

MEDICAL



COLLECTORS



ASSOCIATION

NEWSLETTER NO. 10

July 1987

Dear Colleagues:

I am pleased to inform everyone that the Association is thriving. Although a few members did not renew their participation in the Association this year, they were promptly replaced by a number of other new members. Our current membership stands at 135 and the group continues to grow in size and depth of membership.

The most important news concerns the meetings of the Association. A very successful meeting was held on Friday, May 8th at the New York Academy of Medicine. Excellent talks were given by Drs. Norman Medow, Stanley Burns, Richard Wedeen, and John D. Warren. An additional highlight of the meeting was the accompaniment to Dr. Wedeen's presentation by his wife, Robbie, who played the guitar and sang folk songs reminiscent of the patent medicine era. A total of 53 members and guests attended the meeting itself and participated in a very lively discussion. In the afternoon, 7 dealers set up tables and there was a very productive session. I, myself, was quite pleased at having the opportunity to obtain a very rare Muhamed sphygmograph and a number of other exciting acquisitions were made by the membership. That evening 23 people attended an enormously filling Chinese banquet at the Empire Szechuan Pavillion. This was a particularly delightful experience which gave everybody a chance to speak a little more, get to know each other, and exchange ideas. At the conclusion of the meeting, the Medical Collectors Association donated \$375 to the New York Academy of Medicine, which represents the proceeds from the payments for dealers tables and leftover monies from dues. This money was given to the New York Academy of Medicine with the stipulation that it be used solely towards the support of the Academy's collection of medical instruments. I hope all of you are as pleased as I am with the excellent turnout we had at this second meeting and with our opportunity for a second time in two years to donate a significant sum of money towards the support of an important medical instrument collection.

Plans have now been finalized for the next meeting of the group. Dr. Larry Vincent has very kindly agreed to host the meeting at Chapel Hill, North Carolina. The meeting will be held on Friday, May 20th, 1988, and rooms have been reserved for the 19th through the 21st, in anticipation of some associated activities. Dr. Olgierd Lindan has agreed to give one of the formal talks at that meeting. His lecture will be about medical quackery and electric cures. Any members of the Association who are interested in participating should write to Dr. Vincent at 26326 Southeast 31st Street, Issaquah, Washington 98027. We have made every effort to avoid conflict with other groups during the meeting and the Optical Society has agreed to coordinate its meeting so as not to conflict with the dates chosen. However, it is likely that in view of the great number of meetings and very varied interests of the membership, some people will find a conflict. We apologize for that but we are unable to narrow the dates down any better than has already been done. The Inn at Chapel Hill is a most charming place and I am sure everyone will be pleased with the accommodations, as well as

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

Mailing Address: M. Donald Blaufox, M.D., Ph.D. • 1300 Morris Park Avenue • Bronx, New York 10461 • (212) 904-4011

the program which Dr. Vincent is developing.

You will find three interesting enclosures with this Newsletter; one is the announcement for the Scientific and Medical Instrument Fair in London, October 25th, another is an announcement of the American History and Heritage Association, which is having a Civil War Exposition on October 9th. The Civil War Exposition promises to have a very significant component related to the history of medicine during the Civil War. The third enclosure concerns a new book by Stanley Burns, entitled "Masterpieces of Medical Photography". This book was written with Joel-Peter Witkin as a collaborator and deals with early medical photography based on photographs from the point of view of their interest as art.

I am pleased to announce the publication of a book of interest to all of us which is now available. It is entitled "Nolie Mume, M.D., 1891 to 1984" and it is written by his wife, Norma L. Mume. Dr. Mume began as a farm boy and worked his way up to become an internationally known surgeon. He had a remarkably wide diversity of interests which included medical instrument collecting and the collection of medical books. This hard cover volume is limited to 500 numbered copies and is being sold directly by Mrs. Mume at a price of \$20. Anyone wishing to obtain a copy of the biography of this most extraordinary individual should write to Mrs. Nolie Mume, 6000 Montview Boulevard, Denver, Colorado 80207. The book should be available on or around August 15th.

Another exciting new publication is Dr. C. Keith Wilbur's volume entitled "Medical Antiques". This is very beautifully illustrated with drawings by Dr. Wilbur and has just been published by the Shiffer Publishing Company, Ltd. of Exton, Pennsylvania. Persons wishing to obtain copies of this book should write directly to Dr. Wilbur at 397 Prospect Street, Northampton, Massachusetts 01060. I have received an advanced copy and can assure you that it contains some extremely interesting and useful information for anyone interested in the history of medicine and particularly to an individual involved with medical antique collecting.

A few words of explanation perhaps are in order concerning this current Newsletter. First of all, the "Can you Identify This" object from the last Newsletter has been identified both by Wynona Crossgrove and by David Coffeen. Much to our surprise, it turns out not to be an optical instrument, but rather a drafting instrument called an Opisometer. More details are to be found in the "Can You Identify" section. I have not received any new items for identification and, therefore, none are included with this issue of the Newsletter. If you have any items whose identity is a mystery to you, please be sure to contact me. Send 4" x 5" black and white photos.

Alex Peck has once again supplied us with material for the Newsletter, including a patent model and a brief article concerned with that particular object.

In addition to these items and the usual chapter by Professor Pengelley, I have included two other items which I thought would be of interest to the members.

The first is a photocopy of the BULLETIN OF THE NEW YORK ACADEMY OF MEDICINE from October 1935. That issue contains a description of an exhibition devoted to the development of the stethoscope. This is a most interesting description of the exhibition and contains many useful references and bits of material for those of you who are interested in collecting stethoscopes. Of interest is the fact that one of the figures is mislabeled. Can anybody tell me which is the mislabeled figure? I certainly hope to hear from some of you as a test of the degree of interest in reading the Newsletter.

Finally, I have included a photocopy of an article which appeared in the May issue of MD MAGAZINE and which describes medical antique collecting. This should be of interest to our group and a number of active members of the Association are mentioned in the article.

Please send me any new or interesting material that you may have. I particularly need patents and items for the "Can You Identify" column.

The formal announcement of next year's meeting will appear in the winter Newsletter.

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

WARNER'S

SAFE CURE ALMANAC

FOR 1890.

Take One

Compliments of your Druggist.



PROF. ROCHESTER N.Y. 1890
NO. 72, ST. PAUL ST.

It will pay you to carefully read the pamphlet - W.J.C.



WARNER'S
SAFE
REMEDIES
BELT THE GLOBE

SAFE CURE
WARNER'S
SAFE CURE
NONE QUALITY
BRIGHT'S DISEASE
DRINKS DISORDERS
RENAL COMPLAINTS
GRAVEL & URIC
MALARIAL
GONORRHOEA
NEURALGIA
RHEUMATISM
MIGRAINE
HEADACHE
DYSPEPSIA
INDIGESTION
CONSTIPATION
H. H. WARNER & CO.
ROCHESTER, N. Y.

COOKING RECIPES FROM

WARNER'S SAFE COOK BOOK.

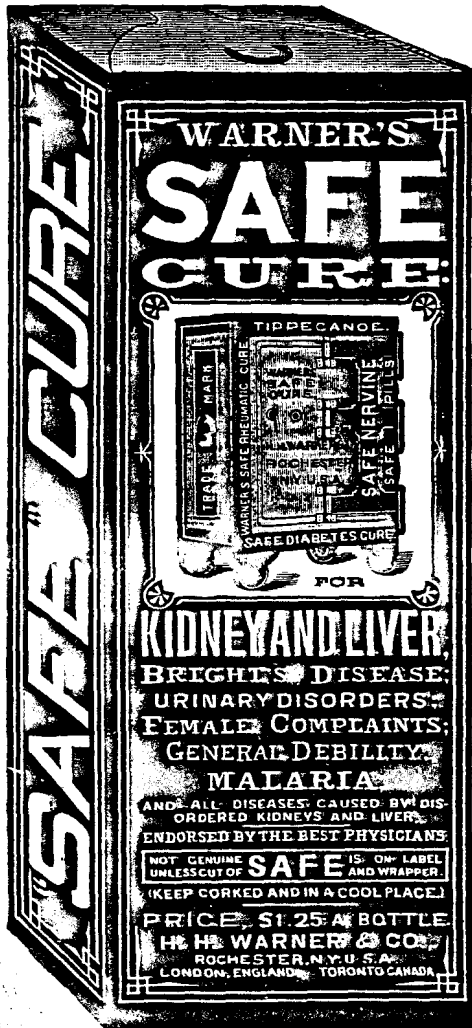


Fig. 1.

Apparent ONE-FOURTH Size Fac-Simile Views of
 "Warner's SAFE Cure" Caddy or Wrapper,
 and "Warner's SAFE Cure" Bottle.

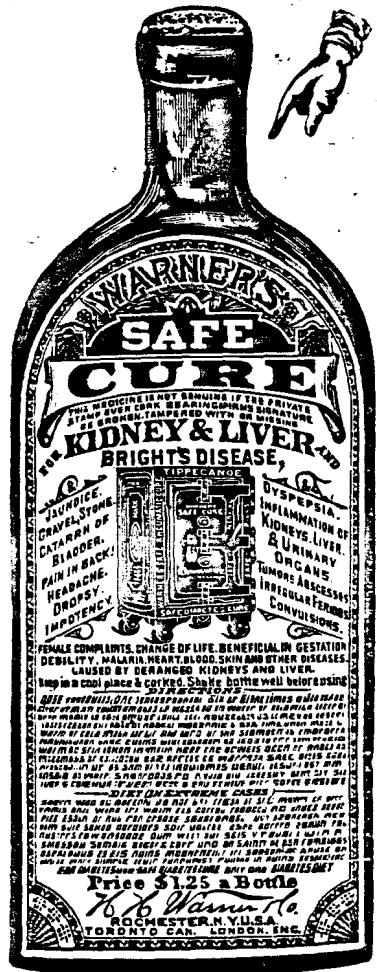


Fig. 2.

OF PARTICULAR IMPORTANCE.

Fig. 1 is an apparent One-Fourth Size Fac-Simile view of "Warner's SAFE Cure" Caddy or Wrapper.

Fig. 2 is an apparent One-Fourth Size Fac-Simile view of "Warner's SAFE Cure" Bottle, dark amber glass. The *Caution* under the Title is in *Red Ink*, the rest is *Black on White*. This bottle should have a *Perfect Private Stamp* over the *Cork* (see Fig. 4, page 2). This Stamp is chocolate-tinted (see Fac-Simile of Label, Fig. 3). If the Stamp looks as if it had been in any way tampered with, do not take the medicine, as it is probably spurious.



Fig. 3.

Under no circumstances is any Dealer authorized to remove the Stamp over the Cork of "Warner's SAFE Cure," nor is he authorized to repurchase our bottles, wrappers or boxes! If he offers to do this, we will be obliged if our patrons will report the case to us. The proceeding is Criminal, and we shall prosecute Rigorously! Take no bottle of "Warner's SAFE Cure" (or other liquid SAFE Remedies) unless it has a Chocolate-tinted Private Stamp affixed over the Cork, as shown in Fig. 4, page 2.

ALEX PECK, ANTIQUÉ SCIENTIFICA

Fine Quality
Artifacts from
the History of
Medicine and Science

P.O. BOX 710
CHARLESTON, IL
61920 USA
217/348-1009

A CIVIL WAR PATENT

Recently a large cache of documents dating from the 1850s and 60s has surfaced which belonged to Jacob Dunton, a Philadelphia apothecary, inventor, and entrepreneur. The documents record Dunton's day-to-day operations of his business, the setting-up of a household (note a receipt for a Steinway bought at \$375), and many working drawings for medical and pharmaceutical containers offered to the U.S. government during the period of the American Civil War (1861-1865).

Dunton was awarded several patents for his container designs, and one such example is found in the hoard of papers [Figs. 1 and 2]. The patent for Dunton's 'Improved Pack-Saddle' is no. 37,742, dated 24 February 1863. Early in the Civil War it became apparant that medical services and supplies needed to be as mobile as possible. With the army medical service asleep since the end of the Mexican War (1846-1848), the demands of the protracted and large scale Civil War prompted a rapid growth not only in trained surgeons, but also in medical equipment. Dunton's pack-saddle was designed to carry medical supplies over rough terrain, and it includes a special saddle and fitted cases.

Among the Dunton papers are his original pencil drawings for the saddle [Fig. 3] and cases [Fig. 4]. The cases themselves are quite ingenious as they attempt to make the most beneficial balance between allowable space, needed equipment, and the rigors of field usage. A drawing is included here [Fig. 5] showing a 'Liquid Chest' and a 'Solid Chest.' Dunton jots that the 'Liquid Chest' was to hold cans of coffee, alcohol, whiskey, chloroform, and ether, to mention but a few items. Candles, salts, sugar, mustard, dressings, etc., were to be placed in the 'Solid Chest.'

No remaining example of the 'Improved Saddle-Pack' is known to this author, though another piece of Dunton Civil War equipment has survived. It is the 'U.S.A. Hospital Knapsack, Regulation Pattern 1862,' with contents listed in a printing from the group of papers and corrected in Dunton's hand [Fig. 6] and recorded in detail in the **Medical and Surgical History** [Figs. 7 and 8]. (That monumental medical survey of the Civil War also gives mention to 'Dunton's regimental medicine wagon' [Fig. 9], well-represented in the discovered file [Fig. 10]). The knapsack itself is worthy of an article, and the Dunton papers as a group beg further attention.

UNITED STATES PATENT OFFICE.

JACOB DUNTON, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVED PACK-SADDLE.

Specification forming part of Letters Patent No. 37,742, dated February 24, 1863.

