

**MEDICAL**



**COLLECTORS**



**ASSOCIATION**

**NEWSLETTER NO. 23**

**MARCH 1993**

Dear Collectors:

Once again it is time to begin to look towards the annual meeting of the Medical Collectors Association. We have reached a planning stage for the eighth meeting which will take place in New Orleans, Louisiana. Dr. Gus Colon who gave a truly enjoyable lecture at the meeting last year at the New York Academy of Medicine has graciously taken on the responsibility for the meeting in New Orleans. Preceding this newsletter are details for the meeting. We currently plan to get together for a cocktail reception at the Pharmacy Museum. The description of the Pharmacy Museum is attached to the registration form which precedes this newsletter. Following the reception at the Pharmacy Museum we will walk over to Antoinette the famous New Orleans restaurant for an evening in a private reception room which should be an ideal surrounding for some lively conversation and getting acquainted. The next morning we will have a meeting at the Windsor Court Hotel with a program that is enclosed and this followed in the afternoon by a dealer's session as has been our tradition.

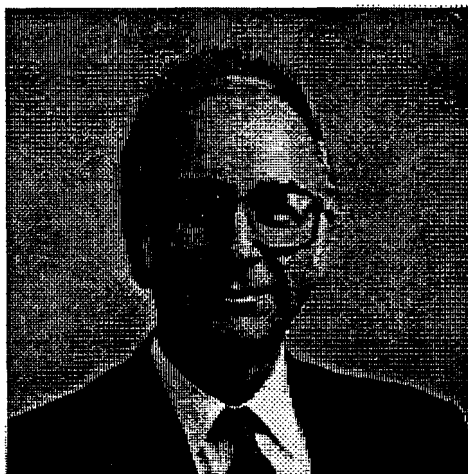
Although we have an adequate number of speakers for the meeting, anyone else with interesting material who would like to present should contact either me or Dr. Colon so that we can make the appropriate arrangements in the program. Because of a variety of problems with financing it has been necessary to raise the registration fees and the cost of the dinner this year. I hope that this will not present a problem for anyone. Even at these rates the meeting is expected to just about break even. If it does make a few dollars profit, the profit will be donated to the Pharmacy Museum.

You may recall at the time of the renewal of membership I asked people if

they were interested in having the membership list circulated. Fifty nine people responded that they would like to have the membership list circulated and twenty two responded that they were opposed. In view of the fact that there are some members who don't want the membership list given out, I've decided to deal with this by arranging with anyone who wishes to make a mailing to the membership to contact me and send me their materials. I will then handle the mailing at my office. This protects everyone's name and yet makes available to them all of the potential extra material. The first such example of this policy was a mailing in the beginning of March of a catalog from an auction which contains a number of very rare books.

I have received some interesting correspondence during the year. Dr. Douglas Johnston of Phoenix sent me a catalog which is put out by G. Godwin, Inc. This company produces reproductions of antique medical instruments. For those of you who might be interested in obtaining information about this there address is: P.O. Box 100, Valley Forge, Pennsylvania 19481, (215) 783-0670. Dr. Johnston points out that these duplicates do not look like genuine pieces but he warns that collectors should be aware that duplicates are in circulation. I myself did at one time

bid at an auction for a tooth key which looked like an eighteenth century tooth key. When I received it, it was obviously a duplicate and the dealers very graciously agreed to refund my money once I pointed this out to them. Those of you who wish to have some examples of items that they have been unable to find might consider seeking out duplicates for this purpose. Anything in my collection which is not genuine has been carefully marked so that mistakes won't happen, should it fall into other hands.



Founder : M. Donald Blaufox, M.D. Ph.D.

While we're reviewing the activities in the auction area some of you may be aware of the Civil War surgical set which was auctioned off on February 4th in Massachusetts. This was a four layer set sold by Codman and Shurtleff but with labels by Tiemann. This set belonged to Dr. Willard Clark Collins, Assistant Surgeon to the 26th main volunteers. For those of who are sitting down while you're reading this you might be interested to learn that the set went for \$8,250.00. It would appear that investment in surgical instruments is greatly exceeding the return that one gets from the stock market.

We've had just a few responses to the Can You Identify It column. I surely would like to see some more activity in this regard. Dr. Rugendorff has suggested that the item displayed in the last issue was a formosis clamp. This is the closest call we've received yet, perhaps some of you out there have some other ideas or some documentation. Also, Dr. Wilbur has decided to take issue with my discussion from the newsletter in which I suggested that many of the blown glass jars that are sold as leach jars were truly fish bowls. He has sent me some photographs which are included in this newsletter and a long defense of their use as leech jars.

Alex Peck has continued to send us interesting material. Included in this issue is a photocopy of the instructions for using Hall's affordable galvanic apparatus which Alex sent me. I have the regulating apparatus but I have never seen it complete with the case and battery cells. I wonder if anyone does have a complete outfit. Alex has also sent me an interesting patent on the oraphone and one on a scarificator. This material as well as a Civil War commission of hospital steward Conelius P. Clark and a New York University medical and surgical society certificate are included. Alex has also sent me a copy of some material from a catalog indicating where the Laennec stethoscope that I showed a couple issues ago was auctioned in France several years ago.

I have photocopied an announcement of a Workshop on Cataloging Historical Medical Artifacts which will be held in April which some of you may wish to attend. Also I want to bring to your attention that a National Museum of Civil War Medicine has been founded with Gus Dammann as Chairman of the board and Mr. John Olson as President. This museum is planned to open in 1994 and I'll keep you posted as we receive more information about it. It is going to be established at the Antietam National Battlefield Park at Sharpsburg, Maryland.

The Microscope Collectors Association of America has recently been formed and anyone interested in information about this should contact Manuel Del Cerro, M.D., Microscope Collection Association of America, 14 Tall Acres Drive, Pittsford, New York 14534.

Advertisements of a new group called Finders Keepers are included for people who wish to spread the word of their collecting interest and I have included the latest announcement (newsletter #7) of the Auction Team Koln with a listing of their forthcoming sales and some of the results from earlier sales.

If you are considering a trip to London the 14th Scientific and Medical Instrument Fair will be held at the Postman Hotel on Sunday, May 9th.

A variety of other material are included which are self explanatory.

Looking forward to seeing you in New Orleans.

Sincerely,  
M. Donald Blaufox, M.D., Ph.D.

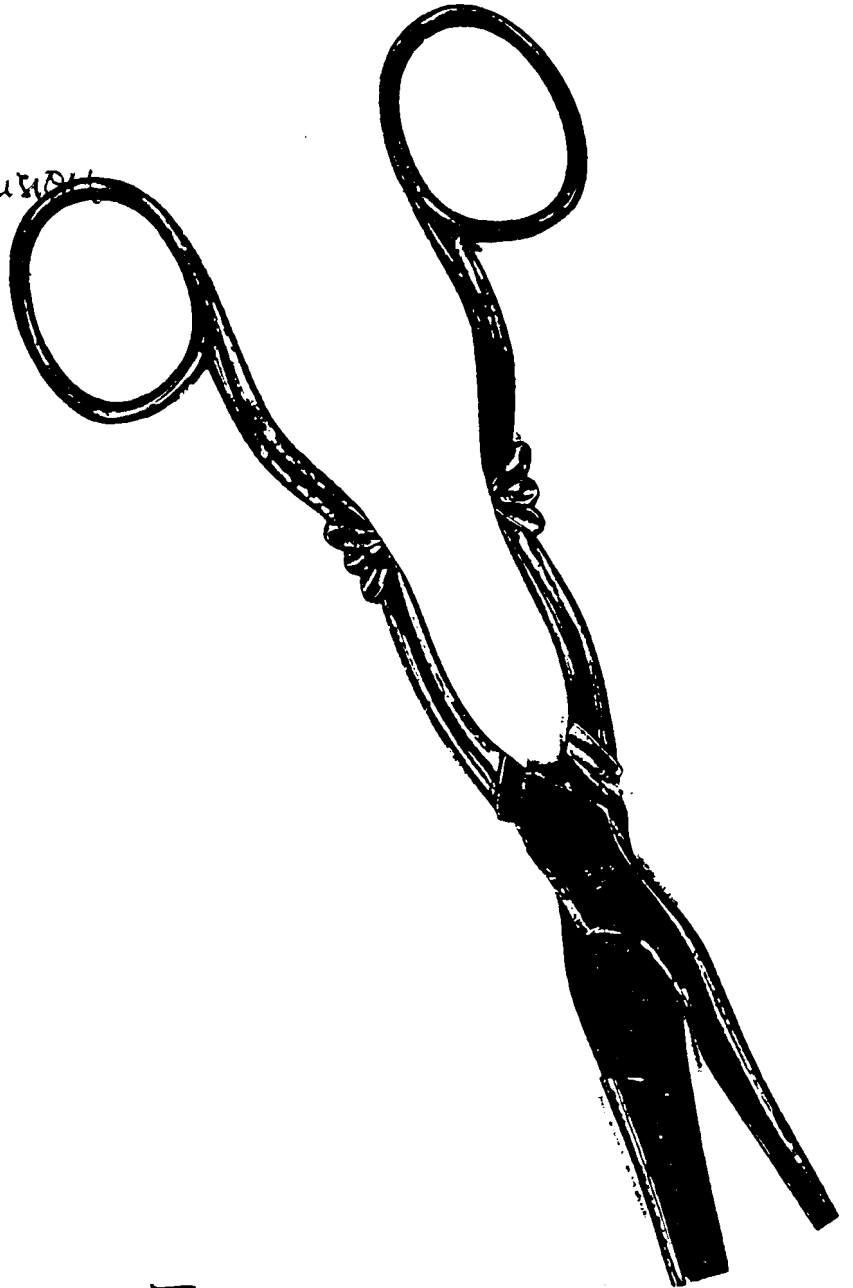
CAN YOU IDENTIFY THIS

Material:

Maker:

Presumed Use: *Circumcision*

Date: ca. 1860-1880



I think this is a: *Phimosi's Forceps*

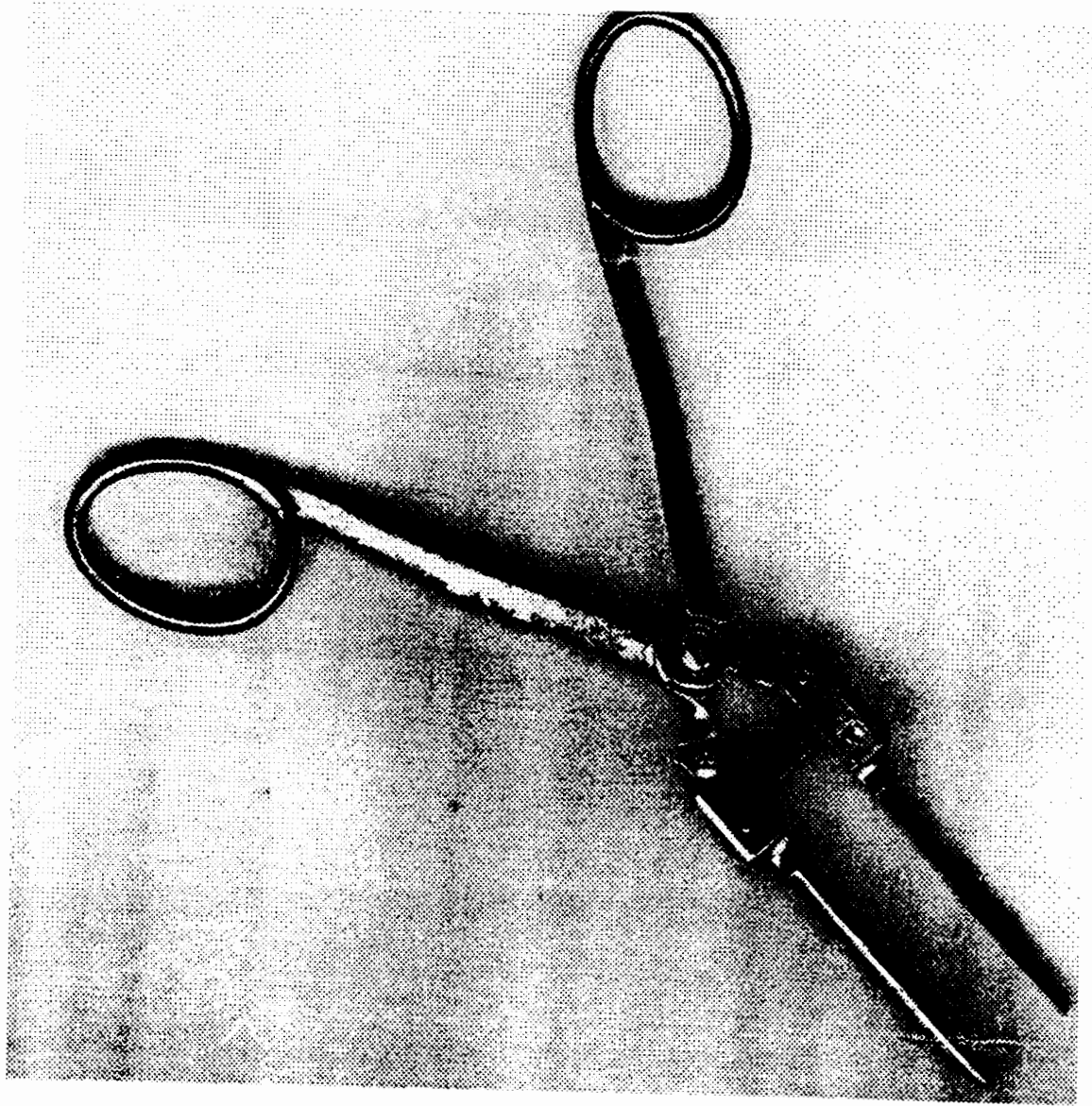
From:

Please return to M. Donald Blaufox, M.D., Ph.D.

