ordinary chloral hydrate and resembles that compound in its effects upon the animal system. Its only recommendation to medical favor lay in its supposed property of being peculiarly anodyne to the trigeminal nerve (Liebreich), and so of peculiar promise for the alleviation of neuralgias of the face and head; but this property certainly does not exist to any marked degree. Practically, the drug is only a comparatively insoluble, and therefore inconvenient, substitute for ordinary chloral hydrate. It may be given in doses ranging from 0.30 to 2.00 gm. (gr. v. to xxx.) in syrupy mixture.

Edward Curtis.

BYRON SPRINGS.—Contra Costa County, California. Post-Office.—Byron Springs. Hotel and cottages. These excellent springs are pleasantly situated near the foot-hills, on a spur of the Coast Range of mountains, about 16 miles southeast of Mount Diablo, and 68 miles northeast of San Francisco. They are reached by the railroad line running from San Francisco to Stockton and Sacramento viâ Martinez. The springs are one mile and a half from Byron Station on this line. They lie in a small valley leading from the San Joaquin plains. The elevation is about 100 feet above tide water, and the climate is mild and pleasant. An excellent hotel and a number of cottages have been erected for the accommodation of guests. Being only three hours' ride from San Francisco, the place is visited by thousands of people every year, and is constantly increasing in popularity. The springs are upward of fifty in number, and many of them are of great therapeutic value. They range in temperature from 52° to 140° F. Within a few feet of each other one finds a cold carbonated spring and a hot sulphureted spring. The entire basin has the appearance of being an extinct volcanic crater. The cold soda springs probably come largely from the surface water, while the hot springs undoubtedly have a much deeper origin down in the earth's crust. Of the fifty or more springs only seven or eight are in active use. We present several analyses made by Dr. Winslow Anderson:

The "Liver and Kidney" Springs.

One United States Gallon Contains:

Solids.	Grains.
Sodium chloride	622.07
Potassium chloride	33.74
Potassium iodide	.79
Potassium bromide	Trace.
Magnesium chloride	3.92
Magnesium carbonate	15.75
Calcium chloride	85.37
Calcium sulphate	1.12
Calcium carbonate	.59
Barium carbonate	.93
Ferrous carbonate	.72
Ammonium chloride	.05
Silica	1.00
Organic matter	Trace.
Total	766.05
Free carbonic acid gas	7.82 cubic inches.
Temperature of water	66° F.

The analysis shows this water to be heavily impregnated with saline ingredients. The water is said to have a special action on the liver and kidneys, which fact gives the spring its name. It is said to be very useful in dyspepsia, chronic hepatic diseases, obstruction in the gall ducts, and what is known as "gin livers." Its good effects are also observed in intestinal atony or torpidity of the bowels. The water is diuretic, and is said to have been successful in a number of cases of albuminuria. Its best effects are observed in alcoholic dyspepsia, and in the "rocky" and dilapidated state of the system consequent upon excessive conviviality.

The "White Sulphur Spring."

One United States Gallon Contains:

Solids.	Grains.
Sodium chloride	12.01
Sodium bicarbonate	12.94
Sodium sulphate	1.34
Solids.	Grains.
Potassium chloride	Trace.
Potassium carbonate	2.37
Potassium sulphate	Trace.
Magnesium chloride	"
Magnesium carbonate	2.50
Calcium carbonate	1.13
Calcium sulphate	.51
Ferrous carbonate	3.00
Silica	.26
Organic matter	Trace.
Total	36.06
Carbonic acid gas	21.17 cubic inches.
Sulphureted hydrogen	5.80 "
Temperature of water	76° F.

This will be seen to be a light alkaline-sulphur water, with a well-marked quantity of ferruginous salt. Its action is tonic, diuretic, alterative, aperient, and antacid. It is very useful in affections consequent upon the uric-acid diathesis, such as rheumatism, gout, glandular enlargements, and many forms of skin disease.

The "Black Sulphur Spring."

One United States Gallon Contains:

Solids.	Grains.
Sodium chloride	395.00
Sodium sulphate	Trace.
Sodium bicarbonate	"
Potassium chloride	35.62
Potassium sulphate	Trace.
Potassium iodide	.74
Potassium bromide	.16
Magnesium chloride	1.00
Magnesium carbonate	9.50
Calcium chloride	9.00
Calcium sulphate	3.20
Calcium carbonate	5.95
Ferrous carbonate	.70
Barium carbonate	Trace.
Ammonium chloride	"
Silica	1.10
Organic matter	Trace.
Total	461.97
Carbonic acid gas	25.60 cubic inches.
Sulphureted hydrogen	8 "
Temperature of water	90° F.

