

ALLOUEZ MINERAL SPRINGS.—Brown County, Wisconsin.

POST-OFFICE.—Green Bay. Hotels in Green Bay. The Allouez Springs are beautifully located near the base of an elevation (Astor Heights) in the southern part of the city of Green Bay. This charming city, which lies at the head of the bay of the same name, is one of the oldest settlements of the Northwest. In the year 1668 Father Allouez established a military station here, and from that period dates the first settlement of the city. The springs are located but a short distance from the site of the old mission, and are named in honor of its intrepid and worthy founder. The water bubbles out from the hillside at a uniform rate all the year. It has a temperature of 46° F. A pretty park surrounds, and an ornamental pavilion covers the spring, which gushes up through an octagonal marble basin. An attendant in charge supplies water to the visitors. It is believed that the Menominee Indians used the spring for medicinal purposes. The water was analyzed in 1888 by Prof. W. W. Daniels, of the Wisconsin State University, with the following results:

ONE UNITED STATES GALLON CONTAINS:

Solids.	Grains.
Sodium chloride.....	4.26
Potassium sulphate.....	0.12
Sodium sulphate.....	3.46
Calcium sulphate.....	0.11
Sodium phosphate.....	Trace.
Iron bicarbonate.....	0.06
Calcium bicarbonate.....	24.69
Magnesium bicarbonate.....	27.53
Alumina.....	0.17
Silica and insoluble residue.....	1.97
Total.....	62.37

In his work on the mineral waters of the United States the writer has classified this as an alkaline-saline-calcic mineral water. It contains a very fortunate combination of mineral ingredients. The principal component, the bicarbonate of magnesia, gives it valuable antacid and laxative properties. The latter action is aided somewhat by the presence of sulphate of sodium. Authorities are agreed that the carbonate of magnesia is an excellent antilithic in those cases in which uric acid is too abundant. The small proportion of bicarbonate of iron which the water contains is sufficient to impart to it tonic effects. The chloride of sodium, sulphate of sodium, and bicarbonate of magnesium, all contribute to render the water diuretic. In diseased states its best effects have been observed in diabetes, Bright's disease, disorders of the stomach and liver, and in gout, rheumatism, and vesical calculi. The water is soft and sparkling, and, as it contains no trace of organic or vegetable matter, is well adapted for general table use.

Green Bay offers numerous advantages as a health resort. Its elevated location renders the air cool and refreshing during the summer months, and malaria is unknown. The magnificent Fox River, which flows into the bay at this point, is spanned by five bridges. The streets are embowered with avenues of grand old trees, and there are excellent drives in all directions for miles around. Small steam and sailing yachts, with their burdens of pleasure seekers, ply the placid waters of the bay, forming, during the spring and summer months, a picture of serene and restful beauty.

James K. Crook.

ALLSPICE (PIMENTA).—"The nearly ripe fruit of *Pimenta officinalis* Lindley (fam. *Myrtaceae*)" (U. S. P.). The source of this fruit is a handsome, evergreen, fragrant tree, about 10 metres (30 feet) in height, with opposite, dark-green, shining leaves and small white flowers. The fruit is a rather dry, two-celled and two-seeded drupe, from 0.5 to 1 cm. (one-fifth to two-fifths inch) in diameter, nearly spherical, and crowned with its four-parted calyx and short cylindrical style.

The allspice tree is a native of the West Indies, South and Central America, and Mexico. It is abundant in the

island of Jamaica, both wild and cultivated, and has been introduced into Asia and other tropical places.

This spice has been used in Europe for more than two centuries, and is still in great demand, both there and here, as a domestic condiment. It comes almost entirely from Jamaica, where it is obtained in enormous quantities, from both wild and cultivated trees. The fruits—like those of pepper and cubeb—are collected just before they are ripe and dried in the open air. When fully ripe, a portion of the fragrance is lost. The dried fruits are slightly smaller than the fresh; spherical or nearly so, finely wrinkled or tuberculated upon the surface, of a brown or grayish-brown color, and having a strong, agreeable, aromatic, clove-like odor. The limb of the calyx is usually rubbed away, leaving a circular projecting margin, or crown, at the apex of the fruit, enclosing a shallow, saucer-shaped calyx cup, from the middle of which rises the style, usually broken off at the top. The seeds are brown, flattish, exalbuminous, the embryo spirally coiled. A section of the fruit reveals, just below the surface, numerous large oil cells, some of which, projecting outward, form the small corrugations to be seen upon the outside. These cells contain most of the oil; in the seeds are fewer and smaller oil cells.



