

COCAINE

— I N —

DENTAL SURGERY.



COMPLIMENTS OF

R. A. HOLLIDAY,

Dental Depot, - - ATLANTA, GA.

COCAINE.

The remarkable discovery was recently made that a solution of muriate of cocaine applied to the conjunctiva of the eye produces complete anæsthesia of that sensitive membrane; and subsequent experiments with this preparation demonstrating its apparently universal applicability as a local anæsthetic in all cases in which such an agent is indicated, has created a demand for the salts of this alkaloid which it has heretofore been difficult to supply.

It gives us great pleasure, therefore, to be able to announce that we are now prepared to supply the following salts and solutions in the packages specified:

Cocaine alkaloid	} all pure	} in 1 gramme vials.		
Cocaine hydrobromate			} in	} in 5 grain vials, or
Cocaine muriate			} crystals.	} in 10 grain vials.
Cocaine citrate, 4% solution.	Cocaine salicylate, 4% solution.			
Cocaine mur., 2% & 4% solution.	Cocaine oleate, 5% alkaloid.			
Each in one-eighth ounce vials.				

For advertisement of Improved Cocaine Cases see fourth cover page.

RANGE OF APPLICATION OF COCAINE SALTS.

In Ophthalmology, Otology, Laryngology, Gynæcology, in Genito-Urinary and Dental Surgery, in the great variety of minor surgical procedures, even in some of the major surgical operations, and in the treatment of the opium and alcohol habits, cocaine and its salts have clearly proven their inestimable utility.

PARKE, DAVIS & CO.,

Manufacturing Chemists,

DETROIT, MICH.

NEW YORK: { 60 Maiden Lane.
 } 21 Liberty St.



COCAINE IN DENTAL SURGERY.

REPORTS FROM PRIVATE AND CLINICAL
PRACTICE.

REPORT NO. I.*—Prof. W. H. Morgan, of the Dental Department, Vanderbilt University, Nashville, Tenn., on December 13th, 1884, conducted a brilliant clinic, in the presence of members of the faculty, and an enthusiastic class. The first case was an inferior wisdom tooth, overgrown with inflamed and exquisitely sensitive gum tissue. A drop of a 4-per-cent. solution of muriate of Cocaine was applied to the sensitive structure on a bit of cotton, and at the expiration of four minutes the parts were freely incised, and the patient felt no pain.

The second case was an exposed and highly inflamed tooth pulp (nerve). The anæsthetic was applied as before, and, after the lapse of $3\frac{1}{2}$ minutes, the professor thrust his instrument into and tore away a portion of the offending organ, while a pleased and gratified expression played about the patient's countenance. The professor announced that this was ordinarily one of the most painful operations in all minor surgery.

The third case was the extraction of a superior

*From the Nashville, Tenn., American.

second molar, a firmly attached tooth, though ulcerated. In this case a small rope of cotton was wound about the tooth, saturated with about two drops of a 5-per-cent. oleate of Cocaine, and brought in contact with the gums, waiting seven minutes for complete absorption. The tooth was extracted without causing the slightest pain.

The fourth and last case was an inflamed cavity, the result of rapid decay, and which could not tolerate the touch of an instrument. After five minutes application of the 5-per-cent. oleate the cutting and removal of the decayed tooth bone was accomplished without the least pain.

One could not witness the series of operations without a feeling of awe and admiration, the result seemed so like magic.

It has been contended by physicians and scientists that the new anæsthetic, hydrochlorate of Cocaine, being local in its effects, could not be used satisfactorily in the extraction of teeth without pain. Dr. J. F. Stephens made a test of this matter which proved highly successful. He extracted five teeth for a lady, and she said that, though her face was very sore from long suffering, she felt no pain whatever after the anæsthetic was applied.

REPORT No. 2.*—From reading the proceedings of the Ophthalmological Congress in Heidelberg, I was induced to procure a quantity of the above drug sufficient for making a fair test of its merits as a local anæsthetic to sensitive dentine, as well as for extracting teeth and other operations on the mouth. The solution I have is a 4-per-cent. solution. My first experiment was on a first left inferior molar

* H. E. Beach, D. D. S., in the Dental Headlight.

that had ached twice, at intervals of about ten days. The first spell there was no treatment; but the last was so severe the patient could stand it no longer. The tooth was treated with oil of cloves, and an engagement made for next day.

