

TOBOLDT, (A. L. A.)

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A PAPER ON

IMPORTED

Carlsbad Mineral Waters

—AND—

SPRUDEL SALZ,

BY

A. L. A. TOBOLDT, M.D.



Assistant Demonstrator of Pharmacy, University of Pennsylvania,
Editor of the "Medical Clippings and New Chemicals," &c.

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Mr. Chairman—Gentlemen.

The famous fountain of health at Carlsbad, in Bohemia, which has been the refuge of invalids for five centuries is certainly well worthy of a careful study. Although the subject is so old that it may be doubted whether there be anything new to say about it, nevertheless my experience with this remedial agent has been such that I may truly say that no remedy which I have ever employed has given me so much pleasure and profit as this particular one.

My opinion as to mineral waters generally, and Carlsbad in particular, which is probably shared by the majority of the profession, has been that much if not all the therapeutic action may be traced to change of scene, to the strict diet enforced, to outdoor exercise and the large quantities of water drunk. Starting with this opinion, I undertook a series of experiments with Carlsbad waters, such as is exported by the authorities of the City of Carlsbad. Selecting a number of chronic hypochondriacs whose afflictions had baffled all my previous efforts as my subjects, I was truly astonished to note that, although no rigid diet was prescribed, and only a limited amount of exercise was indulged in, I obtained most remarkable results—the complexion even after a week's use began to clear up, the step became more firm and elastic, and what was more, the entire host of hypochondriacal complaints seemed to vanish like mist. These surprising results bade me pause, and I then set about investigating the subject more closely, arguing that it certainly could not be the water alone that produced these effects. The diet and exercise having been left entirely out of consideration in several of the cases, I proceeded to use the Crystallized *Sprudel Salz*, which, being obtained by evaporating the waters, I thought must surely be the remedial agent. But alas! when I came to use this, by dissolving it in ordinary water or in carbonic acid water, I invariably failed to get so prompt an action, and in the majority of cases utterly failed to get that peculiar therapeutic effect which I had obtained from the exported mineral waters themselves. There was something at fault with either my argument or the *Sprudel Salz*. On looking up the subject I found that at Carlsbad the salt was only recommended and used as an addition to the mineral waters, to act as a purgative when the waters failed in that respect. The analysis of the salt I found did not tally with that of the mineral waters, so for a time at least I fell back on the use of the exported Carlsbad waters until my attention was called to experiments made by Dr. Jaworski, of Krakaw, with "*Sprudel Salz Powder*." I then determined to give this a trial, still convinced that it was not the water, but its contained salts that produced the therapeutic effect. The chemical analysis of the *Sprudel Salz Powder* certainly more nearly corresponded to that of the mineral waters, and upon trial I found that I could obtain the same effect with the *Sprudel Salz Powder*. The first case upon which I tried it was so unique that I was literally dumb-founded at the result. A woman who five years before had weighed but 75 pounds had in that time increased in weight to 190 pounds—a gain of 115 pounds. She came to me for treatment, laboring under all the symptoms that would naturally be expected from such an enormous increase in weight. I put her first upon the Crystallized *Sprudel Salz*, only to be disappointed; when, after several weeks, I used the *Sprudel Salz Powder*, I was really startled to note the effect. In eight days, *i. e.*, from Wednesday to the next Thursday, she lost 16 pounds, an average of 2 pounds per day, and was, in consequence, losing all the symptoms she had so much complained of. The woman had in the meantime been indulging in her

customary diet, even to drinking several glasses of beer daily, and being a market woman she had been debarred from taking any extra exercise. This then verified my theory that if there was any therapeutic action in Carlsbad mineral waters it ought to have the same effect without the usual adjuncts of a Carlsbad cure, namely, diet and exercise. In the very next case, a mild one of diabetes mellitus, the sugar disappeared entirely after its use, the patient only abstaining from fresh fruits, and that because it caused too great a looseness of his passages. How the *Sprudel Salz Powder* acts in diabetes mellitus I am unable to say, and must content myself with stating facts only. I will not tire you with a recital of any more cases; I have arranged these in a tabular form attached to this paper. Sufficient, I think, has already been said to warrant calling your attention to a remedial agent that in one form at least has been known and used by the profession for the last four centuries.

The Springs of Carlsbad are located in Bohemia, and have been known to the profession ever since the fourteenth century, and have been gaining in their favor ever since. The waters, which issue from 15 different springs, have all the same chemical composition, differing only in the amount of free CO_2 which they contain, this depending upon the temperature at which the water reaches the surface, there being a difference of 40° Reaumur between the different springs. The hotter the water the less carbonic acid it holds in solution, and vice versa. Upon analysis they are found to belong to the alkaline mineral waters, and according to the most recent analysis of Profs. E. LUDWIG and J. MAUTHNER, 1886, they contain :

ANALYSIS OF THE CARLSBAD SPRUDEL, by Prof. E. LUDWIG AND Prof. J. MAUTHNER, 1886.

| | |
|---|---------|
| Carbonate of Iron..... | 0.030 |
| Carbonate of Manganese..... | 0.002 |
| Carbonate of Magnesium..... | 1.665 |
| Carbonate of Calcium..... | 3.214 |
| Carbonate of Strontium..... | 0.004 |
| Carbonate of Lithium..... | 0.123 |
| Carbonate of Sodium..... | 12.980 |
| Sulphate of Potassium..... | 1.862 |
| Sulphate of Sodium..... | 24.053 |
| Chloride of Sodium..... | 10.418 |
| Fluoride of Sodium..... | 0.051 |
| Borate of Sodium..... | 0.040 |
| Phosphate of Calcium..... | 0.007 |
| Oxide of Aluminium..... | 0.004 |
| Silicic Acid..... | 0.715 |
| Carbonic Acid, partly combined..... | 7.761 |
| Carbonic Acid, free..... | 1.898 |
| Caesium, Rubidium, Thallium, Zinc, Arsenic, Antimony, Selenium, Formic Acid, Undeterminable organic matter..... | Traces. |
| Amount of solids..... | 55.168 |
| Specific gravity..... | 1.00530 |
| Temperature in $^\circ\text{C}$ | 73.8 |

ANALYSIS OF THE SPRUDEL SALZ (POWDER), by Dr. SIPOECZ.

| | |
|-----------------------------|----------------|
| Sodium Sulphate..... | 43.25 per cent |
| Sodium Carbonate..... | 36.29 " |
| Sodium Chloride..... | 16.81 " |
| Potassium Sulphate..... | 3.06 " |
| Lithium Carbonate..... | 0.39 " |
| Sodium Fluoride..... | 0.09 " |
| Sodium Borate..... | 0.07 " |
| Silicic Acid Anhydride..... | 0.03 " |
| Iron Oxide..... | 0.01 " |

For many years the waters were only used externally, but at present a cure at Carlsbad chiefly consists in their internal use.

