

articles are to be preferred, and starches and fats avoided, or given in small quantities, the effect of these on the stools being closely watched.

Medicinal Treatment. *Purgatives:* The first indication of medicinal treatment is to evacuate the entire digestive tract.

The initial vomiting may have cleared the stomach more or less efficiently. If this is not the case, some simple emetic, such as ipecac or zinc sulphate, may be employed in older children, but in infants nothing is more efficient than stomach washing. If this be impossible, large draughts of water should be administered and the vomiting reflex excited by tickling the fauces.

The colon may be emptied by irrigation, but to clear the small intestine cathartics must be resorted to. The best for this purpose are castor oil and calomel.

When vomiting is not marked castor oil should receive the preference, as its results are fairly prompt and certain, and its after-effects soothing. The proper dose is one drachm to a child under six months of age, two drachms to one a year old, and half an ounce to one over three years of age.

If vomiting is a marked initial symptom calomel should be employed. Two grains may be given at one dose, or better, gr. $\frac{1}{2}$ every hour up to eight doses or until the characteristic green motions are seen. This has a favorable effect upon the vomiting, and is valuable both as an antiseptic and as a purgative.

If the motions occur with great frequency and are fluid, all purgatives should be avoided, stomach washing and colon irrigation taking their place. It is necessary to wash the stomach out only once as a rule, but the colon should be irrigated several times daily.

Antiseptics and Astringents: The value of intestinal antiseptics in diarrhoeas of infancy is open to question. The writer cannot claim any great faith in those he has employed. Salol, resorcin, the sulpho-carbolates, carbolic acid, salicylate of soda, and several others have all given equal satisfaction. Salol and resorcin in gr. i. doses every three hours to a child six months of age have the preference.

But of all drugs the most useful in the diarrhoeas of infancy is undoubtedly bismuth. Most of its preparations can be given in fairly large doses and rarely cause vomiting if properly administered. The most satisfactory preparations are the subnitrate, the subgallate, and the salicylate. The subgallate of bismuth may be given in doses of from gr. ij. to iv. every two hours to a child a year old. The salicylate may be given in doses of gr. i. to ij., with the same interval to a child one year old.

Bismuth subnitrate is probably the most reliable preparation; it may be given in doses of gr. v. to x. every two hours to a child a year old. It has been combined with the salicylate with advantage in the writer's experience, and is best administered suspended in mucilage, sweetened with glycerin. It should be given in sufficiently large doses to blacken the stools and often enough to keep them of that color.

The objection to salicylate of soda and also to salol is that they tend to cause vomiting. The action of salol upon the kidneys should be closely watched when large doses of this drug are employed.

Arsenite of copper is useful in the later stages after the temperature has fallen and the stools are no longer offensive. It may be given in doses of gr. $\frac{2}{100}$ every three hours to a child a year old.

Tannigen in doses of gr. ij. every three hours in a child a year old is useful, especially when the diarrhoea tends to become chronic. Excellent results have been reported from the use of tannalbin, but the writers have had no experience of its employment.

Acids: Dilute hydrochloric and sulphuric acids are of distinct value in chronic cases. They are best administered in combination with some digestive, as lacto-peptine, shortly after food. The dose is from \mathfrak{m} ss. to ijj., according to the age of the patient.

Alkalies are of value in cases in which the stools are strongly acid and cause excoriation of the buttocks and

genitals. They tend to alleviate vomiting, and are particularly serviceable in acute cases. The most valuable are lime water, magnesia, sodium bicarbonate, and chalk mixture.

Opiates: Opiates in some form are required in many cases, particularly those in which tenesmus, pain, and great frequency of motions are marked.

Opium in any form should be withheld until the intestinal canal has been cleared by purgatives or by irrigation; it should not be given when there are cerebral symptoms, associated with scanty, offensive motions. It is of service, however, in those cases in which the administration of food is followed by active peristalsis and frequent stools.

Opiates should always be administered alone and not in combination with diarrhoea mixtures, and their effect on the number of the stools should be noted and the dose and frequency regulated accordingly.

The best preparations are paregoric when it is to be administered by the mouth, and the liq. opii sedativus (Battley) when given in an enema.