Erwin W. Rugendorff, M.D.  
Siesmayerstrasse 6  
D - 6000 Frankfurt am Main 1  
F.R. Germany

Cohn's Rhinoscopy Forceps

{American  
(see) *Annals of the American Surgical Association*,  
Fig. 2837)

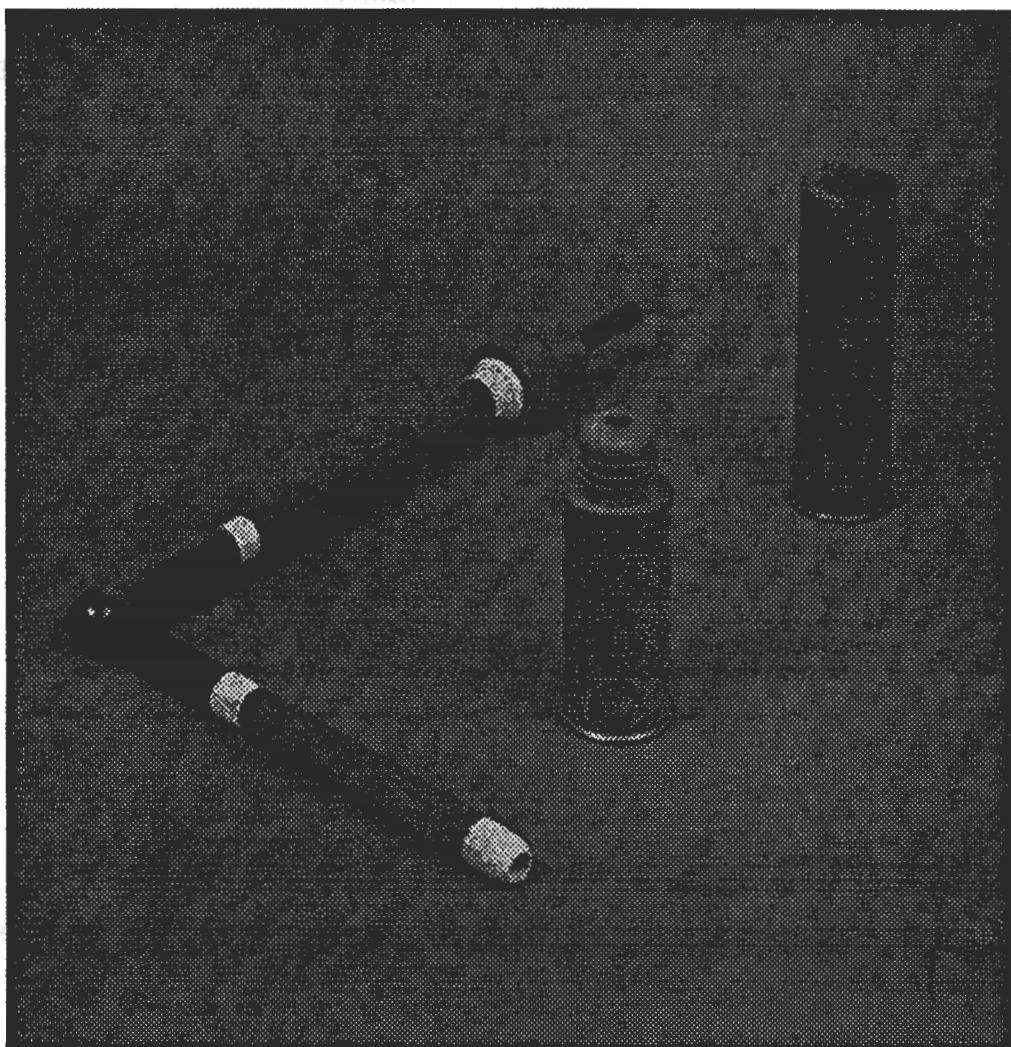


**Materials:** Fruitwood, bone and ivory

**Maker:** Unknown

**Presumed Use:** Stethoscope

**Date:** 1820-1830



**I think this is:**

**From:**

**Please return to M. Donald Blaufox, M.D., Ph.D.**

# INSTRUMENTS DE CHIRURGIE

CHIRURGIÉ GENERALE - CHIRURGIE OSSEUSE - OPHTALMOLOGIE  
GYNECOLOGIE ET OBSTETRIQUE

## LIVRES

### MEDECINE - CHIRURGIE - PSYCHIATRIE - SCIENCES

Œuvres de : Astruc - Avenbrugger - Bartholini - Bretonneau - Corvisart  
Demours - Dupuytren : lithotomie

Esquirol : Maladies mentales - Galilée - Jobert - Laennec : auscultation médicale  
Lisfranc - Magendie - Nelaton - Orfila - Pawlow - Pinel - Senac, etc.

### VOYAGES - SCIENCES

Relations et ouvrages par : Anson - Agensola - Brion - Bligh - Cook - Degrandpré  
de Flacourt - Claret de Fleurieu - Freycinet - Heude - Labat - Lacroix -  
Le Page du Pratz - Laplace : Voyage autour du monde - Moreau - Mungo Park  
Niebur - Souverat - Thunberg - Tobieson, etc.

### JULES VERNE

Important ensemble de ses œuvres en cartonnage polychrome HETZEL

### AUTOGRAPHES

Vente aux enchères publiques le :  
Lundi 8 Décembre 1980 à 14 heures  
NOUVEAU DROUOT, SALLE N° 2

Par le Ministère de :

**Jean-Alain LABAT**

Commissaire-Preneur

10, rue de la Grange-Batelière - 75009 PARIS

Tél. 824.70.18 - 824.90.54

Assisté des experts spécialisés :

Pour les instruments de chirurgie :

**M. A. BRIEUX**

48, rue Jacob, 75006 PARIS

Tél. : 260.21.99

Pour les livres :

**M. G. LEGUELTEL**

17, rue Drouot, 75009 PARIS

Tél. : 770.33.00

Pour les autographes :

**M. T. BODIN**

45, rue de l'Abbé Grégoire, 75006 PARIS

Tél. : 348.25.31

Les n° 78 et 102 sont reproduits sur la première de couverture  
et le n° 147 sur la dernière de couverture

### EXPOSITIONS :

Les instruments de chirurgie seront visibles chez M. A. BRIEUX, du jeudi  
27 novembre 1980 au jeudi 4 décembre 1980, sur rendez-vous.  
L'ensemble de la vente sera exposé le samedi 6 décembre 1980 au Nouveau  
Drouot, de 11 h à 18 h, et le lundi 8 décembre de 11 h à 12 h.

**STETHOSCOPE DU TYPE DE LAENNEC**, non signé, c. 1830, bois  
fruitier, bagues en ivoire, coude en corne.

Très bel instrument d'un type très rare se composant du stéthoscope conforme à  
celui décrit par Laennec en 1819 dans son ouvrage : « de l'auscultation médiate ». A ce  
stéthoscope (diamètre : 36 mm, longueur : 240 mm) a été adapté un tube coudé de  
225 mm pour un bras et de 220 mm pour l'autre.

(Voir la reproduction!)

# I N S T R U C T I O N S

FOR USING

## HALSE'S GALVANIC APPARATUS.

PRICE £6 : 10 : 0

First place the pots in the box, as in the sketch, and into the first pot on the left-hand side place the thin or platinized silver plate with the screw attached to it. Now take one of the double plates, and place the zinc or thick plate in the same pot, whilst the silver plate dips into the next pot: again take another double plate, and let the zinc be placed in this second pot, whilst the silver dips into the next pot. Do the same with the other double plates, and thus you will get to the fourth pot, which will now contain a silver plate only. Now take the zinc plate with the screw attached to it, and place it in this pot; and thus the four pots will be supplied with plates. We shall thus have in each

and as we commenced with a silver plate, we shall, if necessary, end with a zinc plate. The wire which is joined to the left-hand screw of the box must now be joined to the screw of the silver plate. The wire which is joined to the right-hand screw of the box must be joined to the screw of the zinc in the fourth pot. *Care must be taken that the silver and zinc do not touch each other in the pots.* (When the apparatus is correctly put together, it must have precisely the same appearance as the sketch which accompanies the apparatus: parties are therefore requested to well examine it before they commence putting the apparatus together.) The pots are now ready to receive the solution, which is made as follows:—Get one ounce, by measure, of strong sulphuric acid [oil of vitriol], and mix it well with a quart of water. Now get a lip cup, and throw the liquid into each of the pots, until they are three parts full. The box may now be shut, and the regulating apparatus placed on top of it. The next thing is to join a wire with each of the two screws of the regulating apparatus marked with a star, the other ends of which are to be united, one to the right-hand screw of the box, and the other to the left-hand screw. The steel spring will then commence vibrating. (If the steel spring should not vibrate when the apparatus is put in order, commence the vibration by touching it gently with the finger.) In order to receive the current, the wire attached to one of the handles must be inserted into the screw of the regulating apparatus marked 1, whilst the wire of the other handle must be inserted in the screw marked 2. Now bring the hand of the dial, by turning the little brass knob at the top, to the part of the dial marked "very weak," viz., to the Fig. 1. By holding one handle in each moistened hand, a very slight succession of shocks will be felt. If the hand be gradually moved forward toward 1, 2, 3, 4, &c., stronger shocks will be felt and they will gradually increase in strength until the hand arrives at the part of the dial marked "very strong," viz., to No. 19. If this power should not be strong enough, turn the

hand back again until it reaches the part marked "very weak," and then shift the wire from No. 2 screw of the regulating apparatus to No. 3 screw. If the hand be now moved forward, the power will be gradually increased. Be cautious that you do not shift the wire from No. 2 to No. 3 screw until you have placed the hand of the dial at the weakest power, as otherwise you may get severe shocks. When the hand has reached the parts marked "very weak" and "very strong," do not force the hand to move further, as it may injure the internal machinery. When the patient has been galvanized, the two wires which connect the two screws of the box with the two screws of the regulating apparatus should be taken off; or else the galvanic action con-

tinuing, the solution of sulphuric acid would quickly get exhausted. The acid solution in this pot should be renewed. (This must be particularly attended to).† Half-an-hour will be quite long enough to apply the galvanism at a time. Once or twice a week a teaspoonful of strong sulphuric acid should be well mixed with the solution of each pot; and once a month the solution of all the pots should be thrown away, and fresh made. Care must be taken that the plates are placed in the same order in the pots; that is, that there be not placed in each pot two zinc plates, or two platinized silver plates. There must be always one thick one [zinc] and one thin one [silver]. Be particular that the screws catch the wires firmly; and do not put the cotton of the wires into the holes, for metallic contact is necessary. It will be noticed that there is a piece of platina soldered on to the vibrating spring of the regulating apparatus (near the middle of it), and another piece soldered on to the bottom of the screw which comes in contact with it during the vibrations; both these pieces should be scraped bright once or twice a month. The screw with the platina point must not press too tightly on the steel spring; it must just touch it. The small screw at the side of this latter screw is for the purpose of keeping it tight, and which is necessary, otherwise the spring will not work well.

The first day I would advise the patient to apply the galvanism only to his hands, by enveloping each of the two handles in moistened doileys, and holding one in each hand. This plan will be of but little service to the patient, excepting that it will make him acquainted with the sensation, and enable him to perfectly understand how to increase or decrease the strength of the shocks. The next day it may be applied to the parts diseased,

† As some country shopkeepers keep their sulphuric acid mixed with water, the patient must be particular to ask for the strongest, otherwise the solution will be too weak. If the acid be too weak, add two ounces instead of one. Be particular to commence the first pot with a thin or silver plate, as otherwise the spring of the regulating apparatus will not work well, and the poles of the battery will be reversed. Attention to this is of great consequence.

N.B.—Should any of the pots get broken at any time, glass, or gutta-percha ones, will answer every purpose.