The effect of the waters and of the *Sprudel Salz Powder* dissolved in carbonic acid water or ordinary water, being so near alike, may be treated of together, and be summed up as follows :

Locally upon the stomach and bowels they produce a stimulating, alterative effect, and they also act as a sedative to the gastric nerves. They neutralize the acids of the stomach, its normal acidity, according to researches of Dr. W. Jaworski, returning sooner after the use of the mineral waters than after the use of the *Sprudel Salz Powder* in solution. After several doses have been taken they act as a mild purgative, partly by increasing the peristaltic movements, diluting the contents of the bowels, dissolving toughened mucus, bile and hardened fecal masses, and partly also by increasing the intestinal secretions; hence at times such copious discharges. After continued use the stools become much darker, almost black and tarry. But occasionally, for a time at least, especially when taken hot, they produce constipation. During the continuance of the treatment there is an increased development of gases in the gastro-intestinal canal, which cause frequent odorless and tasteless eructations and the passing of flatus, having the odor of sulphuretted hydrogen. These gases are the cause of the distentions so often complained of, giving rise to a feeling of oppression in the region of the stomach, and sometimes even cause slight gripings. In fact, according to Dr. Hlawacek, of Carlsbad, nearly all the symptoms complained of during a cure may be traced, either directly or indirectly, to this cause.

The appetite is at first increased, but later on it is generally diminished, especially for the midday meal. Occasionally a bitter, pasty taste, with loss of appetite, is noticed. Thirst is usually increased.

The urine is generally increased in quantity, and, after a varying length of time, is rendered neutral or alkaline. The urea and uric acid are, according to the researches of Dr. Seegen, much diminished, whereas the phosphates are greatly increased in quantity. So-called brick dust sediments in the urine, when present, disappear after several days' use.

The secretions of the skin are also increased, and sometimes altered in character. The skin frequently exfoliates, causing the complexion to become much clearer, an effect very noticeable in patients having freckles. Dr. Hlawacek asserts that he has occasionally noticed an increased flow of saliva. There frequently is, also, an increase in the *mucous secretions of the air passages*. Aching and drawing pains are felt from time to time in the extremities, most of the joints, and in old scars, and a feeling of languor is frequently complained of. When taken hot, in addition to these symptoms, there is noticed what is known at the springs as "*Brunnenrausch*"—the head feels confused, there is an incapacity to concentrate the thoughts on any one thing, giddiness, staggering, and other symptoms of rush of blood to the head are noticed—symptoms seldom, if ever, met with when the waters are drunk cold. This is followed, however, in a few days by an increased tonicity of the entire muscular system; the patient becomes brighter, and the previous dullness gives place to a clearness of intellect, of thought, feeling and fancy much exceeding that existing previous to the beginning of the treatment.

In females the catamenial flow is apt to be delayed and also diminished in quantity.

Most patients loose flesh, especially those who are very corpulent, whereas thin and delicate patients who take much nourishment are apt to increase in weight.

Other effects noticed are the disappearance of old inflammatory deposits, especially in the fibrous tissues. *Old rheumatic or gouty nodules* I have known to disappear entirely; also inflammatory thickenings around the uterus and its appendages. Upon the system generally a marked increase of tissue metamorphosis is noticed. The water tastes very pleasant and is liked by most patients.

As to the diseases for which Carlsbad is recommended, they are so numerous that I will not take up your time in enumerating them. Suffice it to say that it may be used wherever an alkaline mineral water is indicated, especially where there is lack of tone in the gastro intestinal tract, as in *dyspepsia*, deficient or perverted *biliary secretions*, *jaundice*, *chronic constipation*, etc.; where accumulations of fat, especially in the liver, other organs, or under the skin, are to be disposed of; where there is that peculiar discrasia known as the uric acid diathesis, as in *gout*, *rheumatism*, *gravel*, etc., and where inflammatory deposits, especially in the fibrous

tissues, are to be removed, and in that peculiar and so little understood disease, *diabetes mellitus*.

Carlsbad may be said to be contra-indicated in all wasting diseases, especially those of the lungs, and those involving a great amount of suppuration, and in all acute febrile diseases, especially inflammatory and infectious diseases, aneurism, atheroma of the larger vessels, etc.

As to the mode of administration: The dose of the impored mineral waters may be set down as 2—3 glasses of about 6 oz. each, drank slowly in the morning an hour before breakfast, another glass during the morning or afternoon, and one or two before retiring at night. The dose of the *Sprudel Salz Powder* is about one teaspoonful dissolved in a glassful of water, taken three times a day, either one hour before or two hours after meals. If taken with the Carlsbad Water, one teaspoonful of the Salt with the first tumblerful of the water, taken in the morning, will suffice. That of the Crystallized *Sprudel Salz* is from one to two spoonfuls dissolved in a glassful of water as a purgative. When taken hot the effect on the bowels is less marked.

As to diet, experiments of Dr. E. Hlawacek and others, as well as my own, prove that any diet otherwise not contra-indicated by the disease may be indulged in during the continuance of the treatment.

¶ The effect of exercise, although not found essential, is a factor which I think ought not to be lost sight of, especially where the disease is caused by sedentary habits. Experiments made by Dr. W. Jaworski prove that exercise hastens the passage of the waters from the stomach into the intestinal canal. The experiments made by Dr. Jaworski also proved that the normal acidity of the stomach returns sooner after the ingestion of the mineral waters than after solutions of *Sprudel Salz Powder*; hence *diseases of the stomach are generally best treated by the mineral waters*, whereas the *Sprudel Salz Powder* is to be preferred in *diseases of the other viscera*, such as *intestinal canal, spleen, kidneys, in adiposis, diabetes, etc.*, although this rule does not hold good in every case. The experiments of Dr. Jaworski with *Sprudel Salz Powder* as to the effect when given per rectum, prove it to have much the same effect as when given *per se*, and may be resorted to when from any cause the stomach needs rest, or where the disease is located in the bowels, etc. The addition of *Sprudel Salz Powder* to clysters brings away larger quantities of fecal matter, and generally produces a greater number of passages than when water alone is used.

¶ As to the difference between the crystallized and *Sprudel Salz Powder*, I would say that both are obtained by evaporating the Carlsbad Mineral Waters; but the powder is, while still moist, exposed to the carbonic acid so abundantly given off by the springs, and in consequence differs from the crystallized in containing more carbonates and less sulphates. In fact it contains all of the soluble constituents of the waters, and hence more nearly represents the Carlsbad Mineral Waters themselves.