To all whom it may concern:

Be it known that I, JACOB DUNTON, of the city and county of Philadelphia, in the State of Pennsylvania, have invented a new and Improved Pack-Saddle, or Device for Securing and Supporting Burdens upon the Backs of Animals; and I do hereby declare the following to be a full and exact description of the same, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is an under or inner side view of a portion of my pack-saddle, showing the saddle-bar. Fig. 2 is a perspective view of the entire apparatus. Fig. 3 is a vertical transverse section of the same, exhibiting its position upon the back of the horse.

Similar letters of reference indicate corresponding parts in the several views.

The subject of my invention is an apparatus for conveying burdens upon the backs of horses or other animals, and consisting of two cases or panniers of rectangular or other form, connected by any suitable means, and each having attached to it a saddle bar or pad, as will be hereinafter explained.

To enable others skilled in the art to which my invention appertains to fully understand and use the same, I will proceed to describe its construction and operation.

A A' may represent two cases of any suitable form, provided with lids *a a'*, and adapted for the storage of any commodity which it may be desired to convey. The said cases are connected at their adjacent edges by hooks, hinges, or links B B', or by other suitable means.

To that side of each of the cases which comes next the horse is secured a bar or pad,

C C', projecting to a sufficient distance from the surface of the case to prevent the contact of the latter with the shoulders or hips of the animal. The space thus acquired affords room for a sack or pocket, D D', which may be secured to the case or pannier beneath the bar.

Two rectangular cases or panniers connected and supported in this manner afford convenience for the placing of a third case, A², in the angle formed by the upper sides of the first two. The links B B', projecting a little above the angle between the lower cases, secure the upper one against longitudinal displacement, and it may be further held by straps E E'.

Having thus described my invention, what I claim therein as new, and desire to secure by Letters Patent, is—

1. A pack-saddle consisting of two disconnected bars or pads, C C', attached, respectively, to two cases or panniers, A A', connected together by any suitable means, substantially as herein described, and for the purposes set forth.

2. The combination of the two panniers or cases A A', connecting links B B', and upper case, A², when the whole are constructed and arranged in the manner herein shown and described, so that the connecting-links of the lower cases shall serve to prevent longitudinal displacement of the upper one, as explained.

3. The pockets D D' in the described combination with the cases or panniers A A' and bars C C', for the purposes explained.

JACOB DUNTON.

Witnesses:

OCTAVIUS KNIGHT,
JOHN S. HOLLINGSHEAD.

J. Dunton,

Improved Pack

Riding Saddle,

N^o 37,742.

Patented Feb. 24, 1863.

Fig. 3.

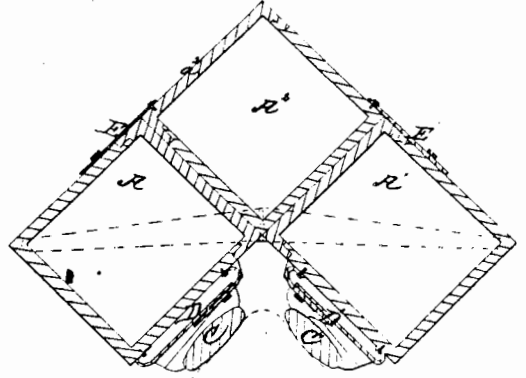
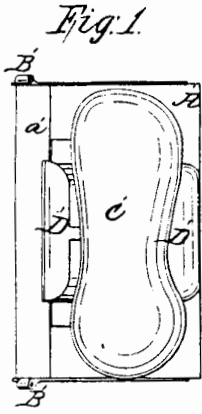
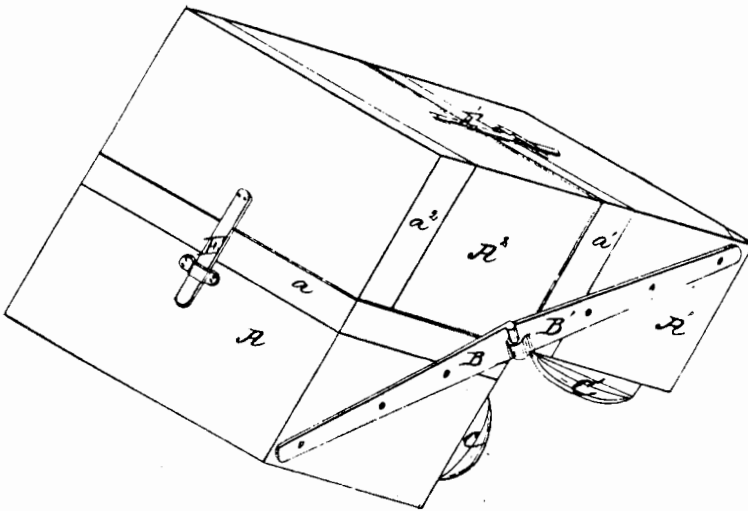


Fig. 2.



Inventor.

Jacob Dunton
attorney by

Witnesses.
John P. Smith
Chas. Smith

FIGURE 2

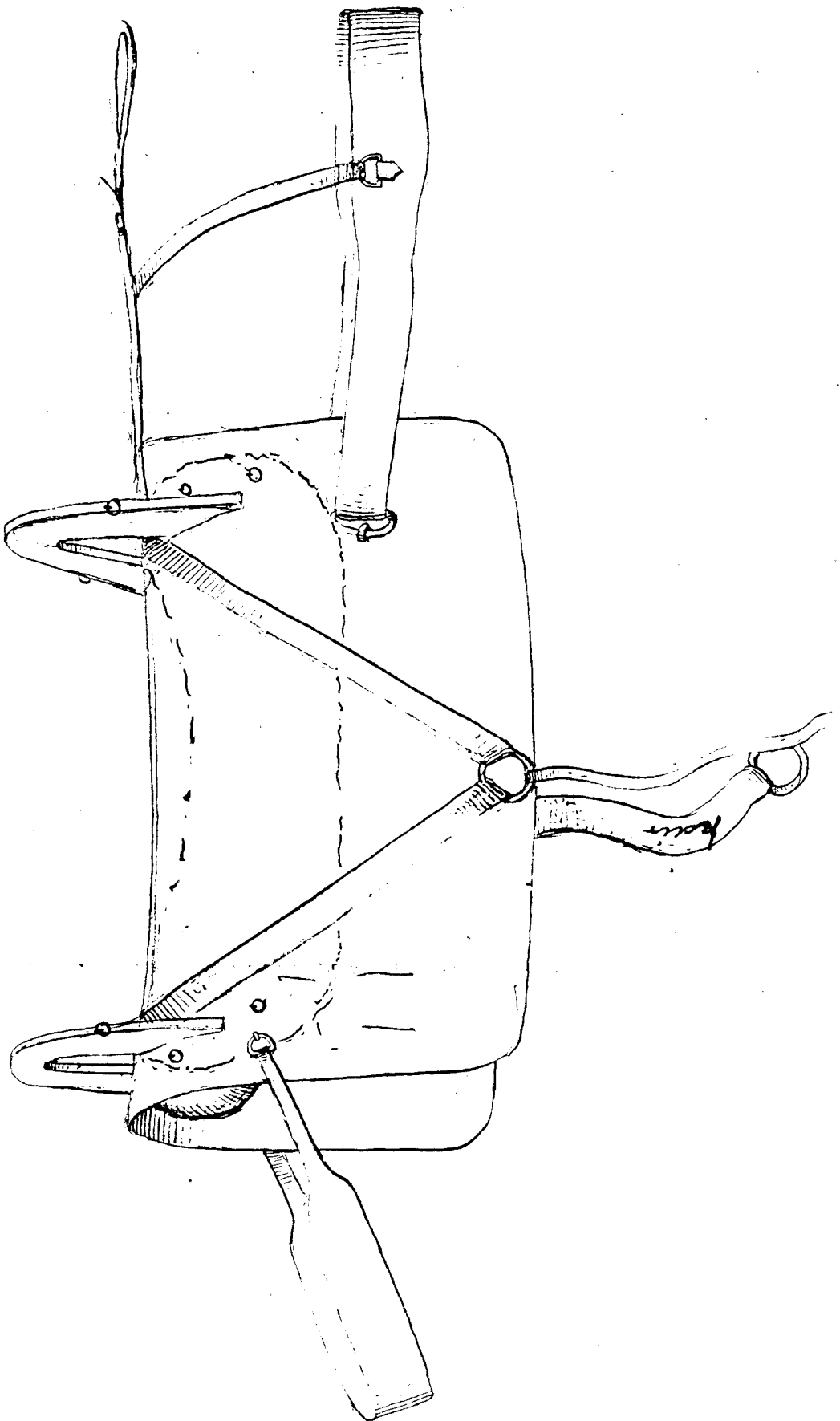


FIGURE 3

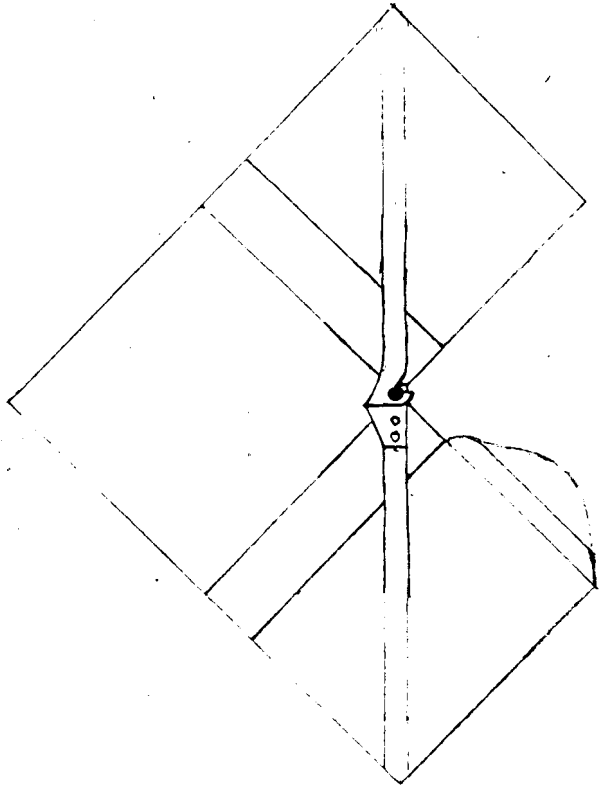
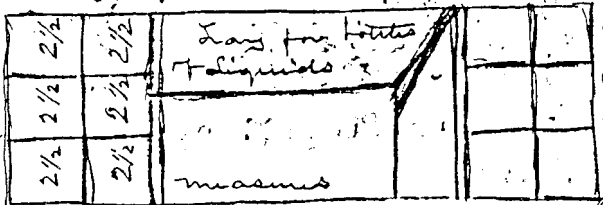


FIGURE 4

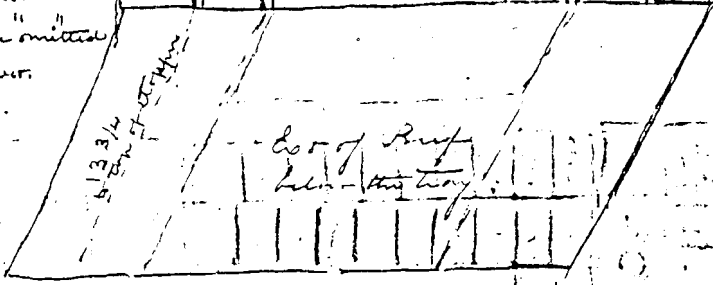
Suspect Chest

(7 1/2" wide 13 3/4" deep)

- 8 2c. Perf.
 - 6 1c. Coffee
 - 2 1/2c. Whisky
 - 1 1c. Seltzer
 - 1 1c. Almond
 - X 1 6c. Raisins
- See if " can be omitted w/o. D. Perf.

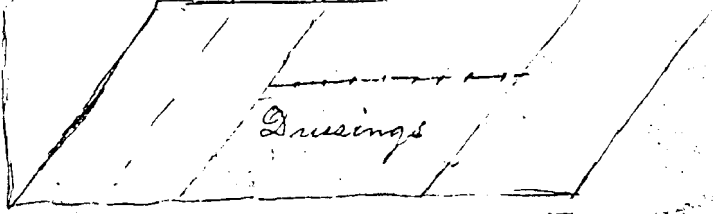
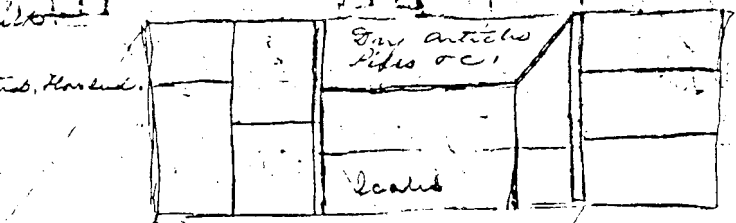


- 6 Perf.
- ammonia
- 6c. Tooth
- " 6c.
- Chloro
- Ether
- Ether



2) Solid Chest

- Iron, Sugar, Milk
- Canned, Mustard, Ketchup
- Salts



have cans made with a guard like bottles

Dressing tray 18" x 10" x 5 1/4" deep.

$$\frac{18 \times 10}{2} = 90$$
 92" c.o.

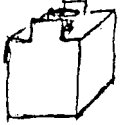


FIGURE 5

CONTENTS OF U. S. A. Hospital Knapsack,

REGULATION PATTERN, 1862.

Ceræ Albæ,	piece	1
Cerat: Simplicis,	oz.	8
Chloroformi,	"	12
Emp: Adhæsivi,	yards	5
" Ichthyocollæ,	"	2
Ferri per Sulphatis,	oz.	1
Pil: Cathart: Co:	no.	100
" Hydrarg:	"	150
" Opii,	"	150
" " et Camph:	"	100
" Quiniæ Sulph:	"	150
Sp: Ammon: Arom:	oz.	8
" Vini Gall:	"	16
Tinct: Opii,	"	4
<hr/>		
Bandages,	no.	18
Binders' Boards,	"	10
Charpie,	oz.	4
Glasses, Medicine,	no.	2
Lamp, (Spirit)	"	1
Lint,	oz.	12
Matches,	box	1
Pins,	paper	1
Silk, Surgeons',	spool	1
Sponge,	pieces	4
Tourniquets, field, (Dunton's),	no.	4
" spiral,	no.	1
Tape,	pieces	1
Wire, Lead,	spool	1
" Silver,	"	2

THE
MEDICAL AND SURGICAL HISTORY

OF THE
WAR OF THE REBELLION.

