THE GRACE HOSPITAL

"EVER LEVEL" "EVER TRUE"

COMPASS.

Vol. III. DETROIT, MICH., AUGUST 15, 1892. No. 8.

THE

Grace Hospital Compass.

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CONTENTS.

THE latest contribution to the etiology of disease is set forth in a recent number of the *New York Medical Journal*, by George Quarrie. The idea is this: Muscular exercise generates electrical currents in the body; these currents may be detected by a galvanometer connected with the feet of a person exercising upon an insulated stool. In a normal condition these currents pass into the ground, thus equalizing the potential of our bodies and the earth, whenever this has been raised by bodily activity of any sort. Unfortunately, however, civilization has compelled us to clothe our feet with a thick layer of leather, which is a non-conductor and prevents the proper exchange of these delicate currents. The consequence of this interferance is that we are in a state of disturbed electrical equilibrium most of the time. This lack of equilibrium produces disordered states of the body, and renders us more liable to the invasion of disease in general. Insulating the feet during exercise, by means of dry paper or rubber, is said to produce marked and immediate effects upon the eyes in particular, causing them to burn, smart and grow red in a very uncomfortable way. Anyone doubting this is at liberty to try it himself.

It is entirely possible that Mr. Quarrie has hit upon a good thing. It would not be fair to dismiss the suggestion without giving it some consideration, and even if we do not find in it all that he claims we may get something of value. A few facts occur to us that do not seem to corroborate the theory. Take tennis playing and bicycle riding for example; in the former the rubber soles to the shoes, and in the latter the rubber tires to the wheels afford a much greater insulation than the ordinary leather soles of our boots. Further, the activity of the tennis player and the bicycle rider are usually very great, yet we do not recall, either from our own experience or from that of others, any facts which would tend to show that these occupations were unpleasant or harmful *per se*. Neither do we remember having heard tennis players or bicycle riders complain of their eyes, as if the playing or riding affected them. There is no likely harm to come from putting one's

self into electrical *rapport* with the earth, and certainly if by so doing we can escape even a small portion of the discomforts of life, we ought not to neglect it. Mr. Quarrie advises a thin in-sole of some good conducting material, with fine wires so arranged as to give connection with the earth as we walk. We commend it to our readers for trial.

AS described elsewhere in this issue, a "milk laboratory" has been established in the city of Boston, where infant foods will be compounded upon physicians' prescriptions. The preparation of these foods will be under the direction of a skillful chemist, and the most scrupulous care will be observed in every process that is carried out. This will secure the purity and correctness of every bottle of food that is dispensed. The enterprise deserves the warmest endorsements. A larger number of children who die in infancy are the victims of poor food. The "milk laboratory" will not save them, altogether, but it will help to do so. What is equally necessary, is to educate physicians so that they will be competent to take advantage of such an institution. We are certain that the profession in general need to give the matter of infant diet more careful study. It is just as easy to degenerate into routinism here as in other departments of medical practice, and although it may be true that the prescription of infant foods is largely empirical, it has a scientific basis that ought not to be overlooked. The abundant and growing supply of prepared foods seduces the busy doctor from their intelligent study. Just as the pharmacists save him the necessity of thinking by having ready for him tablets and granules for every common ailment, so the manufacturers of foods spare him much trouble by presenting him with substitutes for mother's milk, each of which is, of course (as per advertisment), the most perfect. Without doubt there are excellent infant foods upon the market, but it is questionable whether they are all equally perfect, and the unavoidable uncertainty about their composition and uniformity render their intelligent use difficult, to say the least. We have used many of them in our own practice with gratifying results, but we do not stand ready to give them our unqualified endorsement. In the meantime, we look with interest upon the Boston experiment. In order that it may be a success the profession must give more study to the food problem. Careful prescribing is as necessary as careful preparation, and careful use when prescribed and prepared is perhaps as necessary as either.