\* Ask for the strongest commercial sulphuric acid, about 1s. or 1s. 3d. a pint. Mix it well with the cold water by means of a bit of stick.

Should the sulphuric acid discolour the pots and turn the zinc plates black, it should not be used, as such acid is very impure.

according to the instructions on this and next page, but for only a quarter of an hour, and the power should be very weak indeed; after which it may be applied for half an hour each time, and twice a day. If the stomach be at all deranged, I would suggest that the patient refrain from wines, malt liquors, pickles, rich pastry, salt meat, meat which has been cooked a second time, fat, new bread, and strong tea or coffee. A little weak brandy, whiskey, hollands or gin and water, without sugar, will not hurt; and although I recommend the patient to refrain from salt meat, I would advise him to make use of plenty of salt with his fresh meat. After the morning's operation, the patient should, if possible, walk for half an hour or an hour in the open air. Whatever the disease may be, if the stomach be at all deranged, the galvanism should be applied once a day in the manner pointed out under the article "INDIGESTION," in the next column, as it frequently happens that derangement of the stomach is the sole cause of the disease, and it will be, in such a case, great folly to apply the galvanism locally to the painful parts, and leave the cause untouched. In galvanizing for indigestion, and many other complaints, the patient need not undress; all he will have to do will be to unbutton his collar, and the front of his shirt, and when the handles are placed flat on the spine and pit of the stomach, to button up the waistcoat and keep them firm. The handle at the spine may be placed perpendicularly; the one at the pit of the stomach horizontally across the stomach. The handles, enveloped in doileys, must be placed next the flesh; a towel may be placed between the handles and the linen to keep the latter dry. Either towelling or flannel may be used instead of doileys. The water in which the doileys are moistened may be either warm or cold, and a teaspoonful of common table-salt may be added to a pint of it. If flannel doileys are used, the shock will be much weaker than if linen doileys are used. I recommend parties to examine the sketch of the apparatus, and to read over the description on page two or three times before they commence putting the plates together.

The following is inserted for the purpose of showing to the patient the great difference between my apparatus and those small machines known by the name of the Electro-magnetic or Electro-galvanic Machines.

Every time the steel spring ceases to be connected with the bottom of the screw a shock is felt, and at the same time a large quantity of galvanism circulates through the body of the patient.

For the cure of diseases, quantity of fluid is required, as well as intensity, the one being quite useless without the other. In order to prove that there is an enormous quantity of fluid passing through the patient whilst under the influence of "Halse's Portable Galvanic Apparatus," whilst the quantity is but trifling in the Electro-galvanic or Electro-magnetic Apparatus, apply the handles to the wires of an electro-magnet (which is a bar of soft iron bent in the form of a horse-shoe, having three or four coils of covered copper wire wound round it in a peculiar manner), and it will be found that the bar of iron will not be converted into a magnet; try the same experiment with Halse's Apparatus, and the bar of iron will instantly become powerfully magnetic. The reason of this difference will be obvious when the difference in the construction of the two is pointed out. In the small Electro-magnetic Apparatus there are two coils of wire wound round the bobbin, having no connection whatever with each other, as they are insulated from each other by means of cotton. One coil is called the primary coil, the other being called the secondary coil. One wire connected with the zinc plate is now attached to the screw connected with the commencement of the primary coil, and the wire connected with the silver plate breaks contact with the other end of the primary wire; consequently, the current flows from the galvanic pair of plates back again to them, and without going through the body of the patient at all: but this current in the primary coil induces a current of great intensity in the secondary coil, the two ends of which are attached to the body of the patient, and he, consequently, receives only this induced secondary current, which current is quite useless as a remedial agent. In Halse's Apparatus there is but one coil of wire; and it is so constructed that the galvanic current, after it has circulated through the coil, is made to pass through the body of the patient before it can again return to the battery.

These facts will be sufficient to show that in Halse's Apparatus both intensity and quantity of fluid are produced; whilst in the Electro-magnetic or Electro-galvanic Apparatus, as it is sometimes called, only intensity of fluid is produced. The shocks produced by the Electro-magnetic Apparatus and by Halse's Galvanic Apparatus are so very similar as to lead parties to believe that there is no difference between them.

I will conclude by stating that I have tried those small machines in a variety of cases, and I never noticed that they were of the least service. Their only effect is to irritate the nerves without strengthening them.

WILLIAM HOOPER HALSE,

PROFESSOR OF MEDICAL GALVANISM,

Warwick Lodge, No. 40, Addison Road, Kensington, London.

N.B.—Although "Halse's Galvanic Apparatus" is so powerful for medical purposes, it is not the best calculated for experimental purposes. It is constructed entirely for medical purposes; but if the strength of the acid solution be increased by well mixing one ounce, by measure, of sulphuric acid with seven ounces of water, it will be a very powerful battery for various chemical experiments.

#### HOW TO AMALGAMATE THE ZINC PLATES.

It will be noticed that the zinc or thick plates are coated with quicksilver; the object of this is to prevent the acid solution from acting on them when the apparatus is not in use. When they again require to be amalgamated, the process is performed most easily in the following manner:—

Take one or two ounces of quicksilver; take the zinc plates out of the acid solution, and rub them (whilst wet with the acid) on the quicksilver, which will immediately adhere to them, and may be rubbed all over them either by means of the finger or a bit of sponge. Be careful that the quicksilver does not touch the thin or silver plates, as it would quickly destroy them. When air-bubbles [hydrogen gas] are seen to escape rapidly from the zinc plates, it is a sign that they require to be fresh quicksilvered. The zinc plates should always look as bright as silver; if they at any time look dark, quicksilver them.

N.B.—The better the zinc plates are kept quicksilvered or amalgamated, the better the apparatus will work; therefore do not neglect to quicksilver them. See note on next page.

#### THE METHOD OF APPLYING GALVANISM IN VARIOUS COMPLAINTS.

FOR INDIGESTION, ASTHMA, NERVOUSNESS, GENERAL WEAKNESS, and DEFICIENCY OF NERVOUS ENERGY; also TIC DOULOUREUX, and HEADACHES (for these complaints are generally caused by derangement of the digestive organs), the best way to apply the galvanism is as follows:—Get two doileys about half the size of a sheet of writing paper; damp them with warm salt and water, and wrap one round each handle so as to cover the metal. Now place the handle which is connected with No. 1 screw of the regulating apparatus just between the shoulders, next to the skin, and place the other at the pit of the stomach, also next the skin. Always commence at the weakest power, and increase the power gradually until it is felt distinctly, but not uncomfortably so. Continue the galvanism for half-an-hour at a time. Be cautious not to apply the galvanism at all painful, as, if you do, it will, most probably, irritate the whole nervous system. A person whilst under the galvanic process should be enabled to read a book or write a letter, such a gentle power being all that is necessary. It is quite impossible to point out what screw of the regulating apparatus should be used, as every patient bears it differently. What one patient would feel painfully strong, another would scarcely feel at all. About one hour after meals is a very good time to apply



the galvanism. If the weakest power is uncomfortably strong, do not put any salt in the water; or place a bit of *dry* linen outside the wet doiley.

**LIVER COMPLAINTS.**—Place the handle which is connected with No. 1 screw of the regulating apparatus between the shoulders, and place the other just below the ribs on the right side. Observe the above precautions.

**COSTIVENESS.**—Place No. 1 handle in the middle of the spine, and the other just under the navel.

**RHEUMATISM, NEURALGIA, SCIATICA, and LUMBAGO.**—I find that these complaints frequently are caused by derangement of the digestive organs; and in such cases I invariably galvanize the stomach, as for indigestion. Should, however, the stomach not be the seat of the complaint, I apply the handles to the painful parts, and thus galvanize the patient; but very gently.

**PARALYSIS.**—If the arm be paralysed, place No. 1 handle at the top of the spine, and let the patient hold the other in his hand. If the leg be paralysed, place No. 1 handle at the bottom of the spine, and tie the other up to different parts of the calf, or place the leg in warm salt and water, in which place also the handle. If all the limbs are paralysed, the legs and spine, and arms and spine, must be galvanized alternately. The handle may occasionally be drawn up and down the spine, whilst the other is drawn up and down the muscles of the paralysed limbs. The limbs should be exercised as much as possible during the day.

**STIFF JOINTS.**—Place one handle on each side of the joint, and gently keep it moving during the operation.

**DEAFNESS.**—Place No. 1 handle at the nape of the neck; tie a bit of sponge on to a short wire, and screw the other end into the other handle; moisten the sponge and introduce it into the ear.

**DULNESS OF SIGHT.**—Place one handle at the nape of the neck, and place the other on the closed eye; but be cautious and apply the galvanism very weak indeed. *If the patient feels it is*

there are many cases of deafness and blindness which arise entirely from derangement of the digestive organs; in such cases galvanize as for indigestion, and do not meddle either with the ear or eye.

In all the above cases the handles must be enveloped with the moistened doileys. I have purposely avoided using medical terms, well knowing that these instructions will get into hands quite unacquainted with such terms.

There are three handles sent with the apparatus, the use of the third one being to equalize the power of the other two; and in order to effect this, the wire of this handle is to be united to that screw of the regulating apparatus from which the shocks are felt strongest, and the handle is to be held in one or both moistened hands. For instance,—supposing, in galvanizing the spine and stomach, that the shocks are felt very distinctly in the spine, and scarcely at all in the stomach, we must then proceed as follows:—Unite the wire of this third handle to

No. 1 screw of the regulating apparatus, *with the other wire*, and hold the handle in one or both moistened hands. The shocks will then be felt less at the spine and more at the stomach. If, however, the shocks had been felt more at the stomach in the first instance, this third handle wire should have been united to the same screw of the regulating apparatus that the stomach handle is joined to. We shall thus have two handles united to one screw of the regulating apparatus, and one handle to the other screw. If the shocks are felt equally in the spine and stomach, there is not any occasion to use this third handle. The galvanism may be applied twice a day, half-an-hour each time.

WILLIAM HOOPER HALSE,

PROFESSOR OF MEDICAL GALVANISM.

40, Addison Road, Kensington.

N.B.—I have received letters from some parties desiring me to inform them what I will allow them for the apparatus after they have used it for a month or two. My reply to them has been (and as it will be to all others), *that as I do not sell second-hand apparatuses, such apparatuses are of no use to me at any price*; therefore it will be quite useless to offer them.

When the plates are worn out, I charge £1 : 5 : 0 for a new set. I do not repair the old plates.

N.B.—When the apparatus has been in action one or two days the zinc plates should be amalgamated for the first time, and then once every two or three weeks afterwards; but should there be noticed at any time a sort of boiling in either of the pots, it is a sign that the zinc plate in that pot requires to be amalgamated, which, when done, the boiling will immediately cease. This should be particularly attended to, for the better the zinc plates are kept amalgamated, the better the apparatus will work. If the acid solution be almost exhausted of its strength, it will be difficult to make the quicksilver adhere to the zinc. In such a case a pot of acid should be prepared for the purpose, consisting of one of acid to eight of water, by measure. The zinc plates can then be dipped in one after another, and

silvered. The acid solution in this pot should be thrown away. Should any of the zinc get precipitated on the silver plates, giving them a lead appearance, all that it is necessary to do is to place them in a pot of acid solution like the above, one after another (without the zinc plates) until the zinc is dissolved off, which will be known by all effervescence ceasing.

Should the apparatus at any time appear not to work well, and the cause cannot be discovered, the best plan to adopt will be to throw away all the acid solution, to amalgamate the zinc plates, and to proceed in every respect as at first. The machine will then work well.

The plates need not be removed from the acid solution oftener than once a month, unless the apparatus is used twice a day, in which case a fresh solution should be made once a fortnight; but the zinc plates should be kept well amalgamated as above. When the apparatus is put in action, the regulating apparatus should be placed on top of the box with its dial, and screws of the box, in front of the patient.

When the apparatus is in action, thousands of air-bubbles will be seen to escape from the thin plates, but not when the apparatus is not in action; all should then be perfectly still.

Be careful not to put the thin plates between the pots, nor crumple them up in the pots. If any of the thin plates should get unsoldered, any tinman can solder them on again. They must not be waxed or gummed on.