PART III.

VOLUME II.

SURGICAL HISTORY.

Prepared, under the direction of JOSEPH K. BARNES, Surgeon General United States Army.

BY

GEORGE A. OTIS, SURGEON UNITED STATES ARMY,

AND

D. L. HUNTINGTON, SURGEON UNITED STATES ARMY.

FIRST ISSUE.

WASHINGTON:
GOVERNMENT PRINTING OFFICE.
1883.

accompanied by a hospital orderly, who carried a knapsack containing a limited supply of anæsthetics, styptics, stimulants, and anodynes, and material for primary dressings. This hospital knapsack had been recommended for adoption by an army board in 1859; it was made of light wood, 18 inches in height, 15 inches wide, and 7½ inches deep, but subsequently

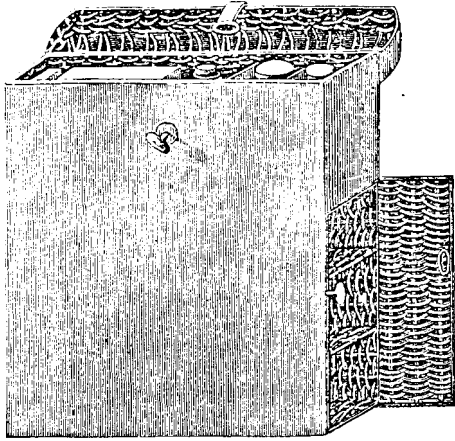


FIG. 425.—Hospital knapsack of wicker-work, covered with enamelled cloth.

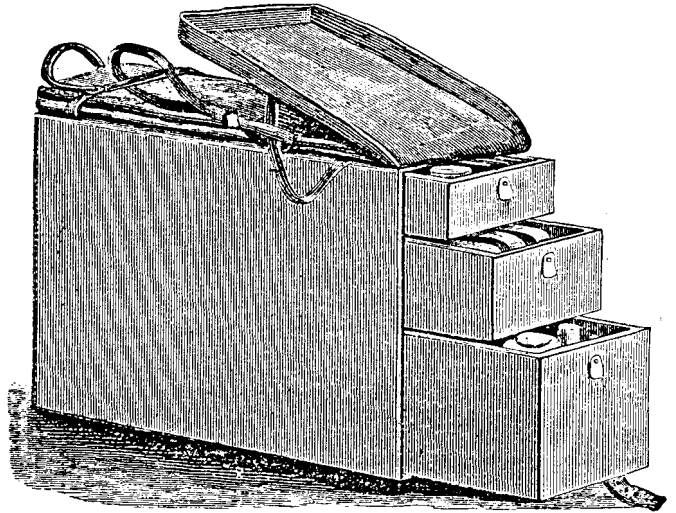


FIG. 426.—Regulation hospital knapsack of 1862.

wicker-work, covered with canvas or enamelled cloth, was substituted for the wood; its weight when filled was 18 pounds. This knapsack (Fig. 425) was in general use in the first year of the war and served an excellent purpose. In 1862 it was changed for what was known as the new regulation knapsack, in which the arrangement and character of the supplies were modified. The new pattern was 16 inches high, 12½ inches wide, and 6 inches deep; the contents were packed in drawers, which were more accessible than in the old style and less liable to become disarranged or broken.¹ The weight when packed was nearly 20 pounds (Fig. 426). Notwithstanding its convenience and general adaptability it was too heavy and cumbersome to be carried by the Surgeon himself, and, when entrusted to other hands, was liable, in the vicissitudes of battle, to be lost. In the early part of 1863 Medical Inspector R. H. Coolidge, U. S. A., arranged a field case or companion² (Fig. 427) to take the place of the knapsack. It was something after the plan of the one used in the British service, and was intended to be carried by the Surgeon himself, if necessary. The "companion" is a leather case 13 inches long, 6 inches wide, and 7½ inches deep; it is supported by a strap passing over the shoulder, and is provided with a waist strap to steady it when carried.

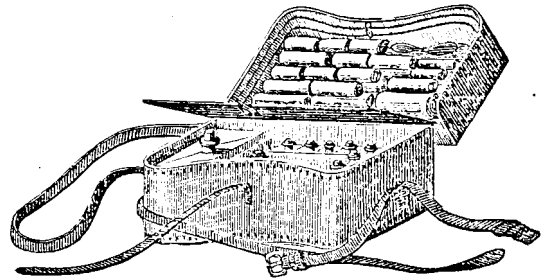


FIG. 427.—Surgeon's Field Companion.

The hospital medicine chest, mess-chest, and bulky hospital supplies were transported in wagons of the supply train and were often inaccessible when required. To obviate this

¹The contents of the knapsack were: One piece of white wax, 8 oz. simple cerate, 12 oz. chloroform, 5 yds. adhesive plaster, 2 yds. isinglass plaster, 1 oz. persulphate of iron, 100 compound cathartic pills, 150 blue mass pills, 150 opium pills, 100 opium and camphor pills, 150 quinine pills, 8 oz. aromatic spirit of ammonia, 16 oz. brandy, 4 oz. laudanum, 10 bandages, 10 binder's boards, 4 oz. charpie, 2 medicine glasses, 1 (spirit) lamp, 12 oz. lint, 1 box matches, 1 paper of pins, 1 spool of surgeons' silk, 4 pieces of sponge, 4 (Dunton's) field tourniquets, 2 spiral tourniquets, 1 piece of tape, 1 spool of lead wire, 1 spool of silver wire, and 1 spatula.

²The contents of the Surgeon's Companion were: 6½ oz. chloroform, 2 oz. fluid extract of ipecacuanha, 2 oz. fluid extract of ginger, 2 oz. solution of persulphate of iron, 24 oz. of whiskey, 2 oz. tincture of opium, 144 compound cathartic pills, 144 colocynth and ipecacuanha pills, 144 sulphate of quinine pills, 144 opium pills, 1 yard isinglass plaster, a medicine cup, scissors, teaspoon, pins, thread, 4 oz. lint, a towel, 2 doz. bandages, muslin, and corks.

pital supplies for a regiment for three months." The wagon could be elongated at both ends, or closed, as was desired, and was arranged so as to be opened on the side.¹

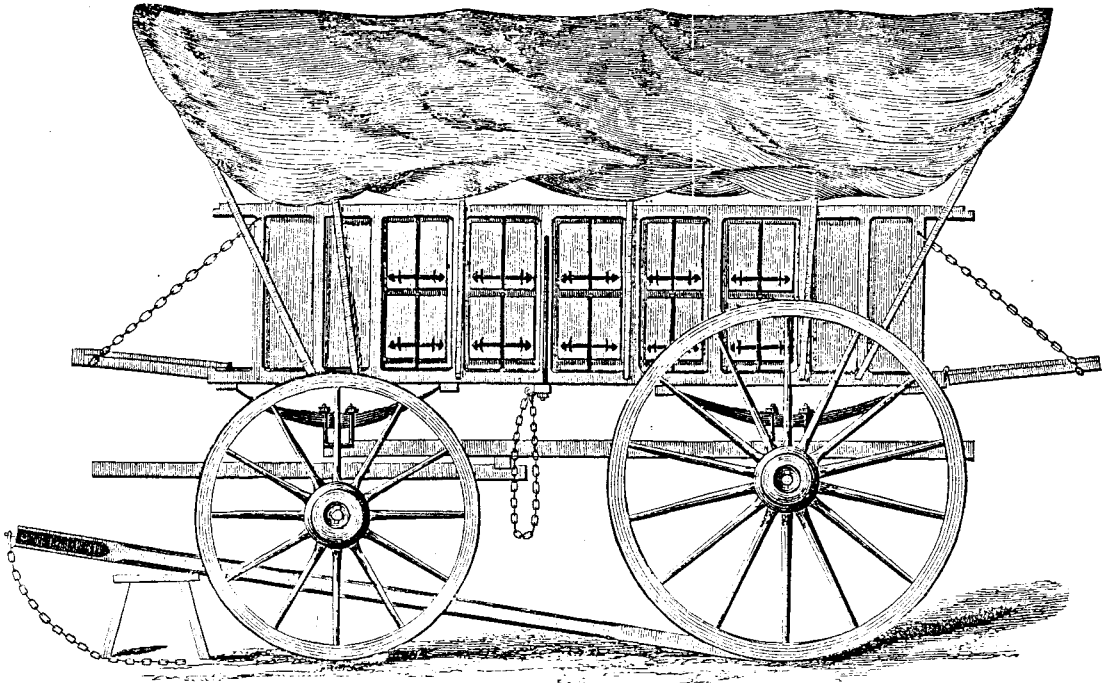


FIG. 430.—DUNTON'S regimental medicine wagon.

As the organization of the medical staff was perfected, the cumbrous regimental supplies were curtailed and the brigade supplies augmented. Each brigade was provided with

a "medicine wagon," which was furnished not only with drugs but with ample provision of stores, dressings, furniture and appliances, an amputating table, and a limited amount of bedding. The contents of the medicine wagon were constantly replenished from the stores of the medical purveyors who accompanied each army. FIGURE 431 represents the medicine wagon of Perot.² While the internal fixtures and arrangements for transporting supplies in this wagon were excellent and convenient, the cost of furnishing it was very great, and on the recommendation of a Medical Board consisting of Surgeons C. H. Crane, R. O.

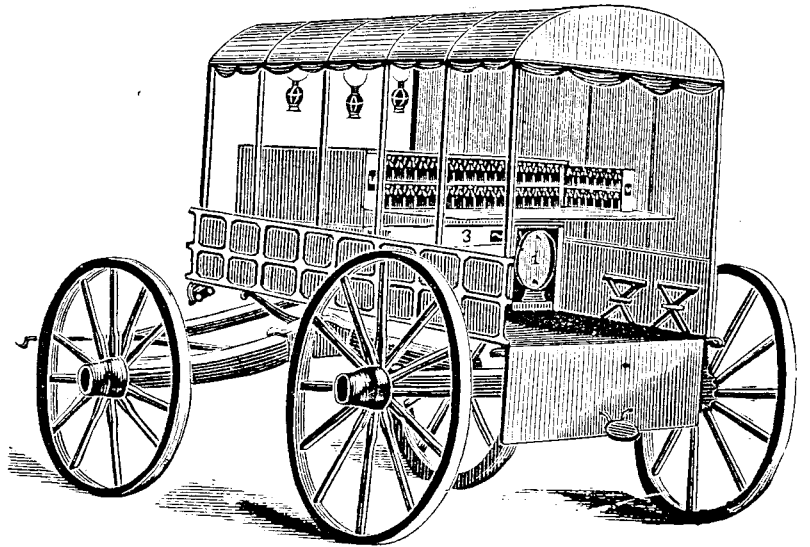


FIG. 431.—PEROT'S medicine wagon.

¹This medicine wagon is erroneously designated by Professor T. LONGMORE (*A Treatise on the Transport of Sick and Wounded Troops*, London, 1869, page 386) as a United States Sick Transport Wagon with side and end openings.

²CONTENTS OF PEROT'S MEDICINE WAGON.—*Drawer 1* contained an oval keg for 6 galls. of whiskey, with a cock on top and bottom, one to let in air, the other to draw from. This keg is on a skid and can be drawn out and filled at the bung. *Drawer 2*: Stronger ether for anæsthesia, 32 oz.; sweet spirit of nitre, 32 oz.; solution of ammonia, 32 oz.; turpentine, 1 qt.; castor oil, 4 qts.; brandy, 6 qts.; olive oil, 2 qts.; purified chloroform, 32 oz.; copaiba, 32 oz.; sulphate of quinia, 10 oz.; syrup of squill, 4 lbs. (part in *Drawer 9*). *Drawer 3*: 1 sponge-holder for throat, 12 probangs, 1 hinged tongue depressor.

