CATALOGUE

OF

Surgical Instruments

Manufactured and Sold by

GEO. TIEMANN & CO.,

F. A. STOHLMANN, *EDWARD PFARRE,*

No. 67 CHATHAM-STREET,

NEW-YORK.

Geo. Tiemann & Co.'s Surgical Instrument Factory,

F. A. STOHLMANN. *BOERUM STREET, BROOKLYN, E. D., NEW-YORK.* EDWARD PFARRE

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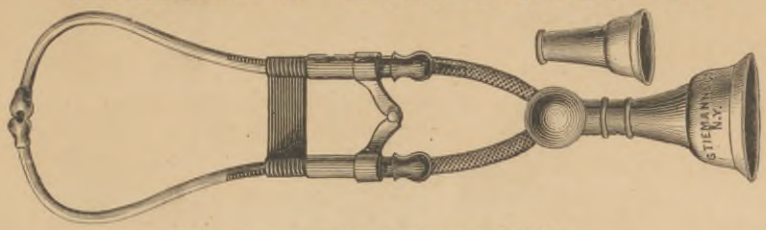
CAMMAN'S STETHOSCOPE.



IMPROVED BY DR. SNELLING, N. Y.,

with one India Rubber Rim, by the elastic expansion of which all air is excluded.

Its advantage will be evident at a glance in auscultation over the carotids, where the pressure made by the ordinary unshielded lip of the instrument must cause an adventitious murmur; over the jugulars for venous murmur, over or under the clavicle when a patient is so thin as to preclude the complete adjustment of the ordinary instrument to the exclusion of the air; in patients so emaciated as to make it impossible to apply the sounding tube upon or between the ribs, and where it is desirable to locate a cardiac murmur over one or another valve.

Extracted from the American Medical Times, October 26, 1861.

On Auscultation, Percussion, &c.

BY AUSTIN FLINT, M.D.

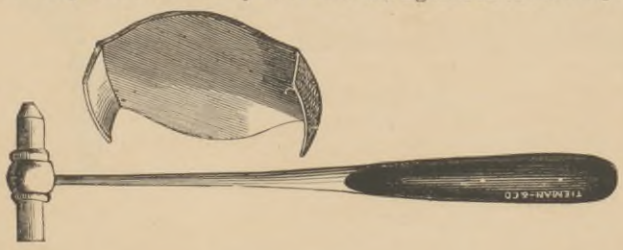
If you percuss much, you may find a serious inconvenience arising from soreness of the dorsal surfaces of the fingers used as a pleximeter. Several years ago I was obliged to resort to other instruments for this reason.

Various instruments have been contrived as substitutes for the fingers. A disk of ivory, bone, or india rubber, is generally used as a pleximeter. The one which I use is composed of hard india rubber; it differs from those in common use, in the length of the auricles. They are of large size and roughened on their exterior aspect, so as to be easily and firmly held by the fingers of the left hand.

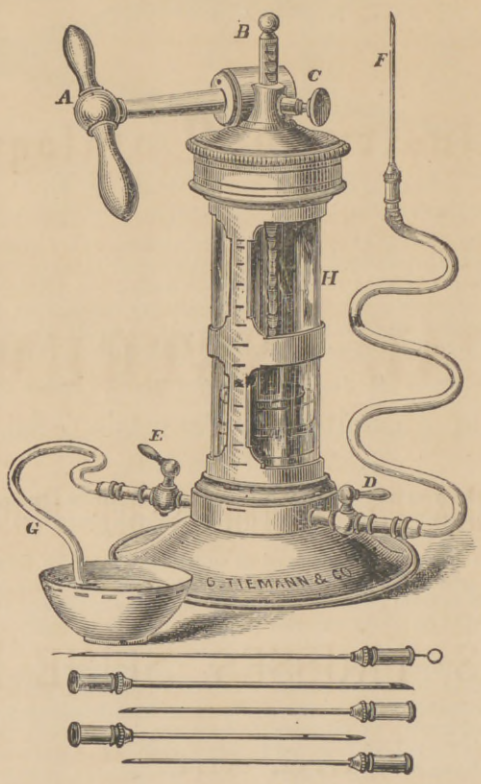
Of percussors I have three varieties before me. One consists of a small metallic ball encircled with a ring of india-rubber, and attached to a small elastic handle of whalebone. I have no doubt that this instrument answers very well, but I prefer a handle which is rigid, not elastic. Another is the instrument known as Winterich's hammer, It consists of a pretty heavy piece of metal, with a cone of india-rubber inserted into it, attached to a flattened handle with spaces hollowed out to receive the ends of the fingers. This instrument is intended to be used by throwing up the hammer to a certain height, and allowing it to fall upon the pleximeter. It seems to me that the force of the blows can be better estimated if they are made directly and entirely by muscular action, and if used in this way, the hammer is too heavy and the form is inconvenient.