When paregoric is used it is best to give small doses at short intervals till the desired effect is produced. For a child of one year the initial dose should be \mathfrak{m} v., to be repeated every one, two, three, or four hours as may be indicated (Holt). Dover's powder is particularly suited to certain cases, but its taste is objectionable. It may be given in doses of gr. $\frac{1}{4}$, to a child one year old, every one, two, or three hours as required. Laudanum or Battley's solution may be given in doses of \mathfrak{m} i. to ij. in an enema consisting of \mathfrak{z} ij. of thin starch solution, and may be repeated as often as necessary in order to control tenesmus and pain.

The severe tenesmus occasionally associated with pro-lapsus ani, met with in acute ileo-colitis, is best relieved by means of a suppository containing cocaine, in the dose of from gr. $\frac{1}{4}$ to i., according to the child's age.

Stimulants are needed in a great many cases, but are often used unwisely. Alcohol stands at the head of the list. It is best used in the form of good whiskey or brandy. The daily quantity should rarely exceed from \mathfrak{z} ij. to iv., and is best administered well diluted with sterilized water or albumin water.

In chronic cases wines, particularly claret and hock, are of distinct value. Other stimulants are aromatic spirits of ammonia, and caffeine in the form of cold tea or coffee.

In *cholera infantum* the condition of intoxication is usually so severe as to demand the most urgent and active treatment. The main indications are: (1) to clear the gastro-enteric tract; (2) to support the heart and nervous system; (3) to reduce the temperature; and (4) to supply the tissues with fluid to compensate the drain of the discharges.

The first indication is best fulfilled by lavage of the stomach and irrigation of the colon.

As the absorptive processes are at a standstill in the stomach and intestine, hypodermic medication must be relied on to control the action of the toxins on the heart and nervous system. For this purpose a hypodermic injection of morphine, gr. $\frac{1}{10}$, and atropine, gr. $\frac{3}{100}$, may be given to a child a year old, and repeated every hour till the desired result is obtained. The only contraindication of the morphine is stupor associated with scanty purgation.

To replace the watery drain, intracellular injection of normal saline solution is indicated. Half a pint of a solution of salt in sterilized water may thus be injected into the cellular tissue of the abdomen, buttocks, thighs, or back.

To reduce the temperature the cold bath only can be relied upon. It must be repeated as often as required to keep the temperature within bounds.

Ice-cold water irrigation of the colon is also of great service in reducing the temperature, and the ice cap should always be employed.

Stimulants may be administered hypodermically if the vomiting is severe. Whiskey, ether, or camphor may be used freely as indicated.

David James Evans.
F. Morley Fry.

DIASTASE.—An unorganized ferment, or enzyme, occurring in plants, especially in seeds during germination, and possessing the function of converting their starch into sugar (maltose and dextrose). The diastase of barley and its relatives is best known. It is the agent which converts the starch into sugar in the manufacture of malt. It is not present, or at least not in appreciable quantity, until germination occurs, when it is developed from some other body present. Its amount increases up to a certain stage of germination, when it begins to decrease. When at its height, it is equal to about one-fifth of one per cent. of the original weight of the seeds. Like other enzymes, it does not combine with the substance upon which it acts, and is not itself consumed in the process, except by the application of undue heat (above 125° F.), and is still present in the malt. The several forms of extract of malt upon the market, either so-called or sold under fanciful copyrighted names, contain various amounts of it. The extensive use of diastase, for both external and internal starch digestion, has led to a strong demand for its introduction into the Pharmacopœia, a demand which is likely to be complied with.

Pure diastase, like pure pepsin, is unknown, but the substance known to us under this name is a white, or at most pale yellowish, odorless and tasteless powder, soluble in water and weak alcohol, but precipitated by strong alcohol. Albuminous matter and sugar are its common impurities. The readiness with which it digests starch under artificial conditions suggests its ability to do so in the stomach during the early stages of digestion, before it is destroyed by the free acidity of the gastric juice, and experiment has demonstrated that such is the case. Diastase is readily subject to standardization, but all the processes are tedious and rather complicated. They depend upon the power of a standard diastase solution to digest a certain amount of starch within a specified time, under fixed and carefully regulated conditions. It is to be remembered that their only value for determining the relative activities of different samples of diastase lies in the rigid uniformity of the conditions of trial. No statement that a certain diastase or diastasic substance converts a certain amount of starch, as contrasted with some other, is of the slightest value, except upon this condition. The dose is 0.1 to 0.6 gm. (gr. ij. to x.), and it must be taken with the meal, preferably during the latter part, or just at its close, when the hydrochloric acid, having entered into combination with the proteids, cannot inhibit its action.

Henry H. Rusby.