In addition to this the *crystallized Sprudel Salz, being hygroscopic, frequently causes inconvenience* on this account. The *Sprudel Salz Powder, on the contrary, occurs in a fine granular powder, and is proof against all atmospheric changes.*

In conclusion, I would say that the Carlsbad Mineral Waters, as exported by the City of Carlsbad, being the natural product, is, of course, much to be preferred where the quantity of water is no objection, particularly in diseases of the stomach. Where, from any cause, two or three glasses of water (6 oz. each) cannot be taken, then the *Sprudel Salz Powder* answers the purpose equally well, and in diseases other than of the stomach it is even to be preferred. The *Sprudel Salz* in crystals may be used in every case where a purgative action only is desired.

¶ Furthermore, I would say that the Carlsbad Mineral Waters and *Sprudel Salz* do not differ in the least from any other remedial agent of well-known properties. That their effect is uniform and to be relied upon independently of any adjuncts of treatment, such as diet, exercise or water.

Table of Cases treated with Carlsbad Mineral Waters, Crystallized Sprudel Salz and Sprudel Salz Powder.

| No. | CASES. | TREATED WITH IMPROVED CARLSBAD MINERAL WATERS. | TREATED WITH IMPROVED SPRUDEL SALZ CRYSTAL. | TREATED WITH IMPROVED SPRUDEL SALZ POWDER. | LENGTH OF TIME TREATED. | REMARKS. | RESULT. |
|-----|---|---|--|---|-------------------------|--|---|
| 1 | Mr. G., <i>æt.</i> 48 years. Typhoid—Confirmed Hypochondriac. | 3 glasses in morning afternoon 1 glass at bedtime. | None. | None. | 6 weeks. | Complained of pain in right hypochondrium, soreness over apex of left lung, great depression of spirits almost amounting to melancholia. | Cured. |
| 2 | Mr. S., <i>æt.</i> 55 years. Musician. Hypochondriac. | 3 gl. bef. breakfast 2 g. 1 hour bef. din. 1 gl. at bed-time. | Used a teaspoonful occasionally as a purgative. | None. | 5 weeks. | Had acid dyspepsia, bowels would not be moved for a week at a time, complained much of headache and depression of spirits. | Cured—Bowels been regular ever since. |
| 3 | Mr. S., <i>æt.</i> 47 years. Hotel keeper. Hypochondria. | 3 gl. bef. breakfast 2 g. 1 hour bef. din. 2 gl. at bed-time. | None. | None. | 6 weeks. | Dyspepsia, headache, coughed up a great deal of mucus in the morning. Symptoms of catarrhal inflammation of stomach. | Cured. |
| 4 | Mr. S., <i>æt.</i> 40 years. Chronic Constipation. | None. | $\frac{1}{2}$ teaspoonful in 1 glassful of water 3 times a day. | None. | 8 weeks. | Would get better for a time, neglect to take her medicine, and then take it regular for a week or ten days. | Much improved. |
| 5 | Mr. R., <i>æt.</i> 40 years. Enlargement of Liver and Constipation. | None. | $\frac{1}{2}$ teaspoonful in 1 glassful of water 3 times a day. | None. | 5 weeks. | The protracted constipation patient suffered from generally followed attacks of diarrhoea. Liver very much enlarged. | Much improved. |
| 6 | Mr. P., <i>æt.</i> 20 years. Jaundice. | None. | $\frac{1}{2}$ teaspoonful in 1 glassful of water 3 times a day. | None. | 4 weeks. | The jaundice began to disappear after third day, but reappeared during last week of treatment, patient discouraged and discontinued treatment. | Not much improved. |
| 7 | Mr. M., <i>æt.</i> 35 years. Hypochondriac. | None. | $\frac{1}{2}$ teaspoonful in 1 glassful of water ter die. | None. | 6 weeks. | Had some tenderness over liver, and also over spleen which was somewhat enlarged. Took some horseback exercise. | Not benefited. |
| 8 | Mr. M., <i>æt.</i> 35 years. Same case, 6 months later. | 3 gl. bef. breakfast 2 " 40 A. M. 2 " at bed-time. | None. | None. | 5 weeks. | The same man returned after six months, much the same symptoms, the liver seemed also somewhat enlarged. Sedentary habits. | Completely cured. |
| 9 | Mrs. D., <i>æt.</i> 24 years. Marketwoman. Adiposis. | None. | $\frac{1}{2}$ teaspoonful in 1 glassful of water 3 times a day for 3 weeks, then took the Powdered Salt. | $\frac{1}{2}$ teaspoonful in 1 glassful of water, 3 times daily. | 5 weeks. | This woman weighed but 75 lbs. 5 years before; before treatment weighed 100 lbs. No result after use of Cryst. Salt, but after using the Powdered Salt lost 16 lbs. during first 8 days, after that only 10 lbs., then discontinued treatment. Took no exercise, but kept up her usual diet, drank beer. | Very much improved. |
| 10 | Mr. L., <i>æt.</i> 25 years. Journalist. Diabetes Mellitus. | None. | None. | 1 teaspoonful in 1 glass of CO ₂ water 3 times a day. | 6 weeks. | The man in good health, but discovered sugar in urine accidentally. Being much alarmed placed himself under treatment. No change made in diet, but abstained in a measure from fresh fruit because they caused too great a looseness of his passages. | All trace of sugar disappeared after second week. |
| 11 | Mr. F., <i>æt.</i> 40 years. Druggist. Catarrhal Inflammation of the Stomach. | None. | None. | $\frac{1}{2}$ teaspoonful in 1 glass of Carlsbad water 3 times a day. | 5 weeks. | Disease caused by intemperate use of whisky, from which patient did not abstain entirely during treatment. Spit up a great amount of mucus in the morning. Had more or less cough all the time. | Completely cured. |
| 12 | Mr. E., <i>æt.</i> 35 years. Merchant. Dyspepsia. | 3 glasses, bef. breakfast, 2 at 10 A. M. 1 at bed-time. | None. | None. | 4 weeks. | Patient very sallow, addicted to abuse of tobacco. No appetite, pain and sour eructations after eating, especially after farinaceous food; took very little exercise. | Completely cured. |
| 13 | Mrs. G., <i>æt.</i> 35 years. Chronic pelvic cellulitis. | None. | None. | 1 teaspoonful in 1 glassful of water 3 times a day. | 5 weeks. | Uterus fixed and held down by adhesions much inflammatory thickening of appendages, patient very much reduced, seldom left the house. | Entirely cured. |
| 14 | Mrs. L., <i>æt.</i> 24 years. Hæmorrhoids. Chronic Constipation. | None. | None. | 1 teaspoonful in 1 glassful of water 5 times a day. | 4 weeks. | Never had a passage without taking some purgative medicine for the past 5 years. Also suffered from hæmorrhoids. | Cured. |