MR. HALSE

HAS REMOVED FROM

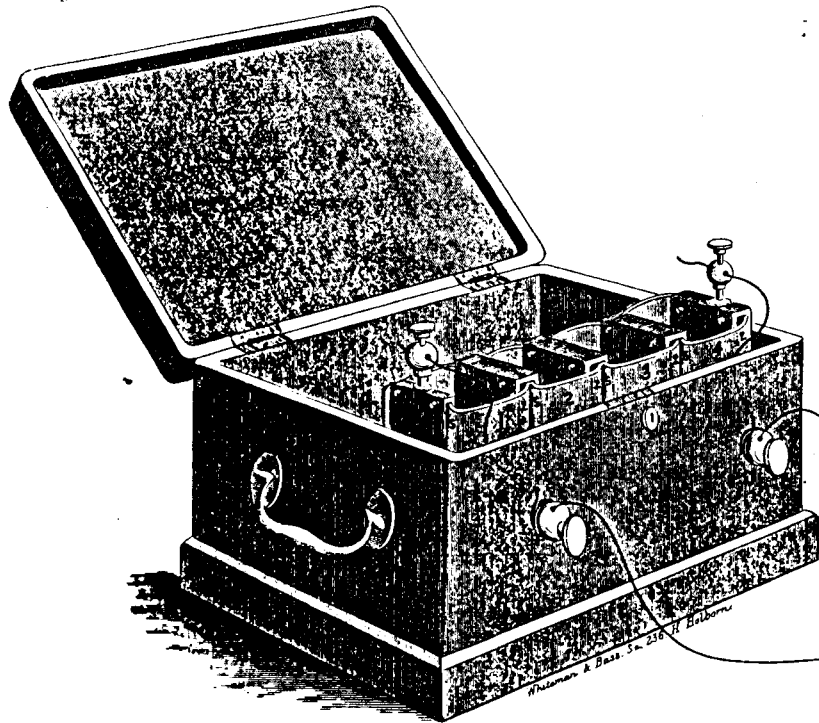
ADDISON ROAD, KENSINGTON.

TO

No. 68, TAVISTOCK CRESCENT,  
WESTBOURNE PARK LONDON.

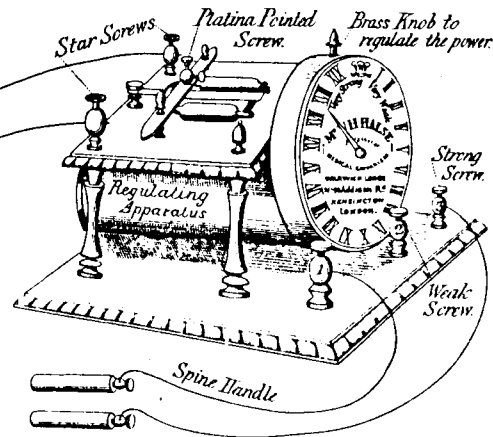
(Tavistock Crescent is close to the Westbourne Park Station.)

# SKETCH OF "HALSE'S PORTABLE GALVANIC APPARATUS," Price £ 6.10.0.



- S. Platinized Silver or Thin Plates
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Let the Points at the top of the plates all point in the same direction as marked in the Sketch. Commence the 1<sup>st</sup> pot with a thin or Silver Plate. There must be a thick plate and a thin one in each pot. Do not let the plates touch each other in the pots.



Never use Nos 1 & 3 Screws of the Regulating Apparatus if you can get power enough by using Nos 1 & 2 Screws. No 1 Screw must always be used. Screw the wires Tight.



**Societas Medica, et Chirurgica**  
*UNIVERSITATIS NOVI EBORACI.*

—◆◆◆—  
 ANNO MILLESIMO OCTINGENTESIMO SEPTIMO INSTITUTA.  
 —◆◆◆—

Omnibus, ad quos hæc literæ pervenerint, Salutem.

**Cognitum Sit,** *Nos Gubernatores Societatis testari velle*  
**JOHANNEM H. SACKETT** *Juvenem esse, moribus inculpatum, studiis*  
*diligentem, et in Scientiâ Medica, peritum, et sedulum; illumque omnia privi-*  
*legia Institutionis nostræ, merito, ac jure obtinuisse; que, dum nobiscum Consoci-*  
*avisse, non minus æstimatum studentem, quam amicum dilectum fuisse.*

*In quorum testimonium Chirographa huic affiximus.* **DATUM** in aula  
**COLLEGII MEDICI UNIVERSITATIS. *prime die mensis***

*Martis* **MDCCCIX** *Anno Domini.*

*Samuel Mearns*  
*Thomas Erasmus Hall*

**PRÆSIDES.**

*Johannes W. Francis*

**SECRETARII.**

*Guilielmus Eggesmont Russell*  
*Guillermo Therrill*

# UNITED STATES PATENT OFFICE.

JAMES A. MALONEY, OF WASHINGTON, DISTRICT OF COLUMBIA.

## AURIPHONE.

SPECIFICATION forming part of Letters Patent No. 362,099, dated May 3, 1907.

Application filed December 16, 1906. Serial No. 721,761. (No model.)

*To all whom it may concern:*

Be it known that I, JAMES A. MALONEY, a citizen of the United States, residing at Washington, in the District of Columbia, have invented a new and useful improvement in Auriphones, of which the following is a specification.

My invention relates to instruments destined for use by persons of defective hearing, which operate to collect sound-waves in greater volume than can be collected by the external ear, and to conduct the same after having been made to pass through interposed media to the tympanum of the ear. I have named such instruments "auriphones;" and my present invention has for its object the construction of an auriphone in which the medium interposed between the external air and the tympanum of the ear is a peculiarly-constructed diaphragm.

This diaphragm, by reason of its peculiar construction and the mode of mounting the same, is exceedingly sensitive to sound-vibrations which it receives in large volume, and which it conducts with the least possible diminution of force to the tympanum. In furtherance of this object I sometimes provide a means for excluding from the ear all sounds which do not pass through the auriphone, and in the preferred form of my instrument I also provide a means for locking the instrument to the ear, so as to be supported entirely by the latter. The peculiar construction of the diaphragm employed involves a novel process of making the same, and several details of construction, more or less essential to the useful application of the main features of my invention, constitute the parts of said invention. All this will more fully appear from the following description, in which reference is made to the accompanying drawings, and in which—

Figure 1 is a sectional view of one form of my improved auriphone; Fig. 2, a face view of the ear-piece employed in this form. Fig. 3 is a sectional view of a preferred form of my invention. Figs. 4 and 5 are rear and side views, respectively, of the same; and Figs. 6 and 7 illustrate the process of making my improved diaphragm.

In Figs. 1 and 2 I have shown a flaring sound-collector, A, which connects by a curved tube, B, with a case, C, in which the diaphragm D

is mounted, an ear-piece, E, with a suitable sound-opening, F, closes the case in front, and a cross wire or wires G, serving as a fender, prevent the ear from touching the diaphragm, and also protects the latter against injury from external objects.

The diaphragm D may be made of any suitable resonant material; but I prefer to make it of a thin, highly-elastic sheet of soft-rubber, which is stretched between two rings, a b, of thick paper, card-board, or other like material, one on each side of the diaphragm. I deem it important that there should be a ring on each side of the diaphragm, and that these rings be not merely attached to the diaphragm, but that the latter be in a state of tension when the rings are attached. In this manner both sides of the diaphragm, or the two opposite surfaces of the same, are under tension when the diaphragm is in place, and maintain the tension given to them proportionately during the operation of the apparatus. Figs. 6 and 7 illustrate the manner in which I secure this result.

I employ an annular block, H, of any suitable material—such as wood or metal—having a head, h, formed at its upper edge, and a groove, i, directly below the head. Upon this block I place the sheet of soft rubber, D, or other membranous body, which may be selected, and stretch the same by passing its edges tightly over the head h, and securing the turned edge or edges by a wrapping of silk or other thread, k. If bladder or other membranous substance is used in place of soft rubber, the same is moistened before it is stretched upon the block, and is then allowed to dry. I then take the two rings a b, of paper, card-board, wood, or any other suitable material, and glue or cement the same, one to each face of the membrane, as clearly shown in Fig. 7. The external diameters of the rings a b are smaller than the internal diameter of block H, and the two rings are equal as to diameter and thickness. They are both applied concentrically to the stretched membrane, as shown in Figs. 6 and 7. The glue or cement employed is now allowed to dry, and the membrane is removed from the block H. A cut with a sharp tool around the outer edge of the rings removes the finished diaphragm, which has then the

shown in Fig. 1. The whole diaphragm is then varnished to render it non-hygroscopic, or it may be varnished before it is removed from the block.

5 By the process described the diaphragm is stretched between two rings as to have both faces under very nearly equal tension, and I find that such diaphragms are specially sensitive to sound-vibrations. I ascribe this to be  
10 the fact that the fundamental notes of the two vibrating-surfaces are the same, and that there is no interference between the same.

The diaphragm constructed as above described is inserted into the case C. The external diameter of rings *a b* is smaller than the internal diameter of case C, so that there is a small space between the edges of the former and the inner side of the case, as shown. By  
15 one of its rings—*a*, for instance, by ring *a*—the diaphragm is glued or cemented to the curved portion of case C, which joins the inner cylindrical with the plane face of the same, as indicated at *x*, and in this position  
20 the diaphragm receives the impact of sound-waves through the collector A and tube B. It responds forcibly to these waves, and if the ear is applied to the ear-piece the sounds internal toward A are heard much better than if  
25 the waves were directly received through the air.

In Figs 3, 4, and 5 the sound-collector A is shown to have the form of the ear-piece in Fig. 1, while the ear-piece B in this instance consists of a short tube extending from the  
35 case C and slightly inclined to the axis of the latter. This tube is cut off at an angle, and is destined to be inserted in the ear, whereby extraneous sounds, or such as do not pass through the diaphragm, are excluded. A  
40 cam-shaped structure, *I*, is secured to the ear-piece, and when the tube is inserted into the ear and the instrument is turned about the axis of said tube or ear-piece the cam engages one of the convolutions of the external ear or pinna, preferably the concha, and is thereby  
45 locked in position. In this form of instrument the listener is not obliged to employ his hand to support the same, it being carried by the ear with great comfort.

Having fully described my invention, what I claim, and desire to secure by Letters Patent, is—

1. An auriphone consisting of a sound-collector, an ear-piece, and an elastic diaphragm interposed between the two and stretched between two rings, substantially as described.

2. An auriphone consisting of a sound-collector, an ear-piece, and a diaphragm having its two surfaces held under the same degree of tension, substantially as described.

3. In an auriphone, the combination, with a sound-collector, ear-piece, and diaphragm, of a cam secured to the ear-piece, substantially as described, for locking the auriphone to the ear.

4. In an auriphone, the combination, with a sound-collector and ear-piece, of a cam secured to the ear-piece, substantially as described, for locking the auriphone to the ear.

5. In an auriphone, the combination, with a sound-collector and ear-piece, of a diaphragm composed of elastic, non-hygroscopic material, and two rings applied concentrically upon the opposite sides of said diaphragm, as described, for holding both faces under equal tension.

6. A diaphragm for auriphones, consisting of a stretched membrane and two concentric rings cemented to said membrane, as described, for maintaining the tension of both faces.

7. The process of making diaphragms for auriphones, which consists in first stretching a membrane, and then clamping the same on both sides concentrically, substantially as described.

8. The process of making diaphragms for auriphones, which consists in first stretching both faces of a membrane, and then framing the same by concentric clamps, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JAMES A. MALONEY.

Witnesses:

JOHN C. ATHEY,  
O. M. BALL.

J. A. MALONEY.  
AURIPHONE.

No. 362,099.

Patented May 3, 1887.

Fig. 1.

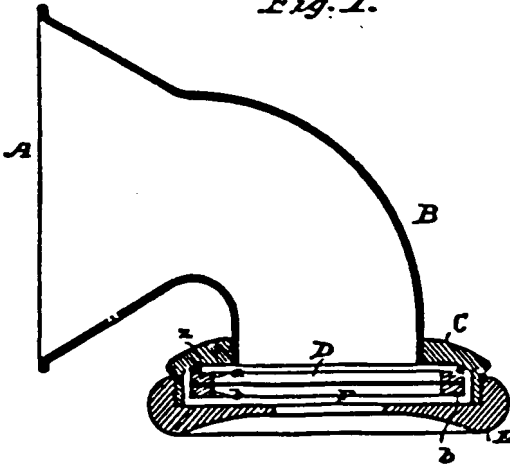
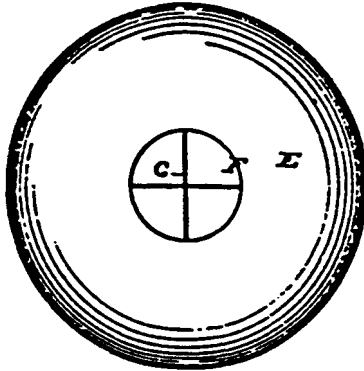


Fig. 2.



Witnesses

*T. C. Beatty*  
*A. L. Smith*

Inventor

*James A. Maloney*  
By his Attorney, *Joseph G. Long*

February 19, 1993

M. Donald Blaufox, M.D.  
1300 Morris Park Avenue  
Bronx, New York 10461

Dear Donald,

Here are the photos I promised.