When the patient came, I dried the cavity and inserted a piece of cotton, saturated with the solution, and allowed it to remain ten minutes. Removed major portion of decayed dentine with but little pain. Made a second application, and allowed it to remain ten minutes; the excavation was then completed with but slight, if any pain, and the tooth filled with ox. ph. This was on the 22d of November, and there has been no trouble since.

Case 2.—A lady about 35, with extensive decay between first and second superior bicuspids on right side, with epuloid tumor filling the larger of the two cavities in second bicuspids. It was very tender to the touch, so much so that the patient said it was like sticking a knife through the brain. Made three applications; the first being very painful, the second slightly so, and the third application, there was no pain at all. In 15 minutes from first application, I removed tumor with a spoon-shaped excavator, and applied the rubber-dam, without the slightest pain. Made another application to the cavities, and excavated with but slight, if any, pain. The pulp in second bicuspids was largely exposed, but was so completely anæsthetized as to give absolutely no pain. I capped the pulp in the usual way and filled with ox. ph.

Case 3.—A lady of nervous temperament, with inflammation of peridental membrane of right inferior wisdom tooth, crown all broken down, and very sore to the touch. Gums soaked in muriate of Cocaine

for fifteen minutes and roots removed; no feeling in the gums while pressing the forceps down, but very little, if any, diminution of pain in removing roots, or after removal.

Case 4.—A lady of unusually nervous temperament, but strong will and clear discriminating powers, with second superior bicuspid distal surface extensively decayed, and exceedingly sensitive. Three applications in 15 minutes relieved all sensitiveness, and the whole operation was completed without further trouble.

REPORT NO. 3.*—I have used Cocaine twice in the extraction of teeth, and in each case the operation was for a single tooth. The preparation used was a 2-per-cent. solution. In the first case the tooth was exquisitely tender, and the gum inflamed, and so closely adherent to the tooth that it was necessary to incise it. After carefully drying the gum, a small camel's-hair brush was dipped into the solution, and the gum on either side of the tooth brushed across a few times. This was repeated twice at intervals of three minutes, making three applications in all. A few minutes later the gum lancet was used, with almost no pain at all. The tooth was then extracted with a little less pain than it could have been without the anæsthetic. The second case was similar to the first, and the solution was applied in the same manner, with two additional applications. After cleansing the incision from blood, a few drops of the solution were instilled into it, and repeated once after about three minutes. No pain attended the incision, and the tooth was extracted with considerably less pain than in the first case.

* Dr. C. H. Shears, in the New York Medical Record, Dec. 13, 1884, p. 657.

REPORT NO. 4.*—At our clinic this morning, at the Baltimore College of Dental Surgery, the oleate of Cocaine was used in five cases, as follows:

Case 1.—Extraction of an upper dead wisdom tooth—the oleate being applied to the gum around the tooth on a pellet of cotton wool for ten minutes. The tooth was extracted without difficulty, and there was absolutely no pain felt when the tooth was grasped. The beaks of the forceps were pushed well up under the gums. There was some pain at the moment of lifting the tooth from its socket. I considered the drug as a success.

Case 2.—Second inferior bicuspid, left side. A hypodermic injection of ten drops of a 4-per-cent. solution muriate Cocaine was made just over the anterior mental foramen, before the bicuspid to be removed, and the gum and the neck of the tooth painted three times with the same. There was but slight pain on extracting the tooth.

Case 3.—Two lower roots. Applied the oleate by means of cotton wool—time, ten minutes. No pain from removing anterior, but there was considerable from removal of posterior root. This was owing, in my opinion, to the fact that this root was very much decayed out, and was below the gum, which had become very much hypertrophied, and the delay in removing the prong, which was accomplished with an elevator.

Case 4.—A cavity of decay on buccal surface of right lower wisdom tooth. Extremely sensitive. The oleate was applied on pellet of cotton for ten minutes, when I prepared the cavity for filling, using dental engine with burs, also excavators. Com-

* Professor Coyle, of the Baltimore College of Dental Surgery.

plete absence of sensitiveness was the result in this case.