| | | | | | | | |
|----|--|-------|-------|--|---------|--|--|
| 15 | C., set. 19 months. Marasmus. | None. | None. | 5 grs. in 2 table- spoonfuls of water 3 times a day. | 4 weeks | Little patient unable to take any food besides mother's milk, which was also vomited occasionally; much diar- rhea and emaciation. Began to improve second day. | Cured. |
| 16 | Mr. M., set. 32 years. Laborer. Enlarged Liver. | None. | None. | 1 teaspoonful in 1 glass of water 3 times a day. | 5 weeks | Fell while trying to climb over a fence, had pain in hypochondrium from that time; also suffered from chronic gleet that had baffled all previous treatment. | Cured. |
| 17 | Mr. M., set. 45 years. Shoemaker. Chronic constipation. | None. | None. | $\frac{1}{2}$ teaspoonful in 1 glass of water 3 times a day. | 4 weeks | Bowels moved but once or twice a week and then gen- erally had to resort to some purgative. Also complained of hæmorrhoids. | Cured. |
| 18 | Miss J., set. 13 years. Chronic Rheumatism, joints enlarged. | None. | None. | $\frac{1}{4}$ teaspoonful in glass of water 3 times a day. | 6 weeks | Patient suffered more from inflammatory deposits of former attacks than from present attack of rheumatism. Could not straighten out the affected joints. | Cured. Inflam- mation en- tirely disappeared. |
| 19 | Mr. S., set. 3 years. Gravel. | None. | None. | $\frac{1}{2}$ teaspoonful in 1 glass of water 3 times a day. | 5 weeks | Great pain during micturition, passed a number of pieces twice as large as a pin's head; occasionally could not pass water for 24 hours. | Cured. |
| 20 | Mr. F., set. 28 years. Clerk. Jaundice. | None. | None. | $\frac{1}{2}$ teaspoonful in 1 glass of water 3 times a day. | 4 weeks | Had three previous attacks that lasted three months. This attack began the same as others, with a diarrhoea lasting several weeks. Improved after first week. | Cured. |
| 21 | R., set. 2 $\frac{1}{2}$ years. Jaundice. | None. | None. | 3 grs. dissolved in water ter die. | 3 weeks | Had failed with ordinary treatment. Improvement after third day. | Cured. |
| 22 | Mr. R., set. 50 years. Farmer. Ague & Scurvy. | None. | None. | $\frac{1}{2}$ teaspoonful in 1 glass of water 3 times a day. | 6 weeks | Patient had several chills during time of treatment al- though not exposed to malaria, had not had one for two years previously. | Cured. |
| 23 | Mr. L., set. 25 years. Merchant. Ulcer of Stomach. | None. | None. | $\frac{1}{4}$ teaspoonful in 1 glass of water 3 times a day. | 6 weeks | Patient suffered much from pain and frequently vom- ited blood. Began to improve after second week. | Cured. |
| 24 | Mrs. P., set. 30 years. Housekeeper. Chronic constipation. | None. | None. | 1 teaspoonful in 1 glassful of water 3 times a day. | 4 weeks | Had never had a natural passage for the past three years; since her last confinement. Patient had freckles which disappeared entirely with the exfoliation of the skin. | Cured. |
| 25 | Miss R., set. 20 years. Dropsy from valvular heart disease. | None. | None. | $\frac{1}{2}$ teaspoonful in 1 glass of water 3 times a day. | 4 weeks | I had endeavored by the use of Digitalis and squills as diuretics; and Elixarium and other purgatives to remove the dropsy, but singularly failed. After using the salt for two days patient began to pass a very great amount of water by the bowels and kidneys. | Cured. |
| 26 | Mr. B., set. 23 years. Clerk—Gouty nodules on feet. | None. | None. | 1 teaspoonful in 1 glassful of water 3 times a day. | 6 weeks | The nodules had become very painful so as to confine the patient to his room. Improvement began after third week. | Cured. |
| 27 | Mr. L., set. 35 years. Police Officer. Dilatation of Stomach. | None. | None. | $\frac{3}{4}$ teaspoonful in 1 glass of water 3 times a day. | 5 weeks | This was a typical case of simple dilatation of stom- ach. There were also a few dyspeptic symptoms and constipation. | Cured. |
| 28 | B., set. 1 year. Marasmus. | None. | None. | 3 grs. in hot water 3 times a day. | 4 weeks | Never had anything but cow's milk, and for the past two months gruel had been added to his diet; patient much emaciated, 15 stools a day. Improvement after second day. | Cured. |
| 29 | Mr. B., set. 52 years. Barber—Catarrhal In- flammation of Stomach. | None. | None. | $\frac{1}{4}$ teaspoonful in 1 glass of water 3 times a day. | 6 weeks | Whiskey the cause of the disease. Patient stopped for one week, then resumed his former habits, took 8 or 10 drinks a day. Kept comparatively well for two months. | Cured for a time. |
| 30 | Mr. J., set. 40 years. Sailor. Enlarged Spleen. | None. | None. | $\frac{1}{2}$ teaspoonful in 1 glass of water 3 times a day. | 6 weeks | The spleen was enormous, reaching down to the brim of the pelvis and much beyond the median line. Prob- ably caused by malaria. | Cured. |

In none of the above cases was there any particular diet prescribed. The patients were allowed to choose for themselves, and to eat whatever their appetites craved.

Only in one case (No. 7), a hypochondriac took riding lessons for one week, and then abandoned them entirely, until two weeks after the treatment, when, as he expressed it, he had more heart to go about amongst people and enjoy himself. The other cases took very little, if any, exercise outside of that required by their respective callings.

As to the matter of taking the Carlsbad Waters or *Sprudel Salz* solutions, hot or cold, I would say that most patients preferred taking them cold, and as there appears to be the advantage that taken cold there are no so-called head symptoms, and a more decided purgative action, I have invariably given cold the preference, only using them hot in cases of diarrhoea, when I did not desire the purgative effect.

The foregoing would then prove conclusively that the Carlsbad Waters, as well as the *Sprudel Salz* Powder, are bona fide remedial agents independent of the usual adjuncts of treatment. But I would not here be understood as making light of or ignoring them, their value has been proven many years ago, and who has not himself seen the benefits of copious draughts of water, well directed exercise, change of scene, etc. If these can be had in addition, well and good; if not, a Carlsbad treatment need not therefore be dispensed with.

In conclusion, I would say that the experiments were made with genuine imported Carlsbad Water and *Sprudel Salt*, which is bottled under the supervision of the City of Carlsbad, and has the signature of Eisner & Mendelson Co., sole agents for the U. S., and Loebel Schottlaender, sole licensee of the Spring, with the seal of the City of Carlsbad on the neck of every bottle. It would be folly to expect any reliable action from any of the numerous imitations sold here in bulk or in bottles.