FIG. 87.—*Pimenta officinalis*, Fruit (entire).



FIG. 88.—Longitudinal Section of Same (enlarged).

The oil of allspice (*Oleum Pimentae*, U. S. P.), which is its only valuable constituent, can be obtained to the extent of two to four per cent. With this, occur fixed oil, resin, tannin, and gum. Allspice is little used medicinally, in doses of 0.5 to 2 gm. (gr. viij.-xxx.), as an ordinary aromatic, similar to cloves, but weaker. There is no official preparation, though it enters, as a carminative and flavor, into several official preparations.

W. P. Bolles.

OIL OF ALLSPICE (Oil of Pimenta).—"A volatile oil distilled from pimenta" (U. S. P.). This is a thin, transparent liquid, at first colorless, becoming yellow or even brownish, and thicker with age. It has the odor and somewhat the taste of cloves. Its specific gravity is 1.040 to 1.050. Its active constituent is *eugenol*.

H. H. Rusby.

ALLYL TRIBROMIDE.—Tribromhydrin, tribromophenyl, C₂H₃Br₃, is obtained by the action of bromine on oil of garlic (allyl sulphide). It is a heavy, colorless, or faintly yellowish liquid, which is insoluble in water and soluble in alcohol, ether, volatile and fixed oils. Liquid at ordinary temperature, it solidifies at 10° C. (50° F.). This remedy, containing as it does eighty-five per cent. of bromine, may well replace the alkaline bromides as sedative and antispasmodic. In asthma, pertussis, laryngismus stridulus, nervous irritability, and especially in epilepsy it has had a marked effect. In hysteria, on the other hand, it has been of no value. Its dose is 2 to 10 minims, given in capsule or on sugar, two or three times a day; or it may be given hypodermically dissolved in 10 or 20 minims of ether or oil.

W. A. Dastedo.

ALMONDS, BITTER AND SWEET.—*AMYGDALA AMARA*, *Bitter Almond*. "The seed of *Prunus Amygdalus amara* D. C. (fam. *Rosaceae*)" (U. S. P.).

AMYGDALA DULCIS, *Sweet Almond*. "The seed of *Prunus Amygdalus dulcis* D. C. (fam. *Rosaceae*)" (U. S. P.).

The almond tree is a small tree, inhabiting the countries bordering the Mediterranean Sea, Greece, Asia Minor, Syria, Algeria, as well as Abyssinia and other Eastern lands. It has been cultivated also in many of these places from time immemorial. It is very similar in size and appearance, as well as leaf and flower, to its near ally, the peach, growing from 5 to 10 metres (16 to 32 feet) in height, with graceful branching top.

The leaves are oblong, lanceolate, finely serrated, simple, and give when bruised a peachy odor. The flowers are large, pale rose colored, almost exact counterparts of those of the peach. But the fruit, although structurally similar, develops differently; that part (the sarcocarp) which in the peach becomes juicy and edible, in the almond dries up, splits, and falls away, leaving the stone (putamen) attached to the tree. This is then gathered and makes the almond of commerce, while the seed, removed from the stone, is the official almond.

The former is oblong-ovate, pointed, yellow, somewhat flattened, with blunt or sharpish borders, and a roughish surface, perforated with numerous pores and depressions. The shell is variable, usually hard enough to require a light hammer to break it; in some varieties it is easily crushed between the thumb and forefinger. The seed is sometimes, in some varieties always, imported without the shell. It is solitary and exalbuminous.