Case 5.—Was a case of exposed dentine, caused by excision of the gum on buccal surface of first right lower molar. Extremely sensitive to the slightest touch. The oleate was applied as in case 4. While there was not complete abrogation of pain, the patient was enabled to submit to polishing and burnishing the surface. From the result of this clinic I am disposed to believe that, in a large number of cases, Cocaine will act as a successful local anæsthetic. I propose to continue experiment in the direction of the hypodermatic application.

REPORT NO. 5.*—Regarding my experience with Cocaine in dental surgery, I would say I have used it in about thirty cases where the tooth I was working upon was so sensitive to the touch of the excavator (or dental engine), that the pain was unbearable to the patient. Drying the cavity by the means of bibulous paper and hot air, I insert one or two drops of the 4-per-cent. solution and wait four minutes; I am thus enabled, in the majority of cases, to excavate thoroughly without a particle of pain. I am unprejudiced when I say that in the majority of cases the cavities were so unfavorably situated that the saliva had the opportunity of commingling with the Cocaine, thus helping to destroy the anæsthetic effect. I firmly believe that when there is complete exclusion from moisture, and no aggravated, inflamed condition of the pulp, the dental surgeon can, with this drug, excavate and fill teeth without pain, and this alone is a great boon to suffering humanity. I

* Chas. A. Meeker, D. D. S., Secretary of the Executive Committee and Board of Examiners of the New Jersey State Dental Society.

would say that in one case of necrosis of the superior maxillary, right side, extending from the canine to the front molar, I removed the necrosed portion, including the bicuspids, without pain, applying about a quarter drachm of the 4-per-cent. solution.

In the treatment of several abscesses where the surrounding tissues were exquisitely sensitive to the touch, and highly inflamed, I have had complete success in painlessly lancing them after using the 5-per-cent. oleate of Cocaine.

REPORT No. 6.*—In my practice a 2 per-cent. solution of hydrochlorate of Cocaine has in many instances produced marked anæsthetic effects when applied to dentine; but almost as frequently it failed to produce any perceptible result. I afterwards resorted to a 10-per-cent solution with the hope of obtaining uniform results, but was entirely disappointed, and after returning to the use of a 4-per-cent. solution, have obtained better effects than I did with the 10-per-cent. solution, and about the same as were produced by the first solution used. I consider the use of Cocaine an invaluable adjunct in dental practice; it is frequently of great service in relieving pain when used as above indicated, and is, of course, much more uniform in its effects on the soft tissues of the gums, etc. It is applicable also by hypodermic injection, as has already been proved, and I do not doubt that means will be found to effect the hard dental tissues by sealing it up in carious cavities in teeth.

REPORT No. 7.†—At the semi-annual meeting of the Executive Committee and the Board of Examiners of the New Jersey State Dental Society, held January

*J. Morgan Howe, M. D., New York.

†Chas. A. Meeker, D. D. S., Secretary.

9, at the residence of the president, J. W. Scarborough, of Lambertville, N. J., a trial was made of the 4-per-cent. solution and 5-per-cent. oleate of Cocaine, and in the presence of all the members the anæsthetic effect of both preparations on the inflamed and exceedingly sensitive gum surrounding an ulcerated lower first molar, was proven by several severe tests, and after nine minutes application of the 5-per-cent. oleate of Cocaine, the forceps was easily and painlessly adjusted, although pain was felt when the tooth was extracted.

REPORT No. 8.*—The dental uses of Cocaine hydrochlorate are still the subject of experiment, and I do not wish to speak too positively of its future. But I had marked success in perhaps a dozen cases where it was applied to the exposed pulp, and I think it will become a standard application for this purpose. It is very useful in rendering the gums insensible to cutting or pressure, as in removing calculus or adapting the rubber dam. I have had no satisfactory results from its application to dentine, but now and then a little relief. On the whole, I do not think dentists will be able to dispense with this medicine.

REPORT No. 9.†—This afternoon (Jan. 29, 1885) the oleate of Cocaine, 5-per-cent., was applied to the left inferior first molar in my mouth by Brooks Rutledge, operator. The tooth had been too sensitive to excavate with any kind of an instrument for over a year. The cavity could not even be touched with a toothpick, the dentine was so very sensitive. After applying the oleate, the dental engine was used with very little pain, and the cavity

*J. Smith Dodge, Jr., 15 W. 20th, St., New York City.