A. L. A. TOBOLDT, M. D.,

207 VINE STREET, PHILADELPHIA, PA.

CARLSBAD.

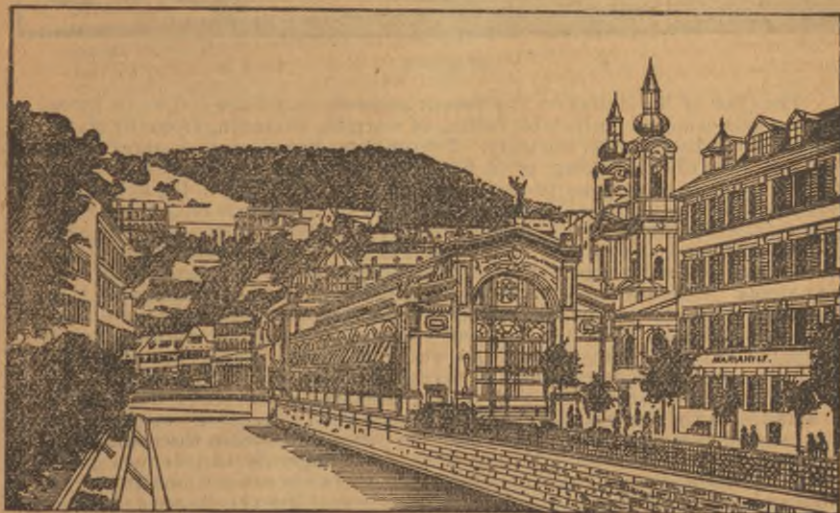
Tradition says, that Emperor Charles IV, while deer hunting, discovered these springs. This tale in its particulars was not known until 1571, when Dr. Sommer published it in his book on Carlsbad; the author, however, claims to have received this information not from the manuscripts, but from inhabitants from that country. There is no reason to doubt, that the discovery was made by some distinguished man, when out on a hunting party, and even denying that this man was Charles the Emperor, the tale does not lose any of its interest, for there are reasons to believe that these springs were not only known long before, but that there was already a resort called "Wary," existing, which Bohemian expression signifies "a warm bath." This name which is found on a map sketched at the beginning of the 13th century, points out exactly the spot at which Carlsbad is now situated.

There are sixteen springs at Carlsbad, differing only in the temperature of their waters. All of them are supposed to arise from a common reservoir, which is probably situated beneath the "Sprudel." The granite basin surrounding the spring is filled out in a vault-like manner by the solid constituents deposited from the water. This deposit is called "Sprudelstein." This sediment in some places is 2-9 feet in thickness, in other places three different layers have been pierced. The sediments include larger and smaller caves, empty or full of hot water, some of which are very extensive and situated in the environs of the river, upwards and downwards from the

"Sprudel." The depth of these vaults varies from two inches to eighteen yards. One of this size was struck when digging for the foundation of a house, a second layer of sediment was removed and the water rushed forth with great force from an opening of eight inches in diameter. People tried to explore the depth of this cave by sinking an eighteen yard pole into it, but the bottom was not reached because the force of the water wrenched the pole from the hands of the laborers. This stone is used by the inhabitants of Carlsbad for manufacturing various kinds of trinkets and souvenirs. It is of a peculiar light gray color and very hard.

The first examination of the physical and chemical properties of the Carlsbad Mineral Waters took place more than one hundred years ago, and from that time the therapeutical value and importance of the springs began to be recognized. The present chemical constituents are exactly the same as they were then.

It need not be explained how Carlsbad gradually grew to its present medicinal importance, and how it came to be awarded the first place amongst all medical springs, but it may suffice to be briefly mentioned that during the first period, beginning about the 14th or 15th century, the waters were only used for bathing purposes. It was not until the year 1520 that people began to make use of them in the present way, induced by the counsel of Dr. Wenzel Payer, at that time physician to Count Schlick, who, having been cured by the hydropathic remedies, had two medals coined in honor of the Doctor.



SPRUDEL-COLONNADE.

The names of the different springs are:—Sprudel, 72.5° C.; Bernhardsbrunnen, 62.5° C.; Kurhausquelle, 65° C.; Neubrunn, 60° C.; Felsenquelle, 58.7° C.; Schlossbrunn, 52.5° C.; Muehlbrunn, 50° C.; Theresienbrunn, 51.2° C.; Marktbrunn, 43.7° C.; Kaiserbrunn, 47.7° C.; Spitalbrunn, 35° C.; Kaiserquelle, 42.5° C.

Chemical Properties.—All these springs contain the carbonnate of iron, manganese, magnesium calcium, lithium, potassium and sodium sulphates, sodium chloride, sodium fluoride, sodium phosphate and calcium phosphate, silica and alumina, carbonic acid half-bound and free, and traces of rubidium, caesium, thallium and of volatile organic matter. The chemical composition of all these springs being the same, with the exception of those divergencies which arise from a difference in temperature, there can be no doubt that the medical effect of all of them is the same.



SPRUDEL.

The effect of the waters on the human system is as follows: Two or three tumblerfuls cause a comfortable feeling of warmth, beginning from the stomach and spreading all over the body. Two or three tumblerfuls, in most cases 3—5 will soon after drinking, or at least one hour afterward, produce one or several stools, in most cases preceded by a painless rumbling in the abdomen. But not in all cases do such evacuations occur in the course of the first day. Intestinal evacuations mostly become darker in color and occur 2—3 times a day in the course of the cure. Sometimes in the second or third week, copious evacuations will set in, followed by constipation for 1—2 days, or by regular stools. Evacuations sometimes even assume a black appearance, this color, however, disappears by degrees. Secretion of the urine is increased, the water becoming clear and light colored and occasionally assuming a disagreeable odor. In many cases urine which previously had a sour reaction, after some weeks becomes neutral. Secretion of urea and uric acid has by experiments been ascertained to decrease, discharge of phosphoric acid bound to alkalies on the contrary increasing. Perspiration is generally augmented, but sometimes has a disagreeable odor. Appetite increases in the beginning, taste normal, thirst commonly increased. A stronger development of gases in the digestive channel causes tasteless and scentless evacuations from the stomach, and the discharge of offensive borborygmi from the bowels. In consequence of this action there is frequently a feeling of fullness. The female patient's menstruation during the cure is frequently somewhat retarded, less frequently forwarded, discharge of blood diminished. The first use of the water generally causes a feeling of exhaustion and somnolence during the day, the nights frequently being sleepless. There is a feeling of numbness and disinclination to cerebration, but this condition soon changes into a pleasant easiness, which permits long and not fatiguing exercise, the mind cheers up and the spirits become exhilarated. These symptoms of course do not appear with all patients, many of whom can only state, that their stools have become easier and the desire to urinate more frequent.