For several years I was in the habit of using a hammer of steel (with a cone of india-rubber inserted) considerably smaller than that of Winterich's instrument, the handle being round and of a convenient size for striking directly upon the pleximeter. One difficulty which I experienced with this instrument was, the india-rubber cone frequently became loose and fell out, or it became too much compressed and required to be renewed. To obviate this difficulty and to secure more completely the great object in a percussor, viz., to bring out a sound which shall, as exclusively as possible, come from within the chest, the instrument which you see me use habitually, was contrived and made, at my suggestion, about a year ago, by Messrs. Tiemann & Co., of this city. It consists of a hammer composed of india-rubber in the form of a double cone. This is firmly fixed in a metallic ring at the centre of the cone, attached to a handle of convenient size and length. It is, in fact, a double hammer, one end of the cone being smaller than the other end. This instrument seems to me to leave nothing to be desired, as regards weight, form, durability, &c. It produces, moreover, as little sound as possible, exclusively of that coming from within the chest. You will perceive that, in the latter respect, the smaller end of the cone is preferable to the larger end. I strike successively with the two ends, and it is evident that a greater share of the sound with the larger end comes from the contact with the pleximeter and not from within the chest.

The percussor and pleximeter used by the writer are figured in the accompaning wood-cut.

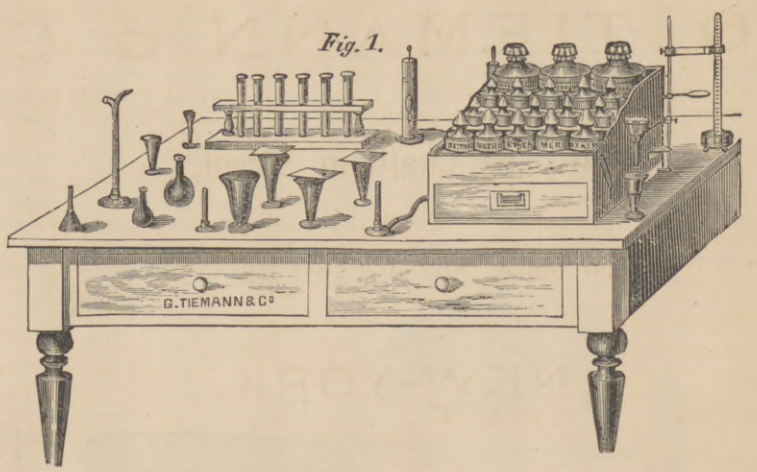


IMPROVED ASPIRATORS.



APPARATUS FOR URINARY EXAMINATIONS.

Fig. 1.



INDEX AND PRICE-LIST TO PART II.

OF

Illustrated Catalogue

OF

SURGICAL INSTRUMENTS,

Apparatus for Deformities and Fractures,

BANDAGES, TRUSSES, SPINE BRACES,

ETC., ETC.

MANUFACTURED AND SOLD BY

GEO. TIEMANN & CO.,

No. 67 Chatham Street,

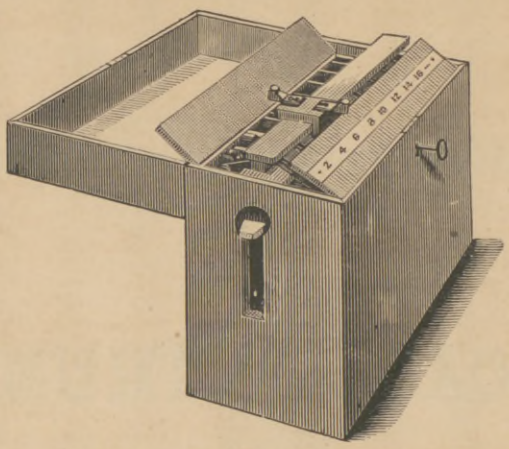
AND

Branch Store, No. 107 East 28th Street,

NEW-YORK.

FACTORY, Nos. 81 & 83 BOERUM STREET, BROOKLYN, E. D., N. Y.

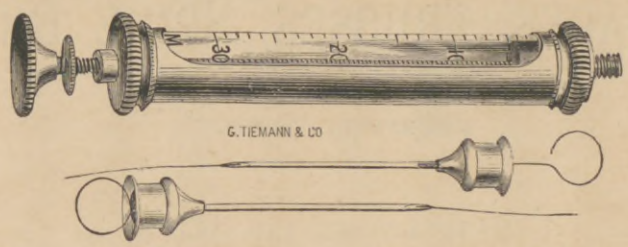
STOEHRER'S GALVANIC BATTERY



and other Electric Batteries and Electrodes for Medical Purposes.

(*Extract from the "Medical Record," March 15th*, 1871.)

A NEW HYPODERMIC SYRINGE.



WE present our readers with a new hypodermic syringe, devised by GEO. TIEMANN & Co,, which we think, has decided advantages over others. These advantages consist, for the most part, in the peculiar construction of the instrument, which allows of its being kept clean with very little trouble, in the comparative improbability of its getting out of order, and its non-liability to breakage.

As represented in the cut, the glass cylinder is encased in a metal mounting, fenestrated to show the graduations for minims. No cement is used to fasten the parts to each other, but in its stead there are washers at each extremity of the cylinder, which not only insure the exclusion of air, but effectually prevent the annoyance of the glass becoming loose.

The instrument can be taken apart for cleaning by simply unscrewing the nut through which the piston plays. The piston is made longer than the cylinder, to allow of the washer bejng pushed through far enough to be freshened, oiled, &c., without the trouble of getting at it in the old way.

The two canulated points are made of tempered cast-steel and much finer than those usually employed, an advantage in lessening pain on the introduction of the same.

For Sale by

GEO. TIEMANN & CO.

ESTABLISHED 1826.

