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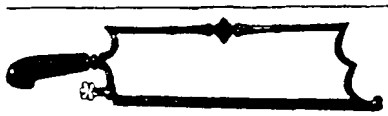
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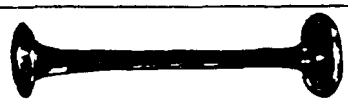

ASSOCIATION

NEWSLETTER NO. 13
July 1988

Dear Colleagues:

The Third Annual Meeting of the Medical Collectors Association was held at Chapel Hill, North Carolina, and was a great success. The meeting was attended by approximately 30 people and included a reception at the Carolina Inn by the Dean of the medical school, as well as the formal sessions, and a very small dealers' session. All of us are greatly indebted to Larry Vincent who did all of the work and, unfortunately, was unable to attend the meeting because of his recent change in positions. All-in-all everyone at the meeting had a wonderful time and I urge those of you who have not attended the meetings to try to come to the fourth meeting, which will be held in Cleveland. Olgierd Lindan has agreed to host the meeting, which will take place probably between July 27th and July 29th of 1989. In addition, it is likely that a small reception will be held in conjunction with the meeting at the Dittrick Museum. Please mark off those dates, July 27th-29th, 1989 to plan to attend the fourth meeting in Cleveland.

Returning to our experiences in Chapel Hill, the only downside was an unfortunate accident which prevented Rosalind Berman from getting to the meeting, since she wound up in the hospital. However, I understand that she is convalescing quite nicely.

A recent communication from Larry informs me that $130 was left over from the various fees collected and this is being donated to the Rare Books Library of the University of North Carolina in the name of the Medical Collectors Association. I think it is nice that once again the Association has had a successful meeting and is able to lend some support to a worthy medical history cause. Thanks again to Larry Vincent for a job well done.

One last note about the meeting is recognition of Jack Rubin's very fine effort in creating an exhibit of antique medical instruments, which are in the care of the University. A brief description of the medical instrument exhibit is included in the Newsletter under the title "News and Views". We are also grateful, of course, to Nancy Austin of the Rare Books Library, Stuart Bondurant, Dean of the medical school, and all those individuals at Chapel Hill who helped to make this meeting a success.

Several additional items are included in the Newsletter. A letter was given to me by the owners of Patterson's Mill and Country Store which they received from a Professor J. Beck. Professor Beck is working on

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

an unusual research project and he is seeking related materials. Perhaps some of the membership can be of help to him. His letter is included in the Newsletter. We have also received a letter from Keith A. Nier of the Thomas Edison papers, who is searching for an Edison Inductorium. A copy of his letter to me, as well as of the description of the object, is included in the Newsletter. Any of the members who are aware of the location of this device, or who can help Mr. Nier acquire one, should contact him directly.

I recently received a brochure from the Science Heritage Library about a group of volumes devoted to the history of microscopes and microscopic technique. Since this appeared to be something of interest to the membership, I have included the brochures in this mailing of the Newsletter.

We have also received a query from Dr. Harry J. Gloetzner concerning the Burleson & Burleson Rectal Clinic of Grand Rapids, Michigan. If any of you know of the existence of this company or its significance, please contact Dr. Gloetzner directly. A copy of the stationery is included with the Newsletter, as well as the formal request by Dr. Gloetzner.

Dr. Sam Eichold has brought to my attention the formation of the Heustis Medical Museum. I enclose with this Newsletter the brochure from the museum which describes its organization and purpose. Dr. Eichold is laboring valiantly with very little funding to create a medical museum from scratch. Any instruments which any of you are able to donate to the museum will be greatly appreciated. Dr. Eichold will provide an appraisal to any individuals who wish to donate things to the museum, should they wish to utilize the donation for income tax purposes. Dr. Eichold may be contacted at 2451 Fillingim Street, 415 Mastin Bldg., Mobile, Alabama 36617.

Once again, we are indebted to Bill Helfand and Bob Kravetz for their ongoing contributions to the Newsletter. The usual space occupied by the Identification Column is not being used in this issue and I will not print the form again unless I receive some items for identification. It is amazing to me that with all of the unusual things that turn up, no one has submitted to me any items for identification within recent months. If you have any interesting objects which you would like to get the membership to identify, please contact me.

The other remaining regular publication, namely, the Patent Column, is included in the article by James Edmonson for this issue. We are greatly indebted to Dr. James M. Edmonson, Curator of the Dittrick Museum, who has supplied us with an extremely informative article on Asepsis and the Transformation of Surgical Instruments. This very scholarly report is included as the highlight of this issue of the Newsletter. Thanks again to Dr. Edmonson for his very kind help and I am sure we all look forward to seeing him at the meeting of the Medical Collectors Association in Cleveland in July of 1989.

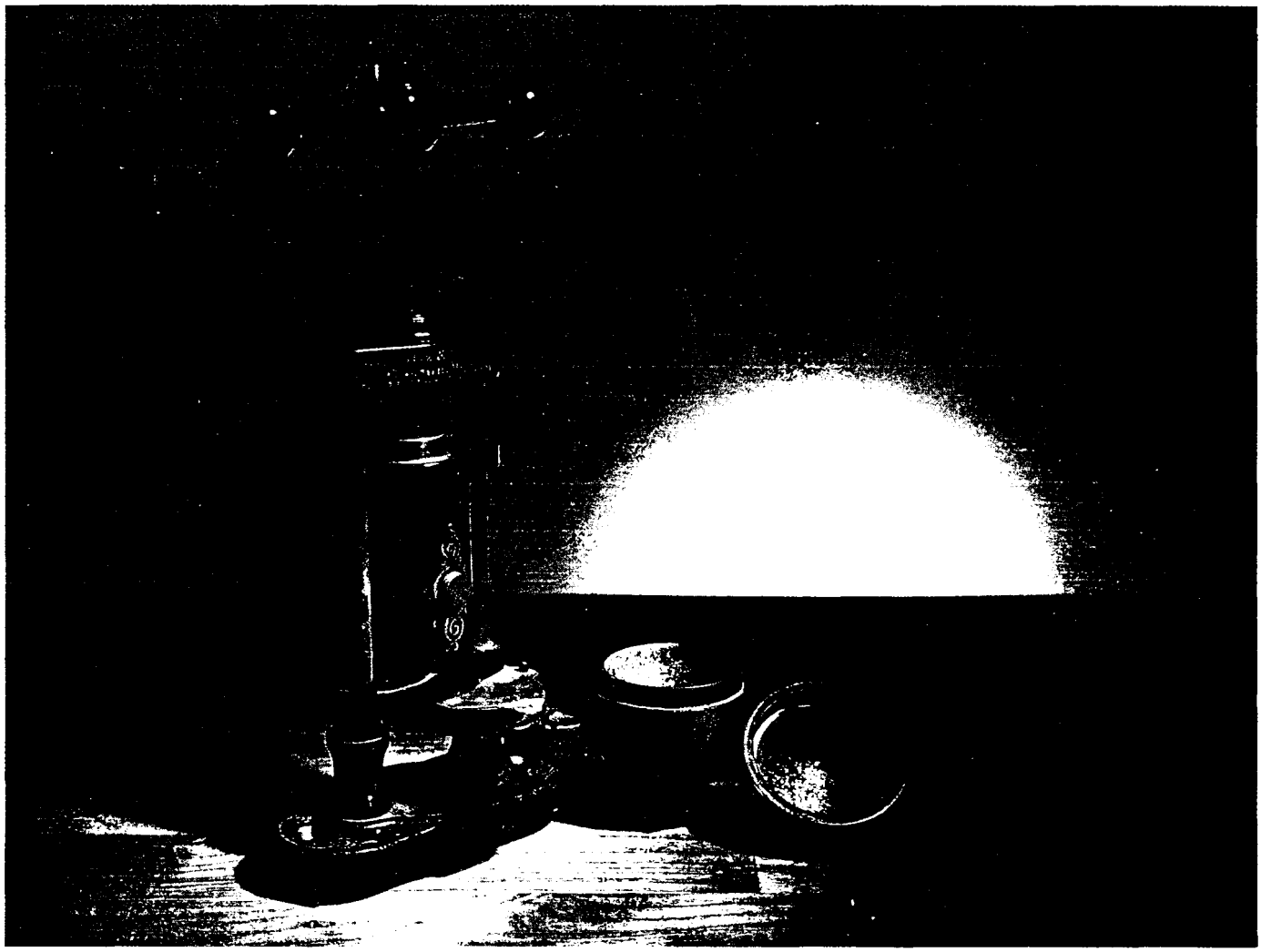
The last item of the Newsletter is, of course, another contribution from Dr. Pengelley. This time Dr. Pengelley tells us of the medical museums in yet another country.

Once again I would like to thank all of you who have contributed to the Newsletter in some fashion and urge the remaining members of the Association to contribute whatever information, articles or related matter that they think may be of some interest.

Sincerely,
M. Donald Blaufox, M.D.,PhD.

A LOOK BACK

FASCINATING ARTIFACTS FROM THE HISTORY OF MEDICINE



MEDICAL ARTIFACTS COURTESY OF ROBERT E. KRAUTZ, M.D., CURATOR OF THE MEDICAL MUSEUM PHOTOGRAPHED BY KEVIN HEFLIN

In years past, the dispensing of medicine was no easy matter for the corner druggist. It required a detailed knowledge of various herbs and botanicals that had to be compounded and individually prepared for customers. Today's pharmacist, although much more knowledgeable about the chemistry of drugs, has a significantly easier time in filling prescriptions, as compounding and preparation are no longer needed.

Pictured above is a hand-operated metal suppository machine that was used to compress the suppository from a solid cocoa butter mass into specialized brass molds. The suppositories from this machine, patented in 1891, were for vaginal and nasal use.

Also pictured is a boxwood pill coater with a fine antique patina from the late 1800s. The smooth wooden box, shown open, was used to coat hand-made pills. The pills were first covered with a glue-like syrup material and then placed in the pill coater. Gold or silver leaf was added, the top was screwed on and the coater was rotated until the pill was covered with the material, which acted to protect it and was not harmful when swallowed. Pill coaters such as this one were used in drug stores during the 18th and 19th centuries.