DIASTASE, TAKA.—Taka diastase is diastase found "crystallized" upon the roots of certain species of *Aspergillus* and removed in water. The removal of diastase from various species of fungi for use in the production of fermented liquors has long been in vogue in Japan. Some years ago Dr. Jokichi Takamine studied the effects of these substances and selected that derived from the above species for medicinal use. He named it as above because "taka" means *strong* in Greek, *high* in Japanese, and forms the first part of the name of the investigator. The method of production is thoroughly to sterilize wheat bran, and to sow it with a pure culture of the spores of the *Aspergillus*. After about fifty hours' exposure to a warm and moist atmosphere, there is an abundant crop of the fungus, which then bears its highest percentage of diastase. If left longer, the diastase would be consumed. The mass is now quickly cooled, broken up and percolated with cold water. The percolate is evaporated in a vacuum pan to a syrupy consistence, this liquid being ten times as strong as ordinary malt. From it the diastase is precipitated by strong alcohol, removed, and dried in the form of a yellowish white, odorless powder of pleasant taste. Under the most favorable conditions, it digests three hundred times its own weight of dry starch, or ten times as much cooked bread or other similar starchy food. Under ordinary conditions it digests from one hundred to one hundred and fifty times its weight of dry starch. Experiment has fully demonstrated that a similar result takes place

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in the stomach during the first hour or two of digestion. It is even believed by some that it can pass through the stomach and continue its work in the duodenum, but undoubtedly its principal work is performed in the stomach, as stated. By encasing it in keratin capsules or pills, it can be made to pass through the stomach and be freed for work in the duodenum. The ordinary dose is gr. iiss. It should be taken immediately with the meal.

Henry H. Rusby.

DIATHESIS.—In proportion to our increase in knowledge of the etiology and pathology of disease does the tendency to use the words idiopathic, dyscrasia, and diathesis grow less. Text-books and dictionaries which antedate the acceptance of the germ theory are filled with these terms, while the authoritative works of to-day seldom use them except in connection with those diseases concerning which our knowledge is still very limited, as, for instance, the uric-acid diathesis. Even this most beloved of the diatheses is now often replaced by lithuria and lithæmia. A few decades ago, were a man to develop any one of a host of diseases, it was explained by the fact that he was the unfortunate victim of a peculiar diathesis.

In Foster's Medical Dictionary reference is made to nearly seventy varieties of diatheses and more than twenty varieties of dyscrasia. A verminous diathesis is described as a constitutional condition that has been assumed to favor the development of intestinal worms. Such expressions as bilious diathesis, congestive diathesis, and basic aural dyscrasia indicate the earlier uses of these terms.

Previous to the discovery of the tubercle bacillus cases of consumption were usually explained by the hereditary and diathetic theory. We now know that the most robust, who have not the slightest tendency to tuberculosis, when thoroughly exposed to the infection may develop the disease. However, we must keep in mind the importance of the phthisical habit in connection with its development. Persons of this habit are not already tuberculous, but have tissues which are more vulnerable, less able to resist the attacks of these omnipresent germs. Exposure to infection, rather than the presence of a special diathesis, is in many instances the explanation of the development of disease.

The words diathesis, dyscrasia, and idiopathic have served for many years the purpose of cloaking our ignorance. However, their mission is yearly becoming more limited.

Diathesis and dyscrasia have frequently been used as synonyms meaning predisposition. In many instances diathesis has been used in the sense of disease, but the most commonly accepted meaning of the word is that of predisposition or habit of body. By dyscrasia is meant a cachectic condition which has resulted from the action of certain diseases upon the system. The cancerous diathesis means a hereditary tendency toward the development of cancer, while by cancerous dyscrasia is meant a cachectic or diseased condition of the system which has resulted from the presence of cancer and the absorption of toxins manufactured by the carcinomatous growths.

In a very limited way the word diathesis is still used by modern authors. The following are the diatheses which still cling to our text-books: The uric-acid diathesis, though a common expression, conveys very little information. It is held by many physicians to be responsible for numerous indefinite symptoms. It is supposed to be due to faulty metabolism, which if long continued may lead to gout, with uric-acid deposits in the joints, acute inflammations, and arterial and renal disease.

The expression gouty diathesis is practically synonymous with uric-acid diathesis. It represents the underlying condition of the system which is inherited by those who come of gouty stock or which is acquired by *bon vivants* prior to the characteristic arthritic manifestations of the disease.