F. A. Stohlmann, **Edward Pfarre,**

Manufacturers and Importers of

SURGICAL INSTRUMENTS,

67 CHATHAM-STREET, NEW-YORK.

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SETS OF INSTRUMENTS IN CASES.

PART II. (b.)

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OF

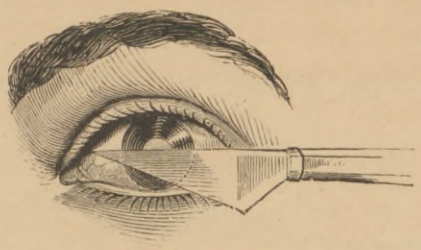
Illustrated Catalogue of Surgical Instruments.

GEO. TIEMANN & CO.'S SURGICAL INSTRUMENTS,

No. 67 Chatham Street;

Branch Store, No. 107 East Twenty-eighth Street,

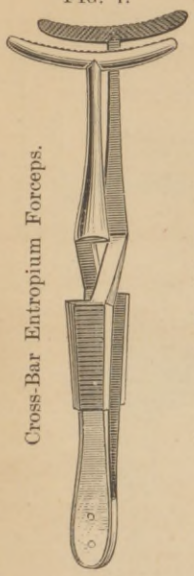
NEW-YORK.



EYE INSTRUMENTS.

INSTRUMENTS FOR OPERATING ON THE LIDS AND LACHRYMAL DUCTS.

FIG. 1.

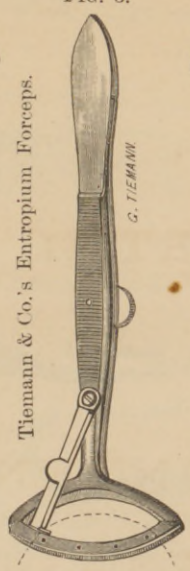


Cross-Bar Entropium Forceps.

FIG. 2.

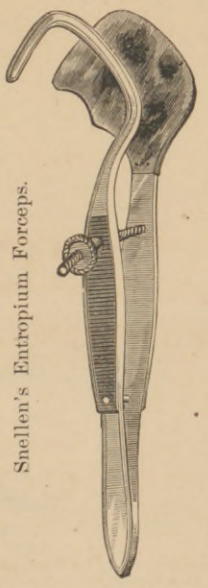
Laurence's Eye-lid Tourniquet.

FIG. 3.



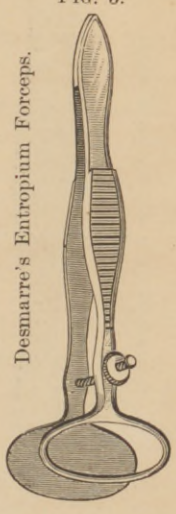
Tiemann & Co.'s Entropium Forceps.

FIG. 4.



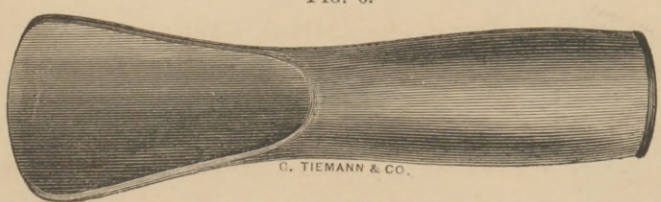
Snellen's Entropium Forceps.

FIG. 5.



Desmarre's Entropium Forceps.

FIG. 6.



Jæger's Plate Lid-Holder.

EYE INSTRUMENTS.

INSTRUMENTS FOR OPERATING ON THE LIDS AND LACHRYMAL DUCTS.

FIG. 7. Henry's Depilating Forceps.

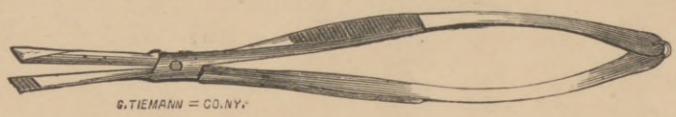
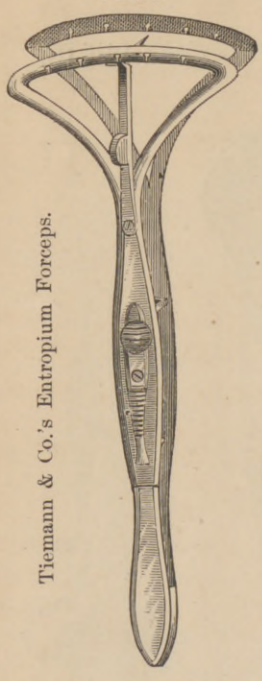


FIG. 8.



Tiemann & Co.'s Entropium Forceps.

FIG. 9. Cilia Forceps.

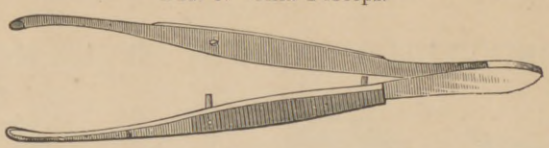


FIG. 10. Ratti's Trichiasis Forceps.