This water contains a considerable quantity of the chlorides and carbonates, and is largely diuretic in consequence. It is also heavily charged with carbonic acid gas, and has a fair amount of sulphureted hydrogen gas. It is indicated in catarrhal irritation and inflammation of the genito-urinary tract, and has proved of service in cystitis, Bright's disease, dyspepsia, and constipation. It is largely used for bathing purposes.

Among other valuable springs at Byron are the "Iron" spring, a well-marked alkaline-chalybeate water; the "Hot Salt" spring, having a temperature of 122.3° F. and much used for bathing; the "Iron Pipe" spring, and the "Surprise" spring. This latter spring is one of the most heavily charged saline waters in the world, containing 15,000 grains of common salt to each United States gallon of 231 cubic inches. With other mineral ingredients it is known to possess over 18,000 grains—about 40 ounces, or 33 per cent. of solid constituents to the gallon. The following comparative table of heavy waters shows the Surprise spring to be one of the most remarkable known.

One United States Gallon Contains:

	Grains.
Sea water	2,138.91
Mono Lake (Cal.)	2,915.16
Castalian Mineral Spring (Cal.)	4,422.25
Owens Lake (Cal.)	7,000.00
Syracuse, N. Y. (salt well)	9,221.00
Salt Lake (Utah)	about 11,000.00
Dead Sea (Holy Land)	13,488.10
St. Clair Springs (Mich.)	17,704.00
Clark's Red Cross Mineral Springs (Mich.)	17,825.77
Byron Surprise Spring	18,773.73

The water is highly diuretic and laxative when taken internally, and ought to be valuable for bathing purposes. Two large bath-houses have been built at Byron, fitted with sulphurous, steam, vapor, and water baths in tub or plunge, at all temperatures. The moor or mud baths

form an important feature of this resort. The hot sulphurous, saline mud has become famous in the treatment of obstinate cases of rheumatism, gout, arthritic joints, scrofula, and skin diseases. The following analysis shows the mineral constituents of this mud:

One United States Gallon Contains:

Solids.	Grains.
Sodium chloride	274.93
Sodium phosphate	42.16
Potassium chloride	26.40
Potassium iodide	.32
Potassium bromide	Trace.
Magnesium chloride	2.06
Magnesium sulphate	19.60
Calcium chloride	7.50
Calcium sulphate	36.05
Calcium carbonate	3.09
Ferrous sulphate	.76
Ammonium chloride	Trace.
Silica	5.62
Organic matter	7.34
Total	425.83
Free carbonic acid gas	17.75 cubic inches.
Free sulphureted hydrogen	14.50 "
Temperature of mud	110° F.

References.

Winslow Anderson: The Mineral Springs and Health Resorts of California, 1892.

J. K. Crook: The Mineral Waters of the United States, 1899.

James K. Crook.