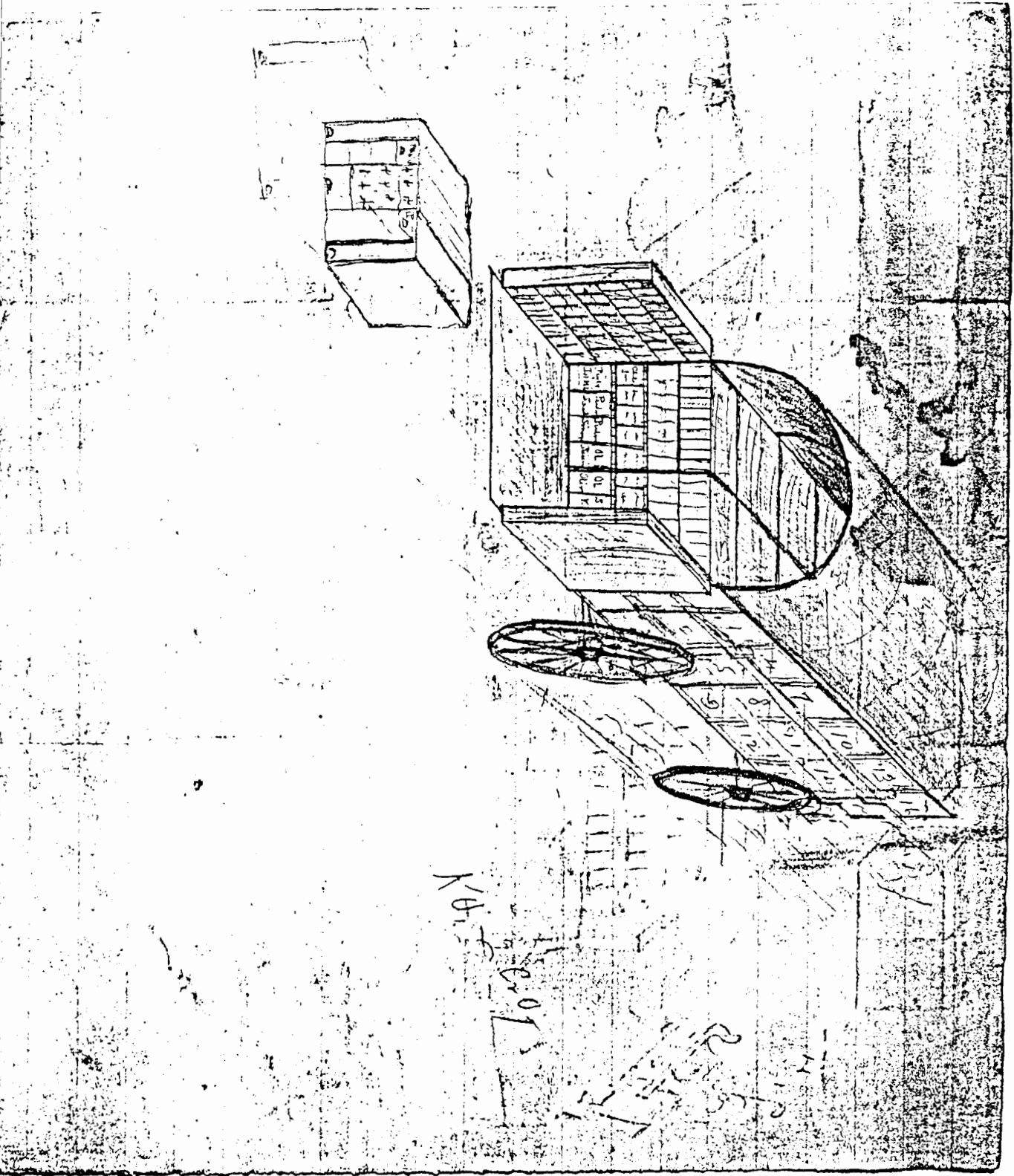


FIGURE 10

SECOND SERIES

VOL. 11, No. 10

BULLETIN
OF
THE NEW YORK
ACADEMY OF MEDICINE



INCORPORATED 1851

OCTOBER, 1935

PUBLISHED MONTHLY BY

THE NEW YORK ACADEMY OF MEDICINE

2 East 103 Street
New York, N. Y.

THE DEVELOPMENT OF THE STETHOSCOPE

AN EXHIBITION

SHOWING THE WORK OF LAENNEC AND HIS SUCCESSORS
HELD IN THE LIBRARY FEBRUARY 13 TO MARCH 29, 1935

Arranged by
PAUL B. SHELDON
and
JANET DOR

This exhibition was prepared, not as an exhaustive study of the stethoscope's history, but more as a survey of the salient points in the development of the instrument. The Academy's Historical Museum possessed several early and later stethoscopes. These were supplemented by material kindly lent by friends and interested institutions. An effort was made to show illustrations, if the instruments were not available. Failing both, a description was given, if possible that by the originator.

The Bibliographical Department of the Library has been very helpful in assembling the material for exhibition and in the preparation of this account, and the Librarian made numerous interested suggestions—to both of whom we are grateful.

Laennec and the First Stethoscope

RENÉ THÉOPHILE HYACINTHE LAENNEC (1781-1826)

In 1816 Laennec, a struggling physician of thirty-five, was working hard in the wards of the Paris hospitals. Physical diagnosis as practiced today hardly existed then. Percussion was scoffed at by all but a few. Physicians were just beginning to use watches in counting the pulse. Auscultation consisted merely in listening with the naked ear against the chest wall. Little was understood of what was heard. Infrequently heart sounds were intensified by placing a short *solid* wooden rod between the precordium and the examiner's ear.

While examining a patient's chest Laennec wished to employ such a rod. None being at hand, he attempted to improvise one by rolling sheets of paper into a solid roll. He was not quite successful and a small air space remained in the center of the roll. This *accident* resulted in the birth of the stethoscope, for the heart sounds were conducted to his listening ear as no solid rod had ever done. Astonished at the improvement, he set about experimenting with hollow rods of various materials, eventually selecting one of wood.

During the next three years he worked patiently correlating what he noted on physical examinations with what he saw at autopsy. The result was his book: *Traité de l'Auscultation Médiante et des Maladies des Poumons et du Cœur*, published in 1819. This is said to be the most important treatise on the thoracic organs ever written. In it he placed before the medical world the first descriptions and differential diagnoses of bronchiectasis, pneumothorax, hemorrhagic pleurisy, pulmonary gangrene, infarct, emphysema, and esophagitis. Even the terms he originated endure, such as "egophony," "pectoriloquy," "sonorous and sibilant râles."

Laennec was one of the greatest teachers of tuberculosis of all times. Because of the merit of his work he was honored and recognized as a great clinician and pathologist. He worked on at his study for seven years more, to die himself of pulmonary tuberculosis at forty-five, undoubtedly the victim of his labors.

1. LAENNEC'S FIRST PRESENTATION OF HIS NEW METHOD (1818).

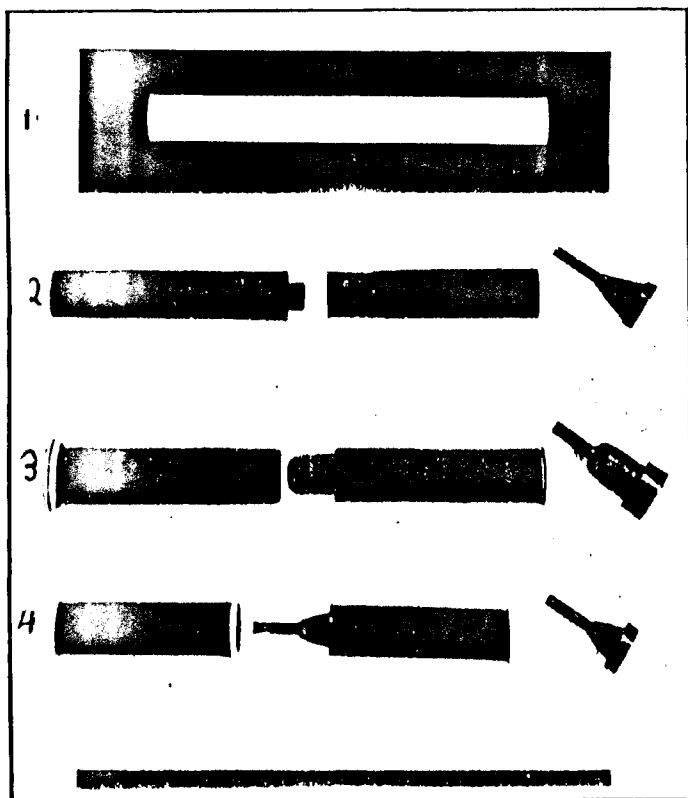
L'art d'explorer les maladies du thorax au moyen de l'auscultation.
Mém. de l'Acad. roy. d. sc. de l'Inst. de France (1818), 3: pp. ccxxi-ccxxiii, 1820.

On Feb. 28, 1818 Laennec submitted the results of his labors to the Académie des Sciences, which received them, it is said, with respect but without the slightest trace of enthusiasm. They were not published until 1820 and then only in the form of the Secretary's notes.

2. FIRST PUBLISHED ACCOUNT (1818).

Mémoire sur l'auscultation à l'aide de divers instrumens d'acoustique . . . *Bull. Fac. de méd. de Paris*, 1818, pp. 129; 156; 171.

Laennec's lecture was read before the Faculté de Médecine, May 1 and 14, June 11, and July 9, 1818. It was not printed in full but merely noted.



3. ROLL OF PAPER LIKE LAENNEC'S (Fig. 1).

Cylinder or roll of paper, 16 "lignes" (a ligne is $1/12$ of an inch) in diameter and 1 foot in length, formed of 3 notebooks of "beaten" paper rolled up very tightly, held together by gummed paper, and flattened out with a file at both ends. It is related that what first attracted Laennec's attention to the use of a hollow tube for auscultation was when passing through the court of the Louvre he saw some children playing about a long beam, and one would put his ear to the end of the beam and listen while the others tapped it lightly. Described by Laennec in *De l'auscultation médiate*, 1819, 1:8-9.

4. WOODEN STETHOSCOPE LIKE LAENNEC'S FIRST MODEL (Fig. 2).

Originally brought from Paris by Dr. Henry Ingersoll Bowditch, who studied under Louis, 1832-1834, and there imbibed the teachings of Laennec.

Presented to the Trudeau School by his son, Dr. Vincent Y. Bowditch in 1916.

Kindly loaned by the Trudeau Sanatorium.

5. FIRST EDITION OF LAENNEC'S BOOK ON AUSCULTATION (1819).

De l'auscultation médiate, ou traité du diagnostic des maladies des poumons et du coeur, fondé principalement sur ce nouveau moyen d'exploration. Paris, J. A. Brosson & J. S. Chaudé, 1819. 2 v.

This was Laennec's masterpiece. Two editions appeared during his lifetime.

6. TRANSLATION OF THE FIRST EDITION OF LAENNEC'S BOOK (1821).

A treatise on the diseases of the chest, in which they are described according to their anatomical characters and their diagnosis established on a new principle by means of aconstick instruments. Translated . . . with a preface and notes by John Forbes. London, T. & G. Underwood, 1821.

Appearing two years after the publication of the first French edition, this translation did much to introduce and popularize the stethoscope and Laennec's work in England.

Forbes became a leading consultant in tuberculosis.

7. SECOND EDITION OF LAENNEC'S BOOK ON AUSCULTATION (1826).

Traité de l'auscultation médiate et des maladies des poumons et du coeur. Paris, J. S. Chaudé, 1826. 2 v.

Garrison's comparison, taken from the third edition, 1921, of his *Introduction to the History of Medicine*, is pertinent enough to quote:

"In the first edition (1819), Laennec pursues the analytic method, giving the different signs elicited by percussion and auscultation, with the corresponding anatomic lesions (he was an expert pathologist). In the second edition (1823) [sic.], the process is turned about and the method is synthetic, each disease being described in detail in respect of diagnosis, pathology, and (most intelligent) treatment, so that this edition is, in effect, the most important treatise on diseases of the thoracic organs that was ever written."

8. TRANSLATION OF SELECTED PASSAGES FROM LAENNEC'S BOOK.

Translation of selected passages from "De l'auscultation médiate" (first edition). With a biography by William Hale-White. London, John Bale, Sons & Danielsson, 1923.

An excellent translation of Laennec's book. It also contains the story of Laennec's life with illustrations.

9. GOOD, BRIEF ARTICLES ON LAENNEC AND THE STETHOSCOPE.

Morgan, James Dudley (1862-1919).

Laennec: the great Internist. *Washington M. Ann.* 9:250-258, 1910.

Lamb, Daniel Smith (1843-1929).

The stethoscope: a history. *Washington M. Ann.* 9:260-269, 1910.

Camac, Charles Nicoll Bancker (1868-).

Laennec and his stethoscope. *M. News*, 86:918-923, 1905.

10. EARLY CONTEMPORARY COMMENT (1818).

N[acquart], J. B.

Des instrumens en médecine. *J. gén. de méd.* . . . 64:185-186, 1818.

This amusing commentary was written a few months after Laennec's announcement of his discovery.

11. TWO STETHOSCOPES CONTEMPORARY WITH LAENNEC (1819?) (Fig. 3).

Stethoscopes such as Laennec used. The original cylinder model was cut in two for convenience. The pectoral end is hollowed out. The wooden plug was fitted into the pectoral end when listening for heart sounds.

12. AN EARLY MODIFICATION OF LAENNEC'S STETHOSCOPE (1820) (Fig. 4).

Haden's modification of Laennec's stethoscope. The metal tube makes for a firmer joint than in the earlier models. Charles T. Haden, a physician who worked at the lathe with Laennec, introduced the stethoscope into England.

13. LAENNEC'S MODIFICATION (Fig. 5).

Laennec, in improving his stethoscope, probably went no further than this type, a shorter, somewhat flaring, unjointed wooden tube with an ear-piece.

14. PORTRAIT OF LAENNEC.

Laennec à l'Hôpital Necker ausculte un phthisique. 1816. Mezzotint after painting (?) by T. Chartrem. Kindly loaned by Dr. J. A. Miller.

Laennec's Immediate Successors

15. PLORRY'S ADAPTATION (1828).

Ploorry, Pierre Adolphe (1794-1879).

De la percussion médiate et des signes obtenus à l'aide de ce nouveau moyen d'exploration dans les maladies des organes thoraciques et abdominaux. Paris, J. S. Chaudé, 1828.

Opened at plate showing illustrations of Ploorry's stethoscope with various pleximeters.

16. PIORRY'S STETHOSCOPE (1828) (Fig. 6).

A remarkably well preserved Piorry stethoscope. Photograph shows the same instrument as assembled when not in use. An extra wooden tube could be added if desired. The wooden cone was inserted into the pectoral end for cardiac examinations. The disc is a pleximeter, an invention of Piorry. This represented the first type of easily portable instrument. It was first made in 1828 and was the type most in use up to 1883. Ivory was introduced into the manufacture of stethoscopes in 1834.

17. FIRST SEMI-FLEXIBLE STETHOSCOPE (1829).

Comins, Nicholas P.

New stethoscope. *London M. Gaz.*, 4:427-430, 1829.