THE *Trained Nurse* for August is a very interesting number. An anonymous contributor supplies a clever short story with excellent wood-cuts, "Dr. Freston's Brother"; S. Wier Mitchell, M. D., continues his "Talk About Nurses and Nursing"; Dr. Charles Good writes about "Food in Health and Disease"; L. L. Dock contributes an article on "Croupous Pneumonia," and Rachel Norris continues her "Nurse's Notes," etc., etc. The Lakeside Publishing Co., New York.

Babyhood has changed its name. It is now *The Mother's Nursery Guide*. Its reading matter, however, remains the same, or better. The pages of the August number are filled with a large amount of interesting and valuable matter.

THE efforts of the editor to take a little vacation have resulted in delaying the last two issues of THE COMPASS. We have sharpened our scissors and renewed our paste-pot, however, so that we may greet our readers with greater promptness hereafter. In the meantime, we extend to them a general invitation to contribute to our columns. Articles appropriate to the general character of the journal will be very welcome, and we trust that our invitation will be accepted with alacrity. Contributions may be sent to EDITOR COMPASS, 96 Monroe Ave.

A MILK LABORATORY.

ONE of the improvements in the preparation of infants' food which so strikingly mark the present time, is the establishment in Boston, by or through the agency of Dr. Rotch, of a milk laboratory, where infants' food is prepared upon physicians' prescriptions with the same accuracy as drug prescriptions are at a pharmacy. Careful observation has shown that food, even breast-milk, which agrees well with one child does not necessarily agree with another. Hence, modification may be necessary, and at the same time some advances have been made toward the determining of what these modifications in any given instance should be. The following description of the laboratory and its work is from an article by Dr. Rotch:

"A laboratory such as that described has already been established in Boston, and is in successful operation, a number of physicians having found it to be an indispensible adjunct to their daily practice.

An important matter is the careful supervision of herds of cows especially selected as to breed, and systematically fed, so that the analysis of their milk should be of an almost unvarying percentage. The morning's milk of these cows, milked into glass and kept scrupulously clean, is rapidly cooled, and in a few hours delivered at the laboratory. The atmosphere of the laboratory is kept pure and fresh by means of a large fan that keeps up a constant outward current of air. The laboratory itself is lined with white tiles, and contains a separator by means of which a stable 16 per cent. cream can be quickly obtained from the milk. There is also a large sterilizer, into which not only steam can be introduced, but in which the milk can be exposed to high or low temperatures, at the will of the modifier.

Having once obtained a pure, clean-skimmed milk and cream of a stable percentage, it is merely a matter of mathematical calculation to combine these fluids in such proportions as to produce a mixture in the percentages of fats and albuminoids prescribed by the physician. The sugar percentage is obtained in like manner by using a carefully prepared 20 per cent. solution of milk-sugar and distilled water.

Diagrams were made to show the prescriptions written by the physicians in fat, sugar and albuminoid percentages, the same prescriptions translated into drams and ounces by the milk modifier, and the figures returned by the chemist to whom the modified milk was sent, to test the accuracy of the modifier's calculations.

I have a large number of test analysis made, so that there is no longer a doubt but that fairly exact combinations can be made in this way.

As the chemistry of the mineral matter in woman's milk is so little known, it is better to ignore that element for the present. Three figures only need to be remembered, corresponding to the percentages of fat, sugar and albuminoids in average human milk, namely, 4, 7 and 1½. Starting with these figures, the physician can then easily change one or more of them, either to increase or decrease, according to the need of the especial infant.

As objection has been made to sterilizing at 212 degrees Fahr., this could just as well be done at the safer and lower temperature of 167 degrees Fahr. in the laboratory sterilizer."

After considerable trial this laboratory seems to be a real help to the practicioners who have used it. Such a laboratory, of course, can only be successfully established in cities and towns of considerable size. We understand that the cost of this food is very moderate. The morning milk is received early in the day, and the food for twenty-four hours can be ready for delivery about noon. There is thus practically no question about the freshness, purity and uniformity of the food; the dictation of its proper constitution rests with the physician. The attendant has only to warm it and give it to the infant. It seems that in other great cities similar laboratories could be successfully and beneficially established. Their success would not be confined in its benefit to those immediately using them, but the experience gained would be a guidance to physicians everywhere as to the proper mixture of infants' foods.