Long cultivation has produced many horticultural varieties of almonds, depending mostly upon their size, shape, and thickness of shell; but the most important distinction is that of taste and composition, in respect to which these varieties fall into one or another of two series, namely, those with bitter, and those with sweet or bland seeds. The trees producing them do not differ from each other much, excepting in the character of the seeds, but yet appear to be distinct, both existing in the wild state.

The chief source of almond production is the Mediterranean region, though it may be cultivated in almost any warm, temperate, or subtropical country. There are so many varieties of both almonds, and these differ so greatly in size and form, that comparative descriptions are difficult. Those used as drugs are about an inch in length, ovoid, with strongly rounded base and obtusely pointed apex, flattened so as to be three times as broad as thick, and about one-half longer than broad. The surface is of some shade of brown, more or less wrinkled, scurfy, with a dense covering of short, thick, microscopical hairs, and with numerous lines radiating from the base. The kernel consists entirely of two oily cotyledons of the same form as the seed, in contact by their flat faces, and of a nearly white color. They have a faint characteristic odor.

In general, the bitter almond is of a darker color, a little shorter, broader, and flatter, and a little less wrinkled than the sweet. It has a characteristically bitter taste, the sweet ones being entirely bland, sweet, oily, and nutty.

Of sweet almonds, the important constituent is fifty per cent. or more of a fixed oil (see *Oleum Amygdale Expressum*), which occurs with about three per cent. of gum and six per cent. of sugar, and a large amount of albuminoid matter. There is a very small amount of tannin in the seed coat. Their properties are purely demulcent and nutritive. We have an official emulsion and a syrup which are used as vehicles.

In composition, bitter almonds have about one-sixth less of the same fixed oil, and contain from one to three per cent. of the peculiar glucoside (see *Amygdalin* and *Emulsin*) which yields hydrocyanic acid and benzaldehyde, as described under *Hydrocyanic Acid*. The yield of oil of bitter almond is about one per cent., that of prussic acid about .06 to .18 of one per cent., of the weight of the seeds.

It is evident that the bitter almond combines the properties of sweet almonds and prussic acid, and that an ounce of the drug is equivalent to almost one grain of the latter. It does not follow that the effect would be the same as that dose, inasmuch as the development of the acid would be neither so sudden nor so complete. Nevertheless, bitter almonds must be regarded as poisonous. Even a small number of them, if eaten, are apt to produce a slight gastric irritation as an after effect. There is no official preparation of bitter almond, except that a little of it enters into the composition of *Syrupus Amygdala*. Its chief use is as a flavoring agent, though small doses are used for their sedative effect.

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Peach seeds are often used to adulterate bitter almond, and their composition is very similar. Sweet almonds are also used as an adulterant.

H. H. Rusby.

ALOES.—The inspissated juice of the leaves of various species of *Aloe*, a genus of nearly a hundred species, in the family *Liliaceae*, widely distributed through tropical Africa, on the continent and islands, and at least two species extending, through introduction, into Asia, and one into Southern Europe and the West Indies.

They are plants of desert or arid regions and strongly succulent, as is common among plants of such localities. They have large, fleshy, bayonet-like leaves, densely arranged in a distichous or trichostichous manner, and tall spikes of fleshy flowers, often similarly arranged. All methods of producing aloes from them are based upon the fact that they contain two distinct juices, the one thin and flowing at once when the leaves are cut, the other thicker and not readily flowing except under pressure. It is the former of these juices which yields the drug, and which is therefore allowed to flow from the cut leaves without pressure.

This juice is then inspissated, either spontaneously or by boiling, and yields a yellow, yellow-brown, gray-brown, green-brown, or nearly black mass, which may be hard and brittle or of a soft, tarry consistency, or of any intermediate degree. It may be dull, waxy, or glassy, and opaque or translucent, and its odor varies greatly. It is thus seen to be unfitted for any general description.