CACAO, BUTTER OF.—*Oleum Theobromatis. Oil of Theobroma. "Cocoa Butter."* "A fixed oil expressed from the seeds of *Theobroma Cacao* L. (fam. *Sterculiaceæ*)" (U. S. P.). The chocolate tree is a native of tropical South America, where we have occasionally seen small forest areas which consisted almost wholly of it. These wild trees only occasionally produce fruit, for which the trees are very extensively cultivated in all tropical countries. There is great variation in the quality of the seeds coming from different regions. Under cultivation, the tree grows like an apple tree, which it closely resembles, from a distance, in form and general appearance. The oblong-ovate leaves are about a foot in length, thick, and rich-looking. The flowers are small and inconspicuous, growing in little cymes directly from the bark of the branches, or even of the trunk. The fruit, about six to ten inches long and half as thick, is oblong-ovoid, coarsely ribbed or grooved, so as to look not unlike a narrow, pointed melon. It has a thick, hardish rind, like a pumpkin or squash, and its color varies through shades of yellow, orange, and red to purple. It is filled with a whitish pulp, as soft as the flesh of a ripe melon and of a very fine texture. The numerous seeds are embedded in this pulp and attached to a soft central placenta. This pulp forms the basis of a delicious jelly of a beautiful purple or wine color. The seeds, after being cleaned of the pulp, are known as raw seeds. In this condition they are bitter and astringent and unfit for use. Two methods of curing are in vogue. The first is to enclose them in tight boxes and allow them to "sweat." The second is to "clay" them by burying in holes in the earth. Either process results in fermentation, by which the outer coating is caused to peel off, and they lose their disagreeable taste. They are then dried, cleaned, and marketed under the name "cacao" (pronounced (kah-kah'-o; or in English, kay-kay'-o). Venezuelan clayed cacao is probably the most highly esteemed and is the most expensive. The seeds are about as large as unshelled almonds, oblong-ovoid and somewhat flattened, blunt at both ends, of some shade of brown, veiny on the outer surface. The shell is thin and brittle, the cotyledons friable and fatty. The latter are wrinkled, and in good seeds fill the cavity loosely, with an irregular, small space in the centre. The taste is slightly bitterish, but agreeable. For chocolate manufacture, the seeds are roasted and shelled and the kernels finely ground into a paste, with or (usually) without a very slight addition of water. In the process a portion of the oil separates. In the earlier manufacture in the United States, this, with frequently an additional portion, was removed, making our chocolate dry. We have since learned so well from our tropical relatives that we not only retain all of this oil, but abstract a portion in making the poorer grades of chocolate, to add to the richer and finer grades.

The seeds yield almost half their weight of fat, about a third as much albuminous matter, considerable starch, and about one and one-half per cent. of the alkaloid *theobromine*. The shells removed from the seeds yield about one per cent. of this alkaloid. They are utilized for the preparation of an inferior drink. The use of chocolate produces, in a milder degree and after a longer time, the cerebral stimulation of coffee. As the latter acts through its caffeine, which is methyl theobromine, it would appear that some transformation of the theobromine of chocolate must occur in the system.

Cacao butter is obtained from the seeds by the aid of heat, either by pressing with heated rollers or by boiling. The cake which remains is ground into "breakfast cocoa." The cacao butter occurs in cakes of a yellowish-white color; has a slight, agreeable odor and an oily taste, a little like that of chocolate. Its specific gravity is from 0.970 to 0.980. It melts at from 86° to 91.4° F., and is soluble in 100 parts of alcohol. It is much subject to adulteration with other fats, for the detection of which the Pharmacopœia provides ample tests. The peculiarities of this fat are its hardness and its melting point, at about the temperature of the body. This combination renders it exceptionally useful for the making of suppositories and bougies. As it does not readily decompose like other fats, it becomes a useful base for medicaments, and is, for the same reason, frequently employed in hot countries as a delicious substitute for butter. It has no distinctly medicinal action.

Henry H. Rusby.

CACHEXIA.—General Pathology.—Definition.—The term as now used designates a condition of marked anæmia associated with great emaciation. The causes of the condition are many. Formerly the term was used rather loosely to designate any state of deterioration of the general health. This led to its use as a generic term, while numerous specific terms designated the causes in individual cases; thus, C. canceratica, C. cardiaca, etc.

Etiology.—Cachexia is not associated with the primary anæmias, namely, pernicious anæmia, chlorosis, leukæmia, and pseudo-leukæmia. In these the general bulk of the frame is well maintained, and in some cases may be increased. In the secondary anæmias the associated emaciation in grave cases leads to the typical picture of cachexia.

The term cachexia, however, is especially used in connection with certain diseases. The most generally recognized types occur in malaria, syphilis, lead poisoning, gastric carcinoma, and infantile scurvy. It is well, however, to consider all the pathological processes which may lead to this state. The condition resulting from the removal of the thyroid gland, sometimes spoken of as cachexia strumipriva, is a special condition not to be considered under the general subject of cachexia.

In this connection the work of Lazarus* on the secondary anæmias has been largely drawn from; his etiological classification is especially valuable. He divides the secondary anæmias into three classes: (1) *hypoplastic*, due to insufficient blood formation; (2) *consumptive*, caused by abnormally extensive destruction of the blood; and (3) *complex*, resulting from a combination of these two causes. Of the consumptive anæmias the post-hæmorrhagic is the purest type. In most cases the pathological processes are so complex that it is impossible to determine whether the hypoplastic or the consumptive factor obtains. The examination of the blood gives no clew to the cause, as the hæmatology of most of the secondary anæmias is practically the same.

* Ehrlich-Lazarus: "Die Anaemie," II. Abtheilung, 1900.