LOW-TEMPERATURE STERILIZER.

In the quotation above, and more at length in our last number, allusion is made to sterilization, at a lower temperature than has formerly been used. The difficulty has hitherto been in the practical adjustment of the temperature. This has recently been made easily practicible in any family by the apparatus devised by Dr. Freeman of this city. To this sterilizing at low temperature, say 167 degrees Fahr. or under, the name of Pasteurization has been applied. Dr. Freeman's apparatus is very simple. In general appearace it resembles an ordinary sterilizer, but it is still less complicated in construction. It consists essentially of a pail with a cover and a rack for the bottles of milk which can be inserted into the pail. The whole principle of the apparatus is this: that a certain amount of boiling water will part with enough heat to warm the rack with its bottles of milk to the required degree, and sufficiently sterilize the milk in a certain time. All this has been carefully worked out by experiment, and the milk so sterilized stands the test of bacteriological cultures after several days' keeping, which is enough for practical use.

The rack differs from the ordinary bottle-rack of a sterilizer in that, instead of being of open wirework it is composed of a series of zinc tubes closed at the bottom. Into each of these is placed a bottle filled with milk at the temperature at which it is received or at which it is taken from the refrigerator, and the space around it in the zinc tube is filled with water at about the same temperature. The pail is then filled with water up to a groove marked in the tin and placed upon the stove until the water boils. It is then removed, placed upon a table or mat, and the rack of bottles immersed and the pail covered. It has been found by experiment that the temperature of the milk within ordinary variations practically makes no difference in the workings of the apparatus. The colder the milk, the quicker it changes temperature, and at the end of ten minutes the temperature is practically the same, whether the milk began at 70 or 50 degrees. It is left in the water thirty minutes in all, and is then practically sterilized. The bottles must then be taken from the holder and rapidly cooled in a refrigerator or in cold water.

This apparatus costs about as much as the Arnold sterilizer, and will presently be put on the market.

The milk after it has been Pasteurized has scarcely any perceptible change in color, smell or taste from that of the original milk. It is reasonable to believe that by its use the disadvantages which seem to be associated with ordinary sterilization of milk may be in large degree, if not entirely, removed.

ANALYZING BREAST MILK.

In connection with the preparation of artificial foods we may mention a simple method devised by Dr. Holt for the analysis of breast milk which may be employed by any physician, or, for that matter, any intelligent person.

The question often arises: Is the breast agreeing with the child? If not, wherein is the fault? The constitution of the milk is usually only guessed at. In cities, chemical analysis is obtainable, but it is necessarily somewhat costly and beyond the reach of many, especially if need to be often repeated. Outside of large cities it is practically unattainable. The method of Dr. Holt is based upon the known composition of milk as to fts main constituents, and, of these, the sugar is known to be present in singularly uniform amount. The variations of specific gravity therefore must depend upon the varying proportions of proteids (caseine, etc.) and of fat (cream).

By means of a cream gauge, and a lactometer and vessel to use it in, the percentage of cream and the specific gravity are easily determined by any one. From these two factors, the character of the milk can be pretty accurately judged by the use of the subjoined

table of directions, prepared by Dr. Holt after a good deal of work with the aid of a skilful chemist.

HUMAN MILK.

	Specific Gravity 70 degrees Fahr.	Cream—24 Hours.	Proteids.
Normal average.....	1.031	8 per cent.	1.5 per cent.
Healthy variations.	1.028 to 1.029	9 to 12 per cent.	Normal (rich milk)
" "	1.032 to 1.033	5 to 6 per cent.	" (fair milk)
Unhealthy "	Below 1.028	High (above 10 per cent.)	" or slightly below
" "	" "	Normal (5 to 10 per cent.)	Low
" "	" "	Low (below 5 per cent.)	Very low (very poor milk)
" "	Above 1.033	High	Very high (very rich milk)
" "	" "	Normal	High
" "	" "	Low	Normal (or nearly so)

Milk presenting only moderate variations from the average, *e. g.*, sp. gr. 1.028, cream 4 per cent. or sp. gr. 1.033, cream 10 per cent., can usually be modified by appropriate treatment. If, however, the sp. gr. is from 1.018 to 1.24, and cream only 2 to 3 per cent., it is hopeless.