†T. M. Comegys, a student in the University of Maryland, from Brownsville, Tenn.

prepared for a filling of gold, work which had been attempted twice before without my being able to tolerate it.

REPORT NO. 10.*—A young girl about 12 years of age came to my office with a large cavity in a central incisor, with the nerve pulp very badly exposed. After the coffer-dam was applied, and the cavity dried, I made an application of the 4-per cent. solution of Cocaine, and in a few minutes I was enabled to remove a portion of the nerve pulp, and fill the tooth without any pain or knowledge of the operation I had performed.

REPORT NO. 11.†—Cocaine has been used here in dental surgery, and Dr. W. Halstead has, by means of injection of a 4-per cent. solution (and even one of greater strength) with a curved point caused anæsthesia of the inferior dental nerves. Several operations have been performed without discomfort to the patient, and one dentist has filled teeth quite painlessly.

REPORT NO. 12.‡—Dr. G. W. Weld, D. D. S., believes that the best method of application of muriate of Cocaine in the operation of removing tartar from the teeth, in Rigg's disease is as follows: Wash the gums with a little dilute alcohol; then apply, by means of a camel's-hair brush, a small quantity of a ten per cent. solution of the Cocaine. Renew this once or twice, when in the course of five minutes it will be found that there is a marked numbness and diminution in the sensibility of the gums corresponding to the sides of the teeth on which the application was made. The following formula is recommended:

* Worthington Pinney, D.D.S., 72 Park Place, Newark, N. J.

† Medical News, January 3, 1885.

‡ New York Medical Record, Dec. 13, 1884, p. 657.

R Cocaini hydrochloratis..... gr. vj.
 Spiritus menthæ piperitæ..... ʒj.

An exposed nerve pulp was treated with the above solution, and partially extirpated, without causing any pain to the patient. In the preparation of an extremely sensitive tooth for filling, a *glycerite, ninety per cent.* in strength (made by dissolving crystals of Cocaine muriate in glycerine) was allowed to remain in the cavity for a period of 30 minutes. On renewing the operation, the patient stated that the pain was materially deadened. The same experiment was tried with the borate of Cocaine (Foucar's crystals), and similar results apparently obtained, but the paste was permitted to remain in the cavity of the tooth for 24 hours.

OTHER STATEMENTS.

John B. Hawes, 13 W. 32d St., New York city, has used Cocaine, 4-per-cent. solution, with good results and says he cannot get along without it.

Wm. H. Atkinson, 41 E. 9th Street, New York city, affirms that "no honest dentist can afford not to know for himself the power of Cocaine."

Carl F. W. Bödecker, 60 E. 58th St., has "derived great benefit from its application."

William Carr, 35 West 46th Street, New York City, has used Cocaine in 2-, 4- and 10-per-cent. solutions for sensitive dentine, and in nearly every case has been able to excavate without pain.

S. G. Perry, New York city, has exposed and removed three living pulps under its influence without pain, and found it of very great service in operations where the gums have to be cut or disturbed.

W. P. Horton, jr., of Cleveland, O., inserted a few drops of the 4-per-cent. solution into the cavity of a sensitive tooth, and a few minutes afterwards used the dental engine without pain.

APPENDIX.

A NEW SALT OF COCAINE.

Messrs. Parke, Davis & Co. have succeeded in producing a new salt of Cocaine—the hydrobromate—which would seem to be of greater benefit to the dental profession than any of the others, from the fact that the sedative properties of bromine tend to increase the anæsthetic effects of Cocaine, and therefore decrease the time required for anæsthetization. No experiments in dental operations with this new salt have yet been reported, but we have pleasure in appending the remarks of Drs. L. Connor, and A. B. Lyons, before the Detroit Academy of Medicine, March 31, upon its general properties:

DR. CONNOR: I have here a new salt of Cocaine which has interested me very much, and which I take especial pleasure in exhibiting as something originating in our own city. It is a compound of hydrobromic acid with the alkaloid. It is in distinct, pure white, translucent crystals, which are permanent in the air, and readily soluble in water. The solution (4-per cent.) is perfectly colorless, and neutral in reaction. I have used it in a few cases, and I find

that it not only produces the characteristic effect of Cocaine, but *that it is more prompt even in its action than the muriate, and at least equally powerful. I should judge that its effects were produced in about two-thirds the time required where a solution of the muriate is used.* It produces no irritation.