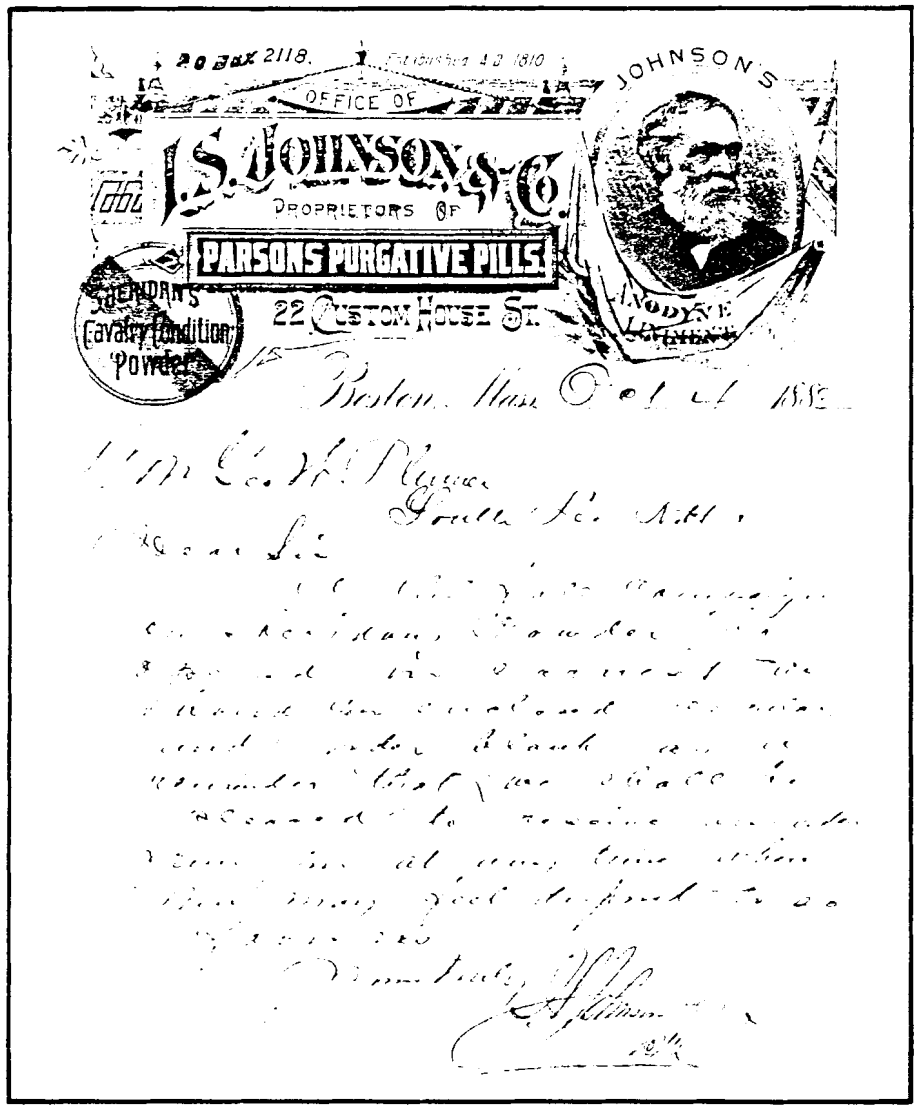
We have just received a colorful letter-head enclosed of the Drs. Burleson and Burleson, Rectal Clinic, Grand Rapids, Michigan Est. 1899. They claim to be the largest institution in the world for the non-surgical treatment of diseases of the rectum ("by the dissolvent method"(?).

We will of course check further the A.M.A. and Proctology Societies but perhaps some of your readers have some information in this regard.

Sincerely,

Henry Jr. Gloetzner

Henry J. Gloetzner, M.D.
Chairman
Historical Committee



Historical Images of the Drug Market—VIII

by William H. Helfand

THE letterhead of the I. S. Johnson Company of Boston, Massachusetts, is a good example of the creative use of lithography to produce an attractive design. It includes not only the portrait of the founder, I. M. Johnson, but also the names of three of the company's leading products, two addresses, and the date of its establishment. Since most correspondence during the 1880s was handwritten, the paper below the letterhead itself was lined. The text beneath the letterhead comprises a message that is still most timely although today's language might be more succinct:

As the fall campaign on Sheraton's powder has opened in earnest, we hand you enclosed circular and order blank as a reminder that we shall be pleased to receive an order from you at any time when you may feel disposed to so favor us.

(Size of letterhead. 3 x 6 inches. Original in W. H. Helfand Collection.)

Thomas A Edison Papers

Rutgers, The State University of New Jersey • New Brunswick • New Jersey 08903 • (201) 932-8511

June 16, 1988

Dr. Donald Blaufox
Albert Einstein College of Medicine
1300 Morris Park Ave.
Bronx, New York 10461

Dear Dr. Blaufox:

I am writing in connection with our recent telephone conversation regarding our search for an extant Edison Inductorium. I enclose a copy of some original advertising material (feel free to crop the page) and I will describe here what we are doing. We hope the Medical Collectors Association Newsletter readers can help us.

The Thomas A. Edison Papers is a major historical editing project preparing both book and microfilm selective editions of the documents left from the life and work of Edison. We seek to make available for scholars studying creativity, technical and scientific history, management of innovation, and so forth, extensive and informative selections of materials from Edison's career. We regard actual devices as well as drawings or words on paper as documents: objects can provide crucial details not just about themselves but about processes of manufacture or design, details not readily available from written sources. We are currently preparing the second volume of our letterpress edition (to be published by Johns Hopkins University Press) which will deal with the period from the middle of 1873 to the middle of 1876. During these years Edison made and marketed an electro-medical apparatus he called the "Inductorium." We wish to know if any of these survive anywhere, public or private, and if we could examine it or them. We also would be very interested in any other surviving ads, flyers, instructions, or other material related to the devices. Any publication would only be done with the owners permission and with full acknowledgement. The Thomas A. Edison Papers, Rutgers University, New Brunswick, NJ 08903, telephone: (201) 932 - 8511.

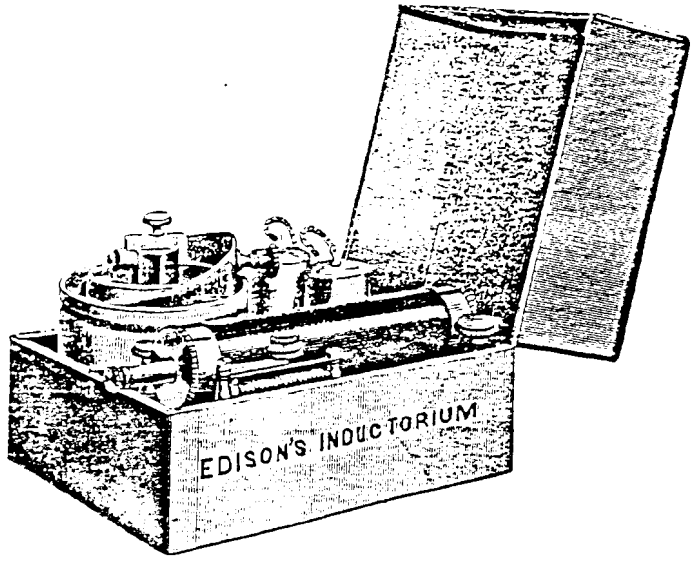
Please use as much of the above as you can. Thank you for your consideration.

Respectfully,

Keith A. Nier
Assistant Editor

Sponsoring Organizations: National Park Service/New Jersey Historical Commission/Rutgers, The State University of New Jersey/Smithsonian Institution
Edison signature used with permission of McGraw-Edison Company.

EDISON'S INDUCTORIUM,

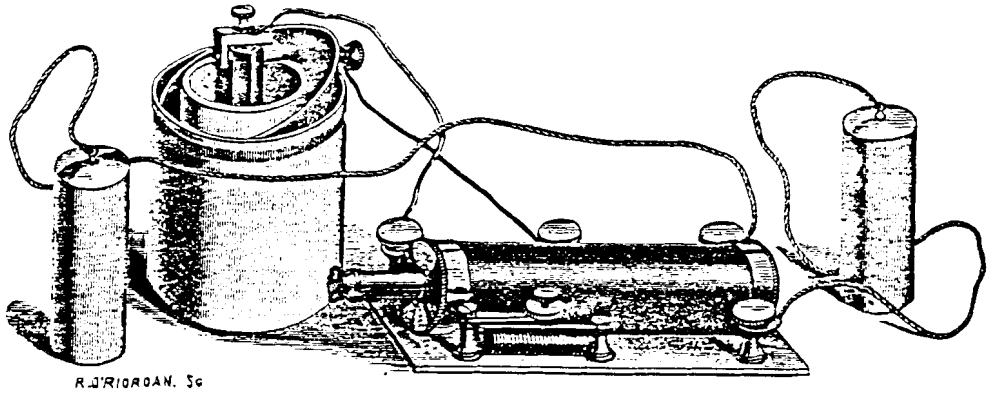


This is an exceedingly powerful induction coil, designed expressly for medical and family use. It is constructed upon a principle recently discovered by its inventor, whereby most extraordinary effects are produced, without a corresponding increase in the size of coil, or battery power, as has heretofore been necessary. Hence we are enabled to furnish the public with an apparatus at one-third the price asked by other makers for coils of equal power.

The workmanship is of a very superior style, and of a solid and substantial character.

The battery which accompanies the coil is the same as used by the telegraph companies.

An almost infinite number of experiments may be tried, by manipulating the electrodes. This instrument should be in every family as a specific cure for rheumatism, and as an inexhaustable fount of amusement.



The second cut shows the manner of connecting the coil with the battery, and electrodes. The latter when applied to different parts of the body for medical purposes, should have moistened sponges placed in the hollow part of each. The handles, which are held by the persons applying the current, should be wrapped with dry paper to prevent its passing through his own body.

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Asepsis and the Transformation of Surgical Instruments, 1885-1900.

James M. Edmonson, Ph.D. Curator, Dittrick Museum

Medical museums and private collections contain ample evidence of the adaptation to asepsis. This evidence comes in physical as well as written or printed form and this includes sterilizers, white enameled furniture, and the entire range of surgical instruments. In a general sense, we know when this change occurred; sometime between 1880 and 1900 instrument makers began to offer new models of surgical instruments in their product catalogues. These new models differed from pre-aseptic instruments in at least two important respects. First, all-metal construction supplanted traditional materials that could not withstand either the corrosive action of disinfectants or the high temperatures of steam sterilization or autoclaving. Second, instruments were designed for easy disassembly, in order to make the task of cleaning them simpler and more certain. While we can thus identify the most significant or obvious changes of instruments in response to asepsis, we know surprisingly little about how, when, or by whom these changes were accomplished. Answering these questions in a brief and tentative fashion is the purpose of this paper; I hasten to add that much research remains to be done before all the story can be sorted out.

One of the first notable public displays of aseptic instruments took place at the Universal Exposition of 1889 in Paris, France. Dr. Paul Berger, author of the official report on the medical and surgical exhibits, commented that,

> ...it is impossible not to be struck by the complete transformation that surgical instrument making has undergone in the past few years. This renovation of our instrumentation was the consequence of the revolution that antisepsis introduced in surgical practice; it has been necessary to create entirely new equipment that meets and exceeds the conditions that surgeons consider essential. 1

Berger went on to describe in detail the individual exhibitors' contributions to the renovation of surgical instruments and equipment. Of special note, according to Berger, were the various designs for scissor-like joints or articulations that French instrument makers had devised.