The sample taken for examination should be from the middle of the nursing or when the breast has been about one-half emptied, as the first milk is always poorer and the last richer than the average. About half an ounce is required.

The specific gravity should be taken at a temperature of from 65 to 72 degrees Fahr. By giving the stem of the lactometer a twirl as it is introduced, it readily settles to the proper level, which may otherwise be prevented by the adhesion of the milk to the milk to the glass, especially in a rich specimen.

The cylinder for *cream test* should be filled exactly to the top of the scale. After twenty-four hours the percentage of cream is read off, each degree in the scale being one per cent.. A temperature ranging between 60 and 75 degrees Fahr. should be maintained.

Note that the quantity of milk must be determined by other means; milk may be average in quality and very scanty.

The apparatus is sold by J. Welker, 222 East 34th street, New York City, is inexpensive, and is likely to prove of real assistance to physicians endeavoring to solve problems of infant nutrition.—*The Mother's Nursery Guide for August.*

(In *The Medical Record* for July 2, Dr. Freeman describes his apparatus and details some of his experiments. The summary of his article is follows:

"1. Both clinical and chemical evidence lead us to believe that milk is injured for infant food by the formerly practiced methods of sterilization by boiling or steaming, or even by any temperature above 176 degrees Fahr.

2. Pasteurization with a temperature between 158 degrees Fahr. and 176 degrees Fahr. destroys the tubercle bacilli, and, according to Van Geuns, destroys also the typhoid bacillus, the cholera bacillus, and the pneumococcus of Friedlander, also most of the ordinary milk germs, and does not injure milk.

3. Milk may be Pasteurized by simply immersing it in a proper proportion of boiling water, the source of heat having been removed, and leaving it so immersed for half hour.")—Ed.

MEDICAL AND SURGICAL.

THE FIRST OVARIOTOMIST.

S. H. KNIGHT, M. D.,
HOM. MED. SOC., MICH., 1892.

WE are now upon the eve of the Columbian celebration, and hence it is a fitting time to stir our patriotism, to boast of our progress, wealth, genius and contribution to the world's advancement. Let us pause for a moment, then, and gratify our vanity by dwelling upon the indebtedness to American Medicine, and

particularly American Surgery, for much that is brilliant, much that is humane, much that is practical. The day is coming when foreign students are coming to us for surgical knowledge, when American ideas will guide all surgical skill. Ether and anæsthesia are our inventions; excision of the inferior maxilla came from Tennessee; in a great measure, to Prof. Helmuth's efforts are due the revival of supra-pubic lithotomy; to Dr. Biglow, of Boston, we owe litholapaxy and the pathology of dislocations of the hip joint; New England furnished us with skin grafting. No one can forget Dr. Sims or his speculum and silver sutures, that have made gynæcology possible; nor Emmet's operations upon perineum and cervix. The plaster jacket is American, and so the recent successful surgical treatment of appendicitis. I may be forgiven, then, if in opening this Bureau I give you a short account of the "Father of Ovariotomy," Dr. Ephraim McDowell.

Dr. McDowell was born November 11th, 1771, in Rockbridge county, Va. His father, Judge Samuel McDowell, was a Pennsylvanian by birth, and his mother, Mary McClung, was born in Ireland. From Virginia, at the age of 13, McDowell moved to Kentucky, received such education as the State afforded and chose the profession of medicine. After studying for three years in the office of Dr. Humphrey, of Stanton, Va., Dr. McDowell attended two courses of lectures at the University of Edinburgh, then the medical centre of the world. It was at Edinburgh that he listened to John Bell, the Scotch surgeon, and there was planted the seed that afterward brought forth so much fruit. Bell eloquently painted the doom of the sufferers from ovarian disease, and perhaps suggested the possibility of the removal of those organs. At any rate, from him McDowell drew his inspiration.