Professor Hlawazek gives the following representation of the effect of Carlsbad Mineral Waters: "What we have positively ascertained is, that Carlsbad Water in a high degree promotes organic changes in the system; that principally by its alkaline constituents, acts as an absorbent of fat and as an antacid throughout the organism, and that it performs this wholesome action by stimulating, augmenting and chemically altering the whole process of secretion."

Carlsbad possesses the following curative influence :

1. By its direct effect upon stomach and digestive channel it exercises a soothing, altering action on the nerves of the stomach, hence the increased appetite, and therefore the feeling of comfortable warmth spreading throughout the whole body.

(b) Healing in certain ulcerations in the mucous membrane of the stomach and duodenum. "This effect," says Prof. Kraus, "is a really sovereign and justly called a specific one."

(c) Neutralizing the free acid contained in the stomach.

(d) Evacuating in a mild way, partly by accelerating peristaltic movements of the bowels, partly by diluting the contents of the intestines, such as mucus and bile, partly by increasing secretion of the intestinal juices. Hence copious evacuations are not uncommon at the beginning of the use of the water.

2. *By reception into the circulation of the system it acts :*

(e) Diluting, dissolving the tough, thickened bile in the gall bladder and even soft calculi contained in this organ ; moreover, it acts on the blood in the circulation, especially that in the portal system ; layers of fat in the tissue of the skin, especially enlargement of the liver, caused by them, are absorbed and fibrous products of inflammation dissolved.

(f) Correcting many morbid decompositions of juices, viz: of blood and lymph, principally that deficient composition of blood which is associated with a high inclination to form urea, uric acid and concrements containing it. In this respect *Husland* is fully justified in claiming *Carlsbad Water* to be the most vigorous stone-dissolving and evacuating medicament. This effect either appears slowly without marked evidence of increased secretion, or it is associated with various excretions, such as copious evacuations of the bowels, frequent offensive sweats and abundant quantities of urine, which may be clear or turbid and also has an offensive smell and deposits sediments of various kinds.

(g) By its diuretic qualities, sometimes in a mechanical way, it effects the passage of even bean sized urinary calculi, and removes the deposits of gravel.

(h) The experience of Prof. Jaeksch, that one of the most prominent effects of *Carlsbad Water* consists in absorption of fresh and old exudation, especially those of the pleura and peritoneum ; this depends upon the diuretic action of the water, which will prove efficient in all tumors originating from exudations and in the various maladies produced by them.

Carlsbad Water is most effective as an aperient when taken 2 to 3 tumblerfuls in the morning immediately after rising, and one tumblerful before retiring at night. Patients suffering from liver complaints, arthritis, venal and biliary calculi need a greater quantity of water, and should drink at least 2 to 3 tumblerfuls after rising, 1 to 2 before dinner and 1 to 2 at bed time.

Prof. *Hlawazek*, has proven by clinical experiments, etc., that the *Waters of Carlsbad* act in the same manner when taken at home as if taken at the spring, and their remedial action is not impaired by export. The temperature can be given them at will. Even when taken cold the effect is the same, only depending on the patient's disposition or idiosyncrasy. The results obtained by Prof. *Hlawazek*, and published in his extensive works on *Carlsbad*, proved beyond a doubt that the *Carlsbad Mineral Water* as exported in bottles, will act precisely the same as when taken at the spring.

The quantity to be taken depends upon the individuality of the patient. It may be said that too much has been taken when slimy, watery stools are ensuing ; that quantity is the best which produces pappy evacuations. The water should be taken slowly and in small draughts. Between every two tumblerfuls there should be a pause of about ten minutes ; hasty swallowing may frequently cause temporary distress. Free movement is one of the principal conditions particularly for those people whose sickness chiefly was caused by a sedentary life. Suitable muscular activity promotes the excretion of the products of decomposition accumulated in different parts of the body by inactivity. Exercise, consisting of walking, etc., should be moderate, and adapted to the condition of the patient. It must not be forgotten, however, that even bed-ridden patients may drink the water with happy results. These patients require smaller doses, according to circumstances.

The diet, while using *Carlsbad Water*, should be meagre in quantity and quality, because abundant fatty food frequently induces sufferings against

which the use of the water is intended. Dr. Becher, one of the most prominent authorities respecting Carlsbad, insists rather more on moderation, than on anxious selection of the food. Most Physicians of Carlsbad say "that a relatively healthy person in using the water, may eat and drink what he likes." The kind of diet of course depends upon the nature of the disease and the condition of the patient. While well nourished persons should avoid or lessen the quantity of luxurious, fat-forming food, weak and lean persons on the contrary should not fast, but look out for good nourishment. Full blooded patients ought to abstain from drinking malt, ale, porter or beer, but to weak persons the use of Johann Hoff's Malt Extract may be recommended as a tonic while and after the use of the water. He who can live on his own fat, should avoid the use of butter, but the lean should use it moderately. Obedience to dietic directions is of an essential condition for the successful use of the water.

The preceding paragraphs have outlined the most important points to be considered. The Carlsbad Water intended for export is bottled right at the spring from 9 o'clock in the morning until 5 o'clock in the afternoon, under the supervision of the city officials.

The Carlsbad Sprudel Salts are manufactured through evaporation from the Sprudel Water in a building especially erected for that purpose by the City of Carlsbad. The Carlsbad Sprudel Salts are used as an adjunct to the water whenever a stronger purgative action is desired. One half to one teaspoonful of salt is then added to a tumblerful of the water, and taken in the morning before breakfast—*German Amer. Pharm. Gazette.*

The genuine imported Carlsbad Water has a strip of paper around the neck of every bottle, bearing the signatures of Loebel Schottlaender, Sole Licensee for the City of Carlsbad, and Eisner & Mendelson Company, Sole Agents for the U. S. All others are worthless imitations.

No. 1 E. 55TH STREET,

NEW YORK CITY, NOV. 11TH, 1887.

At intervals for years past I have suffered from the many ills incident to a uric acid diathesis—for 18 months a rheumatic affection of both shoulders gave me severe pain and made dressing without assistance a very distressing operation. During this period my system at times showed some disposition towards a gouty glycosuria, due I presume to my general gouty condition and not to real diabetes. I have subjected myself for months to the severest rules of diet recommended for such conditions and used almost all the remedies recommended for gout and rheumatism without any benefit until I heard of your imported Carlsbad Sprudel Salt Powder, which I used faithfully for six weeks, dieting for the first three weeks and afterwards eating almost anything I desired. After careful chemical examinations every week for 8 weeks past, I find that all traces of sugar disappeared after the first ten days. All the gouty or rheumatic symptoms left me after the fourth week, my complexion cleared and my general health and spirits have become excellent once again. Your "Sprudel Salts" deserves the widest publicity and I take great pleasure in bringing this fact to your notice.