Krehl* says that the hypoplastic anæmias are due to an injury of some organ concerned in the production of a constituent of the blood. It is certain that many organs are concerned, and a disturbance of any one of these may bring about the result.

The consumptive anæmias may involve the destruction of normally produced blood. Here, also, many organs are probably concerned. The production of substances necessary for the preservation of the erythrocytes in the plasma might be limited, or deleterious substances might be produced. As another possibility might be mentioned acceleration of the normal destruction, by whatever processes that is brought about.

An evidence of increased destruction within the body is an increase in the amount of iron in the liver, spleen, and bone marrow. When the anæmia is due to loss of blood, the amount of this iron is decreased as a result of the activity of the regenerative processes.

The causes of the secondary anæmias may be classified as follows:

I. Hæmorrhages.

II. Insufficient nourishment and bad hygienic surroundings.

III. Malignant tumors and other organic diseases, poisons, parasites, etc.

I. *Hæmorrhages.*—The loss of blood may occur from: (1) the nose; (2) the lungs; (3) the gastro-intestinal tract in association with ankylostoma duodenale, ulcus ventriculi et duodeni, malignant tumors, and hemorrhoids; (4) the genital tract in women; (5) the bladder; and (6) it may also occur in the various forms of hæmorrhagic diathesis. Considerable losses are compensated for if sufficient intervals occur between the hæmorrhages. The more frequent the hæmorrhages the longer is the time required for this compensation.

II. *Insufficient Nourishment and Bad Hygienic Conditions.*—No satisfactory explanation of the anæmia is given. Improper food and surroundings (light, air), hard work, and mental distress are ordinarily given as the causes. Experiments upon professional fasters and upon animals have shown that acute and complete starvation does not produce anæmia. In the more chronic cases, however, it occurs especially when the diet is poor in iron-containing foods, of which the most important is meat. As these are the most expensive foods, this is probably an important factor among the poorer classes. In infantile scurvy the cachexia associated with the subperiosteal extravasation of blood is usually a result of improper feeding. Malted milk and condensed milk are most largely responsible. Animal experimentation and the experience of members of polar expeditions in the long polar nights seem to show that lack of light does not produce anæmia or have any other bad effects. Concerning the ill effects of polluted air, little is known.

III. *Malignant Tumors and Other Organic Diseases, Poisons, Parasites, etc.*—There is hardly an important pathological condition that does not have its effect upon the blood and upon the bulk of the frame. The reduction in the amount of food in disease of course aids in producing anæmia and emaciation.

In *suppurations* there is a loss of important materials and a considerable additional expenditure of energy. The great draft upon the bone marrow is shown experimentally by the increase of the red marrow, and by the relative increase of the neutrophiles — especially the mononuclear forms—and the relative decrease of the eosinophiles.

In *spermatorrhœa, lactorrhœa, catarrh of the air passages and of the alimentary tract*, the same causes obtain.

In *albuminuria* the loss of albumin probably brings about a state of hydræmia, and this latter condition no doubt exerts a deleterious effect upon the red blood corpuscles. The associated intoxication is also probably a factor.

In *fevers* the amount of hydrobilirubin in the urine is to a certain extent a measure of the destruction of the red blood corpuscles. Experimentally the simple elevation of temperature probably does not increase metabolism extensively, or alter the quality of the blood. Practically, however, the associated intoxication, as in the infectious diseases, is probably the important factor. The toxins may exert an erythrocytolytic function.

Diseases of the Digestive Tract. These are among the most frequent causes. Limitation of alimentation and intoxication operate as factors here. Decreased excretion of toxins, and possibly auto-intoxication, occur.

In *syphilis* the anæmia and emaciation are probably due to the specific toxin of the disease.

Tumors. Uncomplicated benign tumors have no effect upon the general health. Uncomplicated malignant tumors produce marked anæmia and emaciation. The cause is to be sought in a toxin which increases blood destruction and proteid metabolism.

Animal Parasites. Most of these probably produce toxins. The eosinophilia which occurs in connection with most, if not all, of the intestinal parasites is to be regarded as evidence of this. This is true of oxyuris vermicularis. In the case of ascaris lumbricoides the mechanical irritation may be a factor. With the echinococcus and the trichina no anæmia occurs. The complications seem to be responsible for the anæmia in the case of filaria sanguinis hominis and distoma hæmatobium. In ankylostoma duodenale the blood removed by the worm is an important factor. In the urine of patients infected with this worm is a toxin which produces marked anæmia in rabbits. In malaria a toxin undoubtedly exerts an influence in addition to the direct destruction of the erythrocytes by the parasites.