In 1795 McDowell returned to practice in Danville, Ky. His residence abroad, his distinguished family and his own marked ability soon gave him an honorable and distinguished position in his profession, in spite of the usual jealousy and envy of his brother physicians. Dr. McDowell's practice in Kentucky presented him many opportunities for successful work, and we have evidence of his remarkable record. He was the first to partially excise the inferior maxilla; from James K. Polk, afterward president, he removed a vesical calculus and cured him of hernia; he knew of the operation of Cæsarian section, and beside performing the first successful one in this country, three times at least he crossed the Atlantic to do the operation.

At length the time arrived for the "experiment" that was to make him famous, to save the lives of thousands of women and of myriads of those yet unborn. It was on the 13th of December, 1809, when Dr. McDowell had been practicing his profession fourteen years, that he was sent for to see Mrs. Crawford, residing in Green county, Ky., some 60 miles from Danville, who was thought by her physicians to have gone long beyond her time in pregnancy, and to be the subject of extra uterine fœtation. McDowell found her trouble to be an ovarian tumor, rapidly hastening to a fatal termination. After a most thorough and critical examination he informed his patient, a woman of unusual courage and strength of mind, that the only chance for relief was the removal of the diseased mass. He explained to her with great clearness and fidelity the nature and hazard of the operation; he told her that he had never performed it, but that he was ready if she were willing to undertake it, and to risk his reputation, adding that it was an experiment, but one well worthy of trial. Mrs. Crawford listened to the surgeon with great patience and coolness, and at the close of the interview promptly assured him that she was not only willing but ready to submit to his decision, asserting that any performance which held out even the most remote prospect of relief was preferable to the ceaseless agony she suffered.

Mrs. Crawford made the journey to McDowell's home, Danville, and there he performed the operation, according to his own description, as follows: "Having placed her on a table of the ordinary height, on her back, and removed all her dressing which might in any way impede the operator, I made an incision about three (3) inches from the musculus rectus abdominis, on the left side, continuing the same nine inches in length, parallel with the fibres of the muscle, extending into the cavity of the abdomen, the parieties of which were a good deal contused, which we ascribed to the resting of the tumor on the horn of the saddle during her journey. The tumor then appeared full in view, but was so large that we could not take it away entire. We put a strong ligature around the fallopian tube near the uterus and then cut open the tumor, which was the ovarium and fimbrious part of the fallopian tube very much enlarged. We took out fifteen pounds of a dirty gelatinous substance, after which we cut through the fallopian tube and extracted the sac, which weighed 7½ pounds. As soon as the external opening was made the intestines rushed out upon the table, and so completely was the abdomen filled by the tumor that they could not be replaced during the operation, which was terminated in about 25 minutes. We then turned her upon her left side, so as to permit the blood to escape, after which we closed the external opening with the interrupted suture, leaving out at the lower end of the incision the ligature which surrounded the fallopian tube. Between every two stitches we put a strip of adhesive plaster, which, by keeping the parts in contact, hastened the healing of the incision. We then applied the usual dressings, put her to bed, and prescribed a strict observance of the antiphlogistic regimen. In five days I visited her, and much to my astonishment found her engaged in making up her bed. I gave her particular caution for the future, and in 25 days she returned home as she came, in good health, which she continues to enjoy."

During the operation a crowd of angry men awaited in the street the result of his experiment. A faithful negro kept them at bay by telling them the woman yet lived. Had the result been fatal, there would have been no power strong enough to have saved him from being lynched. It is said that to face a mob requires the firmest courage man possesses; what think you of this man, within hearing of their angry shouts, undertaking, without any previous experience, without an anæsthetic, without an antiseptic, without previous authority or example, this most severe of surgical procedures. Dr. McDowell did in all 13 ovariotomies, 8 of which were successful.