In 1891, the Whitall, Tatum & Company must have had a giant surplus of leech jars on their shelves. The heyday of bloodletting had passed, and this pharmaceutical supply company sought a new use for an old standby. As we saw in a recent MCA mailing, their catalogue was advertising "fish gloves" - of all things! - among their medical and drugstore supplies. But then, Americans have always been an inventive and enterprising lot.

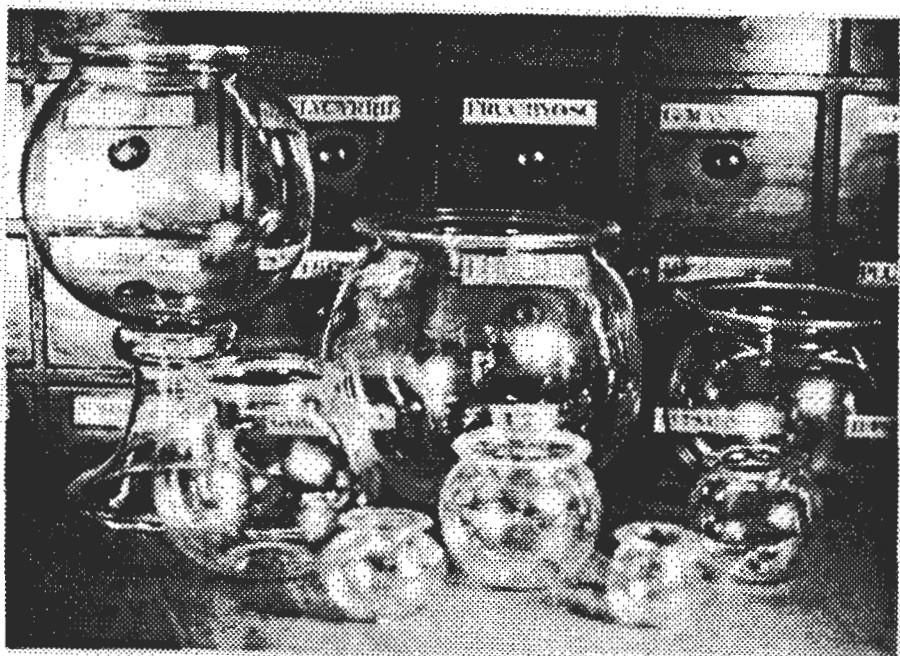
Take the case of another bloodletter that had become obsolete - the hardwood and waxy-handled, spear-headed lancets that were part of the pre-sterilization physician's surgical kit. Although some may have doubts, we believe the lancets had their reincarnation as "ink erasers" (as illustrated in an early MCA mailing).

One of the enclosed photos shows a collection of graduated blown glass leech jars ranging from  $2\frac{1}{2}$  inches to over 8 inches in diameter. Obviously only the smallest of fish would feel comfortable in nothing less than the largest of these leech containers. Perhaps the membership will correct me, but although blown glass gave way to molded glassware after 1840, I would assume that such a specialized form continued to be blown into the Civil War period. Molded glass leech jars were produced thereafter and into the early twentieth century.

The second photo shows two blown glass leech jars for transporting one or two leeches for home treatment. One is a dark green, nearly opaque container, a fortunate choice for those squeamish souls who'd rather not see the hungry critter that would soon lunch on them. The cylindrical leech applicator was also dark green to hide the leech within for localized bloodletting - say for facial hematomas. The third container, also with a flared rim for tying on a gauze covering, is of redware. Considerable effort was made to decorate the bulbous body

before being fired. It certainly is of eighteenth century origin and may well be the earliest American glass jar on record.

Sincerely yours,  
Keith Wilson







## Historical Images of the Drug Market—XXIV

by William H. Helfand

WHAT was the earliest advertisement to use science in its illustration? One candidate must certainly be this piece of promotion used by Pond's Extract in the June 6, 1874 edition of the *New York Daily Graphic*. The physician using a quill pen to write his circular "to Druggists" is its inventor, Theron D. Pond. Atop his desk are bottles, flasks, a retort, and a mortar and pestle, while an adjoining laboratory contains distillation apparatus ready to prepare a batch of Pond's Extract. A branch from a shrub of its active ingredient, witch hazel, *Hamamelis virginica*, is also visible. The physician's circular reviews his contributions to science, listing major discoveries: "Where the best shrubs grow, At what season they are most efficient,

What parts of them should be used, How these should be manipulated to produce the best results, How the product could be preserved from decomposition or change, and how to best adapt the results to General use." Yet somehow all was not well, for a snake, carrying a bottle labeled "A Marvel of Stealing" removes "Good Will" from the doctor's pocket while demons, the products of competitors, float by his desk. He concludes his circular by noting their presence, "I . . . find myself annoyed by the humming of pestiferous insects. Their stings or bites I have long been able to treat with uniform success, but their present attacks do not reach those dignities."

# Historical and phrenologic reflections on the nonmotor functions of the cerebellum: Love under the tent?

Roger M. Macklis, MD, and Jeffrey D. Macklis, MD

What is the function of the cerebellum? Since the pioneering studies of Reil, Flourens, Magendie, Brown-Séquard, and their contemporaries,<sup>1</sup> neuroanatomic analyses have emphasized the overriding importance of the cerebellum and its efferent and afferent tracts in proprioception and the integration of purposeful movement. Yet, over the last two decades, a substantial body of knowledge has begun to suggest a more subtle role for the cerebellum in behavioral patterning and as a part of a cognitive regulatory network extending to the hippocampus, septum, amygdala, and the limbic system.<sup>2,3</sup> This regulatory network may be capable of modifying various emotion-laden psychological processes such as sensory integration, aggression, and reproductive arousal.<sup>3-5</sup> Some subjects suffering from diffuse psychopathologic states such as senile dementia and autism demonstrate significant abnormalities in cerebellar morphology and histoanatomy.<sup>6,9</sup> In autism, for example, some post-mortem histopathologic and morphometric analyses have revealed gross hypoplasia within the cerebellar vermis, diffuse loss of Purkinje cells throughout the cerebellar hemispheres, and a 50% to 90% loss of Purkinje cells in the archicerebellum.<sup>6,9</sup> While these data are controversial and apparently at odds with recent correlative MRI studies performed on autistic children,<sup>10</sup> the reported histopathologic patterns are provocative and suggest that the cerebellum and its projections may be implicated in important nonmotor functions.

The hypothesis that the cerebellum is involved in emotive processing and cognitive activities is not new.<sup>5</sup> In fact, this supposition was at the center of an acrimonious dispute between the 19th-century phrenological movement and its skeptical detractors from the academic mainstream.<sup>11</sup> According to

Franz Joseph Gall (1758-1828), the peripatetic Swiss neuroanatomist, psychologist, iconoclast, and international impresario who founded phrenology some two centuries ago,<sup>12-14</sup> the motor functions of the cerebellum were entirely secondary. For Gall and his followers, the cerebellum was nothing less than the primary anatomic locus of love.<sup>13</sup>

To understand the basis of Gall's conjecture, it is necessary to appreciate the intellectual context of the phrenologic movement.<sup>13</sup> Born into an era that was heavily influenced by Rousseau and the neo-classic *Naturphilosophie* movement (which emphasized detailed comparative anatomy studies aimed at deciphering the hidden relationships between biological structure and function), Gall postulated the existence of an orderly neuronal hierarchy composed of a series of relatively autonomous intracerebral ganglia, each devoted to a certain type of thought process or activity and each capable of reciprocal reinforcement or inhibition through an interconnecting network (figure 1).<sup>13</sup> The relative importance of each type of thought process in the overall psychologic make-up of the individual could be inferred, Gall claimed, by cranioscopic examination of the indentations in the skull overlying each of these neurologic loci. A well-trained phrenologist could thus pass judgment on the character of an unknown individual either ante- or postmortem merely by taking certain key measurements of skull topography (figure 2). The cerebellum was considered the primary node in this hierarchy, and was considered the locus of sexual ("amative") love, while the overlying occipital pole and cuneus was considered the locus of maternal/paternal love for one's children and dependents ("philoprogenitive" love). The surface anatomy correlates of these centers are depicted in figure 3.

See also page 753

From the Departments of Radiation Oncology (Dr. R.M. Macklis) and Neurology (Dr. J.D. Macklis), Harvard Medical School, Children's Hospital, and Brigham and Women's Hospital, Boston, MA.

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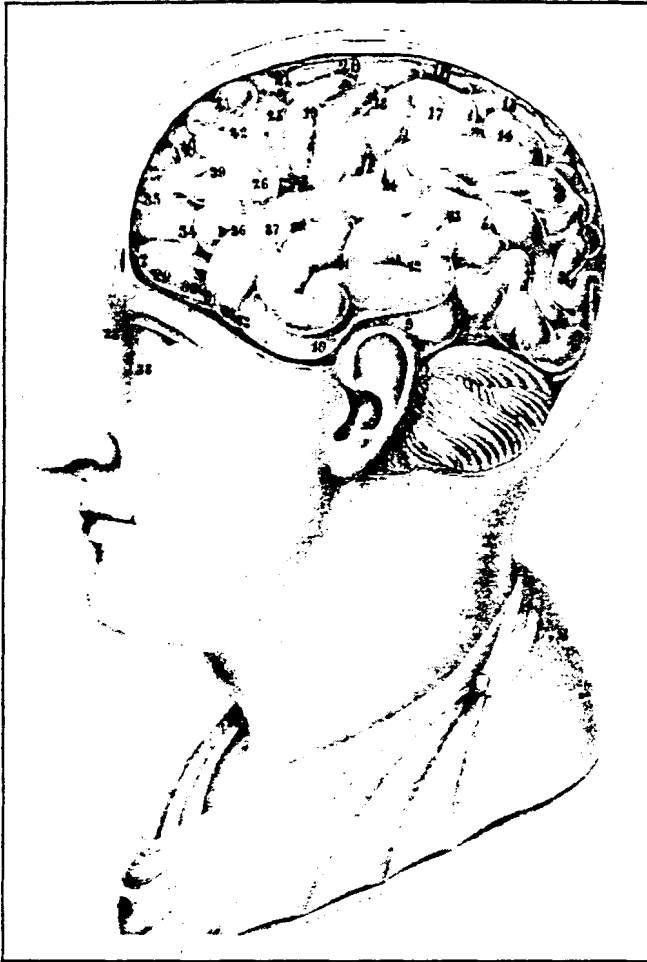


Figure 1. Phrenologic master plan (circa 1848) of the proposed neuroanatomic loci for major character traits. This diagram is an unusual version in that it attempts to pinpoint specific gyric locations for each center. The first nine "propensity" loci, all said to be located near the posterior fossa and the occipital cerebrum inferior to the parieto-occipital sulcus, were identified as follows: locus 1, amative love; locus 2, philoprogenitive love; locus 3, sociability; locus 4, monogamy; locus 5, domesticity; locus 6, concentration; locus 7, love of life; locus 8, courageousness; locus 9, destructiveness. Drawing originally prepared by Wheeler and Burleigh for lecture series by Professor L.N. Fowler (Countway Library Phrenology Collection).