Poisons. In lead poisoning the anæmia is thought to be due to the lesions of the stomach and intestines. Arsenic probably destroys the erythrocytes directly.

In any of the above conditions, if there be marked emaciation, the condition of cachexia may be brought about.

Pathological Anatomy and Histology.—*Blood.*—The condition of the blood is that of a secondary anæmia. In only a few forms is a special feature noted; as, for instance, the presence of parasites in the case of malaria.

Other Organs.—The skin is yellowish rather than white, as in the acute anæmias. This is to be regarded as an expression of the increased destruction of the erythrocytes. The tendency to œdema and hæmorrhages is probably due to changes (fatty) in the blood-vessels. Hæmorrhages may occur into the skin, the mucous membranes, the central nervous system, and the serous membranes. No characteristic changes in metabolism are known. It is often impossible to say whether the gastro-intestinal disturbances which so frequently occur are primary or secondary.

Certain lesions sometimes spoken of as characteristic of pernicious anæmia may also occur in these grave secondary anæmias. Such are hæmorrhages into the omentum, fatty degeneration of the heart, degenerations in the brain and spinal cord, and atrophy of the mucous membrane of the gastro-intestinal tract. Changes in the bone marrow consist of an increase of the red marrow. This may gradually encroach upon the territory of the yellow marrow in the shafts of the long bones. However, the hyperplastic marrow has normal histological characters.

In the emaciation the most important tissues suffer least. The greatest reduction is of the fat; then follow the muscles, skin, liver, bones, heart, and central nervous system. The organs show no striking histological alteration. The atrophy of the fatty tissues is described as follows by Ribbert.* In cases of marked cachexia the fat, especially of the epicardium, may assume an œdematous, gelatinous character. In frozen sections of the fresh tissue one sees, in place of the large, closely packed fat cells, groups of fat droplets in a clear vascular tissue. Under a high power these groups are seen to be contained within cells which represent the atrophied fat cells. If the process is still more advanced they take on the character of the ordinary connective-tissue cells. Between these are connective-tissue fibres.

H. S. Steensland.

* Krehl: "Pathologische Physiologie," Leipzig, 1898, S. 125.

* Ribbert: "Lehrbuch der pathologischen Histologie," Bonn, 1896, S. 11.

CACHEXIA STRUMIPRIVA. See *Thyroid Gland, Diseases of.*

CACTACEÆ.—(The Cactus family.) This strange and interesting family of plants occupies as yet a most uncertain place in the materia medica. It comprises some twenty genera and probably six hundred species, and its study is no less difficult for the botanist than for the pharmacologist. The plants grow chiefly in desert regions, being competent to withstand the most extreme conditions of aridity, and interest centres chiefly in their defensive provisions. The absence of leaves, which are usually metamorphosed into spines, protects them against desiccation. The succulent nature of their stems causes them to be sought by hungry and thirsty animals. In times of cattle famine, the spines are burned off and the stems then used as fodder, while a wholesome water supply can be obtained from cavities scooped out in the bodies of some of the thicker species. Against destruction from such causes, most of them are protected by their armament of spines. Those which lack this armature are commonly protected by poisonous alkaloids, and attempts have been made to utilize some of these in medicine. The important drugs of the family are the *Cactus grandiflorus* and the *Mezcal Buttons*, which see.

Their physiological properties are diversified. The berry-like fruits are commonly edible, and some of them, like the Prickly Pear or Tunya, are of much economic importance. Several of them are hosts for the valuable cochineal insect. Many succulent plants not related to this family are popularly called cactuses.

Henry H. Rusby.