The tuberculous or scrofulous diathesis is mentioned by many authors. By it should be meant the inheritance

of tissues which are less resistant than normal to the action of the tubercle bacillus.

Hemorrhagic diathesis is the synonym of hæmophilia and indicates a peculiar constitutional condition in which the patient is prone to hemorrhages.

The part played by heredity in its relation to disease, though greatly limited by the advances of our knowledge in recent years, must not be underestimated. There exists a close relationship between diathesis, used in the sense of predisposition or tendency, and heredity.

It would seem wise and in keeping with the spirit of the age to eliminate as much as possible from our vocabulary the words diathesis and dyscrasia, and substitute for them words which will never become obsolete, viz., predisposition and cachexia. James R. Arneill.

DIAZO REACTION OF EHRlich. See Typhoid Fever and Tuberculosis.

DIETETICS OF THE SICK.—The proper adjustment of food for the individual in health yields results, in the form of work and physical well-being, that will fully reward the dietetic care exercised. Man has at his disposal a greater variety of foods than any other animal. The methods pursued in the preparation of the food will greatly modify its taste and digestibility.

A food is any substance which can be utilized in the living organism for structural or functional purposes.

A complete food must contain all of the substances necessary to construct and maintain the activities of the tissues of the body. Thus, while meat furnishes us food in concentrated form, it is a simple and not a complete food. Milk is composed of the elements necessary to construct and maintain the human economy. Such a food must contain water, mineral matter, nitrogenous matter, carbohydrates, and fats. It is not enough that a substance possess these elements in order to be regarded as a complete food, but it must possess them in assimilable form and of such a character that sufficient for nutritive purposes may be ingested. The food required for twenty-four hours by a healthy individual weighing one hundred and fifty-four pounds, and doing moderate work, should contain the following elements:

	Pounds.	Ounces.	Grains.
Water.....	5	8	320
Albuminoids.....	0	4	110
Starch, sugar, etc.....	0	11	178
Fat.....	0	3	337
Common salt.....	0	0	325
Phosphates, potash, salts, etc.....	0	0	170

The individual in health gives little heed to proper combinations of food elements and the intake of nourishment sufficient to secure a condition of nutritional equilibrium. It is only when the viscera concerned with the elaboration and utilization of food have been disordered by the ingestion of an excess, or of unsuitable food, that dietetic measures are considered.

The problem of adjusting the food to the requirements of the individual in health is most complex; the adaptation of the dietary to diseased organs is yet more complicated.

In disease there is an increased need for food, and a lessened ability to digest it. The demand for nourishment will be influenced by the character of the morbid process. Thus there is a wide range of variation in combustion of nutritive material between the individual who is confined to bed with an acute local inflammation, and one who is subject to an acute infectious disease or a chronic suppurative process. The perverted secretions and functional inactivity associated with certain diseases render it impossible to secure the ingestion and metabolism of sufficient nourishment for the production of the heat incident to the disease. The circulating albumin, the fat, the muscular tissue, and finally, the viscera themselves are drawn upon to furnish the needed food ele-

ments for the morbidly active combusive process. One has only to look on the feeble, emaciated convalescent from an acute febrile disease, and to contrast his condition with the previously muscular, rounded form, to realize the extent to which the body consumes its own tissues when it is unable to elaborate and annex other forms of food in the necessary quantities. The intake of food is intermittent, while the necessity for nutriment to maintain the increased activity of this vital process is constant. This condition would indicate the desirability of administering nourishment, in assimilable form, in small quantities and at frequent intervals, since it is not what we eat but what we digest and assimilate that determines the sufficiency of any dietetic procedure.

The appetite and digestion will usually furnish a sufficiently reliable guide to regulate the character and quantity of food to be taken in health. In disease, with a perversion of the various secretions, it is not prudent to rely upon the patient's desire or disinclination for food.

The administration of food in disease will be determined by our estimate of the ability of the digestive organs to dispose of it. A temporary withholding of food in certain instances of acute disease will be the best dietetic treatment. The administration of what would ordinarily be an excessive quantity of food is advisable in certain chronic suppurative processes attended with fever. Since the digestive juices are influenced by the absence of fever, it is advisable to administer foods requiring the greatest digestive power at that time of the day when the fever is least active.