It is not to be supposed that such work should go unchallenged. For a long while Dr. McDowell did not publish his cases, and then his statements were subjected to ridicule and contradiction, and he was denounced as a murderer. Now that the operation has been firmly established as not only a justifiable procedure but as a great boon to womankind, it is not surprising that many claimants to the honor of performing the first ovariotomy have arisen. Our cousins across the water, claiming as they do everything on earth, and a little more beside, demand for one of their countrymen the place. Mr. Tait, in his characteristic language, argues that a certain Robert Houston, of Glasgow, in 1701 performed a complete ovariotomy. Houston, however, simply drained an ovarian cyst by an incision of three inches through the abdominal wall, according to his own account, squeezing out all he could and stitching up the wound in three places, almost equi-distant.

Dr. McDowell died in 1830. He was a man of kindly disposition and a broad Christian character, charitable to the poor, his one aim being to relieve suffering humanity. He was sincerely mourned by his wife and children, beside many unfortunates whom his charity and skill had relieved.

MEDICAL EDUCATION.

THE Illinois State Board of Health has been of much service to the cause of medical education in this country, and one of the important factors in raising the standard for entrance and graduation in our medical colleges. The following is a copy of the rules passed at a session of the Board held July 27th of this year, relative to the standing and recognition of medical colleges:

RULE 1.—Any established, legally-chartered medical institution shall be held to be in good standing, for the purposes of the Illinois Medical-Practice Act, which conforms to the course and period of study, the number, character and length of lecture terms, the duration of attendance on hospital and clinical instruction, and the other requirements of a medical education which obtain as the practice of a majority of the established medical colleges of the United States and Canada.

RULE 2.—No medical college can be held to be in good standing until it has established its claim to such standing by an active existence of five (5) years, and then only upon compliance, during such period, with the terms of Rule 1, and by its work and the character of its graduates as determined by the examination of the Board.

RULE 3.—Graduates of medical colleges which do not fully conform to the practice of the majority of established medical institutionsin good standing may, in the discretion of the Board, obtain State certificates upon passing examinations in writing in the branches of the usual medical college course, to wit: anatomy, physiology, chemistry, materia medica and therapeutics, theory and practice of medicine, pathology, surgery, obstetrics and gynecology, hygiene and medical jurisprudence.

Graduates of medical schools of less than five (5) years' existence, but which conform to the practice of the majority of established medical institutions in good standing, may, in like manner and in the discretion of the Board, obtain State certificates upon passing examinations in the branches of the usual medical college course as above recited.

No fee shall be charged for the examinations provided for by this rule.

RULE 4.—Any medical institution which is not recognized by the American Medical College Association, or by the American Institute of Homœopathy, or by the National Eclectic Medical Association, or by the American Association of Physio-Medical Physicians and Surgeons, as the case may be, shall be declared and held to be not in good standing for the purposes of the Illinois Medical-Practice Act.

Your committee would add that it believes the necessity and the propriety of the above rules are so obvious that no argument is needed for their adoption.

Concerning Rule 3, however, it may be observed that its effect would be to avoid individual hardship in the case, for example, of a graduate of a college which had not yet established its good standing by the necessary period of active existence, or in the case of a graduate of an established college which had failed to conform fully to the requirements of the Board. Instead of punishing the individual graduate for the immaturity or the lapses of his alma mater, he would be entitled to a State certificate on demonstrating his fitness to be entrusted with the "interests of the life and health of the citizens of the State" as a practitioner of medicine.

And this, it is conceived, is the primary and essential object of the Illinois Medical-Practice Act.

All of which is respectfully submitted.

B. M. GRIFFITH.
R. LUDLAM.
A. L. CLARK.
W. R. MACKENZIE.
D. H. WILLIAMS.

HOSPITAL ITEMS.

REPORT FOR JULY.

THERE were treated during the month of July 165 cases; of this number 52 were free cases to whom were furnished 546 days of treatment. There were 467 visits to the dispensary; of this number 180 were new cases. The ambulance made 63 runs, bringing in 40 patients and taking home 15. The expenses for the month were $3,567.40 and the earnings were $2,068.06. The monthly income from the endowment is $1,500, leaving a surplus of 66 cents.