The places of manufacture give the names to the different commercial sorts. It is one of the oldest of medicines; valued—according to tradition—long before the Christian era. Certainly it was known to the Greeks and Romans of the first century, and to the rest of Europe during the Middle Ages. It has always been extensively used and highly prized, as the fanciful names given to many of the older aloes compounds testify. The variety earliest known, socotrine aloes, is, singularly too, the same which is still considered the best in England and America, and is nominally obtained from the same little, obscure, out-of-the-way island that Alexander is reported to have peopled with Greeks, in order to protect and improve its production. Of all the known commercial varieties of aloes, the U. S. P. recognizes but two, as follows:

Aloe Barbadosensis (*Barbadoes Aloes* or *Curaçoa Aloes*) is yielded by *Aloe vera* (L.) Webb. The name "Barbadoes aloes" indicates the former rather than the present geographical source, which latter is better expressed in the term "Curaçoa aloes." It was formerly produced in both islands, the Curaçoa coming in large blocks, run into boxes, the Barbadoes in gourds. Later, the latter article largely disappeared from commerce. Still more recently, the other has been put up in gourds after the Barbadoes style. It would appear, therefore, that practically all of our so-called Barbadoes aloes is now of Curaçoa production. The difference is, however, chiefly technical, as the parent plant, the process of manufacture, and the properties are identical in the two articles. This plant is the most widely distributed of the genus, growing through Northern Africa, Southern Europe, and the East Indies, as well as in the West Indies, where it is cultivated for the production of aloes. It grows to a height of nearly two feet, with a thick head of bluish-green, blotched leaves, and a dense spike of greenish-yellow flowers, each a little more than an inch in length, and of an elongated, contracted-campanulate form. From the *Pharmacographia* the following account of the preparation of Barbadoes aloes is quoted:

"The cutting takes place in March and April, and is performed in the heat of the day. The leaves are cut off close to the plant, and placed *very quickly*, the cut end downward, in a V-shaped wooden trough, about four feet long and twelve to eighteen inches deep. This is set on a sharp incline, so that the juice which trickles from the leaves very rapidly flows down its sides, and finally escapes by a hole in its lower end into a vessel placed beneath. No pressure of any sort is applied to

the leaves. It takes about a quarter of an hour to cut leaves enough to fill a trough. The troughs are so distributed as to be easily accessible to the cutters. Their number is generally five, and by the time the fifth is filled, the cutters return to the first, and throw out the leaves, which they regard as exhausted. The leaves are neither infused nor boiled, nor is any use afterward made of them, except for manure.

"When the vessels receiving the juice become filled, the latter is removed to a cask and reserved for evaporation. This may be done at once, or it may be delayed for weeks, or even months, the juice, it is said, not fermenting or spoiling. The evaporation is generally conducted in a copper vessel: at the bottom of this is a large ladle, into which the impurities sink, and are from time to time removed as the boiling goes on. As soon as the inspissation has reached the proper point (which is determined solely by the experienced eye of the workman), the thickened juice is poured into large gourds, or into boxes, and allowed to harden."

This product varies from an orange brown (Curaçoa aloes, usually) to a chocolate brown. The latter when broken up exhibits the orange-brown color also. It is commonly of a waxy lustre, dry and brittle or friable, but is occasionally harder and of a glassy lustre. Its peculiar odor constitutes its most characteristic feature. It is the chief source of *Aloin*, and is regarded as a very good article, though cheaper and less desired than the next. A large amount of it is, however, sold under the title of the next.

Aloe Socotrina (*Socotrine Aloes*) is yielded by *Aloe Perryi* Baker. From Socotra the drug was formerly brought into Europe via the Red Sea and Alexandria. After the discovery of the route around the Cape of Good Hope, it followed the course of commerce in that direction; at present, Socotrine aloes is apt to go to India, and from there to England, with the enormous mass of Indian products.

It comes from various parts of Eastern Africa. The preparation of Socotrine aloes is said to differ from that of Barbadoes, in that the heat of the sun is relied upon for its evaporation. Although sometimes imported in large barrels, it is usually in small kegs or small skins. The latter is a cheaper grade, dry and brittle, the former a soft-solid, at least at the centre, where it is frequently very soft, so as to flow. Socotrine aloes is typically of a brownish yellow or yellow brown, rather than an orange brown like the last, but it is occasionally darker, nearly of a brown black. There should never be any hint of green in its color. If exposed to the atmosphere, it at length becomes hard, through evaporation. Its odor is much finer than that of Barbadoes. Although not, strictly speaking, less strong, it is less rank and heavy. It is its odor which is relied upon for identification, as well as for an indication of its quality.