In 1829 Nicholas P. Comins of Edinburgh, in a letter to the editor of the *London Medical Gazette*, reported his invention of the first flexible stethoscope. As shown in the illustration (p. 428) it consisted of jointed wooden tubes which could be adjusted to varying angles in one plane, so that the examiner's face need not be directly over the patient's. This was often desirable because of the advanced stage of tuberculosis from which many of the patients suffered.

18. ADAPTATION OF COMINS' STETHOSCOPE (1829).

Comins, Nicholas P.

New stethoscope. *London M. Gaz.*, 4:427-430, 1829.

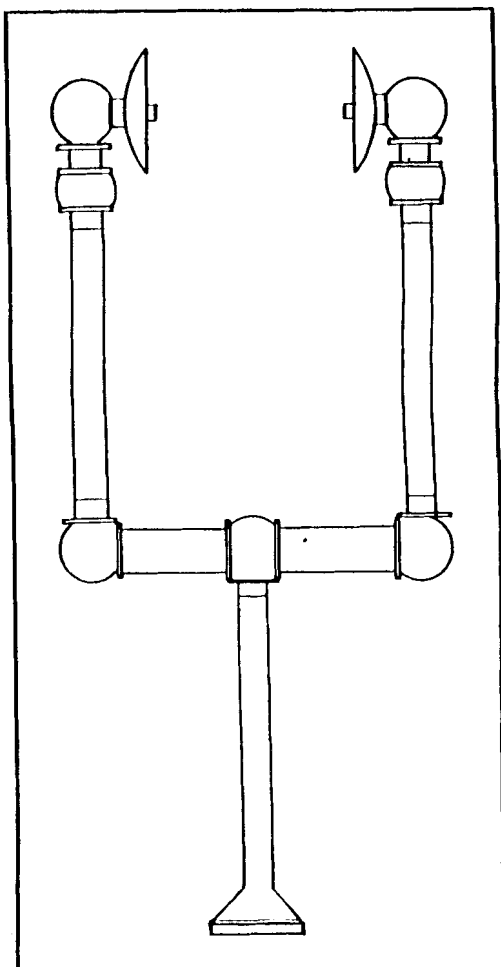
On page 430 Comins made the first published suggestion of employing both ears in auscultation, but he did not furnish a sketch of a binaural stethoscope and evidently never made such an instrument. The conjectural sketch shown is simply Comins' wooden tube stethoscope adapted for both ears. (Fig. 13a).

C. J. B. Williams, in 1843, acknowledged this idea as the father of his binaural instrument, which was also of wood.

19. DEMOUNTABLE STETHOSCOPE (before 1870) (Fig. 11).

This type, employed prior to 1870, is still used extensively in Europe. When in use, holes in side of ear-piece are covered by thumb and finger. When not in use, small end of stem passes through these holes, as shown in photograph. Easily carried in pocket. Photograph shows position when not in use.

Kindly loaned by Dr. A. R. Lamb.



13A

Conjectural Sketch of Adaptation of
Comins' Stethoscope (1829)

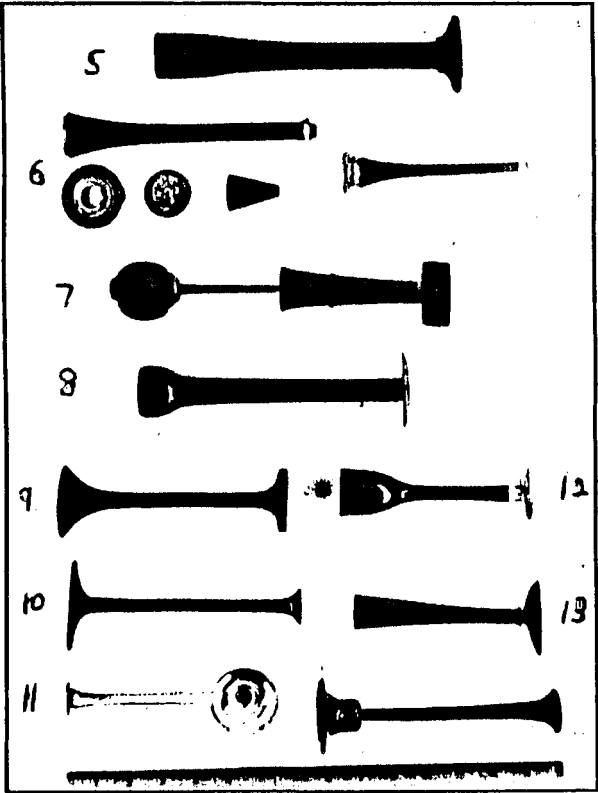
Later Development of Monaural Stethoscope

20. FLEXIBLE TUBE STETHOSCOPE (1832).

Stroud, William (1789-1858).

On mediate auscultation. *London M. Gaz.* (1841-42), n. s. 1:6-9, 1842.

Stroud, in 1832, adapted to auscultation the flexible speaking tube commonly used by deaf persons. One hand held the ebony nipple in the examiner's ear and the other held the ebony chest piece in



place. The flexible tube was made of spiral wire covered by "caoutchouc-cloth." (This easily rubberized cloth was first used about 1832; rubber tubing came much later). Stroud's instrument is shown on p. 7.

21. EXAMPLES OF STROUD'S TYPE OF FLEXIBLE STETHIOSCOPE (1832) (Figs. 14 and 15).

22. FLEXIBLE TUBE STETHOSCOPE WITHOUT EAR-PIECE (1838).

Sibson, Francis (1814-1876).

The flexible stethoscope. *London M. Gaz.* (1840-41), n. s., 2:911-912, 1841.

In 1838 Sibson of Edinburgh dispensed with the ear-piece of Stroud's stethoscope. He simply pushed the small open end into his ear. He was thus able to use one hand to hold the instrument on the chest and with the other to feel the pulse. From his description he was evidently hearing murmurs. His modification is illustrated on p. 912.

23. FLEXIBLE TUBE STETHOSCOPE WITH SPECIAL EAR-PIECE (1840).

Bird, Golding (1814-1854).

Observations on the advantages presented by the employment of a stethoscope with a flexible tube. *London M. Gaz.* (1840-41), n. s., 1:440-442, 1841.

Golding Bird was one of the first to use a flexible stethoscope. It was much like Stroud's save that the ear-piece was a disc cemented to the ball through which the flexible tube passed. A sketch of his instrument is shown.

24. BIGELOW'S COMPACT STETHOSCOPE (before 1846) (Fig. 7).

Henry J. Bigelow invented what was then considered a very convenient stethoscope of cedar. The wide side of the ear-piece could be placed against the chest and the stethoscope used thus as a pleximeter. The worsted ball covered with velvet has an ebony handle. It was used as a percussor.

25. EXAMPLES OF MONAURAL STETHOSCOPES (Figs. 5-13).

The ebonite stethoscope (Fig. 10) was kindly loaned by Trudeau Sanatorium.

26. EARLY AMERICAN MANUAL ON STETHOSCOPES (1846).

Bowditch, Henry Ingersoll (1808-1891).

The young stethoscopist, or the student's aid to auscultation.
N. Y., J. & H. G. Langley, 1846.

This is a most interesting manual on auscultation. It is opened at pp. 14-15, showing various types of stethoscopes: Laennec, Piorry, Bigelow.

Bowditch was a student of Louis. The stethoscope used by him is shown in another case.

27. "THE STETHOSCOPE SONG."

Holmes, Oliver Wendell (1809-1894).

Poems. Boston, Ticknor & Fields, 1856, pp. 272-277.

This characteristic poem, first published in 1849 and written either in 1847 or 1848, at the time Holmes was giving up medical practice (he became Dean of the Harvard Medical School in 1846) throws a humorous light on what may have been his own and his students' early difficulties. The doctor evidently carried one of Bigelow's stethoscopes!

28. WILLIAMS, A STUDENT OF LAENNEC.

Williams, Charles James Blasius (1805-1889).

Memoirs of life and work. London, Smith, Elder & Co., 1884.

Charles J. B. Williams was a student under Laennec at La Charité in 1825. On pp. 40-41 of his *Memoirs* he gives some reminiscences of those days.

29. OBJECTION TO FLEXIBLE STETHOSCOPE (1840).

Williams, Charles James Blasius (1805-1889).

The pathology and diagnosis of diseases of the chest. . . .

4. ed. London, John Churchill, 1840.

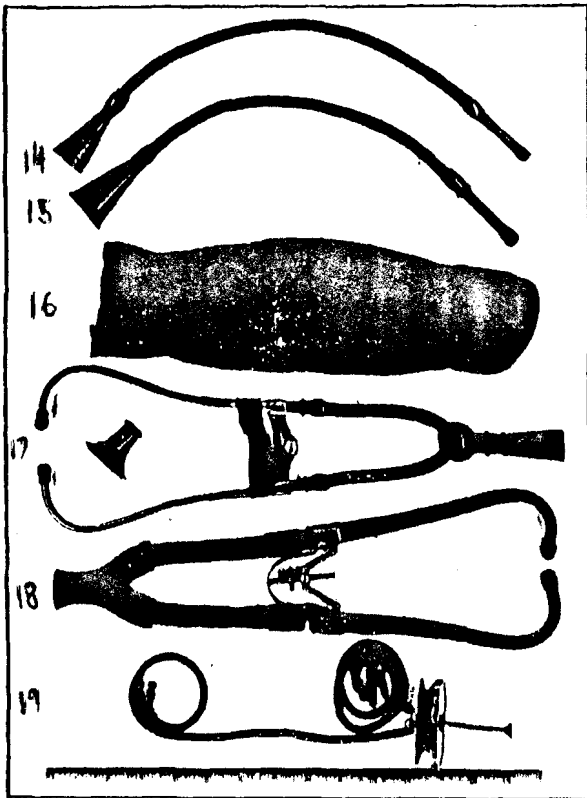
On returning to England from his studies under Laennec, Williams did much to popularize auscultation. He became an authority in his day on "consumption" and diseases of the chest. In his book on diseases of the chest, he advocates a light wooden stethoscope (shown in Plate I, frontispiece), stating his objection to the little used flexible instrument.

30. STRAIGHT WOOD STETHOSCOPE STILL IN FAVOR (1842).

Williams, Charles James Blasius (1805-1889).

On the construction and application of instruments used in auscultation. *London M. Gaz.* (1842), n. s., 1:400-404, 1843.

On p. 402 is shown another of C. J. B. Williams' light wooden stethoscopes. Fig. 3 shows a whalebone pleximeter so fashioned as to fit between ribs. Fig. 4 is a plexor, or, percussor, an instrument then frequently used to strike the pleximeter. Eventually fingers were found more satisfactory.



The Binaural Stethoscope

31. THE FIRST BINAURAL STETHOSCOPE (1843).

Williams, Charles James Blasius (1805-1889).

On the acoustic principles and construction of stethoscopes and ear trumpets. *Proc. Roy. Med. & Chir. Soc. London* (1873), 7:189-194, 1875.

In 1843 C. J. B. Williams, recalling the suggestion of Comins, made the first binaural stethoscope. It was awkward and inflexible, being made of wood and metal. So far no drawing of it has been found. Williams, at a meeting of the Royal Medical and Chirurgical Society, Oct. 28, 1873, stated that he constructed such a stethoscope "thirty years ago." (p. 193)

32. SELF-ADJUSTING STETHOSCOPE OF CAMMANN (1855).

Self-adjusting stethoscope of Dr. Cammann. *New York M. Times*, 4:140-142, 1855.

George P. Cammann of New York City did much to improve the binaural stethoscope. In 1855 he introduced the instrument here illustrated. The chest-piece was of ebony, the ear tips of ivory, and the elastic portion of the tubes of spiral wire covered by "gun elastic" and cloth.

33. EXAMPLES OF CAMMANN'S STETHOSCOPES (Figs. 16-18).

The stethoscope was carried in a chamois-skin bag or in a box. Shown ready to use: the large bell chest-piece was often held before the patient's mouth while the chest was percussed, to elicit "cracked pot" sound. Smaller chest-pieces were for ordinary auscultation.

34. "THE AMERICAN LAENNEC."

Flint, Austin (1812-1886).

Physical exploration and diagnosis of diseases affecting the respiratory organs. Phil., Blanchard & Lea, 1856.

Austin Flint was sometimes called the "American Laennec." He ranked especially high as a diagnostician in diseases of the chest and did more than anyone else to bring the binaural stethoscope into general use.

He was President of The New York Academy of Medicine, 1873-1875.

His text-book is opened to the chapter on *Auscultation*.

35. STETHOSCOPE USED BY AUSTIN FLINT.

Presented to Frederic S. Dennis by Mrs. Austin Flint and given by Dr. Dennis to The New York Academy of Medicine.

36. DIFFERENTIAL STETHOSCOPE (1859).

Allison, Somerville Scott (1818-1877).

On certain auditory phenomena. *Roy. Inst. Great Britain. Notices of proc.* 3:63-70, 1859.

The instrument shown on p. 64 was devised by Scott Allison, to compare intensity of sound coming from two areas of the chest.

It was not found subsequently to be of much value.

37. DOUBLE-BELL STETHOSCOPE (1860?).

Lyons, Robert Spencer Dyer (1826-1886).

On a double-bell stethoscope, *Dublin Quart. J. Med.*, 33:364-366, 1862.

Another stethoscope (illustrated on p. 365) for the comparison of relative intensity of sounds. This had two chest-pieces and a single ear-piece. The arms of gutta serena were slightly flexible. Both chest-pieces were to be used at the same time. It was another of the variations which proved of little value.

38. FIRST DIAPHRAGM STETHOSCOPE (1869).

Stern, Samuel (1839-1915).

Zur Theorie der Auskultation und Perkussion. *Wien. med. Presse*, 10:778-782; 802-803, 1869.

Samuel Stern's instrument consisted of a hollow conical tube, across the larger end of which was stretched a membranous diaphragm. The ear tubes opened separately into the hollow tube.