OPERATIONS FOR JULY.

ABSCESS—Groin, opening and curetting	2
Bone, removal of necrosed skull	1
Castration, for gun shot wound	1
Circumcision	1
Curetting, Ulcers	3
Dilatation, Cervix	1
Eye, extraction of cataract	1
Fistula in Ano	1
Opening Imperforate Vagina	1
Ovariotomy	2
Osteoma, removed	1
Perinæorrhaphy	1
Tonsils, removed	1
Uterus, Curetting and Dilatation	3
Urethrotomy	1
Wounds—Gun Shot wound of back	1
Lacerated wound of hand	1
Lacerated wound of leg	1
Incised wound of arm	1
Incised wound of throat	1
Stab wounds of chest	2
Incised wounds of face	1
Incised wounds of head	1

DONATIONS FOR JULY.

Mrs. W. D. Marton, 6 yards cotton goods; W. Hoffmeyer, (cook) 1 Jewel Pancake Baker; Ladies Committee, fruit once a week; Miss Kirby, spectacles; E. L. John, flowers; Miss Mahew, spectacles; Evening Journal Co., two copies of paper daily.

Miss Hibbard, principal of the Training School, sailed on the Umbria August 12, to be absent for six weeks' vacation. Miss Smith will act as principal and Miss Ryan as assistant-principal during her absence.

We are indebted to the Evening Journal Company for two copies of their paper, the subscriptions for which they have kindly donated to the Hospital.

Dr. and Mrs. LeSeure left August 10 for a trip of several months abroad, chiefly through England and France.

MISCELLANY.

HOW TO PEPTONIZE FOODS.

PEPTONIZED MILK.

A PINT of milk is diluted with ¼ pint of water and heated to a temperature of about 140° F. (or the diluted milk may be divided into two equal portions, one of which may be heated to the boiling point and then added to the cold portion); the mixture will then be of the required temperature. Two or three teaspoonsful of liquor pancreaticus, together with 10 or 20 grains of bicarbonate of sodium (about half a small teaspoonful), are then mixed therewith. The mixture is then poured into a covered jug and the jug is placed in a warm situation, under a cosey, in order to keep up the heat. At the end of an hour, or an hour and a half, the product is boiled for two or three minutes. By skimming the milk beforehand and restoring the cream after the final boiling, the product is rendered more palatable and more milk-like in appearance.

PEPTONIZED GRUEL.

A well-boiled, thick and strong gruel, prepared from any of the farinaceous articles generally used for that purpose (wheaten flour, oatmeal, arrowroot, sago, pearl barley, etc.), is poured into a covered jug and allowed to cool to a temperature of about 140° F. Liquor pancreaticus is then added in the proportion of a tablespoonful to the pint of gruel and the jug is kept warm under a cosey, as before. At the end of a couple of hours the product is boiled and, finally, strained. This preparation is not generally acceptable to invalids, but may be used in conjunction with peptonized milk as—

PEPTONIZED MILK-GRUEL.

First, a good, thick gruel is prepared from any of the farinaceous articles above mentioned. The gruel, while still boiling hot, is added to an equal quantity of cold milk. The mixture will have a temperature of about 125° F. To each pint of this mixture, two or three teaspoonsful of liquor pancreaticus and 20 grains of bicarbonate of sodium are added. It is then kept warm in a covered jug under a cosey for a couple of hours, and then boiled for a few minutes and strained. The bitterness of the digested milk is almost completely covered in the peptonized milk-gruel.

PEPTONIZED SOUPS, JELLIES AND BLANC-MANGES.

In order to vary the regimen and increase its palatability, Dr. J. Milner Fothergill describes other peptonized dishes which may be prepared. A soup may be made by using peptonized gruel, which is quite thin and watery, instead of simple water, for the pur-

pose of extracting shins of beef and other materials employed for the preparation of soup. Jellies can be made by simply adding the due quan ty of gelatin or isinglass to hot peptonized gruel, and flavoring the mixture according to taste. Blanc-manges may be made by treating peptonized milk in the same way and then adding cream. In preparing all these dishes the operation of peptonizing the gruel or the milk must be completed, even to the final boiling, before adding the stiffening ingredient.