Both official varieties are described as having a saffron-like odor. It is said that if the nearly liquid varieties are allowed to stand, they will separate into a nearly black upper stratum and an orange-brown crystalline sediment. It is assumed that the darker or lighter colored varieties depend upon varying proportions of these two component parts. Both varieties are mostly soluble in alcohol and water, the Socotrine more slowly in the latter.

Both, on being dissolved in water or alcohol, yield a crystalline sediment of aloin. Both consist chiefly of a resin-like substance which is soluble in alcohol and hot water, but precipitated from the latter solution by boiling. A small amount of volatile oil is found in both. *Aloin* is about five times as active as aloes.

Aloe Purificata, U. S. P., is Socotrine aloes which has been heated, dissolved in alcohol, strained through a No. 60 sieve, evaporated, cooled, and broken up.

Considering its immense importance as a drug, the action of aloes is a remarkably simple one. Aside from its action in the mouth and stomach as a simple bitter, its operation is almost entirely confined to the lower part of the large intestine, where, by its irritant properties, it

powerfully stimulates peristalsis and moderately stimulates secretion. It is therefore a very dilatory, but quite active cathartic. Its action is quite apt to be griping and painful, especially to those affected with hemorrhoids. Although it has been claimed that this condition can be relieved by the skilful, continued use of aloes, this is doubtful; while it is certainly true that the condition is thus frequently aggravated in a serious degree. A diuretic effect frequently accompanies the purgation, and is probably in chief part due to a mere extension of the irritation. The same is to be said of its emmenagogue effect, and it is to be remembered that this may lead to abortion. The intensity of the action of aloes is quite variable, not only at different times, and this is especially true when aloin is used alone. This is believed to be due to variations in the solution of the aloin. The bile is its natural solvent. Glycerin acts similarly, and either of these solvents, injected into the rectum with aloes, will cause it to take effect. Taken internally, alkalies increase its activity, as does iron. Aloes can be absorbed by the subcutaneous tissue, excreted into the bowel and become active. Because of its slowness, and its limited field of action, it is usually preferred to combine it with some differently acting cathartic. Its peculiar mode of action indicates that aloes is especially useful in those cases of constipation which result from torpidity of the intestinal muscles.

The dose of aloes is exceedingly variable, according to the patient and the effect desired, being from 0.03 to 0.6 gm. (gr. ss.-x.).

The Pharmacopœia provides no preparation of Barbadoes aloes, but a large number of the purified Socotrine aloes, as follows:

LIQUIDS.—Tinctura Aloes, containing 10 per cent. of aloes and 20 per cent. of licorice root, made with 50 per cent. alcohol, dose 1 to 4 c.c. (fl. ʒ ʒ-i.); Tinctura Aloes et Myrrhae, containing 10 per cent. each of aloes, myrrh, and licorice root, made with 75 per cent. alcohol; dose the same as of the last.

SOLIDS.—Extractum Aloes (Aqueous), dose 0.03 to 0.2 gm. (gr. ss.-ij.); Extractum Colocynthis Compositum, containing aloes 50 per cent., extract of colocynth 16 per cent., resin of scammony and soap, each 14 per cent., cardamom 6 per cent., dose 0.06 to 1.0 gm. (gr. i.-xv.); Pilule Aloes, each containing 0.13 gm. (gr. ij.), each of aloes and soap; Pilule Aloes et Asafœtidae, each containing 0.09 gm. (gr. iss.) each of aloes, asafœtida, and soap; Pilule Aloes et Ferri, each containing 0.07 gm. (about gr. i.) each of aloes, dried sulphate of iron, and aromatic powder, with a little confection of rose; Pilule Aloes et Mastiches, each containing 0.13 gm. (gr. ij.) of aloes, 0.04 gm. (gr. ʒ) mastic, and 0.03 gm. (gr. ss.) of red rose; Pilule Aloes et Myrrhae, each containing 0.13 gm. (gr. ij.) aloes, 0.06 gm. (gr. i.) myrrh, and 0.04 gm. (gr. ʒ) of aromatic powder, Pilule Rhei Compositæ, each containing 0.13 gm. (gr. ij.) rhubarb, 0.1 gm. (gr. iss.) aloes, 0.06 gm. (gr. i.) myrrh, and a little oil of peppermint.