The impetus for these claims apparently stemmed originally from comparative neuroanatomic animal dissection data that led Gall and his protégés to posit the existence of discrete gender-based differences in the surface anatomy of the skull and soft tissues overlying the posterior fossa region.<sup>13,15-16</sup> They drew attention to the fact that human male cerebellar dimensions were often somewhat larger than those for females and that flaring of the sub-occipital trapezius muscle at the nape of the neck (thought to indicate intense cerebellar activity) was a common male courtship gesture across many species of vertebrates.<sup>15,16</sup> Conversely, they claimed that the degree of occipital overhang at the bony inion appeared more pro-

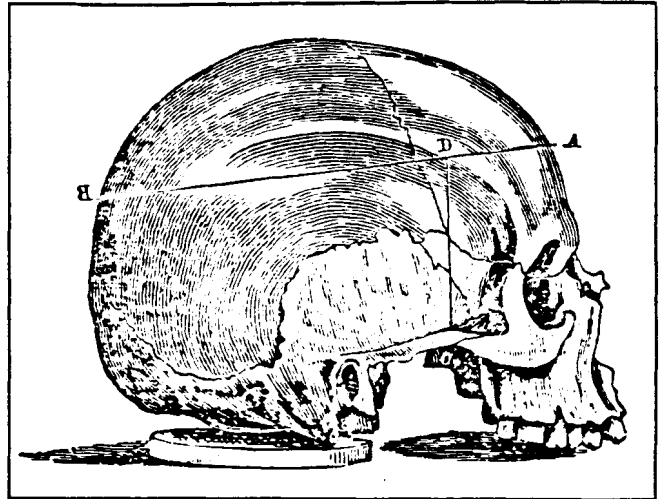


Figure 2. Phrenologic conception of skull topography with respect to the fundamental organization of the mind.<sup>18</sup> Neuroanatomic loci above line A-B supposedly include primarily "moral sentiments"; loci anterior to angle A-D-C represent pure "intellectual" faculties; below A-B and posterior to C-D (the area including the posterior fossa and surrounding structures) indicate character "propensities." The cerebellum was said to be located between the mastoid processes just deep to the "projecting spine" (external occipital protuberance) "in the middle of the transverse ridge of the occipital bone." For postmortem analyses, the posteroinferior projection of the occipital protrusion and the degree of convexity of the region between the mastoid processes and the transverse ridge of the occiput were taken as indicators of cerebellar size.

nounced in some females of certain species compared with males, especially in humans and other higher primates.<sup>15</sup> To Victorian minds, these empirical patterns appeared to correlate with the widely accepted male drive for reproductive sexual love versus the more refined female emphasis on platonic nurturing and philoprogenitive love.<sup>18-20</sup>

Predictably, these views were attacked by most 19th-century academic neurologists who had been profoundly influenced by the contemporary work of Magendie, Flourens, Cuvier, and Rolando. All of these investigators reported that small surgical lesions introduced into the cerebellum of experimental animals resulted in various degrees of ipsilateral weakness, disequilibrium, and loss of motor coordination.<sup>13,17</sup> Measured against these elegant experimental vivisections, Gall's unsubstantiated claims that the posterior fossa region was the locus of "love, philoprogenitiveness, and many other propensities and noble faculties" seemed to his skeptical critics "a collection of mere absurdities, an incoherent rhapsody [suggesting] absolute insanity, gross ignorance, or the most matchless arrogance."<sup>1</sup> Gall and his followers responded to these attacks by downplaying the significance of the animal vivisection results. They claimed that gross surgical removal of any one part of the brain produced global dysfunction and early mortality, thus making structure/function interpretations dif-

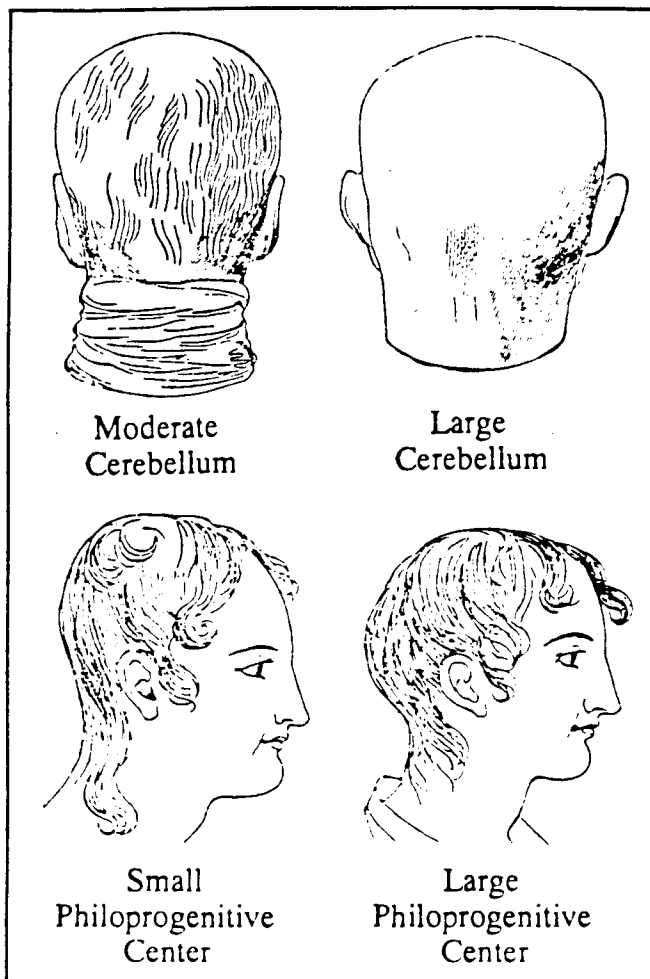


Figure 3. Illustrations of cranial topography taken from standard phrenologic texts. The size of the cerebellum (the "amative love" locus; upper drawings<sup>15</sup>) was purportedly indicated by the cranial separation at the mastoids and the thickness of the nape of the neck while the size of the occipital pole (the "philoprogenitive love" locus; lower drawings<sup>16</sup>) was purportedly indicated by the degree of posterior cranial projection at the inion above the level of C-2.

ficult.<sup>15,16,19</sup> Instead, they proposed to answer the question of cerebellar function by empiric studies correlating cranioscopic dimensions with personality traits in a large number of individuals. To this end, they collected a large series of case reports in which they either analyzed the skull shape of individuals of known psychological character or analyzed the character of individuals with unusual skull shapes. Many of these phrenologic vignettes were collected and published together with related neuroanatomic studies in a summary volume published in 1838 entitled *On the Functions of the Cerebellum*.<sup>15</sup> These anecdotes comprise an interesting mix of neuroanatomy, philosophy, and social commentary.<sup>15,16,18,19</sup>

One analysis details the case of a certain Viennese fortune teller, famous for his libidinous desires and debauches, who was found on post-mortem examination to have an amazing degree of

cerebellar convolution and hypertrophy. Another case involves a well-known society physician whose occipital ridge was said to extend below the level of the external auditory canals. He outlived three exhausted wives and was rumored to require the near-constant attention of four vigorous mistresses. Other vignettes deal with traumatic injuries to the posterior fossa region and their apparent effect on subsequent amatory function. Among these is a tragic story involving an 18-year-old French Foreign Legion soldier who was sabered in the nape of the neck during the Battle of Alexandria and who subsequently became impotent and lost all secondary sexual characteristics. Still other case histories involve craniotomy or postmortem dissection of prisoners charged with various despicable crimes. One particularly interesting section concerns the cranioscopic examination of a series of 29 women prisoners convicted of child-killing. Twenty-five were judged to have "feebly developed" philoprogenitive loci, and most were also thought to have enlarged "organs of destruction" (said to be located in the area of the mesencephalon).

Although the phrenologic movement emphasized diagnosis over therapy, some therapeutic approaches are discussed. For instance, Gall mentions the case of a young Parisian lady born to a proper family who was ceaselessly tormented by her voracious sexual drive and the social temptations of Paris.<sup>15</sup> Unable to control herself, she eventually fled to the countryside, where she lived in isolation with her mother. She was able to give up her self-imposed social exile only through the periodic application of leeches to the flesh overlying the cerebellum on the back of the head.

The neural output of the cerebellum was considered to exert a profound influence on many other centers, as well as on many end-organs.<sup>15,21,22</sup> The relationship between the neuroanatomic locus controlling a trait and the extracranial viscera responsible for carrying out that type of behavior was a question that evoked much discussion in phrenologic circles. In the case of the amatory centers, the cerebellum and external genitalia were thought to be lateralized and reciprocally activating. Thus a critical injury to the left testicle was expected to result in the gradual atrophy of the right cerebellar lobe, and vice versa.<sup>16</sup> Precocious puberty was thought to result from infantile hypertrophy of the cerebellum, while priapism accompanied by loss of consciousness was thought to be a sure sign of cerebellar stroke.<sup>15</sup> Gall was fond of discussing some of these shocking syndromes in his series of public subscription lectures given in Vienna, and he was eventually banned from public speaking by Emperor Francis I on grounds of immorality.<sup>14,16</sup> (Gall later claimed that he had always advised ladies and sensitive men to leave the room before broaching these topics.) He moved to Paris in 1807 and became a French citizen in 1819. Although Napoleon was wary of his disruptive influence and lack of respect for authority, Gall became a power-

ful force in French salon society, and was retained as a consulting physician by Stendhal, Metternich, and the staffs of 12 embassies.<sup>14</sup>

Despite the rejection of all major tenets of phrenology by the academicians of the time, the movement flourished, and its intellectual influence extended to such noted luminaries as Hegel, Bismarck, Marx, Queen Victoria, and Walt Whitman.<sup>14</sup> Phrenologists gave "skull readings" to anonymous volunteers in packed auditoriums, and amateur phrenology was a popular Victorian parlor game.<sup>14,17</sup> Analyses of cerebellar morphology and compatibility were considered by some couples to be important prenuptial checks, and popularized versions of phrenologic texts (complete with instructions and cranioscopic instruments) were widely available to the public in the United States and England.<sup>20,25</sup> The purported key to the analysis of cerebellar size by surface anatomy was the degree of protrusion of the inion backward and downward at the external occipital protuberance.<sup>16</sup>

Using the methods described in the texts, cagey lovers could perform a discreet examination of prospective partners' crania with an unobtrusive hand slung casually over the shoulder.<sup>20</sup> Using surface anatomy landmarks, the topographic location of the center for amativeness was obtained by starting at the middle of the back of the ears and drawing a line backward 1.5 inches; this gave the lateral margin of the locus. The philoprogenitive center was located topographically by drawing a line from the outer canthus to the top of the ear, and continuing this line straight back to the middle of the back of the head. The extent to which the head projected beyond the ears at that point suggested the size of the locus.<sup>25</sup>

Phrenology ultimately came to symbolize the worst aspects of pseudoscience and quackery, although much of this reputation can be traced to the popularized writings of some of Gall's less academically inclined disciples such as J.C. Spurzheim and George Combe. Though considered bombastic, Gall himself was grudgingly acknowledged by the academicians to be a skilled anatomist,<sup>11</sup> and even his arch-critic Flourens admitted that when he first saw Gall dissect a brain by "unfolding" it along its natural gyric lines, he felt as though he was "seeing the organ for the first time."<sup>14</sup> Gall's supporters were quick to point out the close anatomic correspondence between Paul Broca's description in 1861 of a locus for aphasia and Gall's earlier location of the ganglion that he claimed was responsible for word memory.<sup>14,21,22</sup>

Most of its scientific precepts had long been discredited, but pop phrenology continued to be practiced well into the 20th century. Indeed, some credit phrenology with the development of the first integrated doctrine of cerebral localization, thereby placing the mind firmly and completely within the brain.<sup>22</sup> With respect to the posterior fossa, it is clear from a 20th-century vantage point that Gall was far too categorical in his claim that this region

was primarily responsible for emotive behavior and sexual function. But newer data on the nonmotor functions of the cerebellum<sup>2-6</sup> and recent analyses of behavioral changes in humans and animals who have undergone cerebellar irradiation<sup>23,24</sup> seem to point to a widely unappreciated level of complexity in the relationship between the supra- and infratentorial structures. It has now been 200 years since Gall published his first major treatise on the philosophy of medicine, a treatise that contained the kernels of some of the central phrenologic hypotheses.<sup>12</sup> It is both entertaining and intriguing to reread the case analyses presented in the phrenologic literature in light of the new information now being accumulated on cerebral localization of sexual and emotional drives and on nonmotor aspects of cerebellar function.

### Acknowledgment

The authors wish to thank Mr. Richard Wolfe, rare books curator at the Countway Medical Library, for helpful suggestions and access to the Harvard Phrenology Collection.

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**7P**

**DR. PIERCE'S**

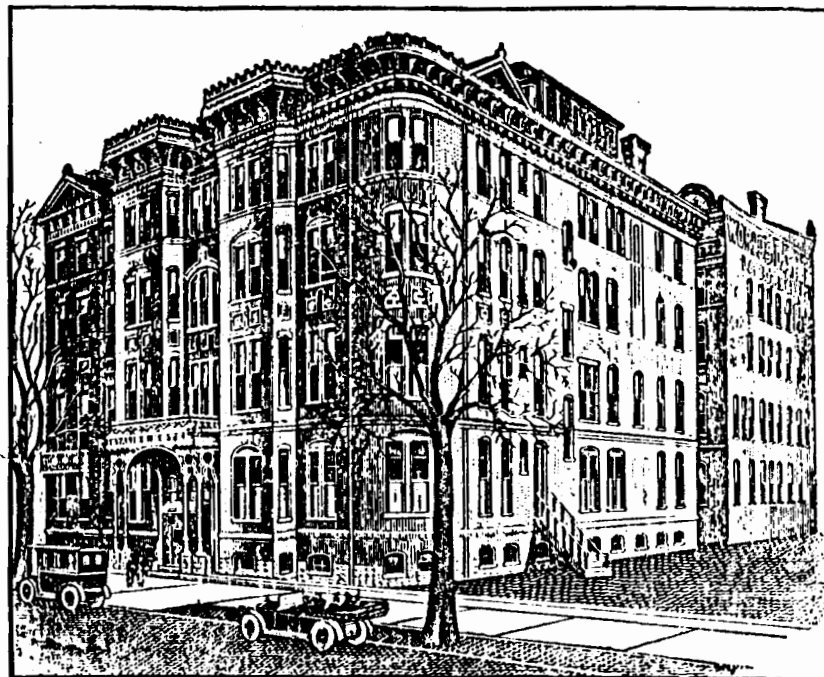
**FAVORITE PRESCRIPTION**

A Tonic  
for Men and Women

**DIRECTIONS:**  
TAKE  
**One or Two Tablets**  
or  
**One or Two Tea-Spoonfuls of the Liquid Medicine**  
IN WATER EITHER  
**BEFORE**  
OR  
**AFTER MEALS**  
AND ON  
**RETIRING**  
AT  
**NIGHT**

**Pierce's Pleasant Pellets**

**DR. PIERCE'S Favorite Prescription**



## Invalids Hotel and Surgical Institute

No. 665 Main Street, Buffalo, N. Y.

