrh, as well as in purpura and other hemorrhages. A tincture (two and a half ounces to the pint) is an eligible form. Dose, 1 or 2 c.c. (℥. xv. ad xxx.), several times a day.

Henry H. Rusby.

**LARD.**—ADEPS. "The prepared internal fat of the abdomen of *Sus scrofa* L. (order *Pachydermata*), purified by washing with water, melting and straining" (U. S. P.).

The tissue from which lard is obtained, lying at each side of the backbone and enclosing the kidneys, and which goes by the name of "leaf lard," is washed, chopped, cleaned from connective bands and trabeculae, and then, with a little water, exposed to a boiling temperature until the connective tissue is softened and the fat has run out; it is then strained, and the heat continued until the water is nearly removed and the melted fat is clear and homogeneous, when it is poured out and cooled. If a very fine product is desired, it should be filtered in a hot filtering apparatus.