CACTUS GRANDIFLORUS.—Cereus Grandiflorus. The flowers of *Cereus grandiflorus* (L.) Miller (fam. *Cactaceæ*). The stems have also been used. This plant, the well-known Night-Blooming Cereus of cultivation, is a native of the West Indies, and flowers in August. Adulteration with, or substitution by, the flowers of *Opuntia decumana* Haw. is very extensive. The flowers of the latter are cup-shaped, about an inch long and broad, with stamens one-fourth or one-half of an inch in length; while the genuine flowers are eight to ten inches in diameter when fully spread out, and have stamens two or more inches long. Much of the contradictory testimony as to composition and properties is doubtless due to this irregularity in the drug used, yet there is a wide discrepancy of opinion as to the merits of that which is genuine. No efforts appear to have been made to compare the flowers collected in different stages of maturity. The facts here stated, however, appear to be fairly well established. Both the stems and the flowers appear to be active, but the latter more so. An alkaloid and a glucoside are claimed, but our information regarding them is very meagre and indefinite. The drug is a cardiac stimulant of peculiar action. It does not affect the stomach nor the centres as digitalis does. It increases blood pressure by quickening and strengthening the heart beat, through direct action upon its nerves. Wilcox, who has studied it extensively, is positive in asserting its value in aortic regurgitation, where digitalis cannot be used, but its injuriousness in mitral stenosis. He recommends it generally in relative cardiac incompetency and functional cardiac weakness. The dose of the fluid extract is 0.6 to 2 c.c. (ηx. to xxx.).

Henry H. Rusby.

CADAVER, LEGAL STATUS OF.—*Scope of the Subject.*—The enactments of State legislatures and the regulations of sanitary codes in regard to the cadaver constitute the purely legal side of the subject, and are too extensive to be considered in detail. So far as they affect physicians, as practitioners, investigators, instructors, and medical examiners, they fall within the scope of an article suitable for this Handbook.

Questions involving the cause of death, and such other deductions as only a person possessing expert anatomical, medical, and surgical knowledge would be able to make from an examination of the cadaver, constitute the medico-legal side of the subject. Those matters, which can be determined only by an autopsy, have been considered in Vol. I under *Autopsies, Medico-Legal Relations of.* Besides pathological conditions, the cadaver presents certain appearances which form a basis for the determination of the fact of death, of the time when it occurred, and of the identity of the dead person.

Legal Aspects.—If we consider the subject from the physician's standpoint, it will be sufficient for us to enumerate the latter's duties and privileges in relation to the cadaver; we shall scarcely be expected to specify in detail the statutes and codes that relate to the subject. For more detailed information in regard to the latter the reader is referred to an excellent article by T. C. Becker on the "Legal Status of the Dead Body," in Witthaus and Becker's "Medical Jurisprudence, Forensic Medicine, and Toxicology."

A death having occurred in a physician's practice, it is his duty to examine the cadaver and verify the occurrence by unmistakable signs presented. (These will be discussed further on.) No statute or code requires this in so many words, but the physician's "Certificate of Death" presupposes such examination to have been made.

The "Certificate of Death" is a record and legal proof of death. The form is furnished by the health authorities, and on its reverse side it contains terse information about the legal requirements. The extent to which these are either neglected or disregarded in New York, and presumably elsewhere, is remarkable. Such neglect is frequently responsible for many vexatious occurrences that might and should be avoided.

The attending physician must furnish such a certificate within a specified time (thirty-six hours, according to the New York Sanitary Code, sec. 180).

The physician must be officially registered (New York Sanitary Code, sec. 5.; Bureau of Records).

The cause of death must be sufficient, no mere symptom being given as the sole cause.

When a cause of death is given which might possibly be the result of injury, if such is not the case the certificate should make that fact plain.

If death is due to other than natural causes, the case must be referred to the coroner, county physician, medical examiner, or justice of the peace, according to the law of the State. In doubtful cases the practitioner should not furnish the certificate unless authorized to do so by the proper official. Such cases are specified by statute in the various States. That of New York State is very broad. If a person dies from criminal violence, or by a casualty, or suddenly while in apparent health, or when unattended by a physician, or in prison, or in any suspicious or unusual manner, the case must be referred to the coroner's office (chap. 410, sec. 1,773, laws of 1882).

Still-Birth.—The still-born fœtus or child at full term is certainly a dead human body, having been alive in utero; yet the law takes no cognizance of this fact, and does not require an inquiry into the cause of death, unless it can be proved that the child was born alive and capable of maintaining a separate existence; the decision of the former fact being based upon breathing; of the latter, upon normal formation and sufficient development.

The physician or midwife in attendance at a still-birth should make a report thereof to the proper authorities. In New York, certificates are furnished by the Bureau of Vital Statistics, and these certificates require, besides other information, a statement of the "cause of death-birth, if known."

Concealing the birth of a child, which if born alive would be a bastard, is punishable in seventeen States.