(Incorporated by Special Act of the New York Legislature)

**The Invalids Hotel is not a Hospital, but a Pleasant Remedial Home organized with a Full Staff of Physicians and Surgeons for the Treatment of all Chronic Diseases**

We have not the space to speak, individually, of the large number of professional gentlemen composing the Faculty of this old and world-famed Institution, but will say that among them are those whose long connection with the Invalids Hotel and Surgical Institute has rendered them *experts* in their several specialties. Several of them have previously distinguished themselves in private practice, and have filled responsible positions in both military and civil hospitals.

### VISIT OUR SANITARIUM

if in need of remedial treatment for any form of chronic ailment, whether requiring medical or surgical means for its relief. If you cannot come, send us a complete history of your case, or write for one of our question blanks. It is well also to send a sample of urine for our chemist's examination, for while, in many cases, no light may be thrown upon the nature of an ailment by such examination, yet, in diabetes, Bright's disease and some other affections, valuable knowledge is thereby gained for the sufferer's benefit.

We make no charge for consultation by mail. Write and describe your symptoms, sign your name *very plainly*, giving also your Street or Box number, Post-office, County and State, and our terms for treatment and all particulars will be sent you. Address

**WORLD'S DISPENSARY MEDICAL ASSOCIATION**

**DR. V. M. PIERCE, President,**

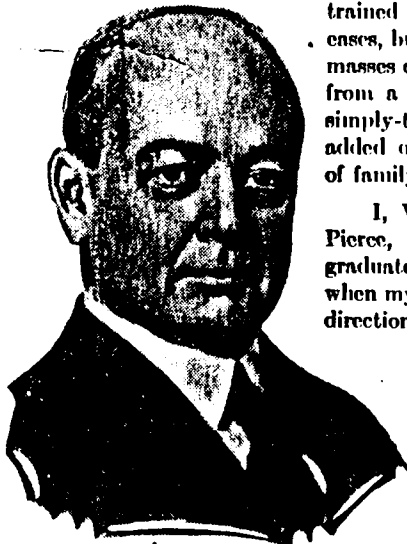
**665 Main Street**

## OVER HALF CENTURY OF SUCCESS

We have helped thousands to find better health. Is there any obstinate illness in your family? If so, I want to help YOU. My offer is backed with all the splendid facilities of the World's Dispensary Medical Association and of the Invalids Hotel in Buffalo, N. Y., a great modern scientific hospital where through years of experience in countless cases of every known disease, diagnosis and the practice of medicine and surgery have brought about relief and benefit to sufferers throughout the United States.

Everybody has heard of my father, the late Ray V. Pierce, M. D., whose Favorite Prescription and Golden Medical Discovery have been used all over this country for more than fifty years. At first Dr. Pierce practised medicine in Western Pennsylvania and his unusual ability and success were soon recognized there; then he moved to Buffalo, N. Y., dropped family practice, and established the World's Dispensary where his famous home remedies have ever since been made. He also established Dr. Pierce's Invalids Hotel and Surgical Institute, to which, for many years, sufferers from all over the United States have come, seeking the skilled, scientific treatment for which this Institute has become so famous.

By establishing this hospital, with a full staff of Specialists, surgeons, chemists and trained nurses, Dr. Pierce recognized the need of special cases, but he never lost sight of the great need of the masses of people, especially in the rural districts remote from a physician, for home remedies ready to use for simply-treated common ailments, and from time to time added other successful formulae to the Dr. Pierce line of family remedies. (See page 15.)



I, V. M. Pierce, M.D., eldest son of Dr. R. V. Pierce, brought up in this medical atmosphere, was graduated from Buffalo and Harvard Universities, and when my father died, was fully equipped to take up the direction of the World's Dispensary Medical Association and of the Invalids Hotel, and these institutions have been my life work.

As a user of Dr. Pierce's Medicine you are entitled to free medical advice.

Write the Faculty, Dr. Pierce's  
Hotel, Buffalo, N. Y., relating  
if you feel the need of advice.

charge for consultation by letter, and all correspondence is confidential.

Yours for better health,  
Dr. V. M. Pierce,  
President Invalids Hotel.

## DR. PIERCE'S FAVORITE PRESCRIPTION

### Directions for Using

Shake the liquid thoroughly, each time, before using. Cork the bottle tightly when putting it away, after each dose.

**DOSE: One or Two Tablets, or One or Two Teaspoonfuls of the Liquid Medicine, in Water, Before or After Meals.**

COMMENCE THE USE OF THE "FAVORITE PRESCRIPTION" by taking one tablet or one teaspoonful three times a day. After using it for a week, the dose should be increased to one and a half teaspoonfuls and at the end of two weeks, two teaspoonfuls, or two tablets, three times a day will be the proper dose to be continued. The preferable time for taking it is a few minutes after meals.

IF THE BOWELS ARE CONSTIPATED, it is very important that they be regulated. Small doses of Dr. Pierce's Pleasant Pellets should be used. It is of the *utmost importance* that the bowels be kept regular. From one to two "Pellets" should be taken daily, in the morning on first rising, until the bowels move once or twice each day.

KEEP THE FEET WARM AND DRY and wear loose, comfortable clothing. Frequent baths should be taken; cold baths must, however, be omitted, just previous to, and during menstrual period.

DR. PIERCE'S LOTION TABLETS, dissolved in water, may be used by women as a hygienic wash.

FULL DIRECTIONS for using the Lotion Tablets accompany each box. If your dealer does not have them in stock, send 35 cents to us and we will promptly mail a box of them to you, postpaid.

SYRINGES.—We will be pleased to send on application, price-list of several of the most approved fountain and other female syringes. We can mail them to you safely. Address, *World's Dispensary Medical Association*, 665 Main Street, Buffalo, N. Y.

### VALUABLE SUGGESTIONS FOR HEALTH

1. While you are under treatment, remember that a great deal will depend upon your cordial co-operation and intelligent endeavor to carry out instructions.
2. Eat fresh animal food three times a day, and as much other nutritious food, such as bread, crushed wheat, potatoes, rice, eggs, etc., as you can.
3. Between breakfast and the mid-day meal, the mid-day and evening meal, and upon retiring at night, drink a tumbler of milk, or a teacupful of beef tea, or of mutton or chicken broth.
4. If possible and convenient every morning upon rising, and every night upon retiring, take a sponge bath of warm water strongly impregnated with table salt, about a teacupful to an ordinary basin of water. Then rub thoroughly and briskly with a rough towel.
5. Women leading sedentary lives should, after each bath, exercise for ten minutes briskly, breathing during this time freely and as deeply as possible.
6. Endeavor to sleep for nine hours every night, and, for one hour at mid-day every day remove the outer clothing, lie quietly in bed, remain entirely without occupation, and if possible sleep.
7. During menstruation keep very quiet, and at all times avoid violent muscular exertion and fatigue.
8. Be sure that the clothing is loose.
9. Take a brisk walk out doors daily.
10. Have an action of the bowels once in every twenty-four hours. Use Doctor Pierce's Pellets to secure regularity.





**Dr. Pierce's**  
SIZE OF PELLETS.  
**Pleasant**  
**Purgative**  
**Pellets**

Are composed of *May Apple (Podophyllin), Jalap, Aloin and Extracts of Nux Vomica and Stramonium in minute quantities.* These Pellets operate without disturbance to the system, diet or occupation. Put up in glass vials. Always fresh and reliable. As a *laxative*, or gently acting *cathartic*, these little Pellets give satisfaction.

FOR A GENTLE APERIENT, OR LAXATIVE, take one or not more than two "Pellets" preferably in the morning, on an empty stomach.

FOR A GENTLE CATHARTIC, two or three are generally sufficient, if taken on an empty stomach.

FOR A VERY ACTIVE CATHARTIC, four to six may be taken in the morning on an empty stomach.

FOR A CHILD OF TWO TO FOUR YEARS, one-half of a Pellet given in a little sauce of some kind, or soft candy, will be sufficient for a laxative, or one for a mild cathartic.

FOR A CHILD OF FOUR TO EIGHT YEARS, one for a laxative or two for a cathartic will act nicely if given on an empty stomach.

KEEP THE BOWELS ACTIVE. The laws of health demand that the bowels be kept regular.

The mother should guard the health of her children. A child should be trained to eat such food as may in a natural way encourage free bowel movement, but if for any reason the bowels do not act once daily, Dr. Pierce's Pleasant Pellets may be given.

#### SIMPLE RULES TO FOLLOW

**EXERCISES.** One of the most important aids to health generally, and to correct intestinal inactivity in particular, is regular exercise, including breathing exercises.

**BE PROMPT.** Do not postpone evacuation unless you are absolutely compelled to do so. Go to stool with absolute regularity every morning soon after breakfast, because making an effort to evacuate at the same hour each morning is conducive to regular activity of the intestines.

**ROUGHAGE.** Every man, woman and child—but especially those who are troubled with constipation—should eat a certain quantity of "roughage," that is, food material which leaves a residue in the intestinal tube. Beets, carrots, squash, parsnips, turnips and raw cabbage are excellent roughage.

**CHEW FOOD.** Although no occasion exists to make one's self conspicuous by chewing and re-chewing food innumerable times, yet all food should be sufficiently masticated to enable digestion to begin in the mouth.

Dr. Pierce's Pleasant Pellets are tiny, sugar-coated granules, easy for children to take.

## Dr. Pierce's Golden Medical ("GMD")

is an alterative and vegetable tonic.

### THE MEDICINAL INGREDIENTS ARE:

BLOODROOT (*Sanguinaria Canadensis*),  
OREGON GRAPE ROOT (*Berberis Aquifolium*),  
STONE ROOT (*Collinsonia Canadensis*),  
QUEEN'S ROOT (*Stillingia Sylvatica*),  
SACRED BARK (*Rhamnus Purshiana*),  
CHERRYBARK (*Prunus Virginiana*).

For over fifty years Dr. Pierce's "GMD" in its liquid form (ingredients given above), has been favorably known. It is now put up in TABLETS also, and can be easily obtained from the World's Dispensary Laboratory in Buffalo, N. Y., if not kept by your dealer. Send 65 cents or \$1.35, and the "GMD" Tablets, in small or large bottle, will be promptly mailed—postage prepaid.

You will receive at least a quarter more medicine for \$1.35 than you did previous to 1923 for we have enlarged the bottles and contents, both liquid and tablets.

### DR. PIERCE'S GOLDEN MEDICAL ("GMD") may be taken

AS A GENERAL TONIC for the system. It is useful in many of the common forms of indigestion due to debilitated conditions.

FOR COUGHS, due to colds, take the "GMD" in small doses, frequently repeated.

If the cough be very tight, or there be dryness of the throat, frequently take a swallow of gum arabic water, mucilage of slippery-elm bark or of flaxseed tea. These mucilaginous drinks will materially aid in relieving a harsh, hacking cough, or a disagreeable, dry, sore sensation in the throat. The inhalation of steam from a strong tea of herbs, as horehound, boneset, lobelia, smart-weed, or any of these combined with hops, is a valuable auxiliary in relieving the tightness of a cough.

FOR CHILDREN, the dose of "GMD" must be regulated according to age. For a child of from one to two years old, give about thirty drops in sweetened water; from two to four years, give about forty-five drops or two-thirds of a teaspoonful; four to six years, give one-half the dose for an adult; six to twelve years, give two-thirds the dose for an adult.

DELICATE INVALIDS, or those having exceedingly sensitive stomachs, and weak, puny children, may be given the "GMD" in even smaller doses than above recommended at the commencement of treatment, and as the stomach becomes stronger, gradually increase the quantity to full doses.

IT IS IMPORTANT, that the bowels be kept free and regular—not jaded or over-worked—but a movement should be secured each day. Should the use of the "GMD" not cause the bowels to move regularly once or twice each day, do not increase the dose, but take one or two "Pleasant Pellets" each day; not to act as a cathartic, but as a slight laxative.

Should the effect of the "GMD" cause the bowels to move too frequently, the quantity taken must be reduced, and the "Pellets" omitted for a time, at least.

## Dr. Pierce's Invalids Hotel

THE paramount thought in the mind of Doctor Pierce when he had in contemplation the erection of the Invalids Hotel and Surgical Institute, was the necessity and importance of providing a home-like institution for his patients.