Berger was not alone in emphasizing this last point, instrument joints. In a series of articles published in Le Progres Medical in 1889, Dr. Marcel Baudouin described in considerable detail the changes introduced by French instrument makers, particularly those in Paris. 2 In that city a small number of firms -- Collin, Mathieu, Mariaud, Aubry, and Luer -- dominated the national output of surgical instruments. These instruments makers [all of whom had worked for or with the industry's leader, Joseph Frederic Benoit Charriere (1803-76)] constituted an active community where the level of inventiveness and innovation was quite high. 3 In 1889 and for some time before that, according to Baudouin, all of these firms seemed to be pre-occupied with the re-design of instrument joints. [See figs. 1-3]

Author's query: For his ongoing study of the changes in surgical instrumentation, the author would enjoy hearing from readers who may have pertinent insights and information. Of particular interest are instrument trade catalogues of the period 1880-1900, both American and European (including British). Please address correspondence to:

James M. Edmonson, Ph.D.
Curator, Dittrick Museum of Medical History
11000 Euclid Avenue
Cleveland, Ohio 44106
(216)368-3648

This pre-occupation was also noted by Guillaume Emile Mergier in his analytical monograph on the exposition, Technique instrumentale concernant les sciences medicales (1891). 4 Mergier identified three technical developments as central to the advance of surgery in the nineteenth century. He included 1) the discovery of anesthetic agents and the subsequent development of anesthetic apparatus, 2) the introduction of antisepsis and its associated paraphernalia (sprayers for disinfectants, sterilizers, etc.), and 3) the invention of more effective means for hemostasis, particularly artery forceps. In his discussion of this last area of technical change, artery forceps, Mergier (like both Berger and Baudouin) reported at length upon instrument makers' efforts to devise a new form of instrument joint that could be readily disassembled for cleaning. Why, one might ask, did this aspect of instrument design generate such interest? [See fig. 4]

Instrument makers devoted their efforts to this detail because they foresaw an unprecedented commercial opportunity. In light of the fact that surgical instruments would have to be altered in compliance with the dictates of asepsis, all instrument makers stood to profit, as physicians and surgeons discarded their existing (and henceforth unacceptable) instruments in favor of the new. If, however, any one instrument maker devised and patented an indisputably superior form of aseptic instrument joint, that individual could attain an immense advantage over competitors. In addition to manufacturing and selling instruments incorporating such an improvement, the innovator could, through licensing and royalties, derive revenues from all other makers who would be compelled by customer demand to adopt a particular form of joint or articulation. This position of dominance would be compounded by the fact that this single design change could be applied across the spectrum of instruments featuring scissor-like action, including forceps, scissors, and the like. Given these prospects, the race was on to devise and patent the joint or articulation that would win the day.

Physicians and surgeons appear to have played little or no part in this scramble. Before the present century the patenting of surgical devices by physicians was in fact a fairly unusual occurrence. Since patenting was not considered to be professionally "proper", especially in the elite circles of the American medical profession, medical men generally shied away from this practice. The first Code of Ethics of the American Medical Association, adopted in 1847, specifically forbade it, stating that, "...equally derogatory to professional character is it for a physician to hold a patent for any surgical instrument or medicine." 5 A review of medical and surgical device patents for the period 1880 to 1895 reveals that not all physicians obeyed this ruling, but for the most part, the leading surgeons of the day did. So, it was left to instrument makers to devise and patent much of the new instrumentation required for aseptic surgery.

In France, the first instrument maker to file a patent for a new aseptic joint was Adolphe Collin, successor to Joseph Charriere. Collin presented his initial model, patented on October 30, 1886, as an improvement upon the widely used mortise and tenon joint introduced by Charriere in the early 1830s. 6 He observed that the Charriere joint required considerable precision fitting, both in manufacture and during assembly and disassembly before and after use. Moreover, frequent usage often resulted in wear and abrasion, so that the joint soon became loose and wobbly. [See fig. 5]

To remedy these design faults, Collin substituted a straight pin for the mortise and tenon. To hold the instrument halves together, he added an overlapping finger or branch. One simply joined the instruments at right angles to each other and then rotated them, as one would when closing a pair of scissors. As the handles came together, the finger placed below the pivot pin held the instrument halves securely in place. This finger proved to be the "weak link" of the Collin design, however; its slender form was not strong enough to guarantee both a tight fit and smooth action.

Not discouraged by this apparent failure, Collin patented a second joint on September 13, 1887. This model, which also proved defective in use, consisted of a modified mortise and tenon joint. Collin quickly moved on to a third design, which he patented on December 6, 1887. In this version, Collin returned to his original straight pin pivot and overlapping finger. This time, however, Collin placed the finger above the joint axis and reinforced it, so that it more closely resembles a yoke or cradle, not a mere finger. In this, his final design, Collin achieved both a snug, secure fit of the two instrument halves, and a smooth opening and closing motion when grasping an artery or tissue. 7 Success was at hand for Collin, or so it seemed.

Collin was not the only instrument maker in Paris to patent new aseptic instrument joints. At least two competitors, Mariaud and Mathieu, patented their own designs in 1887 and 1888. Mariaud, like Collin, devised several different joint forms; in all, he patented five variants from June 1887 to July 1888 before settling upon his final model. 8 Similarly, Mathieu was not satisfied with his original aseptic joint of 1888 and filed additional patent specifications in 1890, modifying the design one last time. 9 [See figs. 6 and 7]

As one can see, French patents of the late 1880s, especially in 1887 and 1888, clearly record a frenetic race to come up with the aseptic instrument joint that would become the international standard throughout the surgical instrument industry. If the evidence found in museum collections is to be trusted, it is apparent that none of the French patented designs became the accepted standard on this side of the Atlantic or much of anywhere outside of France's own Paris-centered surgical instrument trade, where Collin's joint prevailed. 10

The design that did achieve the distinction of being an international standard is to be found among French patent records somewhat later, in 1891. On July 2, 1891, a patent, or brevet, was granted to "M.Henger, for pincers, scissors and analogous instruments composed of two separate parts." 11 [See fig. 8] Henger's joint, subsequently known as the "Aesculap" joint, was also patented in Germany on March 7, 1891, in England on May 29, 1891, and in the United States on May 3, 1892. 12 By 1893 at least one leader of the American surgical instrument trade, Charles Truax, would feature the Henger joint in his trade catalogue [See fig.9] and in the ensuing decade it emerged as the preferred and dominant form of instrument joint. 13 Why, one might ask, did Henger's "Aesculap" joint win out over the many other designs proposed by instrument makers?

The Henger aseptic joint is a simple, elegant solution to the challenge of designing a joint for easy disassembly. It is not markedly more ingenious in form or effective in use than the design of Collin or even that of Mariaud, however. It appears that the principal advantage offered was that of being more easily produced by machine, by drop-forging in particular. This proved to be a decisive factor, since surgical instrument making was shifting rapidly from workshop to factory. Mechanical, machine-based methods of production became central to the success of a few large instrument makers beginning in the 1880s, so that by the turn of the century a handful of firms dominated the market for surgical instruments on both sides of the Atlantic. 14

By 1900 the undisputed leader among instrument making firms was the Jetter and Scheerer enterprise, headed by Wilhelm Scheerer, in Tuttlingen Wurtemberg. Scheerer's success can be explained in great measure by the mechanization of production at his factory, today known as the Asculap Werke AG. In the 1890s, and perhaps earlier, Scheerer introduced steam activated drop forging to replace hand forging in the

manufacture of knives, scissors, and forceps. This change increased output dramatically. By hand a skilled workman could produce about 60 to 75 forgings in a day; by semi-automatic drop forge an adept person could turn out 1200 to 1500 forgings in the same period. 15

In addition to increasing productivity in his factory, Scheerer extended his marketing network abroad, to the United States in particular. By 1898 he had formed the Kny-Scheerer Corporation in association with New York instrument maker Richard Kny. This company served as the principal distributor of Scheerer's instruments, but was also supplemented by a chain of retailers that sold Kny-Scheerer instruments under their own names. 16 Later, after the turn of the century, the Kny-Scheerer Corporation also opened a factory in Newark, New Jersey, to produce instruments on this side of the Atlantic.

The final guarantee of Scheerer's business fortunes was control of the patent rights for Henger's aseptic instrument joint. Evidence of the importance of control over the Henger patent is to be found in the instruments themselves. Beginning in 1909, tariff regulations stipulated that all imported products had to be marked with the country of origin. Surgical instrument retailers in America obtained exemption from this requirement, arguing that the recesses of stamped markings could harbor septic matter and that "would make proper sterilization impossible." 17 Scheerer ignored this ruling and persisted in stamping the "Aesculap" trademark on his instruments. Furthermore, he took special care to add the markings "Patented" and "Pat.5.3.92" (the American patent date) on instruments incorporating the Henger joint. These markings usually appeared on the inner face of the joint, where septic matter was most likely to accumulate. In doing this, Scheerer permitted his commercial interests to take precedent over aseptic precaution. This tangible evidence demonstrates, I believe, the perceived importance of the Henger joint among instrument makers.

In summary, this brief review of the transformation of surgical instruments in response to asepsis reveals that instrument makers played a central role. They approached the problem by devising what I would call "transcendent" solutions; that is to say, they sought out solutions or improvements that could be applied across a broad range of the instrumentation that they produced. With this approach to the problem in mind, they quickly focused upon the redesign of instrument joints. Their technical solutions, like the Henger joint, embodied economic decisions; In this case , an imperative design criterion was to make a joint that could be produced quickly and cheaply by machine. These economic concerns even overrode medical ones, as illustrated by the marking of instruments even though aseptic precaution would have condemned this practice. Finally, this inquiry suggests that surgical instrument makers in America played a comparatively minor part in these important changes; for the most part, they simply followed a European example. Why they "failed", if that is the proper characterization, is an important question that can be resolved only through ongoing research and documentation.

1. "Classe 14. Medecine et chirurgie. Rapport du jury international par M. Paul Berger," in Minstere du commerce, de l'industrie et des colonies, Exposition universelle internationale de 1889 a Paris, Rapports du jury international publies sous la direction de M. Alfred Picard (Paris: Imprimerie nationale, 1891) Groupe II, 2e partie, 564-65.

2. Marcel Baudouin, "La Medecine et les Sciences qui s'y rattachent a l'Exposition Universelle de 1889," Le Progres Medical 9 (1889): 463-65; 504-05; and 10 (1889): 55-59; 77-79; 101-05; 225-26; 239-41; 255-58; 288-91; 301-03; 328-30; 349-53; 365-70.

3. See Urs Boschung, "Joseph-Frederic-Benoit Charriere (1803-1876): fabricant d'instruments de chirurgie parisien originaire de Suisse," Schweizerische Rundschau fur Medizin Praxis 74 (1985): 181-84.