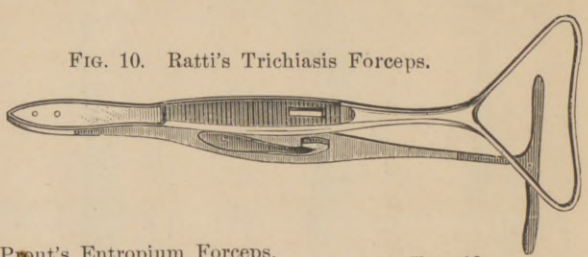
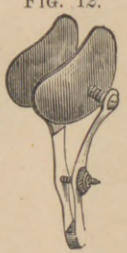


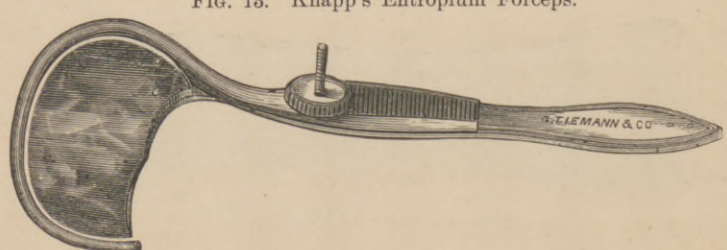
FIG 11. Prout's Entropium Forceps.

FIG. 12.



Stoke's Eyelid Compressor.

FIG. 13. Knapp's Entropium Forceps.



SETS OF EYE INSTRUMENTS IN CASES.

SET OF EYE INSTRUMENTS No. 1.

1 Beer's Knife,	$1 50
1 Curved Needle,	1 25
1 Iris Needle,	1 25
1 Pair of Forceps,	1 50
1 Pair of Scissors, curved on the flat, fine points,	1 50
1 Plain Wire Speculum,	1 00
1 Strabismus Hook,	1 25
1 Dix's Spud for removing foreign bodies,	1 25
1 Silver Probe,	38
3 Suture Needles, fine silk,	75
1 Tyrrell's Sharp Iris Hook,	1 25
1 Daviel's Curette,	1 50
1 Morocco Case, lined with silk velvet,	2 75
Amount,	$17 13

Set No. 1 in a Rosewood Case, $19.

SET OF EYE INSTRUMENTS No. 2.

1 Beer's Knife,	$1 50
1 Keratome, or Artificial Pupil Knife,	1 50
1 Dix's Spud for removing foreign bodies,	1 25
1 Curved Needle,	1 25
1 Straight Needle,	1 25
1 Pair of Straight Iris Scissors,	1 50
1 Pair of Strabismus Scissors,	1 50
1 Strabismus Hook,	1 25
1 Parker's Fistula Lachrymalis Knife,	1 75
1 Plain Wire Speculum,	1 00
1 Tyrrell's Blunt Hook,	1 25
1 Silver Probe,	38
1 Critchet's Lens Scoop,	1 75
1 Pair of Forceps,	1 25
6 Suture Needles, fine silk,	1 25
1 Rosewood Case, lined with silk velvet,	4 50
Amount,	$24 13

EYE INSTRUMENTS.

INSTRUMENTS FOR OPERATING ON THE LIDS AND LACHRYMAL DUCTS.

FIG. 14. Plain Wire Eye Speculum.

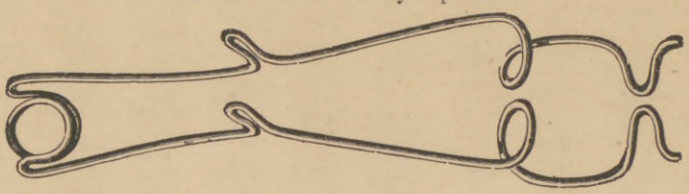


FIG. 15. Graefe's Eye Speculum.

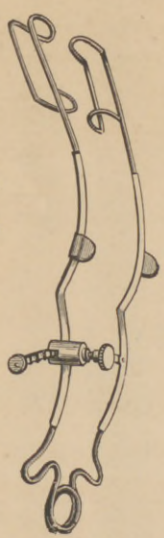


FIG. 16. Plain Wire Eye Speculum.

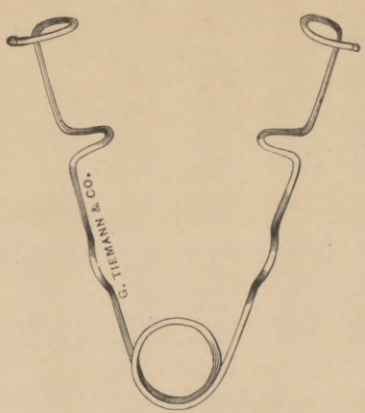


FIG. 17. Noyes' Improved Eye Speculum.

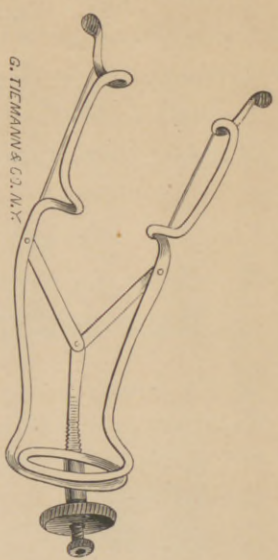


FIG. 18. Noyes' Plain Eye Speculum.

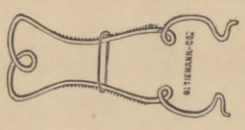


FIG. 19. Liebold's Eye Speculum.