EISNER & MENDELSON Co.,
6 BARCLAY ST., N. Y. CITY.

C. NORTON.

DR. B. HOFMEISTER

Read before the Medical Society of London a paper on the use of

"CARLSBAD WATER."

Of which the following is an abstract:

In speaking of those diseases in which the use of Carlsbad Water is indicated, I will confine myself to those in which evidence is given for thoroughly established usefulness.

First are to be mentioned "diseases of the stomach," among them, and above all, the veritable "catarrhus ventriculi chronicus," with substantial changes of the mucous membrane, erosions, and gathering of copious glairy, or somewhat purulent mucus.

Besides CATARRH, Carlsbad Water is of great use in two forms of gastro-

neurosis, namely, in the sensitive neurosis, which is characterized by total want of appetite, and in that double neuroses of the motor nerves which we term hyperkinesis and akinesis.

The hyperkinetic motions of the stomach often, if not always connected with painful sensation, cease immediately by the use of Carlsbad Water.

In most cases of dyspepsia and chronic gastritis we find an excess of acid in the stomach, which is well neutralized by use of Carlsbad.

Likewise it is an invaluable remedy in chronic intestinal catarrh, whether it appears in the form of diarrhoea or under the mask of obstruction; in both cases a great improvement may fairly be expected.

It is, perhaps, not superfluous to mention that Carlsbad Water is in no sense a mere purgative, as most people believe; patients who do not, as a result, obtain large evacuations are commonly dissatisfied, erroneously judging that they have made but an improper cure; not unfrequently patients have to use the Sprudel Salt, in addition to the water, as a laxative.

Carlsbad Waters are from ancient time celebrated as a restorative in ALL LIVER DISEASES, DIABETIS MELLITUS—fatty degenerations derived from gastro, duodenic catarrh, or from gall-stones, or through thickened bile, will find a rapid relief from the use of Carlsbad Water.

Carlsbad Waters are best indicated in all cases where an excess of uric acid is found, either in the blood or urine, or as a crystalline deposit in the tissues and joints.

Uric acid as an irritant gives rise to congestions in the whole uropoetic system and occasions the formation of calculi.

As long as the kidneys are merely congested, even with albumenuria—not surpassing 1.10 per cent.; when we find under the microscope still fresh, hyaline casts, with lymph and blood corpuscles, and no deeper degeneration of kidney has taken place, so long we may hope some favorable results from the use of Carlsbad Waters.

We find also a large number of people suffering from obesity, with its known highly molesting symptoms, certainly a great loss of fat, a beneficial emaciation, will be the effect of the mineral water, connected with a suitable dietetic regimen.

GOUT is well recognized as arising from excess of uric acid in blood; this theory is supported by the FAVORABLE ACTION of the Carlsbad Waters. Dr. Lustig, of Toplitz, issued a pamphlet wherein he recognized the great efficacy of Carlsbad Waters in RHEUMATISM, both acute and chronic, when taken COLD. Some probability exists a priori of good effects from their use, and I venture, therefore, to direct your attention to this and to recommend it in cases of emergency. In conclusion, I have only to refer to the DIURETIC effects of Carlsbad Water, and need not enumerate all diseases in which it is desirable to produce a large diuresis.

The Carlsbad Sprudel Salt is a very good addition to the efficacy of the water, and the salt, in powder form, is preferred to the crystalline.

The genuine imported Carlsbad Water and Salt is exported by the City of Carlsbad, and each bottle has the seal of the city and the signature of "EISNER & MENDELSON CO.," Sole Agents for the United States, 6 Barclay Street, New York, printed on a strip of paper and pasted around the neck of every bottle.

Carlsbad Water as a Remedy in Constipation.

The treatment of habitual constipation in individuals enjoying good health, not always being as successful as desired, I decided to give the Carlsbad Waters a trial, and met with the following success:

Mrs. F., æt. 52, Russian, has been in this country for two years. She has been of a constipated habit for a number of years. She has always had sufficient exercise. Her diet is plain, including plenty of fruit. Since she has been in this country her bowels were not moved more frequently than once in seven or eight days, unless she resorted to the use of laxatives. After trying several methods of treatment, on December 20th, 1886, I ordered her to drink a gobletful of Carlsbad Sprudel Water three times a day. After drinking the water for two days, she had a natural movement. For the next two days her bowels moved every other day. Since then, once every day. On the 1st inst., by instruction she discontinued the use of the water. To-day

she tells me her bowels moved regularly every day since, and she is feeling better than she has since she came to this country.

Mrs. Y., æt. 25, married, has three children. Has been of a constipated habit since her first baby was born, four years ago. She is subject to bilious headaches. Ordered her to take a glassful of Carlsbad Sprudel Water three times a day. This treatment was pursued for one month with marked benefit. Since the first week of treatment up to the present time, covering an interval of seven weeks, she has had a natural stool every morning and has had no headache.

Mr. J. H., æt. 28, single. In the last four years has never had a movement of the bowels without taking a laxative. Has been under treatment at intervals without benefit. On one occasion twenty grains of powdered jalap and an ounce of bitartrate of potassium, only gave a slight movement. Three compound cathartic pills have little or no effect upon him. "Seidlitz powders," he says, "gave him the most relief." I advised him to take a glassful of Carlsbad Sprudel Water, four or five times a day. After drinking the water for three or four days without success, he was ordered to add a half teaspoonful of Sprudel Salz to each glass of the water and to take it three times a day. After pursuing this treatment for four days, his bowels began to move about every other day. Two weeks later, having had an evacuation every day, the salt was discontinued. The treatment covered a period of two months. It is now four weeks since he has taken any of the water and he reports himself entirely cured.

The above are only a few of the number of cases taken at random from my case-book.

In closing this paper, I shall give an extract from my article on "The Physiological Action of Carlsbad Waters," published in the *Medical Clippings and New Chemicals*, for January, 1887.

"The purgative effect of these waters is only due to their power of promoting a strong peristalsis; by this latter, the driving power of the portal vein is enforced in a high degree, and is enabled to remove existing hyperæmia of the abdominal organs."

PHILADELPHIA, 2, 14, '87.

J. B. POTSDAMER, M. D.

DIABETES.

Dr. J. Seegen, Professor of Medicine at the University of Vienna, in his celebrated work on diabetes mellitus, just published, says: Of all remedies in my large experience with this disease, and the many experiments which I, as well as such prominent men as Anger, Fleckles, Hlawezek, and others, have made, Carlsbad Water deserves to be placed in the first rank.