4. See especially the section "Chirurgie", pp. 19-50 in Guillaume Emile Mergier, Technique instrumentale concernant les sciences medicales. Revue des methods et instruments usites en chirurgie, micrographie, physiologie, hygiene, etc. (Paris: Octave Doin, 1891).

5. "Code of Ethics," Transactions of the American Medical Association 14 (1864): 334. The impact of the United States patent system upon nineteenth century American medicine and surgery is undoubtedly of interest to those studying the history of surgical instrumentation and, more generally, medical technology. This subject has yet to receive the serious attention it deserves, however. To my knowledge, the best guides to historical research in patent records are Eugene S. Ferguson, Bibliography of the History of Technology (Cambridge, Mass.: M.I.T. Press, 1968), pp. 102-09, and Rodris Roth, "Nineteenth-Century American Patent Furniture," in David A. Hanks, Innovative Furniture in America From 1800 to the Present (New York: Horizon Press, 1981), pp. 5-31, and 191-92.

6. "Brevet no. 179361, en date du 30 octobre 1886, a M. Collin, pour un systeme d'articulation applicable aux pinces, aux ciseaux et en general a tous les instruments a branches articulees," in Ministere du commerce et de l'industrie, Description des machines et procedes pour lesquels des brevets d'invention ont ete pris sous le regime de la loi du 5 juillet 1844 publiee par les ordres de M. le Ministre du commerce et de l'industrie (Paris: Imprimerie nationale, 1889), new series, vol. 59 (1886), pt. 2, pp. 18-19 and pl. VI. Hereafter referred to as Description with appropriate volume, year of patent (not publication date), and pages.

7. For description and illustrations see Baudouin, "La Medecine...," Le Progres Medical 9 (1889): 465 and 10 (1889): 55, and Mergier, Technique instrumentale (1891), 32-33. Collin was apparently so pleased (or obsessed) with his joint design that he tried to utilize it whenever possible, even when it was neither called for nor especially helpful. One example of Collin's inability to restrain himself is in the application of the joint to an intubation tube introducer. See "Brevet no. 243456, en date du 7 decembre 1894, a M. Collin, pour un system d'instrument pour poser les tubes servant a l'intubation du larynx," Description, vol. 91, pt. 2 (1894), p. 18 and pl. III.

8. "Brevet no. 184318, en date du 18 juin 1887, a M. Mariaud, pour un nouveau systeme d'articulation pour les pinces, ciseaux et autres instruments a plusieurs branches," Description, vol. 67, pt. 2 (1888), pp. 2-4 and pl. I. See also Baudouin, "La Medecine...," Le Progres Medical 10 (1889): 255, and Mergier, Technique instrumentale (1891), pp. 29 and 32-33.

9. "Brevet no. 193072, en date du 19 septembre 1888, a M. Mathieu, pour un systeme d'articulation a chape et coulisse, applicable aux pinces, cisailles et ciseaux de chirurgie et de coutellerie," Description, vol. 67, pt. 2 (1888), pp. 24-26 and pl. VII. See also Baudouin, "La Medecine...," Le Progres Medical 10 (1889): 102 and 104, and Mergier, Technique instrumentale (1891), pp. 33-34 (description only).

10. Although the Collin joint was not universally employed in this country, there is evidence of its adoption in America before 1890. This is found in Charles N. Dixon, "The preparation of surgical dressings by sterilization with heat," New York Medical Journal 47 (1888): 147-51. Dixon noted:

I take this opportunity of presenting Collin's haemostatic clamp forceps, which is the simplest and most easily cleaned of any forceps with which I am acquainted, and I have adopted it almost exclusively in my practice. Messrs. Tiemann & Co. have adapted this lock to forceps and scissors of different sizes.

11. "Brevet no. 214597, en date du 2 juillet 1891, a M. Henger, pour pinces, ciseaux et instruments analogues formes de deux parties separables," Description, vol. 79, pt. 2 (1891), p. 19 and pl. IV.

12. Paul Henger, of Stuttgart, Germany. Surgical Instrument. Specification forming part of Letters Patent No. 474,130, dated May 3, 1892.

13. In 1890 Charles Truax's sales catalogue featured the "Truax aseptic 'open box joint'", which resembles Collin's joint in its later manifestations. By 1893 Truax had shifted to the Henger joint, as illustrated in the "Columbian edition" of his firm's catalogue. See Charles Truax & Co., Price List of Physicians' Supplies, 5th ed. (Chicago: Charles Truax & Co., 1890), p. 700, and Charles Truax, Greene & Co., Price List of Physicians' Supplies, 6th ed. (Chicago: Charles Truax, Greene & Co., 1893), p. 1098. My thanks go to Kathy Mandusic McDonell, Curator of the Indiana Medical History Museum, for furnishing photocopies of the 1890 Truax catalogue.

14. Marcel Baudouin, in his opening remarks on the 1889 Universal Exposition displays of surgical instruments [published in Le Progres Medical 9 (1889)], noted this shift from small workshops, or ateliers, in Paris to factories in provincial centers of industry:

We will take this occasion to point out a new tendency that is increasingly pronounced among surgical instrument makers and that does not seem to us, on the whole, an improvement. In this industry as in many others, man is steadily displaced by machine [la machine a vapeur]; the artiste, the skilled workman, no longer exists in this quintessentially French branch of cutlery. Most of our makers have their instruments made in provincial centers by ordinary workmen, in vast industrial establishments that mass produce, quickly and cheaply, but ordinarily their output is limited to things [table cutlery] other than amputation knives. Of course, labor is costly in Paris, and to make a greater profit it is better to utilize this provincial work force. Of course, one thus gets instruments of a notably lower price. But the problem is that the products of our French firms are not very much better, and they once were, than those made abroad; everything is leveling out, democratizing; even in the field of surgical instruments. (p. 464)

15. U.S. Tariff Commission, The Surgical Instrument Industry in the United States Tariff Information Series No. 7 (Washington, D.C.: Government Printing Office, 1918), p. 34.

16. Examples include Manhattan Surgical Instruments (New York), Roemer Drug Co. (Milwaukee), and Schuemann-Jones Co. (Cleveland).

17. U.S. Tariff Commission, Surgical Instrument Industry (1918), p. 24.

Fig. 1. Collin joint, as shown in Le Progres Medical 10 (1889): 55.

les annales de la *Société pathologique de Londres*. M. Berger rapporte, comme troisième cas, le fait suivant qui montre qu'il y a bien une loi de pathologie générale s'appliquant à tous ces cas d'oblitération des canaux excréteurs des glandes, quelles qu'elles soient :

Homme de 50 ans, présentant depuis 6 ans une grosseur dans la région sus-hyoïdienne qui a augmenté peu à peu, mais qui est plus dure depuis quelque temps ; depuis un mois, élancements douloureux dans cette tumeur le soir et après le repas ; aucune douleur la nuit. Depuis deux ans, cet homme a remarqué qu'il y avait parfois des grains de sable dans sa bouche. Dans ces derniers temps, poussées inflammatoires. Tumeur sus-hyoïdienne indépendante de la peau, latérale, profonde, grosse comme une petite noisette, assez mobile, faisant dans la bouche un certain relief le long du canal de Warthon. Au cathétérisme de ce canal, on tombe sur un corps étranger qui donne la sensation d'un calcul d'environ 3 centimètres de long. Opération : incision courbe ; on tombe sur une tumeur dure très adhérente aux tissus voisins. L'aspect douteux de la tumeur encourage M. Berger à faire l'extirpation, qui est faite avec difficulté. Calcul enchatonné de 3 centimètres de long, en forme de crâne, à base située dans le centre de la glande. Réunion complète en 8 jours. L'examen histologique de cette intéressante glande a été fait par M. Pilliet, préparateur à la Faculté.

De cet examen il résulte que dans de tels cas on trouve trois altérations principales du parenchyme glandulaire : 1° dilatation de tous les conduits excréteurs, si bien qu'à la coupe ils ont l'aspect d'espaces lacunaires ; leur épithélium est modifié d'ailleurs ; 2° disparition de la substance sécrétante, c'est-à-dire des éléments cellulaires ; des lobules glandulaires, éléments qui ne sont plus reconnaissables, lobules où l'on trouve à peine des traces des acini primitifs ; 3° altération du tissu conjonctif péri-acineux, constituée au début (lésion récente) par une infiltration de cellules embryonnaires très abondantes, surtout autour des filets nerveux et le long des vaisseaux ; puis plus tard (cas anciens) par une véritable sclérose interstitielle, par l'organisation véritable du tissu conjonctif péri-acineux. Ces lésions sont dues, on le sait aujourd'hui, depuis les travaux de MM. Charcot et Gombault (1867) sur le foie, de MM. Straus et Germon (1882) sur la ligature aseptique des conduits excréteurs des glandes, de M. Albarran sur le rein, à l'oblitération des voies d'excrétion par les calculs qui s'y développent. La dilatation seule est la conséquence de l'obstruction ; les deux autres espèces de lésions (dégénérescence glandulaire et sclérose) sont dues à l'infection microbienne concomitante, puisqu'on ne les observe pas dans les cas de ligature aseptique des conduits excréteurs glandulaires. M. Pilliet n'a pu retrouver sur les coupes de la glande sous-maxillaire, qui a servi à contrôler ces faits, les microbes cause de l'infection ; peut-être cela s'explique-t-il par la disparition rapide en général des microbes qui sont en contact avec la salive.

De telles observations sont rares ; d'ailleurs pour avoir des glandes sous-maxillaires ainsi malades il faut des cas invétérés. On ne connaît pas de cas analogue pour la parotide. Comme les troubles observés se rapportent plutôt à l'inflammation de la glande qu'à la présence du calcul, il importe de débarrasser le malade de l'organe inutile qui le fait souffrir. L'ablation totale est donc justifiée dans de tels cas.

M. Despres croit que lorsqu'il y a simple hypertrophie, simple engorgement de la glande, il est inutile d'en faire l'ablation. Cette hypertrophie peut disparaître seule.

M. Berger est de son avis, mais il ne faut pas confondre cet engorgement temporaire avec l'induration chronique dont il parle. Il lui paraît insuffisant, quand la glande est ainsi transformée en tissu scléreux très dense, de se borner à l'extraction du calcul salivaire (1).

Élection de 4 membres correspondants nationaux. — Au 1er tour de scrutin (26 votants), sont nommés : MM. Minier (25 voix), Piéchaud (20), Leprévost (du Havre) (19). — Au 2e tour (29 votants), M. Rohmer (de Nancy) est élu.

Marcel Baudouin.

(1) Nous avons eu l'occasion d'observer ces jours-ci, à l'hôpital de la Pitié, un cas presque analogue à celui de M. Berger et où l'extirpation totale de la glande chroniquement infectée, malgré

CHRONIQUE SCIENTIFIQUE DE L'EXPOSITION.