DR. LYONS: The idea of combining Cocaine with hydrobromic acid suggested itself in view of the alleged sedative action of the bromides of other bases, organic as well as inorganic. At the same time I had in mind the possibility of producing a salt more easily crystallized than the muriate. In this I succeeded beyond my expectations. The hydrobromate has a strong tendency to assume the crystalline form. The advantages of this are apparent at once. It enables one to produce, even from impure materials, a pure salt, and the crystalline form of the product is a safeguard against adulterations. I have obtained the crystals in two forms—the bold translucent prisms, such as Dr. Connor has showed you, and fine needles resembling those of morphine sulphate. When the quantity of material operated upon is small, it is easier to obtain it in these minute crystals, which are equally pure with the large ones. There is another advantage belonging to a crystallizable salt. Its solutions pass through an animal membrane by osmosis more readily than those of amorphous salt. In other words, they are more dialyzable. *I believe it is on this account that the hydrobromate exerts so prompt an effect,* as Dr. Connor states that it does. The proportion of alkaloid contained in this salt is somewhat less than that in the hydrochlorate, or muriate, as it is still generally called. The "muriate" contains $89\frac{1}{2}$ per cent. cocaine, the hydrobromate (anhydrous) 79 per-

cent., the citrate (neutral) $81\frac{1}{4}$ per-cent., the salicylate $69\frac{1}{3}$ per-cent. Much of the muriate of Cocaine that is sold is impure; crystallization appears to be the only way of getting rid of impurities which accompany the alkaloid in the process of manufacture. The hydrobromate readily frees itself from these impurities and in this respect has an advantage over the other salts of Cocaine.

REPORT ON HYDROBROMATE OF COCAINE.*—Through the courtesy of Dr. A. B. Lyons, chemist for Parke, Davis & Co., I obtained a few days since a sample of a new salt of Cocaine which he had succeeded in producing. It is a combination of hydrobromic acid with Cocaine. The appearance of the crystals, as obtained from a watery solution, is extremely fine.

The crystals are slender translucent prisms, of snowy whiteness, as large and distinct as the ordinary crystals of menthol. In this respect it is strikingly contrasted with the muriate of Cocaine, which, if crystallized at all, requires the aid of a magnifying glass to distinguish the crystals. Owing to this perfection of crystalline form, any impurities in this salt would be at once detected.

On experimenting with a 4-per-cent. solution, I found in an aggregate of some twenty-five experiments, that the hydrobromate of Cocaine acted more rapidly than any of the other salts thus far introduced. Thus after an average of one minute the cornea and conjunctiva were fully anæsthetized. In five minutes the pupils were fully dilated. The first irritation of the conjunctiva is not different from that produced by the salts already in use.

*L. Connor, M. D., in the *Detroit Lancet*, April, 1884.

In so far as could be estimated, the anæsthetic effect was greater, for the same amount of solution, than that of any of the salts formerly introduced. If farther observations shall show that this is the habitual action of hydrobromate of Cocaine, it will have decided advantages over any of the other salts.

Dr. Lyons was led to make the salt in the hope that the sedative properties of bromine would increase the anæsthetic effects of Cocaine. My observations made March 30th, March 31st, and April 1st, satisfy me that his hope has been realized.

Hydrobromate of Cocaine has all the properties of the other Cocaine salts, with such intensification of them as I have mentioned. To give each experiment in detail would be tedious, especially as each reader of this note can readily test the salt for himself. In the use of the salt, both for its anæsthetic properties and for its mydriatic power, much time is saved, an item of no small account to the busy practitioner. My observations seem to indicate that there will be an actual saving in the amount of the drug required to accomplish a definite result.

FORMULAS.

The following are among the most useful in dental surgery:

SOLUTION COCAINE HYDROCHLORATE, FOUR-PER-CENT.

℞ Cocaine hydrochlorate crystals..... 2¼ grains.
Distilled water fl ʒj.

In a similar manner 4-per-cent. solutions may be made of other salts of the alkaloid. If the solutions are to be kept any length of time, use instead of pure water a solution in distilled water, seven grains to the pint, of thymol or of salicylic acid.

OLEATE COCAINE, FIVE-PER-CENT.

℞ Cocaine alkaloid.....	2½ grains.
Oleic acid, pure	m. xx.
Almond oil	m. xl.