All of the above writers agree with me that the use of the Carlsbad Waters exerts a very beneficial influence in Diabetes. I have in the course of many years treated a very large number of patients suffering with the disease, and have, with great interest, noticed the effect of Carlsbad Water in reducing the amount of sugar. My invariable experience has been that almost without exception an improvement was marked and noticeable during and after the use of the waters, even where no strict diet was observed. For dieting Prof. Seegen recommends "Almond Bread" in preference to "Gluten Bread." The formula how to prepare the "Almond Bread" for diabetes will be mailed to any one upon applying to EISNER & MENDELSON Co., Sole Agents for the genuine imported Carlsbad Waters, No. 6 Barclay Street, New York.

CARLSBAD SPRUDEL SALT.

I shall gladly add my testimonial to your list endorsing the Carlsbad Sprudel Salts as a remedial agent. Several years ago it was brought to my notice by a lady, to which she undoubtedly owed her life. Since then I have given it particular attention, and find in it a valuable remedy, especially so in cases of paralysis, chronic constipation and dyspepsia; and a very dear friend of mine has been wholly cured of an advanced stage of diabetes. I could give you a long list of such cures, but suffice it to say that I consider Carlsbad Sprudel Salts an invaluable remedy in all affections of the stomach, bowels, liver, spleen and kidneys. I remain, very sincerely,

GEO. P. MADDEN, M. D.,

No. 8 Bancroft Block, Appleton Street, Lowell, Mass.

The Physiological Action of Carlsbad Waters.

FIRST.—Upon entering the stomach a decomposition of the alkaline salts takes place with development of free carbonic acid and recombination of the base with the lactic, butyric and acetic acids of the gastric juice. Only a small part of the new salts thus formed passes into the intestine, the rest being directly absorbed by the coats of the stomach.

SECOND.—They excite the secretion of the gastric juice.

THIRD.—If abnormal fermentation exists in the stomach, they may improve some distressing symptoms by neutralization of the acids, but they are not able to remove the cause of fermentation, on the contrary, the alkaline solution forms a fostering soil for the elements of fermentation.

FOURTH.—They produce peristalsis of the stomach and intestines.

FIFTH.—They have the property to dissolve great amounts of mucus, which, in many cases of chronic gastritis, accumulates during the night, and produces morning vomiting. By dissolving the mucus and carrying it into the intestines, they purify the stomach, and pave the way for a better digestion.

SIXTH.—The waters of Carlsbad are to be preferred to all other mineral waters where not only the neutralization of acids is required, but where also the speedy discharge of accumulated undigested food, and inordinate secretion of mucus, by the way of peristaltic motion is desirable, as, for instance, in cases of perforating ulcers of the stomach.

SEVENTH.—Alkaline waters tend to excite the *appetite* in some forms of nervous dyspepsia or rather gastroneurosis, where only the want of sense of appetite is the symptom present without other irregularities.

EIGHTH.—The purgative effect of these waters is only due to their power of promoting a strong peristalsis; by this latter, the driving power of the portal vein is enforced in a high degree, and is enabled to remove existing hyperæmia of the abdominal organs.

NINTH.—Their favorable influence upon the *secretion of bile* is mostly due to the great amount of water which is commonly drunk at watering places, by which the bile is diluted, and its passage into the duodenum much facilitated.

TENTH.—As to the easier discharge of *gall-stones* during the use of alkaline waters, a fact that is placed beyond doubt by experience, it is still questionable if it must be imputed to the properties of alkalines to keep the cholesterine in solution, or to the stronger contractions of the muscles of the gall-bladder.

ELEVENTH.—A great influence upon the *alkalinity of the blood* has been attributed for a long period to the use of alkaline water, and in connection with it, to a more perfect oxidation, and diminishing of fibrin in the blood. According, however, to the inquiries of BUCHHEIM, the excess of alkalinity in the blood is quickly eliminated by the urine, and we must seek for another cause to explain the almost wonderful effects of it in all cases of *obesity*. Surely, the enforcement of proper diet and the frequent evacuations, preventing the total absorption of the whole of the fat-forming qualities of the food, have a great share in this effect.

TWELFTH.—The efficiency of Carlsbad Waters in *diabetes mellitus* has been well established by HLAWACEK, KRAUS and others. The percentage of sugar is reduced to a minimum and the general health of the patient improves and the waters are now the recognized remedy for this malady.

THIRTEENTH.—All authors agree in the favorable effects of Carlsbad Water in *uropastic diseases*, produced by excess of *uric acid* and *phosphate of sodium* in the urine, their irritating influences upon the mucous membrane of the pelvis of the kidneys, ureters and bladder being abated by the alkaleness of the urine. Likewise the formation of *uric acid calculi in the kidneys* may be prevented, or, if present, rendered smaller, and more easily expelled by micturition, a fact that is frequently observed in the treatment of patients thus suffering.

FOURTEENTH.—The Carlsbad Waters are not diuretic. The quantity of urine passed under their influence is less than that of the absorbed waters.

FIFTEENTH.—The morning urine passed immediately after taking the waters only has an alkaline reaction: that passed later has a neutral or acid reaction.

SIXTEENTH.—The uric acid is diminished.

SEVENTEENTH.—The excretion of urea diminishes in most cases.

EIGHTEENTH.—The alkaline phosphates are more freely eliminated during the use of the waters.

—*Cincinnati Lancet and Clinic*,

J. B. POTSDAMER, M. D., Philadelphia.

Many imitations of the genuine imported Carlsbad Water and Sprudel Salt are being sold here by druggists and others in bulk, by the pound or in bottles. The genuine article is bottled under the supervision of the City of Carlsbad and has the seal of the City and the signature of "Eisner & Mendelson Co.," Sole Agents for the United States, on the neck of every bottle of the salt and water. All others are worthless imitations. The genuine is never sold in bulk.

EISNER & MENDELSON COMPANY,

Sole Agents for the United States,

6 BARCLAY STREET, NEW YORK.

Beware of Imitations, the genuine CARLSBAD MINERAL WATER and SPRUDEL SALZ has the following strip around the neck of every bottle:

None genuine without
the Signature of
Loebel Schottlaender
CARLSBAD (Austria)



None genuine without
the Signature of
Eisner & Mendelson Company
PHILADELPHIA
Sole Agents for the U.S.A.

Attested:

Ernst Knolly

Mayor of the City of Carlsbad.



Loebel Schottlaender,

SOLE LESSEE,

OF THE

CARLSBAD SPRINGS.

*Eisner & Mendelson
Company,*

SOLE AGENTS FOR THE U. S.

The Carlsbad Sprudel Lozenges

(Karlsbader Sprudel-Pastillen)

are manufactured under the supervision of the City of Carlsbad, from the powdered Sprudel Salt (Quell Salt).

They are used for acid stomach, indigestion, heart-burn, hiccough, feeling of oppression at the stomach, flatulency, etc. The dose is 2 to 4 lozenges about half an hour after every meal, or 2 to 3 times a day.