UNOFFICIAL VARIETIES OF ALOES.—*Aloe Capensis*, or Cape aloes, is the hardest and most brittle variety, with a strong, usually glassy lustre and a very conchoidal fracture. It is usually blackish (brown black or greenish brown black), occasionally dark reddish brown. It has a very unpleasant odor, is not crystalline, and contains no aloin, and is mostly used in veterinary practice.

Aloe Natalensis, or Natal aloes, has a dull surface and a grayish-yellow brown color. It is crystalline and contains aloin, but is weak in odor and taste.

Hepatic aloes is a name which has come to be applied to any form having a distinct liver-brown color.

H. H. Rusby.

ALOPECIA.—Alopecia is a partial or general loss of hair, from any cause whatever, and that in sufficient quantity to be noticeable to the naked eye.

The word "alopecia" is derived from the Greek ἄλωπις, meaning fox. Why this word has been used to express baldness, it is difficult to say. One explanation

might be that the fox is said to have, normally, two bald spots over his eyes, and another, that he is especially liable to the disease.

The term, as it is used to-day, covers a broader field than it did formerly. It includes not only all varieties and degrees of dystrophies and atrophies of the hair of the scalp, causing baldness, but also similar conditions of the hair upon any other part of the body.

In text-books the alopeciae are usually divided into two main classes, congenital and acquired. In the present article this classification is not followed, but we will attempt to give a more scientific one instead.

Alopecia may be due to a local disease of some hairy part of the body, and in this case it would be limited throughout its whole course to the part in which it commenced, or it may be the result of disease elsewhere, and then the consequent baldness is only incidental to the other affection.

This line of thought also evolves two principal classes: (1) Alopeciae essentialia, idiopathicae sive primariae; (2) Alopeciae symptomatice sive secundariae. The first class includes the congenital and senile forms, and those primary affections of the hair that are premature, comprising alopecia presenilis, alopecia pityrodes, alopecia areata, folliculitis decalvans, and dermatitis papillaris capillitii.

(Note.—We are well aware of the fact that strict logic would really not permit alopecia pityrodes to be placed in this class, but it stands out so prominently among those diseases causing baldness that for practical purposes it may be classed among the essential alopeciae. Similar objections could be made against the placing of alopecia areata among the "idiopathic premature alopeciae," and yet we find it there by the consent of many good authorities.)

The second class contains first, *alopecia toxica*, which includes those instances of alopecia caused by the use of drugs, like mercury and acetate of thallium and also those caused by the toxins of systemic infections such as syphilis, typhoid fever, etc.; second, *alopecia dynamica sive destructiva*, in which loss of hair is principally due to atrophy caused by mechanic force, such as pressure atrophy (lupus erythematosus), or to the destruction of tissue the result of suppuration (gummata, epitheliomata, zycosis, etc.), or to severe local inflammations (acute eczema, erysipelas, etc.); and finally, *alopecia neurotica*, which follows traumatic or functional nerve injuries.

The following represents a brief schedule of this classification:

I. *Alopecia Essentialia, Idiopathica sive Primaria.*

1. Congenita.
2. Senilis.
3. Prematura.

II. *Alopecia Symptomatica sive Secundaria.*

1. Toxica.
2. Dynamica sive destructiva
3. Neurotica.

I. *Alopeciae Essentialia Idiopathicae Sive Primariae.*

1. *ALOPECIA CONGENITA; DEPILATIO CONGENITA; ATRICHA; OLIGOTRICHIA.*

1. **CONGENITAL ALOPECIA** is a rare affection. It may be complete, the new-born babe being wholly devoid of hair, even of lanugo ones. After some time has elapsed, from a few months to a few years, let us say, lanugo hairs may begin to form, and later on, full-sized normal hairs may make their appearance. It may, however, be the case that growth of hair never takes place. This has been frequently found to be true where there was only a partial alopecia at birth. In an instance like this the individual bald patches may multiply in number until they spread over the entire scalp, and they often show a tendency to increase in size.