La Médecine et les Sciences qui s'y rattachent à l'Exposition internationale de Paris en 1889 (*Suite*).

I. — Les instruments de chirurgie (*suite*).

Il est temps d'entrer dans les détails, et pourtant nous ne décrirons, — MM. les fabricants nous pardonneront d'avoir si peu d'espace à leur consacrer, — que les instruments mal connus ou nouvellement construits par les principales maisons. Par contre nous insisterons, avec une certaine prédilection, dans l'énumération ci-dessous, sur ceux qui incarnent d'une manière frappante le génie inventif de tel ou tel industriel. Nous voulons montrer de la sorte à quel degré de perfectionnement en est arrivé chez nous l'art de la fabrication des instruments de chirurgie, et par ce fait essayer de faire connaître quels titres à notre point de vue chaque fabricant a conquis par son labeur constant et son ingéniosité personnelle. Le visiteur de la classe XIV pourra ainsi se rendre facilement compte de l'état actuel de l'industrie à laquelle nous nous efforçons de l'intéresser.

A).—Commençons par la *maison Charrière-Collin*, d'où sont sortis, on le sait, tous les contremaîtres qui dirigent aujourd'hui avec un certain éclat les maisons rivales. Nous avons déjà décrit la *nouvelle articulation à tenon* que M. Collin emploie désormais pour la plupart des instruments à deux branches articulées. Bornons-nous à ajouter que les figures

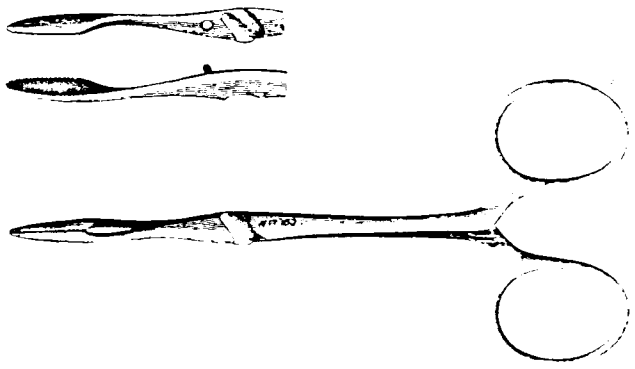

Fig. 4. — Nouvelle articulation à tenon de M. Collin. (Pince à forcipressure montée ; au-dessus, la même désarticulée).

ci-jointes montrent mieux que notre description ardue la façon dont cette articulation est constituée. L'une d'elles (*Fig.* 4), se rapporte à une pince à forcipressure ordinaire,

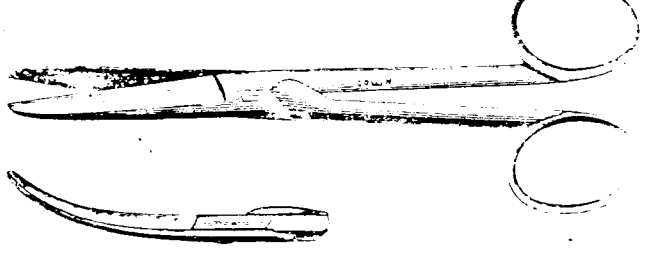

Fig. 5. — Articulation à tenon de M. Collin. Une paire de ciseaux (vue de face et de profil).

l'autre à une paire de ciseaux (*Fig.* 5) ; l'articulation est vue de face et de profil, montée et démontée. Que M. Collin y songe : le crochet des pinces à forcipressure est trop léger : il se casse facilement ; d'autre part, le trou que porte la même branche est si petit que sa désinfection est difficile. Pourquoi ne pas faire une articulation plus solide ? Les pinces peuvent sans inconvénients avoir des manches plus forts, si elles ne doivent pas être pourvues de mors plus grossiers.

On trouvera, dans l'exposition de M. Collin, quelques instruments qui méritent plus particulièrement d'attirer l'attention. Nous les décrirons, sans nous attacher à préciser la situation qu'il occupe dans les vitrines, car leur place varie

Fig. 2. Mathieu joint, as shown in Le Progres Medical 10 (1889): 102.

bry, puisque ce fabricant en est resté à l'ancien tenon, en changeant seulement sa forme. La figure ci-jointe (*Fig.* 38)

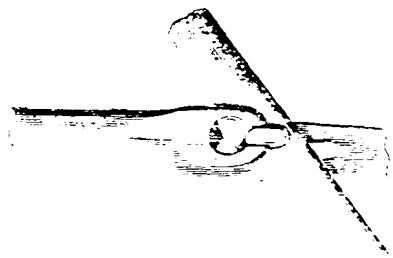

Fig. 38. — Nouvelle articulation de M. Mathieu.

montre qu'il a, comme M. Collin, adopté pour l'une des branches la joue américaine et un orifice destiné à recevoir le principal tenon de l'autre branche. Celle-ci, en effet, présente deux tenons: l'un principal, invisible sur la figure, analogue au nouveau tenon de Collin; l'autre accessoire, plus petit, mais ovale et visible. Pour ce tenon supplémentaire, il a fallu pourvoir d'un orifice cette joue rendue plus large et y ménager une fente d'entrée pour l'introduction du deuxième tenon. Pour articuler ces deux branches et introduire le deuxième tenon dans le trou de la joue, il a fallu transformer l'orifice du tenon principal en une vraie fente allongée, comme on le voit sur la figure (branche disposée ici horizontalement). Cette articulation, qui a une certaine analogie avec celle des forceps anglais, est plus compliquée et notablement plus difficile à nettoyer que celle adoptée par les autres fabricants.

b). Nous avons quelques instruments de *chirurgie générale* à mentionner dans les deux vitrines de M. Mathieu : d'abord une modification dans la construction des cisailles qui a été très remarquée par le jury. Cet instrument porte le nom de *cisaille à tranchant unique* de Mathieu. On en construit de droites, de coudées, de courbes, de longues et de courtes (voir *Fig.* 39). Il y en a même une colossale, qui a bien près

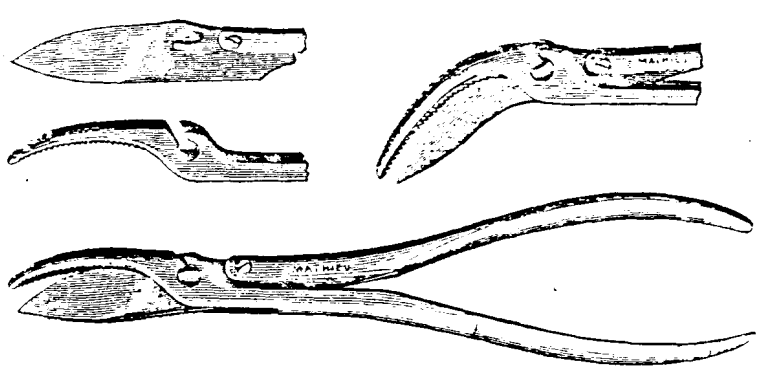

Fig. 39. — Cisaille à tranchant unique de Mathieu. Détails de la construction des mors et de l'articulation de Mathieu.

d'un mètre de manche, destinée à sectionner un fémur. On ne croirait jamais qu'il fût nécessaire d'avoir un bras de levier aussi long pour couper l'os de la cuisse ! L'ancienne cisaille mâchait l'os et dérapait facilement à la moindre résistance ; avec la nouvelle, la section est des plus nettes, sans éclat, quand on proportionne la force de l'instrument à la grosseur de l'os à rompre. La branche mâle a la forme d'une lame de couteau convexe; la branche femelle a son extrémité dédoublée pour doubler le point d'appui, c'est-à-dire est pourvue une sorte de gouttière où s'enfonce la lame de l'autre manche. Le fabricant a utilisé là sa nouvelle articulation. — Il faut rapprocher de cette cisaille à double point d'appui, le *davier de M. le Pr Farabeuf* modifié par M. Mathieu, qui est aussi à double appui en porte à faux et pourvu de la même articulation.

Par contre, de l'avis de M. Mathieu du moins, l'articulation mobile ne peut convenir aux instruments tels que la *cisaille emporte-pièce* (voir *Fig.* 40), la pince coupante, etc. Aussi a-t-il conservé pour ces instruments l'ancienne articulation fixe, faite à chaud. Est-ce absolument nécessaire ? A d'autres de le discuter. — A côté de cette cisaille, on voit des *curettes tran-*

chantes, dont quelques-unes sont perforées et pourvues d'un canal central pour permettre l'irrigation en même temps que le

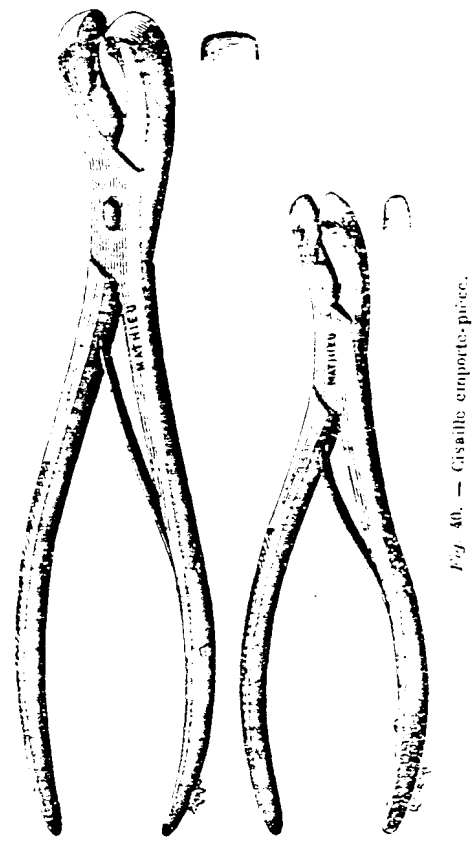

Fig. 40. — Cisaille emporte-pièce.

nettoyage ; — des *gouges à évidement*, de forme carrée ou ronde, fonctionnant comme un rabot à moulures et ayant une

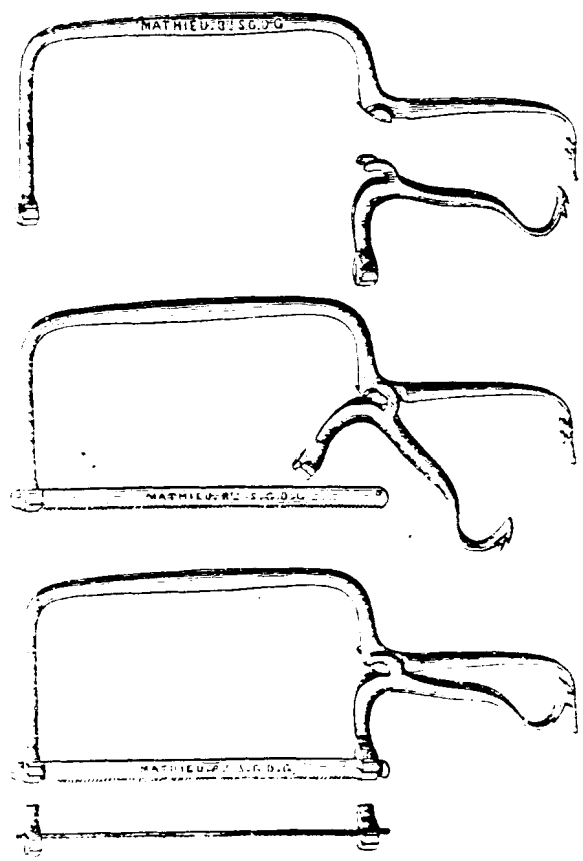

Fig. 41. — Scie à amputation et résection de Mathieu. Scie montée et démontée. Manche, articulation et façon de placer le feuillet.

grande force de pénétration; — des *gouges à main*, plus larges, plus longues que celles de Legouest ; — une *pince à drainage*

Fig. 3. Mariaud joint, as shown in Le Progres Medical 10 (1889): 255.

ccès. Le troisième jour, le Dr Laaser appliqua la méthode sur us occupe et fut étonné d'observer une suppuration considérable. ns les deux jours suivants la guérison s'accentua, mais le mal- le ne put être suivi jusqu'à complète guérison.
Veuillez agréer, Monsieur le Rédacteur, l'assurance de ma ... considération. Dr Leopold CASPER.