Dissolve the alkaloid in the oleic acid and add the almond oil.

The especial advantage of the oleate of Cocaine in dentistry, depends on the immiscibility of the preparation with aqueous fluids. It is not, therefore, diluted, nor is it liable to be washed away by the saliva.

COCAINE PASTE.

℞ Cocaine muriate, crystals.....	gr. x.
Glycerite of tragacanth.....	q. s.

Form a mass, a minute portion to be inserted into a sensitive cavity half an hour before attempting to clean.

COCAINE AND MENTHOL.

℞ Menthol.....	gr. xxx.
Cocaine hydrochlorate, crystals.....	gr. vi.
Alcohol.....	q. s. ad. fl ʒj.

Chloroform or bromide of ethyl may be advantageously substituted in this formula for the alcohol.

COCAINE AND OIL OF CLOVES.

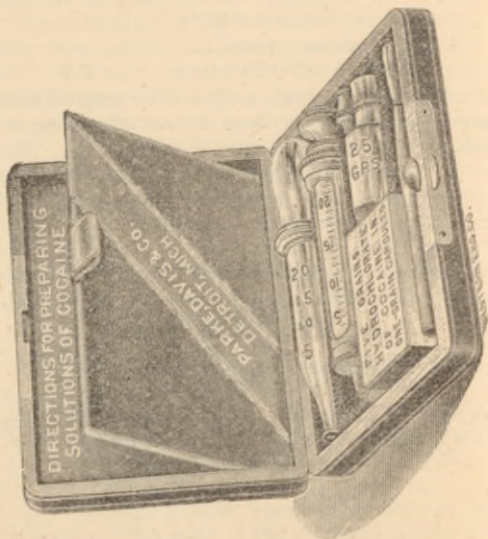
℞ Oil of cloves.....	fl ʒj.
Cocaine muriate, crystals.....	gr. xv.

A powerful analgesic. Like the last combination, this is useful for external applications in neuralgias.

PARKE, DAVIS & CO.'S

IMPROVED COCAINE CASE,

(with or without Hypodermic Syringe.)



For description and price list see fourth page of cover.

TO THE DENTAL PROFESSION.

We have pleasure in presenting herewith such notes on the application of Cocaine in dental operations as have accumulated in the brief space of time elapsed since the wonderful local anæsthetic powers of this alkaloid were first discovered. These would seem to indicate that a new analgesic of peculiar advantage to dentists is now available, without which no live, honest operator ought to be. We have, therefore, made arrangements with Messrs. Parke, Davis & Co., manufacturing chemists, of Detroit, Mich., and New York City, by which we are enabled to supply our friends with the various preparations of Cocaine, equaling in reliability and quality any manufactured in Europe, and surpassing many of the brands which the sudden demand for this alkaloid has caused to be produced in this country.

In this connection it is well to say that ERYTHROXYLON COCA, from which plant Cocaine is derived, was first introduced to the attention of the medical profession in this country by Messrs. Parke, Davis & Co., who have since made the production of their several preparations of the drug a matter of deep scientific investigation. One of the first important facts realized as the results of such investigation was that great care in the selection of the crude drug is essential to the medicinal activity of any preparation of it.

In fact, a suitable article could not be readily found in the open market, in confirmation of which statement we may quote the well-known and universally esteemed pharmacist, E. R. Squibb, who, in March, 1884, reported as follows:

"Coca leaf, of even fair quality, is also very scarce and high. The market is fairly supplied, and not at extreme prices, but the quality is so low that preparations from it would be useless."

The enterprise of Messrs. Parke, Davis & Co., however, never permitted them to be foiled in securing a supply of good quality of whatever crude drug they required, independent of the domestic markets, and, therefore, their own agents and botanists were engaged in its habitat—South America—in the collection, curing and shipment of a large supply of Coca of prime quality. This, in connection with the high talent employed in their chemical laboratory, has enabled them to produce a Cocaine, and salts and solutions thereof, which stand unrivaled for purity and strength before the world.

In selecting the preparations of this house, therefore, as the ones which we should offer our friends of the dental profession, we feel confident that we have acted in the interests of our patrons, and respectfully solicit their valued orders.

Very truly yours,

R. A. HOLLIDAY.

Dental Depot,
Atlanta, Georgia.