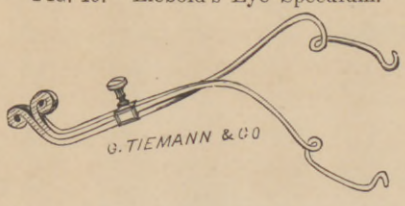
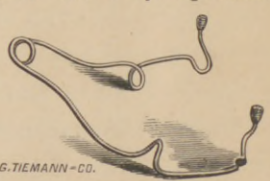
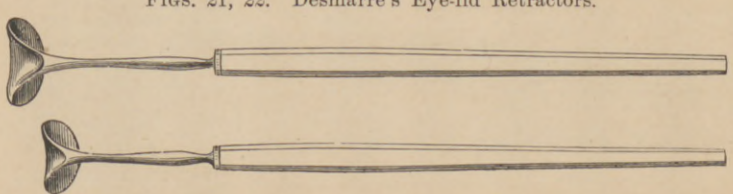


FIG. 20. Hart's Eye Speculum.



FIGS. 21, 22. Desmarre's Eye-lid Retractors.



SETS OF EYE INSTRUMENTS IN CASES.

SET OF EYE INSTRUMENTS No. 3.

1	Graefe's Linear Knife,	$1 50
1	Parker's Fistula Lachrymalis Knife,	1 75
1	Beer's Cataract Knife,	1 50
1	Desmarre's Scarificator,	1 50
1	Straight Keratome, for artificial pupil,	1 50
1	Angular Keratome, for artificial pupil,	1 75
1	Strabismus Hook,	1 25
1	Small Scalpel, for operating upon the lids,	1 50
1	Large Curved Needle, Couching,	1 25
1	Small Curved Needle,	1 25
1	Straight Iris Needle,	1 25
1	Cystotome, for lacerating the capsule,	1 50
1	Tyrrell's Blunt Hook,	1 25
1	Tyrrell's Scoop,	1 75
1	Plain Wire Speculum,	1 00
1	Pair of Cilia (or Eye-lash) Forceps,	1 00
1	Pair of Strabismus Forceps,	1 25
1	Pair of Iridectomy Forceps,	1 50
1	Pair of Straight Iris Scissors,	1 50
1	Pair of Iris Scissors, curved on the flat,	1 50
1	Anel's Silver Probe,	38
6	Suture Needles and Fine Silk,	1 25
1	Rosewood Case, lined with silk velvet,	4 75
	Amount,	$34 63

SET OF STRABISMUS INSTRUMENTS No. 4.

1	Pair of Strabismus Scissors,	$1 50
1	Pair of Strabismus Forceps,	1 25
1	Double Hook, for fixing the eye,	1 50
1	Strabismus Hook,	1 25
1	Plain Wire Speculum,	1 00
1	Morocco Case,	1 75
	Amount,	$8 25

EYE INSTRUMENTS.

INSTRUMENTS FOR OPERATING ON THE LIDS AND LACHRYMAL DUCTS.

FIG. 23. Weber's Graduated Dilator.

FIG. 24. Speir's Lachrymal Catheter.

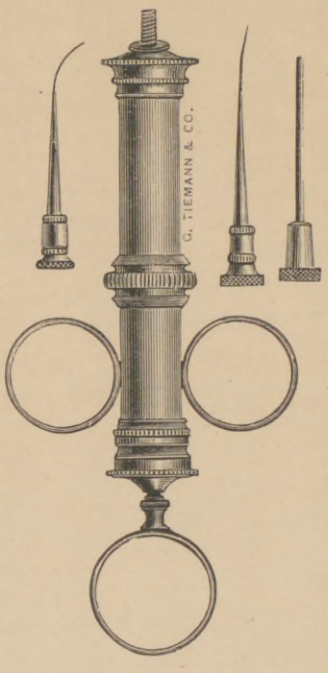


FIG. 25. Anel's Silver Eye Syringe. Silver and Gold Points.

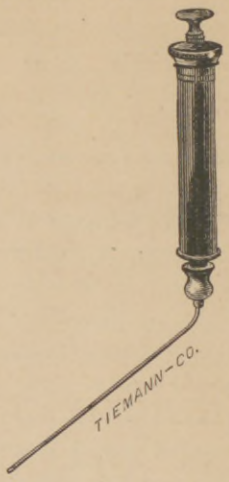
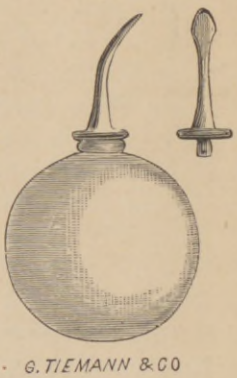


FIG. 26. McFarlan's Lachrymal Syringe.

FIG. 28.



Liebold's Subpalpebral Syringe.

FIG. 27. Drop Glass for the Eye.

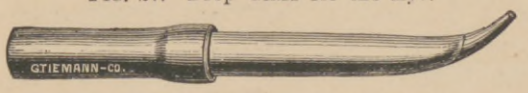


FIG. 29. Agnew's Lachrymal Syringe

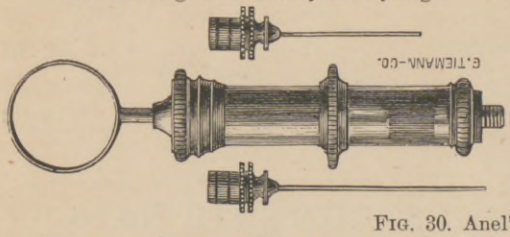


FIG. 30. Anel's Probe.