CHRONIQUE SCIENTIFIQUE DE L'EXPOSITION.

La Médecine et les Sciences qui s'y rattachent à xposition internationale de Paris en 1889 *Suite* [1].

I. — INSTRUMENTS DE CHIRURGIE (*Suite*).

Maison Mariaud.

On peut mettre encore la *Maison Mariaud* en première ne, à la suite de celles qui tiennent la tête du peloton des ricants d'instruments de chirurgie. Elle a un grand mérite, ontestable et incontesté, celui d'avoir fourni, la première,— peut le dire sans exagération, — le matériel nécessaire à ute la jeune génération chirurgicale ou plutôt à ceux de nos itres qui ont défendu avec conviction la valeur de la lapa- omie moderne. Il y a une dizaine d'années environ, alors la chirurgie abdominale n'était encore en France qu'à l'état ryonnaire, M. Mariaud pouvait déjà fournir aux défenseurs doctrines nouvelles les instruments indispensables pour ier à bien leurs hardies tentatives. Ce n'est là un secret r aucun d'entre nous, habitués des hôpitaux parisiens : s nous avons tenu à mettre en relief les efforts faits par e maison, qui s'est pour ainsi dire complètement spécialisée s ce sens. Nous croyons faire acte de justice en le procla- t, désirant rendre à chacun ce qui lui appartient en propre ; tant plus que la plupart de nos confrères n'y ont point sté et qu'aujourd'hui, grâce aux perfectionnements tout nts de la méthode antiseptique, ses concurrents, les direc- s des grandes maisons de fabrication, sont parvenus à s fournir un matériel aseptique irréprochable, qui éclipse s une certaine mesure l'ancienne renommée de l'outillage M. Mariaud. Quoi qu'il en soit, son matériel antiseptique encore d'analogue que celui de MM. Mathieu et Collin.

a). Modifications d'ordre général.

Articulation nouvelle de M. Mariaud et ses manches métalliques.

Articulation nouvelle de M. Mariaud. — Comme Aubry, M. Mariaud a cherché à transformer l'ancienne culation mobile des instruments à deux branches, sans ejeter complètement. La nouvelle articulation de M. Ma- d doit porter le nom d'*articulation à tenon et en huit chiffre*. En effet, l'ancien tenon a été vissé dans la branche , sans rivet, il est toujours formé d'une tête circulaire açon à ce qu'on ne puisse pas le fausser, et au-dessous d'un de-vis tel qu'il se visse de lui-même au fur et à mesure de ire ; il ne peut s'engager dans l'orifice de la branche elle que dans une position donnée, celle qui correspond à rge cannelure, oblique de dehors en dedans et de haut as de cette branche [2]. Cet orifice constitue, avec cette elure, ce qu'il y a de spécial dans cette articulation ; il se pose en réalité de deux trous: il est double, par conséquent. les deux trous ont un point de contact. De plus, un des grande boucle du huit de chiffre) est plus grand que re ; c'est l'inférieur, c'est-à-dire celui qui est le plus rap- é du manche. La tête du tenon qui occupe le milieu de nnelure ne peut s'engager dans le petit trou de l'orifice en de chiffre qu'en passant d'abord par la grande boucle. Une qu'elle est placée dans la petite boucle, dont les bords fraisés pour empêcher la tête du tenon de sortir, les deux ches sont solidement articulées. — Cette articulation, qui t supérieure à celle de M. Aubry, si M. Mariaud prenait non rivé à base carrée (modèle Aubry), est assez facile à yer. Quelques chirurgiens la préfèrent à celle de M. Collin. lle paraît plus simple à première vue et le résultat d'une transformation moins radicale de l'ancienne articulation mobile. Voir *Fig.* 64.

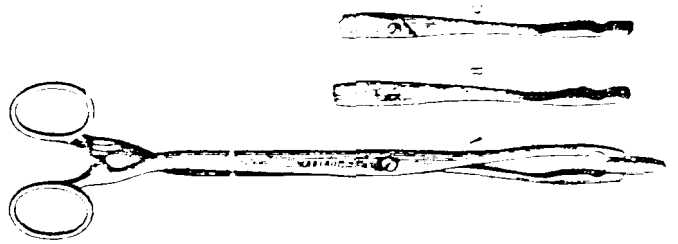

Fig. 64. — Articulation en huit de chiffre de M. Mariaud. — *Légende* : A, Pince montée ; — B, Branche femelle ; — C, Branche mâle.

2° *Manches métalliques.* — Rien de particulier à ajouter pour les *manches métalliques* de cette maison. Les lames sont rivées sur les manches ; tous ces manches sont d'origine absolument française et ont gardé l'allure des anciens manches de bois (Voir *Fig.* 65). Ils sont tous d'un fini remarquable et

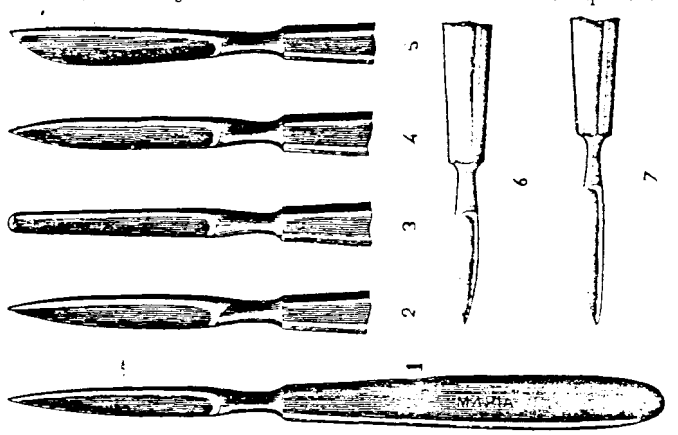

Fig. 65. — Bistouris à manches métalliques (modèle Mariaud).

peuvent amplement lutter contre les produits que certains de nos fabricants exposent et qui sont d'origine étrangère.

b). Instruments dus à M. Mariaud et fabriqués depuis 1878.

1° *Chirurgie générale.*

En ce qui concerne la *chirurgie générale*, nous avons peu d'instruments à signaler d'une façon spéciale dans cette vitrine ; nous y avons cependant distingué un *nouvel appareil pour la transfusion du sang* de bras à bras. Cet appareil se compose d'une pompe aspirante qui fait le vide dans un réservoir inférieur. Ce réservoir est rempli quand le sang vient au contact du piston. On refoule alors le sang aspiré et chaque coup de pompe donne 10 grammes de sang. En somme, ce transfuseur paraît une combinaison des modèles déjà anciens de MM. Collin et Roussel, et a, par conséquent, la prétention de ne pas avoir leurs inconvénients. Resterait à savoir s'il a leurs qualités respectives et si réellement il est plus pratique ; mais l'expérience nous fait défaut sur ce point.

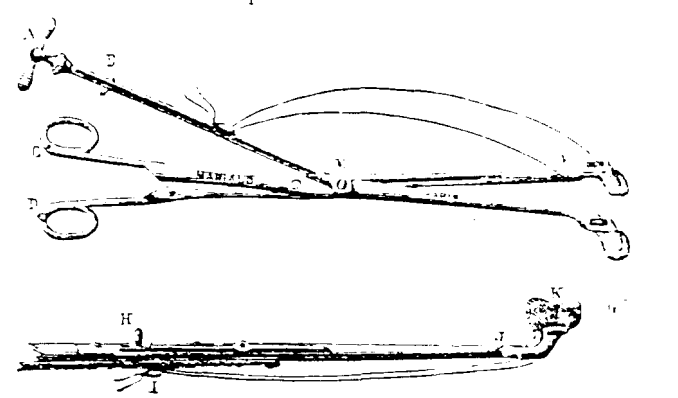

Fig. 66. — Pince serre-nœud de M. Mariaud.

A côté, à noter aussi une *pince serre-nœud* (Voir *Fig.* 66), constituée par une pince-urapoir à un serre-nœud ordinaire.

[1] Voir *Progrès médical*, n° 21 et les suivants.

Fig. 4. Collin joint, as shown in Technique instrumentale (1891), p.32.

de très minimes modifications et les baptisèrent de leur nom; les fabricants oublièrent qu'ils n'en étaient pas les inventeurs et supprimèrent le nom de celui qui les avait découvertes. D'autres essayèrent, par une courtoisie exagérée, d'en attribuer un mérite partiel à l'étranger. De là, les dénominations nombreuses de pinces de Richelot, de Spencer Wells, de Dupont de Lausanne, de Collin, de Mathieu, etc., etc., alors que les Américains, plus justes, les désignent sous le nom générique de pinces de Péan.

Nous n'avons pas la prétention d'avoir fait d'une façon complète l'historique de la question. Ceux de nos lecteurs qui voudront la connaître à fond consulteront les travaux de MM. Deny et Exchaquet (1), de Péan (2), et de Verneuil (3).