To the Dental Profession.

We beg leave to call your attention to the fact that we manufacture a superior quality of

CHEMICALLY PURE CHLOROFORM,

which we list in glass stoppered pound bottles, at \$1.50 per pound, net.

Your valued orders respectfully solicited.

PARKE, DAVIS & CO.,

MANUFACTURING CHEMISTS,

NEW YORK BRANCH:

60 Maiden Lane and 21 Liberty Street.

DETROIT, MICH.

BY APPOINTMENT TO HIS MAJESTY THE KING

CHEMICALS PURCHASING BOARD

REPORT OF THE

COMMISSIONERS OF THE GENERAL LAND OFFICE

IN CONNECTION WITH THE

BROMIDE OF ETHYL AND MENTHOL.

It will be noted that mention is made in the formulas upon page 15 of this pamphlet, of "menthol" and "bromide of ethyl," both of which are well known among the medical profession, and each of which is of peculiar value to the dentist.

BROMIDE OF ETHYL is a rapid, efficient and safe anæsthetic. Weidmann says that it produces anæsthesia more rapidly, recovery from its effects is more speedy, and, owing to the absence of irritating properties, patients bear it better than chloroform. It is not adapted for long operations, but is regarded as a perfect substitute for nitrous oxide in short operations—as preferable, indeed, to gas, because it does not produce the wild excitement which gas sometimes occasions.

For its administration an inhaler, consisting of a thick towel folded in the form of a small cone with closed apex, is recommended. Between the folds of the towel a sheet of paper should be placed, thus making the cone nearly air-tight. The base of the cone must be wide enough to include both mouth and nose. Into this towel cone pour one drachm of the bromide of ethyl, and immediately invert the cone over the nose and mouth of the patient, holding its edge down firmly over the face so as to completely exclude the air. As a rule, a dozen full inspirations are all that is needed to produce complete narcosis.

We shall be pleased to mail detailed information concerning this valuable anæsthetic upon application.

MENTHOL, or peppermint camphor, is a crystallizable body deposited from Chinese oil of peppermint on exposure to cold. It has a definite chemical composition, is scarcely soluble in water, but dissolves readily in alcohol, ether, and in both fixed and volatile oils. It melts at about the temperature of the body, and, when further heated, volatilizes without decomposition. It has long been used in China and Japan as a specific for headache; is also employed for relieving neuralgic pains and toothache, and makes an agreeable substitute for the ordinary smelling salts.

The **Menthol Pencil** is designed to afford a convenient and efficient method for the topical application of menthol, whose properties require it to be kept tightly enclosed to prevent rapid volatilization. It consists of a pencil of menthol, enclosed in a mahogany case, the top of which will unscrew, when the menthol is disclosed ready for application. For toothache put a piece the size of a pin-head in the cavity.

Our "Working Bulletin" on Menthol, containing detailed information, and illustrated with six fine wood-cuts, will be mailed free to any physician or dentist applying for the same.

PARKE, DAVIS & CO.

PARKE, DAVIS & CO.'S

IMPROVED COCAINE CASES.

For the convenience of the medical and dental professions, we have decided to place upon the market a complete "Cocaine case," made in the best style of workmanship and of the finest morocco, velvet lining. This case contains:

1. Five capsules, each containing exactly one grain of cocaine muriate in crystals.
2. A vial to contain a solution of cocaine muriate.
3. A graduated minim pipette.
4. A camel's hair pencil.
5. A place for holding a hypodermic syringe.
6. A card containing formulæ and directions for making 2% and 4% solutions of muriate of cocaine.

It is advisable in all cases to prepare solutions of cocaine salts fresh when they are required for use. To prepare a 4% solution, it is only necessary to empty the contents of one of the capsules into the vial, and fill to the mark with distilled water.

We furnish these cases either with or without a hypodermic syringe. Should the physician already have a hypodermic syringe, the latter case (which is provided with a place for holding it) will undoubtedly meet his requirements.

PRICE LIST.

Cocaine case, with hypodermic syringe, each, \$4 00

Cocaine case, without hypodermic syringe, each, 3 00

Terms, net.

PARKE, DAVIS & CO.,

Manufacturing Chemists,

DETROIT, MICH.

NEW YORK: { 60 Maiden Lane.
 { 21 Liberty St.