39. ECHOSCOPE (1871).

Speir, Samuel Fleet (1838-1895).

Aids for the diagnosis and treatment of certain diseases. *M. Rec.*, 6:174-175, 1871-2.

A stethoscope which could be held in place by pushing the examiner's chin against the rest marked by the arrow. Thus the examiner could use both hands in percussion. It was used during a wave of auscultatory percussion of aneurysms, effusions, tumors, etc. Description and illustration on p. 175.

40. EARLY DIAPHRAGM MODIFICATION (1876).

Yeates,

New form of stethoscope. *M. Press & Circ.*, n. s., 22:58, 1876.

Air forced in stopcock expanded two parallel sheet-rubber drum heads. Several students might listen at the same time by adding the necessary elastic tubes.

41. PAUL'S STETHOSCOPE WITH RUBBER BULB (1881).

Hudson, Erasmus Darwin, Jr. (1843-1887).

A manual of the physical diagnosis of thoracic diseases. N. Y., William Wood & Co., 1887.

Another effort to combine percussion and auscultation in one act resulted in the invention of this stethoscope by Constantin Paul (1881). The chest-piece was made to adhere to the patient's skin by a vacuum, leaving both of the examiner's hands free for percussion. Book opened at p. 70, showing illustration.

42. CALIPER-STETHOSCOPE (1881).

An addition to the binaural stethoscope. *London M. Rec.* 9:219, 1881.

Invented by Irwin Palmer, this ordinary binaural stethoscope was also used as a pair of calipers. The elastic band is replaced by a circular box-spring; a dial plate is attached to the joint. It was apparently first described in the above article.

43. A VERSATILE STETHOSCOPE! (1884).

Smith, Ebenezer Thomas Aydon.

A new form of stethoscope. *Brit. M. J.*, 1:909-910, 1884.

Its promoter admits that its main function is to promote hearing, but in case of necessity, by simply rearranging its parts, one can use it as a monaural, a binaural, or a differential stethoscope, an otoscope, a nasal tube with funnel for feeding the very ill, a nasal douche tube, a catheter, an enema tube, or a tourniquet.

44. HARD RUBBER BINAURAL STETHOSCOPE (1885).

Denison, Charles (1845-1909).

An improved binaural stethoscope. *M. Rec.*, 27:391, 1885.

Denison substituted hard rubber for the metal customarily used in the arms of the instrument. As shown in the illustration, the sound canal diminishes in diameter as it progresses from the bell-shaped chest-piece to the ear-piece.

45. DENISON'S HARD RUBBER BINAURAL STETHOSCOPE (1885).

Kindly loaned by Trudeau Sanatorium.

46. PICKERING'S "PANARKES" STETHOSCOPE (1887).

Pickering's "Panarkes" stethoscope. *Brit. M. J.*, 2:1342, 1887.

This illustrates some modifications of a single stethoscope. When used as in Fig. 1 it was manual and could be carried by Internes in a button hole. As Fig. 2 it had the large ear-piece preferred by some. Fig. 3 was binaural with flexible tubes. Fig. 4 was manual with flexible tubes. Fig. 5 shows the stethoscope serving as a handle for a percussion hammer, the ear-piece in Fig. 2 serving as the pleximeter.

47. COMBINATION MONAURAL AND BINAURAL STETHOSCOPE (1887).

Batten, Rayner Winterbotham (1835-1909).

Binaural stethoscope. *Brit. M. J.*, 2:1342, 1887.

48. MODIFICATION OF CAMMANN'S STETHOSCOPE (1885).

Cammann, Donald Muhlenberg (1852-).

A modification of Cammann's binaural stethoscope. *New York M. J.*, 41:27-28, 1885.

A modification by Cammann of Constantin Paul's idea, in which the rubber bulb was built around the chest-piece of the stethoscope. The stethoscope was thus held by a vacuum against the chest wall.

49. CONSTANT EAR-PRESSURE STETHOSCOPE (1891).

Herschell, George Arleh (1856-).

An improved binaural stethoscope. *Lancet*, 1:609, 1891.

The ear-pieces of Herschell's instrument exerted a constant pressure of the proper intensity. He substituted a clamp for the elastic loop usually used to join the auditory tubes.

50. GERMAN SILVER AND HARD RUBBER STETHOSCOPE (1895).

Knapp, Mark Israel (1868-1920).

A new and improved stethoscope. *M. Rec.*, 48:682-683, 1895.

By covering German silver tubes with soft rubber tubing, Knapp was able to eliminate certain extraneous sounds.

51. PHONENDOSCOPE (1894).

Bianchi, Aurelio.

Il fonendoscopio. *Policlin. (sez. med.)*, 1:179-180, 1894.

Bianchi's own account of his phonendoscope, with illustrations.

52. EXAMPLE OF PHONENDOSCOPE (Fig. 19).

53. PHONENDOSCOPE (1896).

Manges, Morris (1865-).

The phonendoscope. *New York M. J.*, 65:42-45, 1897.

Read before The New York Academy of Medicine, Oct. 20, 1896. Opened to show the instrument in use.

Baruch, Herman Benjamin.

The phonendoscope. *M. Rec.*, 50:624-626, 1896.

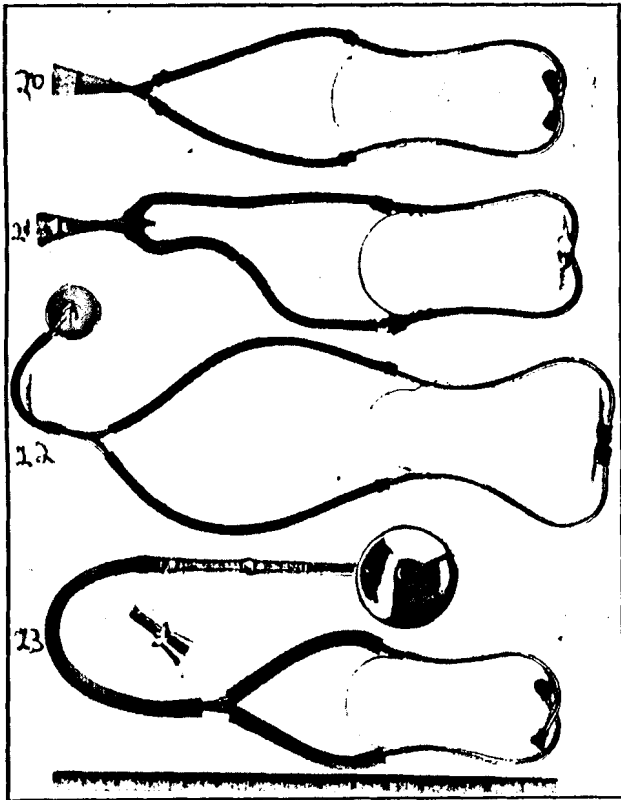
The phonendoscope, well described in this article, is a diaphragm which magnifies the usual sound. It was intended as an improvement on the usual types of stethoscope. Its advocates hoped that it would prove a great aid in outlining organs. The chest-piece was held over the organ or tumor examined, while a finger was drawn over the skin with a gentle stroking motion. As the finger approached the very edge of the organ or tumor, the sound changed its intensity strikingly. The procedure is little used today.

54. NEW STETHOSCOPE WITH ARMAMENTARIUM (1898).

Knopf, Sigurd Adolphus (1867-).

A new binaural stethoscope with armamentarium for complete physical examination. *J. A. M. A.*, 30:27-28, 1898.

In 1898 S. A. Knopf of The New York Academy of Medicine was advocating the use of such a set. The adjustable ear-pieces, various sizes and shapes of chest-pieces, including one held to the chest wall by suction, a Flint percussion hammer, and a pleximeter are shown in the illustration.



55. COMBINATION SINGLE OR DIFFERENTIAL STETHIOSCOPE (1903).

Wetherill, Henry Emerson (1871-).

An improved form of stethoscope. *Am. J. M. Sc.*, 126:884-887, 1903.

A rather recent return to previous features in stethoscopic construction. This stethoscope (shown on p. 884) has separate chest-pieces which can be combined as one or used individually as a differential stethoscope. The flexible projections from each tube, stroked or tapped by the finger, were used in auscultatory percussion. Diaphragms could be slipped into the bells if wished.

56. TRUDEAU'S OWN STETHIOSCOPE (Fig. 20).

Kindly loaned by Trudeau Sanatorium.

57. SIR WILLIAM OSLER'S STETHOSCOPE (Fig. 21).

Used until his death in 1919. Given by Lady Osler to the Academy's Librarian and kindly loaned by him for the exhibition.

Modern Stethoscopes

58. SIMPLE DIAPHRAGM TYPE OF STETHOSCOPE MUCH USED TODAY (1901).

Invented by R. C. M. Bowles, of Massachusetts.
Kindly loaned by Fred Haslam and Company.

59. DOUGLASS STETHOSCOPE (1910) (Fig. 22).

Devised by Alfred A. Douglass. It is an improvement on the Bowles stethoscope and is more sensitive.

60. FETAL HEART STETHOSCOPE, "LEFFSCOPE" (1927) (Fig. 23).

Leff, Morris (1889-).

A stethoscope for auscultating the fetal heart. *Am. J. Obst. & Gynec.*, 20:108-109, 1930.

Designed by Morris Leff. The weight of the bell (2 lbs.) ensures even contact and permits free use of the hands. A regular bell may also be used for ordinary work. Kindly presented to the Academy's Historical Museum by Dr. Leff.

Electrical Stethoscopes

61. EARLY WORK WITH ELECTRICAL STETHOSCOPE (1907).

Einthoven, Willem (1860-1927).

Die Registrierung der menschlichen Herztöne mittels des Saitengalvanometers. *Pflüger's Arch. f. d. ges. Physiol.*, 117:461-472, 1907.

The earliest important work was done by Einthoven. He made records of normal heart sounds and murmurs in 1907, using a carbon transmitter. Others improved the recording devices.

62. MULTIPLE ELECTRICAL STETHOSCOPE (1923).

Cabot, Richard Clark (1868-).

A multiple electrical stethoscope for teaching purposes. *J. A. M. A.*, 81:298-299, 1923.

In 1923 H. B. Williams, Richard C. Cabot, and C. J. Gamble developed an electrical stethoscope suitable for group instruction. A recording galvanometric attachment gave visual records of what was heard.

63. MULTIPLE ELECTRICAL STETHOSCOPE (1924).

Gamble, Clarence James (1894-) & Replogle, D. E.

A multiple electrical stethoscope for teaching. *J. A. M. A.*, 82:387-388, 1924.

The instrument is here described in considerable detail. References are given to the work of others on the subject.

64. PHOTOGRAPHS OF ELECTRICAL STETHOSCOPE DEVELOPED BY CABOT, GAMBLE (*et al*) AND THE WESTERN ELECTRIC COMPANY.

1. The instrument.
 2. Drs. Cabot and Gamble using the electrical stethoscope.
 3. The electrical stethoscope in classroom instruction.
- Photographs kindly loaned by the Bell Telephone Laboratories.

65. ELECTROSTETHOGRAPH (1934).

The latest, and as yet unpublished, work in recording murmurs. It should be remembered that in order to obtain the best records the murmur is first located in the usual manner and then the electro-stethograph is used to read it. The photographs show:

1. Cambridge electrostethograph for amplifying heart sounds.
2. Normal electrostethogram taken over three areas.
3. Electrostethogram taken over three areas: condition, aortic stenosis, Flint murmur.
4. Electrostethogram taken over three areas: condition, aortic stenosis.

Photograph no. 1 kindly loaned by the Cambridge Instrument Company, New York City; photographs nos. 2, 3, 4 by the Department of Physiology, Columbia University.



A LINK WITH THE PAST

More physicians are collecting medical
antiques than ever before.
But there's still room for the beginner.

By Susan Mernit

A decade ago, while on an expedition to Portobello Road in London, internist M. Donald Blaufox bought a 19th-century wooden apothecary chest. "Why don't you buy some surgical instruments as well?" the dealer suggested. He pulled out a stack of neat black leather cases filled with gleaming, ivory-handled knives. "This one is an amputation set made in 1790 by Grangeret, in Paris. It's in perfect condition, absolutely com-



plete, and very rare. And this one here is a surgical set, also French, made by Charniere, from about 1870. I can let you have the later set for £170 (then \$300); the 18th-century set is £530 (then \$950). Are you interested?"

Blaufox passed, and he's still kicking himself. Over the past 10 years, collecting medical antiques has become a popular hobby; prizes like these now rarely come onto the market. And when they do, they now cost 10 times more.

Once left to gather dust, antique and obsolete medical instruments, diagnostic tools, books, and ephemera are now in demand. Presentation surgical sets, monaural stethoscopes, bloodletting kits, blood pressure machines, and trephining sets are among the most popular items, but there are collectors for everything from infant feeders to nasal polyp snares. And most of the new collectors, not surprisingly, are doctors.

"More physicians are collecting today than ever before," says Audrey Davis, curator of the division of medical sciences at the National Museum of American History in Washington, D.C. "I've been in this field for eighteen years, and interest has never been higher. There are more clubs, more organizations, and more dealers, and everyone is active."

So why has collecting old tracheotomy instruments and obstetric forceps suddenly become so popular?

For one thing, there is a special thrill in holding an old medical instrument in your hand and imagining how it was used. Though the conditions under which physicians practice have changed tremendously, many "tools of the trade" have not. To the collector, they form a bridge between the present and an earlier age. "It's interesting to touch the instruments doctors used hundreds of years

Susan Mernin is a freelancer for many national publications.

From top left, clockwise, and back to center: Blaufox



Collector Donald Blaufox reveals the interior of his 19th-century dissection model. The dummy, also on frontispiece, is a French design and has scores of removable parts.

ago," says Judith Flammenbaum, owner of Apple-A-Day Antiques, one of the oldest and most established dealerships.