It is possible still further to adjust the proper administration of food with reference to existing morbid conditions by observing the rule to select the food with regard to the affected part. Thus, in disease which particularly involves the stomach, it would be best to give food whose digestion is accomplished in the intestines, i.e., carbohydrates. The converse is equally true. When the intestines are the seat of the morbid process, a food requiring gastric digestion would prove most acceptable. This differentiation is not absolute, and yet it is reasonable and serviceable.

The dietetic treatment of disease may be planned with skill and care, and yet prove inefficient because of a disregard of two essential factors in the successful administration of food. Dainty service may be given first place. All that can be pictured as implied by the expression will prove helpful in stimulating and aiding digestion. The glass of milk placed beside the spit-cup of the consumptive patient is not novel, neither is it appetizing. The cereal carelessly smeared over the sides and edges of the container, and served in a quantity sufficient for a laborer, is seen more often than it should be. The food sent by a cleanly neighbor is appetizing because it is served with the best china and linen, and the question of its selection has not been discussed with the patient.

Equally important is the preparation of the food. Egg albumen if slightly cooked is digested with the greatest facility. If well beaten it offers the digestive juices least resistance in their solvent action. The hard-boiled white of egg is an example of a food difficult of digestion. Roasted beef having a delicious aroma is far more digestible than the same meat when it is hashed and twice cooked. The chop quickly broiled, so that it retains its juices and is turgid, is more nutritive than the shrivelled and dried, slowly fried or broiled chop from the same cut of the lamb. The method of preparation of vegetables will determine their digestibility and nutritive worth quite as certainly as it does in the case of animal foods. Cereals with the starch cells unruptured by the application of heat or—equally difficult of digestion—cooked in hot fat after the starch granules have been exposed to the action of the over-heated fat, are not of much nutritive value. By the application of the proper amount of heat the cellulose element of certain vegetable foods can be made tender and digestible, and their nutritive worth may be secured instead of being lost between the meshes of the cellular fibres.

The ordering of diet will be simplified by keeping in mind the chemical composition of the various foods.

If animal food is to be made a part of the diet, it becomes necessary to select the form deemed suitable to the digestive power and condition of a given case.

If a vegetable food is to be used, it will be necessary to consider the proportion of nitrogenous or albuminous elements contained in it. We should select vegetables belonging to the class of legumes if a large percentage of nitrogenous material is desired.

In certain instances vegetable nitrogenous material properly prepared will be found better adapted to impaired digestive power than the animal form. If, on the other hand, food rich in carbohydrates and poor in albuminoids is desired, we should order vegetables containing the purer forms of starch, such as potatoes, rice, corn starch, and arrowroot. The green vegetables, being poor in starch and nitrogen, and rich in woody fibre and antiscorbic elements, are selected with reference to the need and ability of the patient to digest this form of food.

Condiments should be used extensively and judiciously, being more important in sickness than in health. Tea, coffee, cocoa, and chocolate are valuable agents, combining as they do food and therapeutic worth.

The method of preparation of the various foods exercises a determining influence upon their utility. It is not enough to select the foods that may be used in a given instance, but detailed directions, with reference to the method of preparation, must be supplied. A great variety of foods at one meal may prove unsuitable to certain cases, while a meal composed of a sufficient variety of food principles to constitute a complete food, may be found to be easily digested. A meal made up of several kinds of meat and one or more legumes is likely to contain an excess of nitrogenous food. It will probably serve best the purpose in view to consider at this time the chief alimentary substances, and some of the ways of administering them, and in this way avoid the necessity for repeating certain statements when directing the employment of these food agents in the dietetic treatment of disease.

MILK.

This food is the chief article of diet in feeding the sick, and by reason of its availability and the likelihood of its being moderately pure, it is relied upon to supply the nutriment required in almost all forms of disease. When we consider how nearly it is the ideal complete food for the invalid, it is in order to give thought to all the means at our command to make it acceptable to the patient. There are those who persist in the idea that they are unable to take milk as a food. They point to the vomited curd as an evidence of their inability to digest it. These people must be taught the fact that the milk taken into the stomach always forms a curd as a necessary part of the process of digestion. Then they must be told that we can so modify the milk that the curd formed will be small and easily digested. Other patients will object to the taste and odor of the milk. These objections must be overcome by a knowledge of the ways in which milk can be made acceptable to a patient.

Let us consider the chemical composition of milk and see what constituents may disagree with the patient. Cow's milk has the following composition:

	Per cent.
Casein.....	4
Fat.....	4
Sugar.....	4.50
Bacteria.....	4.50
Salts.....	0.8
Water.....	86.7

It is the casein that most frequently taxes the digestion by reason of the size and density of the curd formed. Therefore the question of successfully administering milk in most instances is one of modifying the curd, so that it may be digested with greater facility.