Les pinces hémostatiques sont, de nos jours, ce qu'elles étaient en 1867. Comme l'avait indiqué M. Péan, elles doivent avoir pour leurs branches et pour leurs mors la longueur, la force, la forme nécessaire pour chaque région, chaque organe. Le mode de fermeture est le même; le mode d'articulation de leurs branches n'a subi que des modifications de détail. Ce qui a contribué le

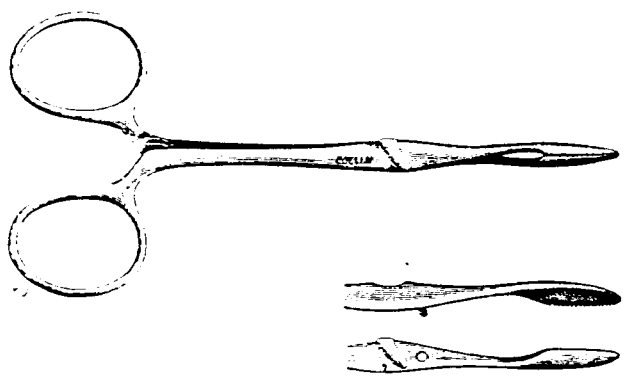

Fig. 8. — Pince hémostatique de Péan (articulation Collin).

plus à les vulgariser, c'est la facilité avec laquelle on peut les ouvrir, et la solidité que présente leur mode de fermeture. Celle-ci se fait par pression graduée, au moyen d'une crémaillère à crans. Avant Péan, on ne trouvait dans l'arsenal chirurgical, en fait de pinces, que la pince à verrou et la pince que Charrière avait fait construire pour passer ses épingles à travers les tissus. Elle se fermait au moyen d'un tenon qui s'engageait dans un trou de la branche opposée. L'une et l'autre était absolument impropre à faire l'hémostasie même temporaire.

M. Mariaud, dont la belle exposition mérite tous les éloges, a imaginé un

(1) Deny et Exchaquet : *Leçons sur la forcipressure faite depuis plusieurs années par M. Péan, chirurgien de l'hôpital Saint-Louis*, Paris, 1872.

(2) Péan : « Leçons sur le pincement des vaisseaux », dans les tomes I et II de ses *Leçons de Cliniques chirurgicales*.

(3) Verneuil : « Historique de la forcipressure à propos de six observations personnelles » (*Bull. Soc. de Chir.*, 1873).

Fig. 8. Henger joint, brevet no. 214597, in Description des machines et procedes vol.79 (1891).

PINCES, ETC., PAR M. HENGER.

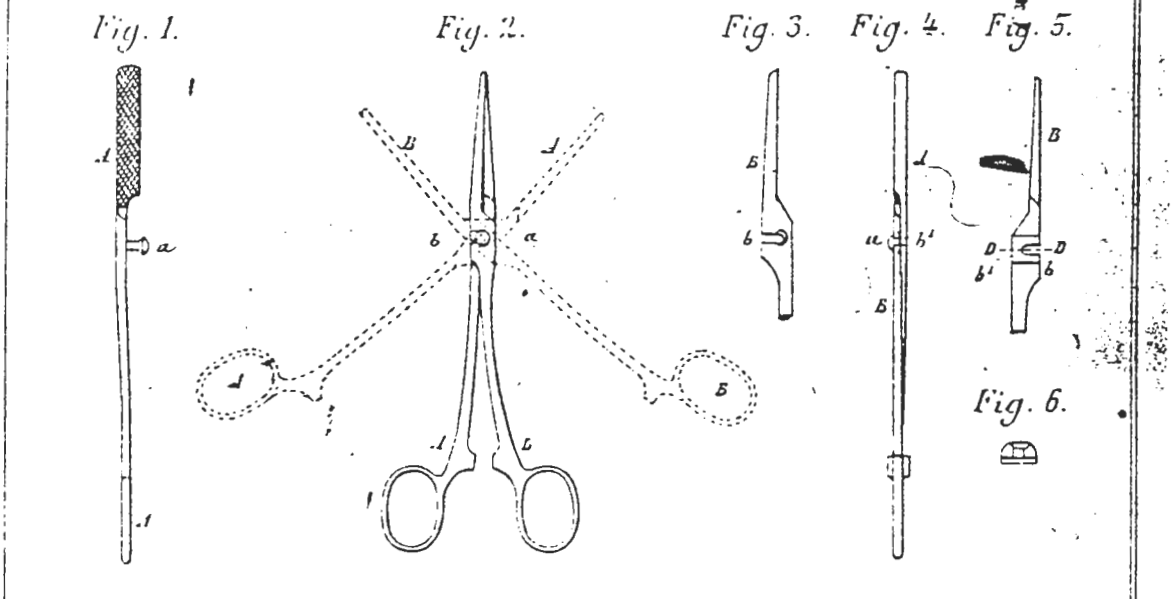

Fig. 9. Illustrations of aseptic joints in Charles Truax catalogues in 1890 and 1893, showing the transition to the Henger joint in the later year.

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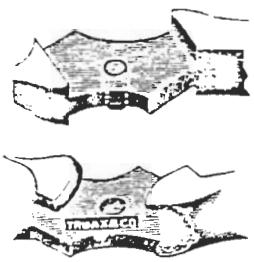
TRUAX & COMPANY

AMPUTATING AND GENERAL OPERATING INSTRUMENTS.



PATENT APPLIED FOR.

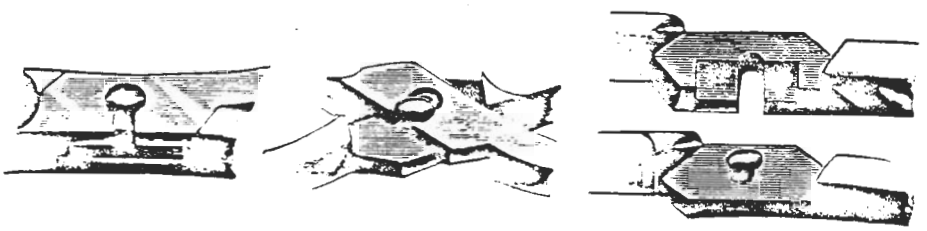
TRUAX'S ASEPTIC "OPEN BOX JOINT."

There is perhaps no class of instruments more difficult to thoroughly cleanse than the ordinary forms of Forceps. Nearly all forms of Bone and Tooth Forceps have heretofore been constructed with closed joints, that not only afforded a safe deposit for disease germs, but furnished a good medium for conveying them from one patient to another. Our open box joint is not only thoroughly aseptic, but it is as strong as the ordinary pattern. It may be unjointed in a second or two and as quickly put together. It combines all the necessary requisites in a perfect-working desirable instrument, and customers need have no hesitancy in ordering instruments constructed with our "Open Box Joint."

1098

CHAS TRUAX GREENE & CO.

AMPUTATING AND GENERAL OPERATING INSTRUMENTS.



PATENT JOINT FOR FORCEPS AND SCISSORS.

There is perhaps no class of instruments more difficult to thoroughly cleanse than the ordinary forms of Forceps. Nearly all forms of Bone and Tooth Forceps have heretofore been constructed with closed joints, that not only afforded a safe deposit for disease germs, but furnished a good medium for conveying them from one patient to another. Our Patent Joint is not only thoroughly aseptible, but it is as strong as the ordinary pattern. It may be unjointed in a second or two and as quickly put together. It combines all the necessary requisites in a perfect-working desirable instrument, and customers need have no hesitancy in ordering instruments constructed with our patent joint.

UNITED STATES PATENT OFFICE.

PAUL HENGER, OF STUTTGART, GERMANY.

SURGICAL INSTRUMENT.

SPECIFICATION forming part of Letters Patent No. 474,130, dated May 3, 1892.

Application filed December 10, 1891. Serial No. 414,802. (No model.) Patented in Germany March 7, 1891, No. 59,030, and in England May 29, 1891, No. 9,117.

To all whom it may concern:

Be it known that I, PAUL HENGER, a citizen of the Kingdom of Würtemberg, residing at Stuttgart, Würtemberg, Germany, have invented a new and useful Improvement in Separable Jaw-Tools, (for which I have obtained patents in Germany March 7, 1891, No. 59,030, and in England May 29, 1891, No. 9,117,) of which the following is a specification.

My present invention is designed to adapt jaw-tools—such as forceps, shears, and the like instruments, and especially such as are used in surgical operations—to be taken apart and reunited in the simplest manner for the purpose of permitting a thorough cleaning and sharpening of the parts detached from each other.

In the drawings, Figures 1 to 6, a simple pair of forceps is represented, which serves to illustrate the essence of my invention.

In the drawings, Fig. 1 represents an inner elevation of one of the legs of the forceps; Fig. 2, a plan of the said forceps in locked position, showing the separable position in dotted lines; Figs. 3 and 5, an outer and inner plan, respectively, of one of the jaws; Fig. 4, a side elevation of the forceps; Fig. 6, a transverse section on line D D, Fig. 5.

The two legs A and B of the forceps are not held together in the usual way by a screw-bolt; but one of the legs A is provided with a fixed pin *a*, whose free end is headed in the manner of a rivet and bolt, as shown. The other leg B is provided with an open slot or notch *b*, whereby the said leg B may be slipped under the pin *a* of the leg A.

In order that the two legs of the forceps may be separated only in a determined position, (in dotted lines in Fig. 2,) the leg B, having the slot or notch B, is provided on its inner side with a transverse mortise *b'*, having the width of the leg A, while the slot *b* is provided with a countersunk portion, preferably in the shape of a conical enlargement on the outer side, as shown. By this arrangement, after the two legs A and B have been united in the position indicated in dotted lines in Fig. 2, the rivet-head of the pin *a* is pressed into the upper conical enlargement of the open slot *b* upon closing the forceps. The falling apart or separation of the legs of the forceps is thereby prevented so long as the position of the legs indicated in dotted lines in Fig. 2 has not been attained.

While I have shown in the drawings and described my invention as applied to surgical forceps, it is manifest that the same may be applied to other jaw-tools for surgical and other purposes, such as shears, tongs, pliers, and the like, and I desire it to be understood that my invention covers all such tools and instruments.

What I claim, and desire to secure by Letters Patent therefor, is—

1. In surgical instruments and similar tools, a leg provided with an open slot, provided with a countersunk portion, in combination with a second leg provided with a pin for engaging said slot, having a head for engaging the countersunk portion of the slot, substantially as described.

2. In surgical instruments and similar tools, a leg provided with a slot having an outer conical enlargement and also provided with a transverse mortise on its inner surface, in combination with a second leg provided with a headed pin for engaging said slot, substantially as described.

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

PAUL HENGER.