Indeed, medical antiques are more than just old instruments. "They show what life was like for a doctor at a specific time and place," adds Eric Kane, M.D., who collects Civil War medical memorabilia. "Through your collection, you can

trace the very history of medicine."

"An object is a symbol of the entire history of medicine—a time, its hopes and values," says Dr. Blaufox, whose collection now numbers more than 2,000 items. "As I've acquired an increasing number of objects from the past, I've developed a better understanding of the present. When you hold a surgical kit from 1850 in

your hands, the medical practice of that time becomes a reality. You can appreciate, very concretely, the lack of facilities and knowledge. A 19th-century physician had to pull teeth, relieve lower urinary tract infections, deliver babies, and amputate limbs. There were no telephones and often no hospitals. The physician of the past went to the patient and, more often than not, was faced with certain defeat."

But not only an empathy with the past motivates collectors. Many of the instruments and machines are extremely beautiful. Compared with today's utilitarian devices, they are unique works of art that speak to the senses as well as the mind. Who could resist the visual appeal of a fine set of surgical knives, carefully inlaid with ivory and ebony, and chased with decorative designs, glowing dully against a background of deep blue velvet inside a black-leather-and-walnut case? Or the smooth surface of a 19th-century bleeding bowl adorned with hand-painted blue and orange flowers? Or the precision of an early brass ophthalmoscope with trim calibration lenses? With many pieces, the line between science and art begins to blur.

Some collectors focus on objects that were designed with a strong decorative focus in mind. Spencer Sherman, a New York City ophthalmologist, has an excellent collection of brass microscopes, while Stanley Burns, M.D., who collects primarily medical photography and ophthalmologic instruments, also has some prosthetic devices he bought because of the way they look. "They're really a kind of folk art," Burns says. "They were carved out of wood, sometimes painted, and used to replace real arms and legs. There's something very primitive about them, and they're very charming, like windmills and weather vanes. Unfortunately, this very charm makes them scarce, because now they're being snapped

A PASSION FOR CONTRAPTIONS

"I bought my first quack machine from the Salvation Army store in downtown Cleveland," says Olgierd Lindan, an internist from Cleveland, Ohio. "It looked like a radio, but it wasn't. When I took it home and took it apart, I discovered that it was a high-frequency machine, and it turned out that it was a 'health device' invented in the 1920s by a California physician named Abrams. You were supposed to take it home and keep it turned on all night so that the radiation would plump up your blood cells. Of course, it was nonsense."

Lindan, whose special interests include electrotherapy devices and electricity, as well as medical quackery, doesn't confine his collection to antique pieces. "The quack treatments of today are the antiques of the future," he says, "so I want them to be part of my collection." To that end, he has added laetrile, mood rings, and 1950s copper and iron bracelets intended to ward off arthritis to his stock of treatments.

Lindan says he collects quack machinery because it's fun. One of his prize possessions is a huge vibrating chair that he acquired from a Cincinnati dealer. "This chair was bought by an old man who was an auction buff," says Lindan. "His passion was going to auctions and buying the items that nobody else wanted, for which he paid just pennies. He had a three-story house, and when he died it was stuffed full of these rejects. The son had to get rid of all this junk, and he sold most of it to a dealer. The dealer planned to keep this big, ridiculous chair for himself when he retired, but it couldn't fit anywhere other than his shop, so he sold it to me."

Another one of Lindan's favorite devices is a contraption invented in the 1930s by Dr. Hercules Sanchez. Consisting of a wire attached to a metal tube, the device was designed to be used at night to keep your blood properly oxygenated. "You took the wire and clamped it around your ankle and attached it to the pipe, which was set in a bucket of water," Lindan explains. "Supposedly, the oxygen traveled through the water into the pipe, into the wire, and then into the body through the ankle. If you were married, you could buy a set with one metal pipe and two wires, so both of you could have your blood oxygenated at the same time."



Fashionably quack: Olgierd Lindan models some of his collection.



up by decorators. These pieces are just the kind of thing people want to display in their study."

Though prices have risen dramatically, collecting medical antiques is inexpensive compared with collecting, say, Winchester rifles or Tiffany lamps. Few items cost more than \$6,000, and some cost as little as \$25. High quality medical antiques still occasionally crop up at out-of-the-way antique shops and flea markets. Often, because private sellers, unlike medical antiques dealers, don't really know what they have, prices will be lower.

"Value is relative," explains Paul Espy, a dermatologist from Marietta, Georgia, who collects patent medicines. "I've gotten a lot of good deals from bottle collectors. They give me better prices than medical antiques dealers do." Espy paid less than \$10 each for most of his 3,000 bottles of patent medicines.

Relatively low prices also mean it is possible for a physician to amass a collection that includes several museum-quality pieces. After all, when impressionist paintings and old wooden decoys sell for upward of \$50,000, not everyone can afford them, but the record price for a medical antique is \$15,000, for a recent sale of a Napoleonic-era elaborate surgical set.

"There's one philosophy of collecting that says you should buy



Pharmacology in the 19th century was taught with the aid of materia medica, top, a fascinating assortment of raw substances from which medicines were made. The U.S. Patent Office once required inventors to file a model of their invention. The artificial leg, left, is part of the Smithsonian's collection, but occasionally, patent models are found in the marketplace.

Photo by the Department of Education, United States Department of Agriculture, and the Library of Congress

HOW TO GET STARTED

Collectors, curators, and dealers agree that there are a few cardinal rules any beginning collector should follow. Their suggestions are:

1. Start with the basics. Judith Flamenbaum of Apple-A-Day Antiques, a mail-order dealership, suggests starting with some of the standard instruments before deciding whether to specialize. "It's nice to begin with a bleeding set, and a stethoscope, perhaps some surgical instruments," she says. "All of these are tools that suggest how much medicine has changed, and yet how much it remains the same."

2. Don't splurge right off the bat. "This is a slow-building field," says Spencer Sherman, M.D., an experienced collector. "Don't begin with the most expensive item. Buy some middle-range pieces first, so that later on, as you proceed, you'll have a basis for comparison and you'll really be able to appreciate the rarer and more valuable items."

3. Proceed cautiously. Some collectors trust dealers, others don't. All have had the painful experience of being burned sooner or later. "You have to be knowledgeable when you buy a piece," Spencer Sherman says. "There can be misrepresentation, forgery, and repairs. Some dealers will try to convince you that anything is 'medical' if that's what they think you want."

4. Build a good reference library. Unfortunately, there are few reference books and no price guides in this area. Instead, collectors use primary sources, like medical company catalogs, textbooks, and historical documents to identify objects, date them, and pinpoint their uses. Being a medical collector is a bit like being a detective. "Identifying an item," says Norman Medow, M.D., "is an important part of collecting. The only way you really know how old something is is to find it in books and old cata-

logs. That's the key to dating a piece."

5. Join collectors' organizations. In addition to the Medical Collectors Association, and the International Society of Physician Historians, there are more specialized groups, such as the Ocular Heritage Society. Joining a club will put you in touch with other collectors and with dealers, who will begin sending you catalogs as soon as they get your name.

6. Don't just buy from specialized dealers. Every collector has a prized possession he discovered in an unlikely spot. The hunt for an item is one of the true joys of collecting. Reputable dealers will send items on approval, but they charge top dollar; if you range more widely, you'll save money.

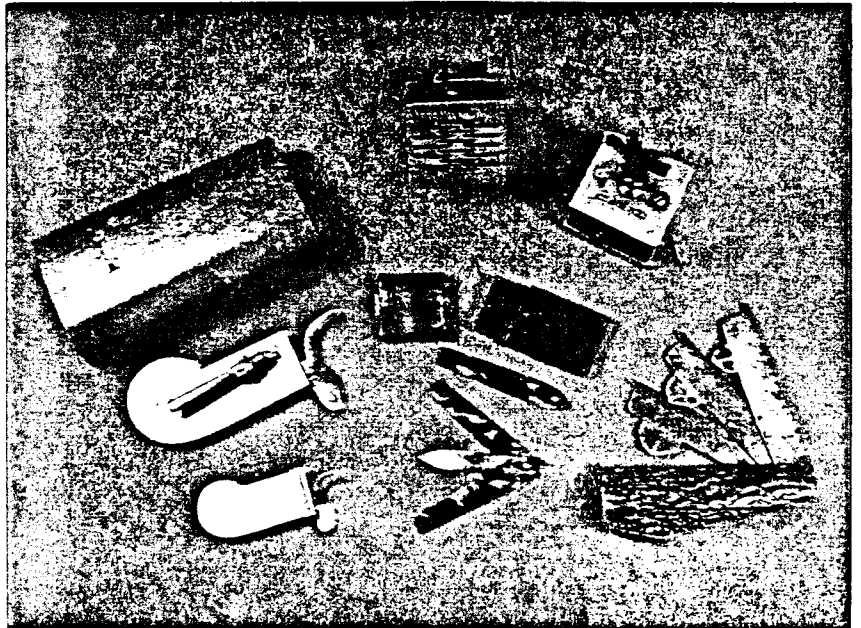
7. Read the antiques magazines and other specialized publications. Collectors recommend (and often advertise in) the pages of antiques newspapers and magazines such as the *Newtown* (Connecticut) *Bee*, *Antique Trader*, *Antiques Magazine*, and *Medical*

Heritage. In addition, the Medical Collectors Association publishes a newsletter two or three times a year that offers items and publishes members' want lists.

8. Visit museums. Looking at fine examples of medical instruments and other devices is an excellent way to educate yourself. Though many of the finest collections are abroad, the National Museum of American History at the Smithsonian in Washington, DC, has 80,000 items. Many major hospital centers also maintain collections and archives, as do some county medical societies.

9. Figure out what kind of collector you are. "Some people," says Norman Medow, "principally want bargains; others don't care about price. Some are hoarders, hiding their treasures away; others love to talk and share. Do you want to collect in your specialty, or focus in another area? Collect just books, or a wider range of objects? After you get started, it's worth giving it some thought."

10. Have fun.



Bloodletting devices are popular collectibles, and typically cost between \$250 and \$800.

A SLICE OF LIFE

Photo: E. Blumstein



Dr. Eric Kane, of Bayport, New York, became involved in collecting Civil War medical memorabilia through his interest in collecting antique guns. Over the past seven years, Kane has assembled a collection of objects that reflect how a physician in the 19th century might have lived and worked.

The Civil War is rich in medical memorabilia, says Kane. To treat all the wounded, physicians set up impromptu operating rooms right on the battlefield. Among Kane's prize possessions are some of the surgical kits, ether inhalers, amputation sets, and portable hospital knapsacks and medicine chests that Civil War physicians and their orderlies carried onto the field.

"Conditions were bad," says Kane, who prefers to ferret out his material from private sellers and flea markets, rather than rely on dealers. "Nothing was sterile. The chances of surviving, even after surgery, were only seven to one. Up until 1864, there weren't even any ambulances to take wounded soldiers to a hospital, and many died right where they fell."

Why is Kane attracted to the Civil War, in particular? "I'm interested in a slice of life," he says, "and this was an important time in history. It was also a time of tremendous change and tremendous upheaval, and physicians were right in the thick of it."

the very best you can afford," says ophthalmologist Norman Medow, a self-confessed pack rat whose collection focuses on early ophthalmologic and phlebotomy items. "I used to collect minor impressionist paintings, but, following that philosophy, I'd have to save up until I had a million dollars, and then I'd buy one Mary Cassatt. The trouble is, I wouldn't

enjoy doing that. I like to collect, and I enjoy the hunt. I stopped collecting paintings and began collecting medical antiques because I can buy really good things and not have to stop with just one of anything."

Unfortunately, the soft prices in this antiques market and its rising popularity have created problems for another group—the museums.

"As there are more collectors, museums are put in a more competitive spot," says Audrey Davis. "Our problem today is that our budget has been cut back and that prices have gone up. Physicians are getting pieces that we would like, but we can't afford them."

Some doctors are well aware of this problem. New Yorker Stanley Burns, who says that "collectors have a responsibility to preserve a slice of the past for the future," formed the International Society of Physician Historians. "The basic purpose of the group is for physician-collectors to meet other physician-collectors, and to bring them together with libraries, archives, and museum personnel so that when physicians want to dispose of their collections, they can go to the appropriate place," says Burns.

Indeed, many physicians would like to donate their collections to a museum eventually. Not only do they have a sincere wish to share what they have accumulated, but many are worried about what might happen to their prized objects if they don't. Their fears are not unfounded. More than one collector has been approached over the years by someone offering to give them "some weird sort of jar or box of instruments" that belonged to a deceased family member. Frequently, upon inquiry, the collector finds out the item is part of a larger collection, one that was given to the thrift shop or thrown out.

"I have a compulsion to learn the history of medicine and share it with others," says Lake Success, New York, internist Leo Palmer, who has a collection of "modern medical antiques" and quack devices. "But my son thinks my collecting is an adult version of playing with toys. I'm not sure if I can rely on him to continue my collection."

"Donating a collection to a museum is sometimes the only way to see that it's going to be taken care of," says Davis. And Burns adds, "If

you do put a good enough collection together, museums will not only want it, they'll keep it on permanent display."

Whatever their motivation, more and more physicians are deciding that collecting medical antiques is an ideal hobby. Both the Medical Collectors Association and the recently formed International Society of Physician Historians are growing in membership. Items that once sold for \$15 now bring \$600, and demand is beginning to exceed supply in some cases. The Printer's Devil, an Arlington, Massachusetts, bookshop, is issuing a bibliographic guide to the old medical catalogs used to research and date items, and Twelve Trees Press is preparing an edition of medical photographs as art taken from Dr. Burns' collection.