The fat constituent of milk, represented in the cream, is less frequently a disturbing element in the use of milk as an exclusive diet. The indications for reducing the

proportion of fat in the milk would be presented by disease or perverted function of the organs concerned in digesting and assimilating fat, that is, in disease of the liver, as jaundice, and in certain cases of intestinal indigestion.

The presence of bacteria in milk greatly influences its acceptability in cases of sickness. One difference between cow's milk and human milk is found in the number and character of the contained bacteria. The method pursued in handling milk from the time it leaves the cow, if not before that time, will determine the number and character of the bacteria present. There is hardly any doubt that the objections to milk are chiefly due to the presence of bacteria and their products. When we remember that the number of bacteria in a given milk is proportionate to the skill and care with which it is handled, it is at once manifest that we are justified in demanding that the milk supplied should conform to certain reasonable tests. I cannot do better than submit the standard of purity exacted by the Philadelphia Pediatric Society of those who would derive the advantages of the certificate of the Society for the product of their dairy. The tests are the result of much study on the part of the Society's committee, and while it fixes a high standard, it has proved to be a working standard, and one that can be obtained only by the most painstaking care with every detail of the processes of feeding, milking, and bottling.

ARTICLES OF AGREEMENT entered into the.....day of....., 190..... between the Milk Commission of the Philadelphia Pediatric Society of the first part and..... of the second part.

It is agreed by the said parties that these articles of agreement shall continue for a period of eight months from date.

The party of the second part agrees that the party of the first part shall procure a bacteriologist, a chemist, and a veterinary inspector; the bacteriologist to procure a specimen of the milk either from the dairy or delivery wagon of said party of the second part, whenever the said party of the first part sees fit, at intervals of approximately one month, the time of procuring said milk to be without notice to the said party of the second part; which bacteriologist shall test said milk for the number and nature of bacteria present to the extent which the needs of safe milk demand, and to make a microscopic examination for pus cells and injurious germs. It is also agreed by the parties hereto that the required standard of purity shall be milk free from pus or injurious germs and having not more than ten thousand germs of any kind or kinds to the cubic centimetre.

It is agreed by the said party of the second part that the chemist of the party of the first part shall examine said milk for the percentages of proteids, fat, sugar, mineral matter, and water present; shall test its chemical reaction and specific gravity; and shall examine it for the presence of foreign coloring or other matters or chemicals added as preservatives. It is agreed by both parties that the required standard shall range from 1.029 to 1.034 specific gravity, be neutral or very faintly acid in reaction, contain not less than from 3.5 per cent. to 4.5 per cent. proteid, from 4 per cent. to 5 per cent. sugar, and not less than 3.5 per cent. to 4.5 per cent. fat (a higher percentage in fat to be so specified on each bottle), and shall be free from all contaminating foreign matter and from all additions of chemical substances or coloring matters; that richness of cream in fat shall be specified and shall vary not more than 1 per cent. above or below the figure named, and that neither milk nor cream shall have been subjected to heat before the examination nor shall be at any time unless so announced to the consumer.

It is agreed by both parties that the veterinary inspector shall at intervals equal to those of the bacteriologist and chemist, and without previous warning to the party of the second part or his agents, inspect the cleanliness of the dairy in general, the care and cleanliness observed in milking, the care of the various utensils employed, the nature and quality of the food used, and all other matters of a hygienic nature bearing upon the health of the cows and the cleanliness of the milk, including as far as possible the inquiry into the health of the employees on and about the dairies; and that he shall see that the cows are free from tuberculosis or other diseases.

It is also agreed by both parties that charges shall be made by each of the experts not to exceed ten dollars for each examination, which amount is to be paid by the party of the second part at the time of examination and without reference to whether the report is favorable or otherwise.

It is agreed that all examinations by the experts shall be made only upon instruction by party of the first part.

It is agreed by both parties that if examinations as aforesaid find the milk up to the aforesaid required standards, the said party of the first part shall give a certificate to said party of the second part as follows:

MILK COMMISSION OF THE PHILADELPHIA PEDIATRIC SOCIETY.

Date.....
The Veterinary Inspector of this Commission has examined the dairy of..... and reports it to be well kept and clean and the cows to be in a healthy condition.