In connection with this malady, anomalies of the teeth and nails are often observed. Crocker reports the case of an individual who had only four molar teeth, and was never known to have perspired or shed tears.

Etiology.—Alopecia congenita represents one of the evidences of arrested development; there is a marked hereditary tendency, and more than one member of the same household may suffer from it.

Pathology.—Schede is apparently the only one who has published a complete microscopic examination of this disease (*Archiv für klin. Chir.*, Bd. xiv.). He found the sebaceous glands well developed, in many places sending their open ducts through the somewhat atrophic epidermis; in some of these, rudimentary hairs could be observed, in others the papillae were merely indicated. The cutis surrounding this region was changed into a coarse areolar tissue interspersed with granules and fat cells.

The **prognosis** in the universal congenital alopecia is said to be not as bad as in the partial affection.

Treatment can only be hygienic, and is limited to aiding the general nutrition processes.

2. **ALOPECIA SENILIS; Calvities Senilis.**—With the advent of old age, a loss of hair not only of the scalp, but also of the eyebrows, the genital and the bearded region is observed. Women are not as extensively affected as men. While it is true that at the decline of human life an increase in the growth of hair is often seen, it is equally true that this growth never takes place upon the scalp.

As a rule the hair becomes gray before there is any sign of senile baldness, which begins upon the top of the vertex, at its junction with the occiput. The coarse hairs begin to fall out, at first from a small circular area only; this loss of hair spreads at the periphery, presenting a picture like the full moon shining through the clouds, and later on assuming the form of the tonsure of a friar. The disease spreads forward along the vertex, and descends laterally upon the temples and the region above the ears, and finally also invades the occiput. As a rule, it leaves a small rim of normal hair encircling the lower lateral and posterior parts of the scalp. The coarse hairs are replaced by lanugo hairs, but these also finally drop out. The scalp is then left as a smooth, shining surface, thinner and tenser than before, but still freely movable over the cranium. The mouths of the follicles may still be seen for some time, but they too shortly disappear.

Pathological Anatomy.—The whole process is incidental to the retrogressive nutrition changes of senility. The prime factor is an obliterating endarteritis, which here means occlusion, lack of blood supply, atrophy, and death of these structures.

Treatment.—From the pathology of this condition it is plain that treatment is of no avail in averting the loss of hair.

3. **ALOPECIAE PREMATURE.**—(a) *Alopecia Presenilis.*—

When the symptoms of the last-described malady appear in younger persons who do not show any other evidences of the degeneration of old age, it is called "alopecia presenilis." Its course and pathology are the same as in the senile form, and therapeutic efforts are as useless. The wearing of stiff headgear, such as derbys and silk hats, is considered by some as a cause of this affection. They argue not only that the hard brims impede the circulation, by pressure upon the blood-vessels encircling the scalp, but that on account of their tight fit the air from expiration becomes so deteriorated as to be obnoxious. This factor may be remembered when a case presents itself. Invigorating treatment, and the avoidance of injurious diet and habits, may in some degree retard the progress of the disease. Active cell metabolism should be encouraged.

(b) *Alopecia Pityrodes sive Alopecia Furfuracea Capillitii.*—Our reasons for placing this affection among the essential premature diseases of the hair causing baldness have already been given. Its true nature is by no means definitely settled, as shown by the various designations given to it, e.g. *seborrhœal eczema, inflammatory seborrhœa, seborrhœal dermatitis*, besides those that are now obsolete, as, *seborrhœa sicca*, and *oleosa capitis, aene oleosa*, and others. It is one of the most frequent causes of bald-