FIG. 36. Galezowsky's Canalicula Dilator.

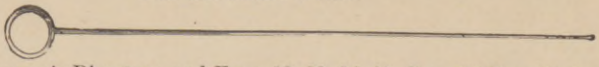
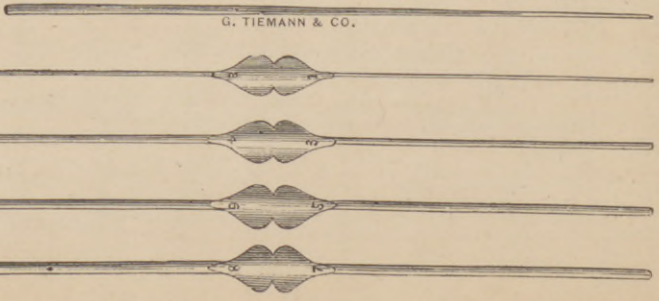


FIG. 31. Bowman's Director; and FIGS. 32, 33, 34, 35, Set of 8 Nos. Probes.



SETS OF EYE INSTRUMENTS IN CASES.

SMALL SET OF EYE INSTRUMENTS No. 5.

1	Curved Couching Needle,	$1 25
1	Strabismus Hook,	1 25
1	Beer's Cataract Knife,	1 50
1	Double Hook, for fixing the eye-ball,	1 50
1	Pair of Plain Curved Forceps,	1 25
1	Pair of Strabismus Scissors,	1 50
1	Plain Wire Eye Speculum,	1 00
1	Morocco Case, lined with silk velvet,	2 50
	Amount,	$11 75

LAURENCE AND MOON'S COMPLETE SET OF INSTRUMENTS FOR OPHTHALMIC SURGERY.

1	Strabometer,	$2 50
1	Liebreich's Ophthalmoscope, best,	6 50
1	Pupillometer,	5 00
1	Speculum, with set-screw,	2 50
1	Eye-lid Tourniquet,	3 00
1	Silver Style,	50
1	Girard Teulon's Canalicula Knife,	7 00
1	Pair of Strabismus Scissors,	1 50
2	Strabismus Hooks, $1.25,	2 50
1	Dix's Spud, for removing foreign bodies,	1 25
1	Gouge, for removing foreign bodies,	1 50
1	Angular Keratome, for Iridectomy,	1 75
1	Straight Keratome,	1 50
1	Broad Needle,	1 25
1	Pair of Iris Forceps,	1 50
1	Tyrrell's Blunt Hook,	1 25
1	Pair of Curved Iris Scissors,	1 50
1	Wilde's Canula Forceps, Scissors and Needle,	15 00
1	Graefe's Linear Cataract Knife,	1 50
1	Cystotome,	1 50
1	Bistoury, for enlarging the section,	1 50
1	Daviel's Curette,	1 50
1	Critchet's Scoop,	1 75
1	Graefe's Tractor,	1 50
1	Beer's Cataract Knife,	1 50
1	Cataract Needle,	1 25
1	Curved Needle,	1 25
1	Rosewood Case, lined with silk velvet,	8 00
	Amount,	$78 75

EYE INSTRUMENTS.

INSTRUMENTS FOR OPERATING ON THE LIDS AND LACHRYMAL DUCTS.

FIG. 37. Bowman's Canalicula Knife. (Director Fig. 31.)

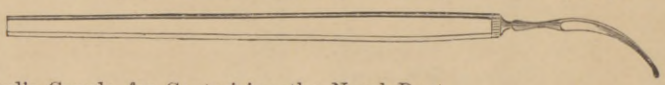


FIG. 38. Gensoul's Canula for Cauterizing the Nasal Duct.

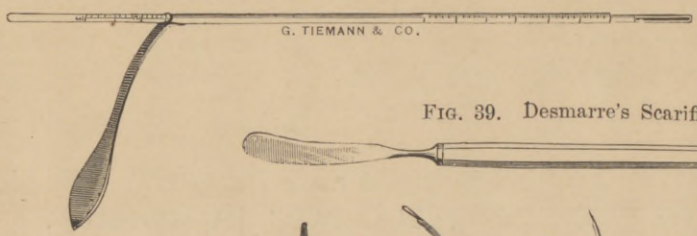


FIG. 39. Desmarre's Scarificator.

FIG 40. Maunoir's Canalicula Scissors.

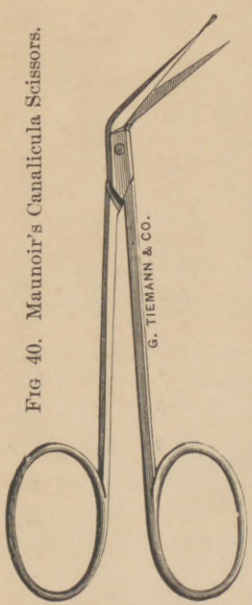


FIG. 41. Stilling's Canalicula Knife.

FIG. 42. Weber's Curved Canalicula Knife.

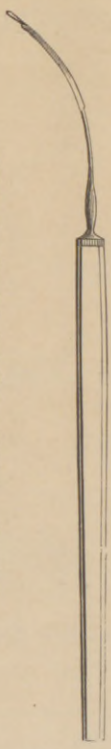


FIG. 43. Weber's Half-Curved Canalicula Knife.