Hospitals at that time were not the modern institutions of today, and a private room for the person in moderate circumstances could seldom be considered. Dr. Pierce, however, designed his hotel for the man of fortune who would miss none of the comforts of his palatial home, and for the poor man that he might not only find health, but also have his pleasures multiplied many times.

There are no "wards" in the Invalids Hotel. Every patient becomes a guest as in a modern hotel, with the privacy of a separate room and the atmosphere of a real home.

Life here is pleasant. Our associates comprise a big companionable household. As our patients improve they have the freedom of the Hotel and gain a stimulus thru gradually increasing their participation in the activities of normal life. Many come here who are not long confined to their rooms and who live much as tho at a good quiet hotel while the human machinery is being investigated and set right.

We are especially careful and proud of our food service and it is our particular fad to have everything of the best. The proper nourishment of our patients is always taken into consideration.

It is true that both major and minor operations are performed by our surgeons, but always under the most favorable arrangements and conditions and with little of the atmosphere of a hospital.

The pleasant, quiet room which is provided for every patient, dispels the gloom and depression which are apt to be present in a public hospital. The close attention and kind consideration of the trained nurses who are employed in this institution, are reassuring and comforting. Homesickness is averted.

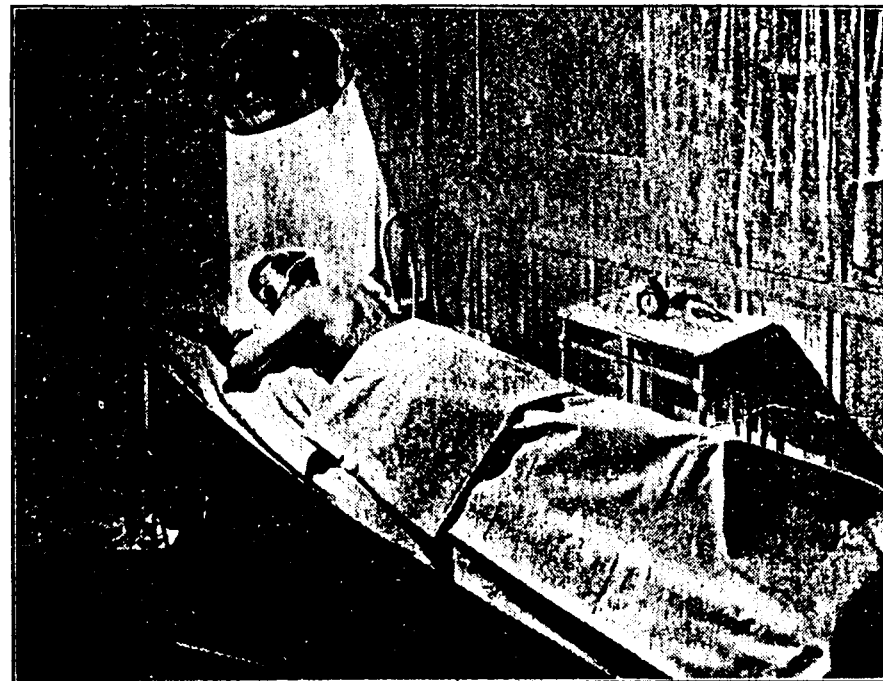
Smoking rooms are provided for the men where games and reading matter may be found with which to pass the time.

Musical entertainments are a part of a regularly established program which is directed by the matron, and moving pictures are shown frequently.

The hotel parlors which have recently been remodeled and newly furnished, are not reserved for any special purpose or function, but are at the disposal of our patients. Many gatherings there have culminated in warm and lasting friendship among those who have been the guests of the Invalids Hotel and Surgical Institute.

## The Alpine Sun Lamp

The Alpine Sun Lamp is so named because it produces effects similar to those obtained from the sun's rays in the Alps Mountains of Switzerland. For many years the Swiss doctors have used the sun's rays in successfully treating various diseases. Scientists have proved that it



is the Ultra-Violet Rays in sunlight which produce the beneficial effects. The Alpine Quartz Lamp generates a light which is very rich in the real Ultra-Violet Rays. They are more powerful than sunlight. They are used in all run-down, weakened or anemic cases, and in these they act as a general tonic. The Ultra-Violet Rays greatly improve the quality of the blood which in turn carries more nourishment to the various parts of the body. In nervous disorders they are very beneficial as they increase the calcium in the body. (This is a chemical which is usually deficient in nervous troubles.) The Alpine Lamp is also used with excellent results at the Invalids Hotel in many local conditions such as neuralgia, neuritis, sciatica and many skin diseases.

## Deep X-Ray Therapy

We have been unusually successful in treating tumors by Deep X-Ray Therapy which is not an operation, does not require cutting or anaesthesia, is painless and does not confine the patient to bed. This treatment can be given in a modern sanitarium only, which is equipped with up-to-date electrical apparatus and has experts in its use.

In treating fibroid tumors with the X-Rays, the patient simply lies on a comfortable table for the required length of time, while the X-Rays are passing into the affected portion of the body.

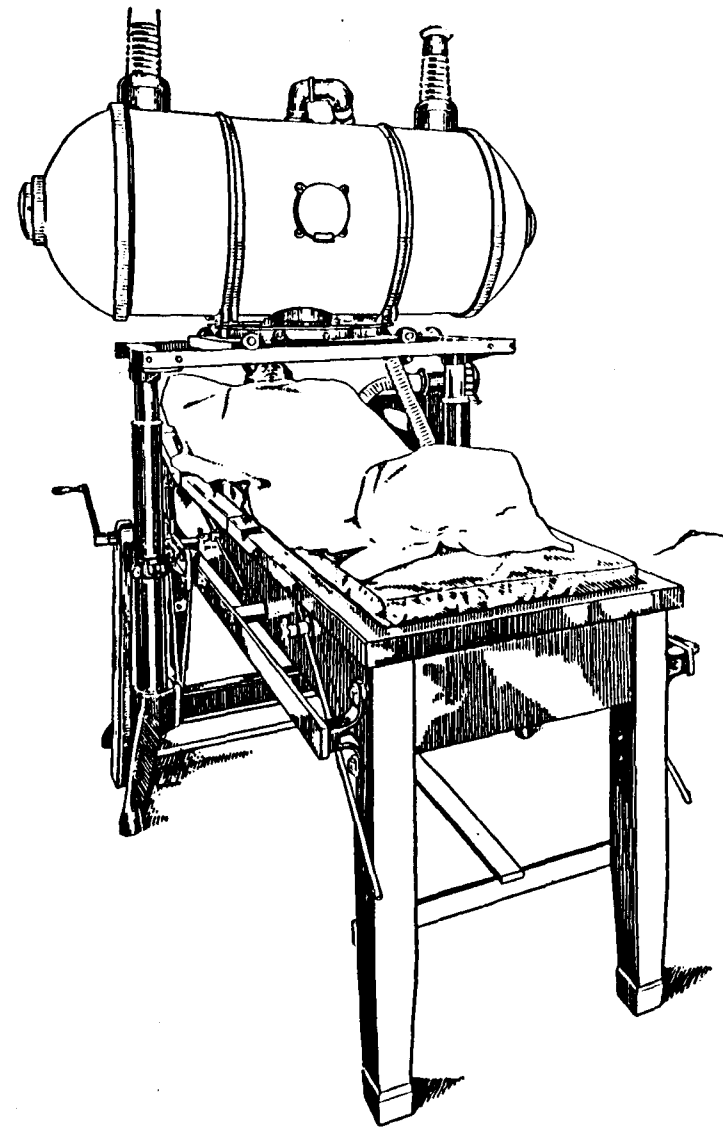
All patients are not treated alike. An examination is made, and the manner of giving the X-Ray is adapted to the peculiar requirements of the case. Some need longer and stronger treatments, others those which are shorter and more frequent. Some are treated thru one area, others thru three or four.

One complete treatment by X-Ray may be divided into two, or more, applications usually given on successive days, and may be repeated in three weeks. Generally a third application is given three weeks later, and these three constitute a full course. As there may be some systemic reaction, it is desirable to have the patient under observation between treatments. There is usually no confinement to bed. In the ordinary case the patient remains in the Invalids Hotel about sixty days.

The X-Ray has a very decided action on certain kinds of tissues. Those of the female generative organs are particularly susceptible. Thru the effects of these rays on the ovarian and uterine structures the tumor soon begins to shrink, and in a few months there is usually a marked reduction in size or maybe a complete disappearance of the growth. During this time there is usually a great improvement in the patient's health in general, as the more severe symptoms are relieved and their weakening effects on the system removed.

For terms and further information on this subject, address your letter, Doctor Pierce's Clinic at Invalids Hotel, Buffalo, N. Y.

## Deep Therapy X-Ray Outfit

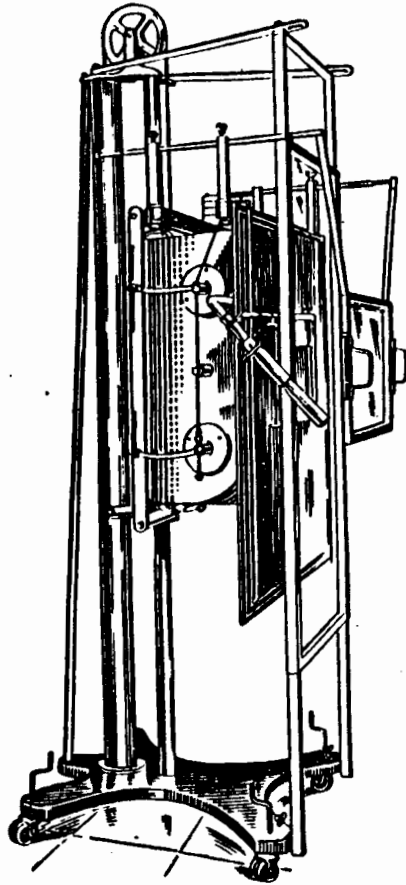


*Deep Therapy Table*

*Used in the treatment of fibroid tumors and other deep-seated growths*

## Kelly-Koett Vertical Fluoroscope

(In Use at Invalids Hotel)



This wonderful piece of X-Ray apparatus enables the operator to see the organs of the living body moving and acting.

The heart's action can be studied.

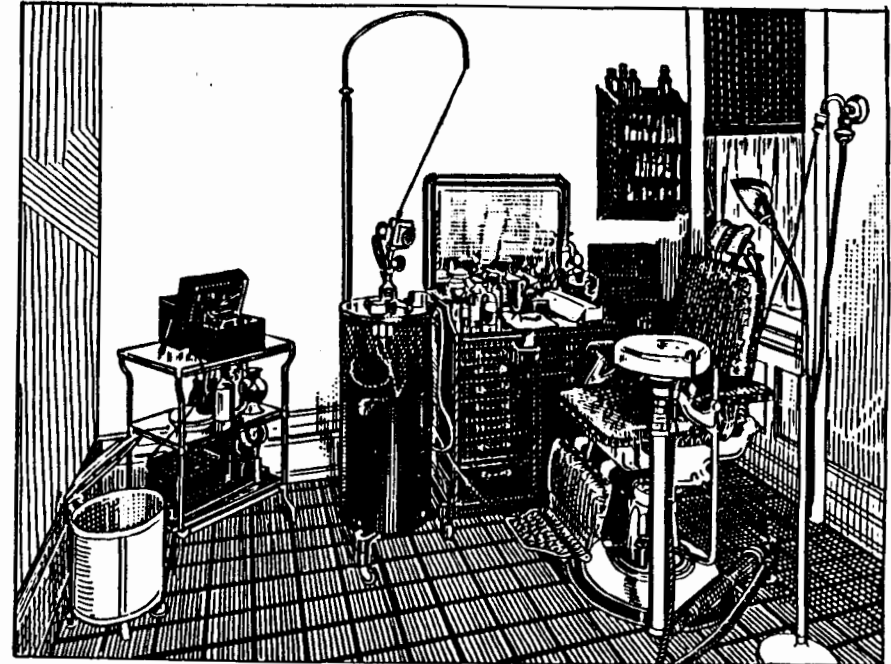
Diseases of the lungs, such as tuberculosis, can be diagnosed.

Examination of the entire digestive tract may be made and ulcer, cancer and displacements of the stomach and intestines definitely determined.

The skull, bones and joints can be studied.

## The Kromayer Lamp

(In Use at Invalids Hotel)



*Corner in Nose, Throat and Ear Department, showing new Kromayer Lamp—left center of picture.*

Here ordinary colds as well as unusual and severe cases of catarrh, acute and chronic, are successfully treated by modern methods and those conditions requiring surgical correction skilfully relieved. The new Kromayer Lamp, the latest form of application of concentrated Quartz Light therapy, is employed as well as the comparatively recent Chlorine Gas method of treatment, where indicated.

For terms and further information on this subject, address your letter, Faculty, Dr. Pierce's Invalids Hotel, Buffalo, N. Y.