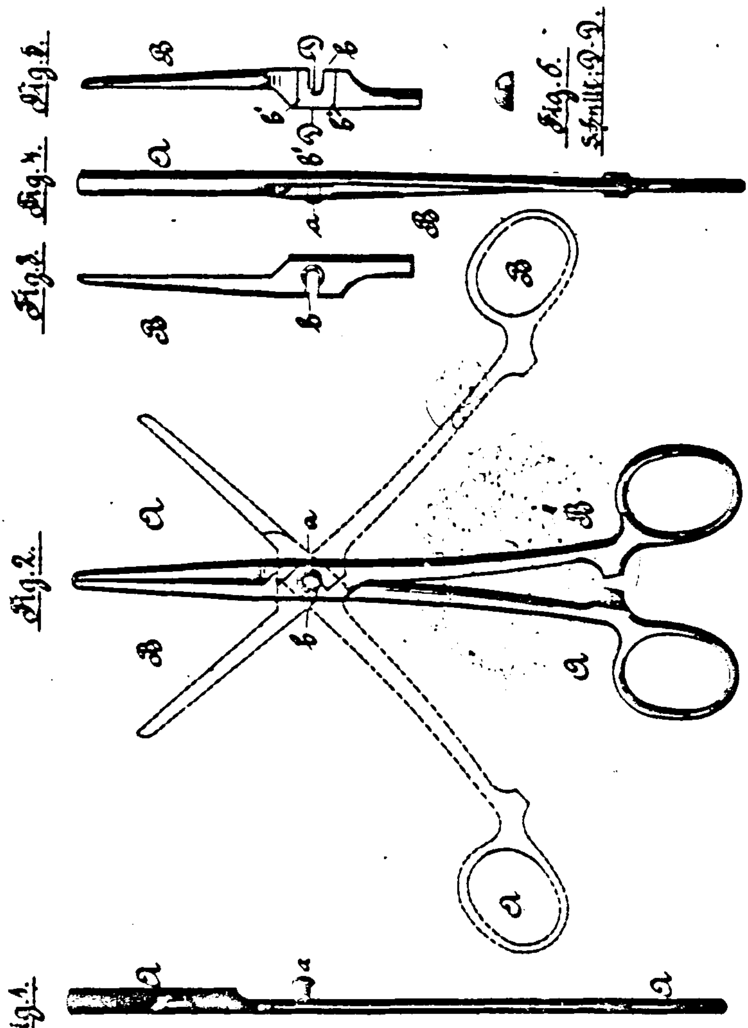
Witnesses:
AUGUST B. DRANTZ,
CARL DUSSMANNTZ.

(No Model.)

P. HENGER.

SURGICAL INSTRUMENT.

No. 474,130. Patented May 3, 1892.



Witnesses:

Inventor:

by

his Attorney

MEDICAL MUSEUMS OF THE WORLD

PART XII

CANADA

BY

PROFESSOR E. T. PENGELLEY

CANADA

Visitors to Canada would do well to understand that it is a bilingual country, based on the fact that its origins go back to a struggle for possession between the French and British. That struggle was finally settled in 1759 with a British victory over the French on the Plains of Abraham, near modern Quebec City. However, the British were, considering the times, tolerant rulers, and many French settlers remained in the country and have subsequently played a major role in its history. Modern Canada was established in 1867 by the British North America Act. With it came a constitution, though it is not an imitation of the United States constitution, but rather the British constitution federalized, which includes many unwritten conventions. Today Canada is a modern "western country," with a relatively small population for its vast territorial size. The capital city is Ottawa.

Until very recent times, Canadian science and medicine were far more closely integrated with those of Britain, but with the huge expansion of these fields in the United States from World War II onwards, Canadian science and medicine have inevitably accomodated to this fact. Nevertheless they have their own independent traditions, and are likely to cling to them.

TORONTO

Toronto, Ontario, is the number two city in Canada, and along with Montreal, Quebec, can certainly be considered the home of Canadian medicine. It was here in 1921 that a truly great medical event took place, namely, the demonstration of the antidiabetic properties of insulin, and its subsequent use in therapy. It was the first major therapeutic application of a hormone. In its day it was sensational with its almost miraculous results. It should be made clear that there are several kinds of diabetes, but the one which has been of such importance in human history is diabetes mellitus (from the Latin, and it literally means honey diabetes). It is a chronic form of diabetes, characterized by an excess of sugar in the blood and urine, together with hunger, thirst, gradual loss of weight and other side effects commonly leading to death. It has plagued mankind throughout his recorded history, and it is only since 1821 that it has been brought under control (there is still no cure) by the therapeutic use of insulin. Indeed many millions of diabetics owe their lives, and their ability to live a more or less satisfactory existence, to this discovery. Traditionally the credit for the discovery has always gone to Frederick Banting (1891-1941), and Charles Best (1899-1978), but that is certainly a simplification of the realities, if not an outright distortion, and unfortunately instead of giving full credit to all those responsible, "nationalism" reared its ugly head with the inevitable misrepresentation. The initial work was indeed carried out by Banting and Best, but this was done in the laboratory of Professor John James Macleod, a Scotsman, under his guidance and with the input of his vast experience and knowledge. In addition the biochemist J. B. Collip played a crucial role in purifying the insulin. However, there was one organization that was not intimidated by the "propaganda," and that was the Nobel Committee in Sweden. For when they awarded the Nobel Prize in 1923, they awarded it to Macleod and Banting, albeit under a storm of protest. They knew what they were doing--but in Toronto it is still Banting and Best who are the heroes.

The Charles H. Best Institute
112 College Street
Toronto

Opening hours: Normal business hours. This is a working institute of medical research.

The Old Medical Sciences Building where Banting and Best worked no longer survives. In place of it is a huge medical complex on the west side of Queen's Park. Outside this complex is a large brass plaque which commemorates the event which took place there. However, just across Queen's Park on College Street, is the Charles H. Best Institute. This was opened in 1953 in honor of the great work of Charles Best and Sir Frederick Banting. It is primarily devoted to medical research, but visitors are welcome on the ground floor where there are many portraits etc. of famous doctors, including Best himself. In addition they have some of the original equipment, including Best's colorimeter, which he and Banting used in the summer of 1921. It is fascinating to see how primitive, by modern standards this equipment was, yet they achieved so much. The equipment, documents, photographs, etc. may be seen by application to the business office of the institute. It is well worth the effort involved.

The Thomas Fisher Rare Book Library
120 St. George Street
Toronto

Opening hours: October - April, Monday - Saturday 9.00-17.00.
May - September, Monday - Friday 9.00-17.00.
Closed on all public holidays. A variety of literature is available. There is no charge for admission.

This is under the direction of the main library of the University of Toronto, but is a seperate building (opened 1973) devoted to rare books and special collections. There is also a display area on the second floor, where there are regularly changing exhibitions. There are particularly fine collections in English literature, Italian Renaissance literature and for our particular purposes, incredible collections of science and medicine from the Renaissance to the 20th century. Included amongst these is perhaps the finest Darwinian collection outside the Cambridge University Library in England (see under Cambridge, England). I cannot recommend this superb historical library too strongly.

The William Boyd Library and Medical Museum
The Toronto Academy of Medicine
288 Bloor Street West,
Toronto

Opening hours: Monday - Friday 9.30-16.00. A variety of literature is available. There is no charge for admission.

This institution has a small but excellent medical historical library, and a limited but very good medical museum.

The Ontario Science Centre
770 Don Mills Road (at Eglinton)
Toronto

Opening hours: Daily 10.00-18.00. A variety of literature is available. There is a small charge for admission.

This is an enormous science and technology museum. Many years in the building, it was opened in 1964 in celebration of the 100th year of the founding of the Province of Ontario.

The museum's main function is education in a broad field of subjects, and the excellent displays range for aeronautics and astronomy to medicine and natural history. It is not necessary to mention them all here, suffice it to say there are many, and I can hardly overstress the size of the museum, it is enormous. Of particular interest to us is a complete natural size replica of the 1921 laboratory used by Banting and Best in 1921. It is most impressive. Some years before his death I had an interview with Dr. Charles Best and I asked him if indeed it was an accurate copy of the original. "Yes", he replied. "As I recall things it is very accurate, with the one exception that it is much cleaner that the original."

VANCOUVER

The principle city of Canada on the west coast, and fast becomming a major cultural and scientific center.

The Charles Woodward Memorial Room
Woodward Biomedical Library
University of British Columbia
Vancouver, B.C.

Opening hours: Monday - Friday 9.00-17.00. This is open to the public, but permission to use it must be obtained from the librarian. There is no charge for admission or use.

The Charles Woodward Memorial Room houses one of the finest historical medical and biological libraries in North America. In Canada it is second only to The Osler Library (which regrettably I have not seen) at McGill University in Montreal.

The library is divided into two parts, the working historical biomedical library on the ground floor, and above on the balcony is a superb collection of very rare and valuable biomedical books. On the ground floor, there are also very fine tapestries showing the history of medicine and other beautiful portraits, busts etc. From time to time there are special exhibits on various aspects of biomedical history. This library should not be missed by anyone going to Vancouver.

VICTORIA

This is the capitol city of British Columbia located on Vancouver Island and a very pleasant ferry ride from Vancouver!

The British Columbia Provincial Museum
Belleville and Government Streets
Victoria, B.C.

Opening hours: Daily 10.00-17.30. A wealth of literature is available. There is a small charge for admission.

This museum is primarily devoted to science and technology (not medicine), but I mention it here simply because it is large, excellent and very new. They have used modern techniques in all their displays, principally of biology and Indian anthropology. I cannot speak too highly of it. It is one of the best in the world.

CONCLUSION

This concludes my project for Dr. Donald Blaufox, M.D., Ph.D., and the Medical Collectors Association. I hope to get these articles published in book form, and I would be more than grateful for any comments or suggestions from those who have read them. In addition I would be happy to hear from anyone who knows of other places of historical biomedical interest that I may have missed.

Eric T. Pengelley
Professor Emeritus
Department of Zoology
University of California
Davis, CA 95616

DEPARTAMENT DE BIOLOGIA VEGETAL
UNITAT DE FISIOLOGIA VEGETAL
FACULTAT DE BIOLOGIA
UNIVERSITAT DE BARCELONA
AVDA. DIAGONAL, 645
08028 BARCELONA

Director
BOOKER'S OLD TIME DRUG EXHIBITION
Patterson's Mill Country Store
Durham County, Route 54 Farrington Road 27514
Chapel Hill
North Carolina
U.S.A.

Dear Sir or Madam,

I am writing to you as I think you could help me. I have been recently made Member of the Royal Pharmaceutical Academy of Barcelona. My inaugural speech was on the subject of historical sealed medicinal earths (*terra sigillata* or *Lemnia, terra samia, cimolia, silesiaca*, etc. and *bol armenicus*). At the moment, I am continuing my research in this subject and I would like to gain some experimental results about the composition of these clays.

At present, I have very few samples to work on and I was wondering if perhaps you would have some of these tablets of clays at your famous Institution. Would it be at all possible to purchase or exchange some of these samples? I would be very interested in the acquisition of any of the above-mentioned clays. Of course, all costs arising from this matter would be paid by me.

I would also cite the origin of the samples in any future publication.

I would be most grateful if you could help me in any way in this matter.

Thanking you in advance for your reply,

Yours faithfully

Prof. Dr. J. BECH
Catedrático de la Universidad
y Académico Numerario de la
Real Academia de Farmacia.

Barcelona, 01-03-88