FIGS. 44, 45. Desmarre's Cautery Iron and Many-Pronged Hook for Obliterating the Sac.

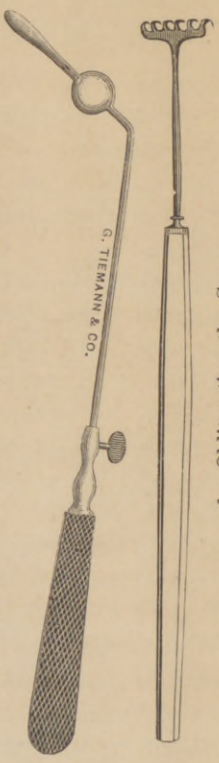


FIG. 46. Noyes' Movable Blade Canalicula Knife.

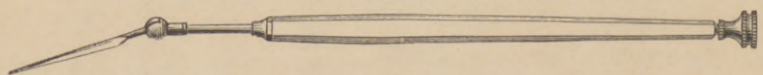


FIG. 47. Noyes' Plain Canalicula Knife.

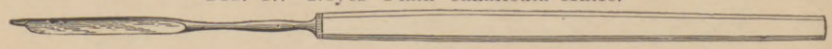


FIG. 48. Parker's Fistula Lachrymalis Knife.

SETS OF EYE INSTRUMENTS IN CASES.

COMPLETE SET OF EYE INSTRUMENTS No. 7.

2	Graefe's Linear Knives, $1.50,	$3 00
1	Beer's Cataract Knife,	1 50
1	Pair of Straight Iris Forceps,	1 50
1	Pair of Curved Iris Forceps,	1 50
1	Pair of Strabismus Scissors,	1 50
1	Cystotome and Daviel's Curette,	2 50
1	Gouge, for removing foreign bodies,	1 50
1	Silver Lens Scoop,	2 00
1	Straight Keratome,	1 50
2	Angular Keratomes, large and small, $1.75,	3 50
1	Pair Cilia Forceps,	1 25
1	Steel Blunt Spatula,	1 25
1	Tyrrell's Blunt Hook, soft shank,	1 25
1	Tyrrell's Sharp Iris Hook,	1 25
2	Strabismus Hooks, $1.25,	2 50
1	Curved Needle, for removing foreign bodies,	1 25
2	Straight Delicate Scalpels, $1.50,	3 00
1	Liebreich's Best Ophthalmoscope,	6 50
2	Desmarre's Lid Retractors, $1.75,	3 50
2	Desmarre's Eye Specula, right and left, with set-screw, $2.25,	4 50
1	Weber's Graduated Dilator,	1 00
1	Set of Bowman's Silver Probes, Nos. 1 to 8,	3 00
1	Pair of Straight, Spring-catch, Fixation Forceps,	2 50
1	Pair of Slide-catch Fenestrated Artery Forceps,	3 00
1	Pair of Desmarre's Entropium Forceps,	3 00
2	Pairs of Snellen's Right and Left Entropium Forceps, $3.00,	6 00
1	Anel's Hard-rubber Syringe, 2 silver gilt points,	5 50
1	Brush and Caustic-holder,	2 50
1	Jaeger's Plate Lid Holder,	1 00
6	Suture Needles and Fine Silk,	1 25
1	Hard-rubber Spatula, to apply ointment,	75
2	Bowman's Stop Needles, $1.50,	3 00
1	Paracentesis Needle,	1 75
1	Straight Broad Needle,	1 25
1	Delicate Shell Spoon,	1 75
1	Double Hard-rubber Curette,	1 50
1	Stilling's Canalicula Knife,	1 50
1	Graefe's Tractor,	1 50
1	Pair Delicate Bone-gouging Forceps,	3 00
1	Rosewood Brass-bound Case, lined with silk velvet,	16 00
	Amount,	$107 00

EYE INSTRUMENTS.

INSTRUMENTS FOR OPERATING ON THE LIDS AND LACHRYMAL DUCTS.

FIG. 49. Jaeger's Bistoury Caché for the Canalicula.

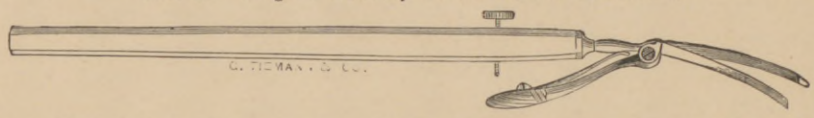


FIG. 50. Beaumont's Concealed Canalicula Knife.

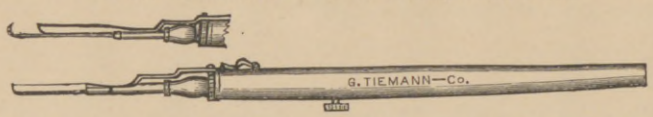
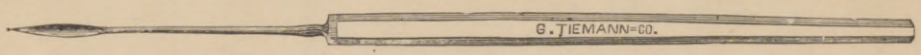


FIG. 51. Agnew's Canalicula Knife.