PEPTONIZED BEEF-TEA.

Half a pound of finely-minced lean beef is mixed with a pint of water and 20 grains of bicarbonate of sodium. This is simmered for an hour and a half. When it is cooled down to about 140° F., a tablespoonful of the liquor pancreaticus is added. The mixture is then kept warm under a cosey for two hours, and occasionally shaken. At the end of this time the liquid portions are decanted and boiled for five minutes. Beef-tea prepared in this way is rich in peptone, and its nutritive value in regard to nitrogenized materials is about equivalent to that of milk. When seasoned with salt it is scarcely distinguishable in taste from ordinary beef-tea. —*Medical Bulletin.*

HOW FOOD IS DIGESTED.

TABLE OF THE DIGESTIVE JUICES AND THEIR FERMENTS.

DIGESTIVE JUICE.	FERMENTS CONTAINED IN THEM.	ACTION ON FOOD MATERIALS.
Saliva.	Salivary diastase, or ptyalin	Changes starch into dextrine and sugar.
Gastric juice.	*a.* Pepsin.	Changes proteids (albumens) into peptone in acid medium.
	b. Curdling ferment.	Curdles the caseine of milk.
Pancreatic juice.	*a.* Trypsin.	Changes proteids into peptone in a neutral or alkaline medium.
	b. Curdling ferment.	Curdles the caseine of milk.
	c. Pancreatic diastase.	Changes starch into dextrine and sugar.
	d. Emulsive ferment.	Emulsifies and partially saponifies fats
Bile.		Assists in emulsifying fats.
Intestinal juice	*a.* Invertin.	Changes cane sugar into invert sugar.
	b. Curdling ferment.	Curdles the caseine of milk.

—Sir William Roberts' "Digestion and Diet."

ABOUT MILK-TEETH.

IF you care for symmetry of feature and sweetness of expression in the lower half of the face; if you appreciate one great beauty in the laugh and speech of a child, and are hurt to see the stumps and gaps in the small mouth; if you have any care on the score of pronunciation; if you are assured that tartar often causes retraction of the gums and loosening of the teeth; if you have ever seen abscess followed by scars on the face, or roots projecting through the gum; if indigestion and its far reaching effects on growth and strength seem undesirable to you—and, finally, if you wish small dentist's bills for regulating and filling the second set:

Then you will follow these directions—which are essential in every detail:

1. In the early months (about fifth to twelfth) clean twice daily with soft rag and lime-water.

2. Later (about the twelfth month) brush with small soft brush after each feeding.

3. Later (about fourth year) teach child to use quill-pick after each meal, and then to brush carefully the most hidden crevices with lime-water, or use waxed silk instead of the pick.

4. Polish off all stains with soft pine stick and tooth powder.

5. Take the child to your dentist every three months, beginning at the second year, and have cavities searched for and filled. By having cavities filled early, child suffers none during operation.

Every tooth after the twentieth tooth belongs to the permanent set. These are all in position by the third year. The first permanent teeth are back of these, appearing usually between five and six.

Establish habits early and firmly, and the child will keep them.

Forbid rich candy, fresh or rich cake, pastry and hot bread.

Let the child strengthen its teeth on sufficient crusts and meat not too tender.

WHAT TO DO FOR TOOTHACHE.

1. Rinse the mouth and the cavity thoroughly with warm water, in which is dissolved all the baking soda it will carry; failing

2. Dry the cavity gently with surgical cotton (absorbent) made into a swab on the end of a knitting needle or crochet needle, and

3. Drop one drop of creosote or pure carbolic acid on a bit of absorbent cotton and pack it gently into cavity,

4. A small capsicum plaster (¼ inch square) bought at the drug store may be placed on the gum. If rhe tooth is sore to bite on, No. 4 is the best.

5. Take the child to the dentist and find out what should be done to the teeth.—*Brooklyn Medical Journal.*