"Even though some people might think that collecting medical items is just too close to my daily work, I find that just isn't true," Blaufox says. "For me, medical collecting is an ideal hobby. Through it, I constantly learn and acquire insights about my profession. No matter where I travel, my search for items provides means of meeting interesting people and passing the time pleasantly. The world of medicine one hundred or two hundred years ago was a different world, and it can provide relaxation and education. And, most important, it's fun." □

For more information, contact the Medical Collectors Association, c/o Dept. of Nuclear Medicine, Albert Einstein College of Medicine, 1300 Morris Park Ave., Bronx, NY 10461; the International Society of Physician Historians, c/o Dr. Stanley Burns, 30 East 60 St., New York, NY 10022; the Ocular Heritage Society of the American Academy of Ophthalmology, P.O. Box 7424, 1833 Fillmore St., San Francisco, CA 94120; or the American Association of the History of Medicine, University of Rochester Medical Center, 601 Elmwood Ave., Rochester, NY 14642.



A DRUG HABIT

Paul Espy, a Marietta, Georgia, dermatologist, is a drug freak—he collects them, along with quack medical devices, shysters' handbills, and medical reference books. Espy, who has been collecting medical antiques for the past 15 years, became interested in them during a postresidency period on an Indian reservation in Shiprock, New Mexico. Curious about Navaho herbal medications, as well as the homeopathic remedies bottled and sold by the local drugstore, Espy began to buy bottles and analyze their contents—and an enduring passion began to take hold. Espy became addicted to prowling through old drugstores, antique shops, and flea markets, searching for patent medicines and obsolete treatments. As his obsession grew, he subscribed to a national antiques magazine, *Antique Trader*, pored through the classifieds, and began to buy from other collectors. Finally, in the major coup of his collecting career, Espy located another patent medicine collector who wanted to sell, so he drove the 14 hours from Georgia to Missouri, completed his transaction, and trundled home with a haul of 2,000 patent medicine bottles, many in their own original containers.

"Before 1906 there were no laws regulating the claims proprietors could make for their medications," says Espy, who now stores over 3,000 bottles of medicine in his office and home. "Most of the medications contained some kind of mood-altering drug, like belladonna, morphine, or cocaine—and of course, high amounts of alcohol, but they promised to cure everything from gout to overweight to old age. Later on, after the laws were passed, they couldn't be so outrageous, and they also couldn't say 'cure'; they had to say 'remedy.'"

MEDICAL MUSEUMS OF THE WORLD

PART IX

CZECHOSLOVAKIA AND HUNGARY

BY

PROFESSOR E.T. PENDELLEY

CZECHOSLOVAKIA

Czechoslovakia is another one of the smaller countries in central Europe with a checkered history. Before World War I it was an integral part of the Austro-Hungarian Empire, but upon the latter's dissolution after the war, Czechoslovakia was created as an independent state. It was occupied by Germany during World War II, but was eventually liberated by the allied armies and regained its independence. However, it shortly came under the domination of the U.S.S.R. and this is still the situation today. From our point of view there is one place of major interest in the history of medicine and biology in the city of Brno, which is where Gregor Mendel (1822-1884) established the modern science of genetics, and I will confine myself to this. I feel compelled to point out that crossing the border into Czechoslovakia is not exactly easy for a westerner, and it is of the utmost importance that full preparations are made in advance. Nevertheless, once inside the country there are reasonably good roads and train services between the major cities. I found the people pleasant, cooperative and eager to help.

BRNO

Location - 200 kilometers east and slightly south of the capital Prague.

Train - Direct from Prague

Road - Take the E14 from Prague and exit at Brno. There is another way of getting to Brno by road, which may be more convenient for many people, and this is from Vienna in Austria. Brno is about 135 kilometers north of Vienna and the E7 runs straight between the two cities. There is also a good bus service two or three times a week between Vienna and Brno, and I found this helpful, as it avoids all the problems of taking a car across the border. Brno was formerly called Brünn, its German name, and has been famous for a long time as a textile centre. It is large, but there are reasonably good public transportation services.

Mendelianum

Mendlovo Namesti

Brno

Opening Hours: Every day (except Mondays) 9.00 - 16.00. Guide books and other literature are available, many of them in English, and the director, Dr. Vitezslav Orel, who is very knowledgable, speaks fluent English. There is a small charge for admission.

This consists of the Augustinian Monastery, where Mendel lived, the gardens where he did his genetic work, and a Mendel Museum and Library.

Gregor Mendel

Johann Gregor Mendel was born in 1822 in Heinzendorf, Austria (now Hyncice, Czechoslovakia). His mother and father were both peasants, but from families with long traditions of professional gardening, and young Johann was brought up in this tradition. He was a good student at school, but suffered from severe mental strain which plagued him all his life. In due course he entered the University of Olmutz to study philosophy, which fortunately for his later work included a considerable amount of mathematics.

In 1843, at the age of 21, he entered the Augustinian Monastery in Brno, taking the name of Gregor. Here he found an atmosphere conducive to learning, and as part of his theological studies between 1844-1848, he attended courses at the Philosophical Institute in such things as pomology and viticulture. Later under the auspices of the Monastery, Gregor went to the University of Vienna and studied more botany. Due to illness he never received a degree from Vienna, and returned to the Monastery which with minor interruptions was home for the rest of his life.

Mendel began his work on the hybridization and cross pollination of plants in 1856. It took him 10 years of careful and painstaking work, mostly on garden peas, to unfold the basic phenomena of what was to become the new science of genetics. The language Mendel used to describe his results is no longer current in genetics, but basically what he established for peas was as follows:

1. There was in each plant a pair of hereditary factors controlling flower color and other characteristics.
2. The two factors in each pair are derived from the plant's parents, one member of the pair from each parent.
3. The two factors in each pair separate during the formation of germ cells, so that each germ cell received only one factor.
4. The factors for the various characteristics (e.g., red or white flowers) are alternate forms of the same factor, one being dominant over the other.

All this has since evolved into the modern concepts of genes, alleles, homozygotes, heterozygotes, etc. and the science of genetics, with its incredible achievements and benefits, to say nothing of its basic contribution to the understanding of biology itself.

Mendel published his results in 1866 in the journal of the local Natural History Society, under the title "Versuche über Pflanzen-Hybriden" (Experiments in Plant Hybridization). Here fate took an unfortunate hand, for there were only 20 copies printed (only 6 are known to survive) and apparently the local readers of the journal did not understand the significance of the work. The journal had such a narrow distribution that it never reached the main centres of science. Thus his work "lay dormant" for 36 years before it was rediscovered in 1900 and finally put to use. It is really impossible to over estimate the importance of Mendel's work, it was a triumph of preparation and perseverance.

In 1868 Mendel was elected Abbot of the Monastery, and the official duties involved with this occupied an increasing amount of his time. With the exception of some work on the hybridization of bees, only spasmodically did he do any more scientific work. He died at the Augustinian Monastery in 1884.

To return to the Monastery itself. It is no longer used as a monastery, but it is very much intact as Mendel would have known it. There is a huge garden courtyard to the monastery building, but the actual garden that Mendel used is a small fenced area right at the entrance to the Mendel Museum. Like everything else at the Mendelianum, they are beautifully kept and are a joy to see. Inside

the building there are several rooms which comprise the Mendel Museum. The first of these is the Mendel Memorial room. Originally this was the dining room of the monastery, but it is now fitted out with a series of panels explaining Mendel's life and work. There are also display cases showing his own instruments, microscopes, grafting tools, pressed plants, etc. Next there is the Abbots' room. This was the conference room of the monks, and it is preserved more or less intact as it was originally. It is a lovely room with superb furniture and various large portraits on the walls. There is also a library section in the museum, which contains many of Mendel's personal books. It is of great interest that amongst these is an early German edition of "The Origin of Species, etc." by Charles Darwin. It is really one of the tragedies of 19th century communication, that Mendel knew of Darwin's work, but Darwin did not know of Mendel's, which was something Darwin desperately needed to explain certain aspects of his evolutionary theory. There are other rooms occupied by the director and his staff.

When Mendel died in 1884 he was buried in the Abbot's Plot of the Central Cemetery in Brno. The Abbots' Plot is difficult to find, and some assistance will be necessary, but once there Mendel's simple grave is clearly marked. Lovers of music may also wish to see the grave of the great Czechoslovakian composer, Leos Janacek (1854-1928), in the same cemetery.

Brno, Czechoslovakia, is not the easiest place to get to, but for dedicated geneticists, doctors, biologists, historians of science, etc., the effort is worth it. It is a pleasant thought that in Brno there is this permanent and cherished memorial to Gregor Mendel, which I hope will remain in good hands.

HUNGARY

Hungary lies due east of Austria, and like the latter was part of the Austro-Hungarian Empire before World War I. However, after that conflict it became an independent state and remained so until World War II, when it was occupied by Germany. It was liberated by the U.S.S.R. in 1945, and has remained in close association with the latter ever since. From our point of view it was in Budapest that the great 19th century physician, Ignác Philipp Semmelweis (1818-1865) was born. This event is commemorated by a very good medical museum there. It is important that I point out here that crossing the border into Hungary is relatively easy as compared to crossing into its neighbor Czechoslovakia. A visa is required, but it is not hard to get, and there are a minimum of formalities at the border.

BUDAPEST

Location - 260 kilometers east and slightly south of Vienna.

Train - Direct from Vienna and many other cities.

Road - Take the road east out of Vienna towards Bratislava, but at Schwechat take the right fork to Bruck and the Hungarian border. Inside Hungary, pick up Route 1 to Győr and Komárno. Then follow Route 10 to Budapest. There is, however, another, and in my opinion a much more pleasant way to reach Budapest. That is to take the hydrofoil from Vienna down the Danube to Budapest. It goes daily and takes about 5 hours. It is a very comfortable and remarkably beautiful journey, which I cannot recommend too strongly. Budapest consists of the twin towns of Buda and Pest, and is one of the major cities of eastern Europe with a long and important history, closely associated with the ups and downs of the Austro-Hungarian Empire. It suffered severe damage in the final days of World War II, but much of this has been repaired, and today with its location on both sides of the Danube, it is really a very impressive city and a pleasant place to visit.

Semmelweis Medical Historical Museum
I, Aprod U. 1-3
Budapest

Opening Hours: Daily (except Mondays) 10.00-16.00. There is a small charge for admission. Literature is available, and there are helpful and knowledgeable guides who speak good German and French, but little English. The museum is in fact the birthplace and former family home of Ignác Semmelweis. It is on the Buda side of the Danube, and situated at the base of the hill on which stands the former Royal Palace.

Ignác Semmelweis

Ignác Semmelweis was born in 1818 into a lower middle class family in Buda. He received a reasonably good elementary education at the Catholic Gymnasium in Buda. He later attended the University of Pest, and finally received a medical degree from the University of Vienna in 1844. At that time Vienna was a major center of medicine, and Semmelweis was determined to stay there. It was fortunate for the future of medicine that he did, and he managed to get an appointment in one of two obstetrical clinics in the Vienna General Hospital.

Here a situation existed which seems almost incredible today. The first clinic, to which Semmelweis came, was operated as a teaching clinic for medical students, and in this the maternal death rate was over 13% from puerperal fever. This is now known to be an infectious disease of the female reproductive tract, commonly called "childbed fever", but in those days its cause was unknown and the outcome was nearly always fatal. The second clinic in the hospital was run by midwives and for the teaching of midwives. Here the death rate from puerperal fever was only 2%. This was in 1847 and everyone was baffled by the phenomenon, but Semmelweis made a crucial observation and deduction. The observation was, that in the first clinic the medical students went straight from the autopsy room (where they did anatomical dissections on cadavers) to the obstetrical clinic where they examined patients, without any washing of hands on the way! This of course was not the case in the second clinic operated by midwives, and Semmelweis concluded that the medical students were in some way carrying the infection to the patients. Consequently he ordered that everyone attending an obstetrical case should first wash their hands in a solution of chlorinated lime. This seems almost common sense today, but it represents one of the great steps in the development of modern medicine. The results of this procedure were dramatic, for within one month the death rate in the first clinic dropped to that in the second.

One might have thought that with such conclusive evidence of success, Semmelweis' ideas would have prevailed, but it was not the case. This was before the time of Louis Pasteur's (see under France) theories on the microbial nature of infectious diseases. Today, Semmelweis is generally considered the direct precursor of Louis Pasteur. His ideas were not welcomed by the conservative medical community in Vienna, and he was even laughed at and ridiculed.

The rest of his career is really insignificant. In disgust he returned to his native Budapest, and eventually received an appointment at the University of Pest in 1855, instituting his hygienic procedures with good results, but with little recognition. This was true also of his great work "Die Aetiologie, der Begriff und die Prophylaxis des Kindbettfiebers" (The Etiology, Concept and Perophylaxis of Childbed Fever) published as a book in 1861. It was not well received and had poor foreign reviews. After this Semmelweis became gradually mentally ill, and in 1865 returned once again to Vienna where he died shortly afterwards. He was buried in Vienna, but his body was returned to his native Budapest in 1965.

Semmelweis is a tragic figure in medicine, but our debt to him is enormous, and he paved the way for the triumphs of Louis Pasteur.

The Semmelweis Museum is the Hungarian peoples' tribute to their great son, and it is maintained by the state. The building was the Semmelweis family home. Ignác was born there, and is now buried there in a vault in the wall of the courtyard. The medical museum itself is extensive and one of the finest in the world. Its emphasis is of course on Semmelweis and his work, but in fact this is only a minor part of the total number of displays. In addition to the Semmelweis displays, there are exhibits on primitive medicine, Chinese, Greek, Roman and Islamic medicine, Renaissance medicine, the development and importance of the microscope, and the gradual advance of medicine in the 18th, 19th and 20th centuries, etc. There is also a magnificent medical historical library, archives, and portraits, etc. It is also pleasant to record that the

museum staff carries on an active program of research into the history of medicine. All in all a fine tribute to the memory of Ignác Semmelweis, and well worth the effort of a visit.