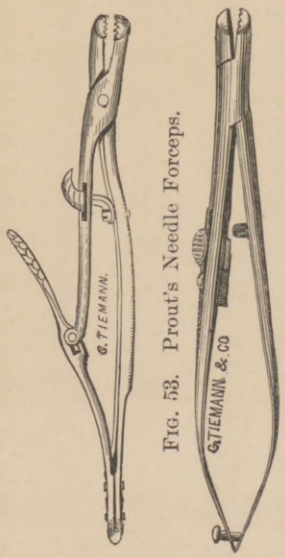


FIG. 52. Sand's Needle Forceps.

FIG. 53. Prout's Needle Forceps.

FIG. 54. Scalpel for Operating upon the Lids.

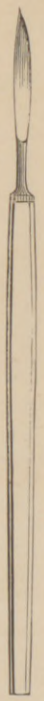


FIG. 55. Medium Size Scalpel.

FIG. 56. Small Size Scalpel.

FIG. 57. Style for the Lachrymal Duct.

FIG. 58. Lachrymal Canula.

SETS OF EYE INSTRUMENTS IN CASES.

NOYES' SET OF EYE INSTRUMENTS No. 8.

2 Desmarre's Eye-lid Retractors, large and small, $1.75,	$3 50
1 Plain Wire Speculum,	1 00
1 Noyes' Plain Canalicula Knife,	1 75
1 Set of Bowman's Probes, Nos. 1 to 8,	3 00
Some Lead Wire, Nos. 4 to 8,	50
1 Small Scalpel,	1 50
1 Hard-rubber Dental Syringe,	1 00
2 Strabismus Hooks, large and small, $1.25,	2 50
1 Pair of Straight Iris Scissors,	1 50
1 Pair of Curved Iris Scissors,	1 50
1 Pair of Fixation Forceps,	2 00
1 Pair of Plain Dissecting Forceps,	75
1 Dix's Spud, for removing foreign bodies,	1 25
1 Spatula,	1 25
1 Straight Iridectomy Knife (Keratome),	1 50
1 Angular Iridectomy Knife,	1 75
1 Short Iris Forceps,	1 50
1 Large Curved Iris Forceps,	1 50
1 Tyrrell's Blunt Hook,	1 25
2 Straight Discission Needles, $1.25,	2 50
1 Graefe's Linear Knife, wide pattern,	1 50
1 Small Sharp Iris Hook,	1 25
1 Pair of Prout's Entropium Forceps,	4 00
1 Cystotome and Curette,	2 50
1 Sand's Needle Forceps,	4 50
6 Small Curved and 3 Straight Suture Needles, and fine Silk,	2 00
2 Graefe's Linear Knives, narrow pattern, $1.50,	3 00
1 Hard-rubber Spoon,	75
1 Critchett's Lens Scoop,	1 75
1 Rosewood Brass-bound Case, lined with silk velvet,	12 00
Amount,	$66 25

EYE INSTRUMENTS.

STRABISMUS INSTRUMENTS.

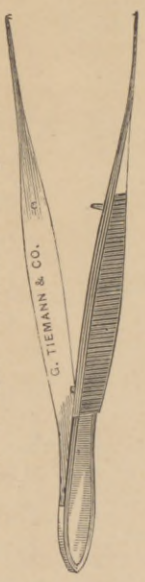
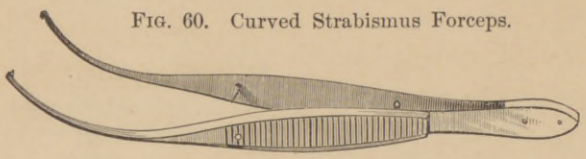


FIG. 59. Straight Strabismus Forceps, Delicate.

FIG. 60. Curved Strabismus Forceps.



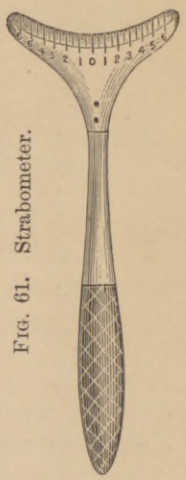


FIG. 61. Strabometer.

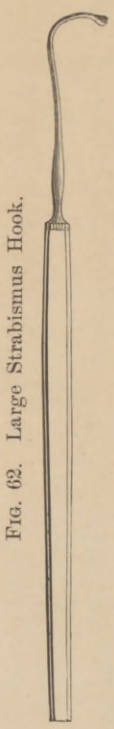


FIG. 62. Large Strabismus Hook.

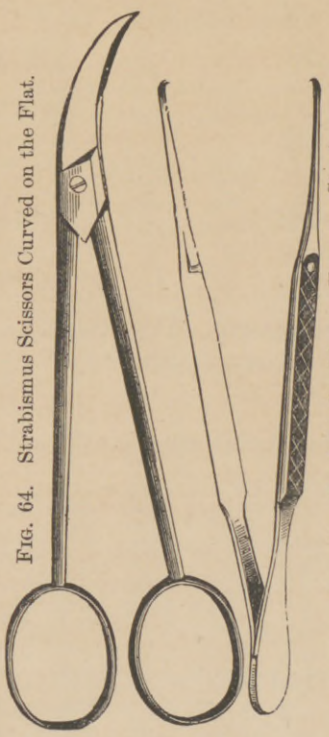


FIG. 64. Strabismus Scissors Curved on the Flat.

FIG. 65. Straight Strabismus Forceps, Stout.

FIG. 63. Small Strabismus Hook.

FIGS. 66, 67. Half-Curved Strabismus Hook, and Double Hook.

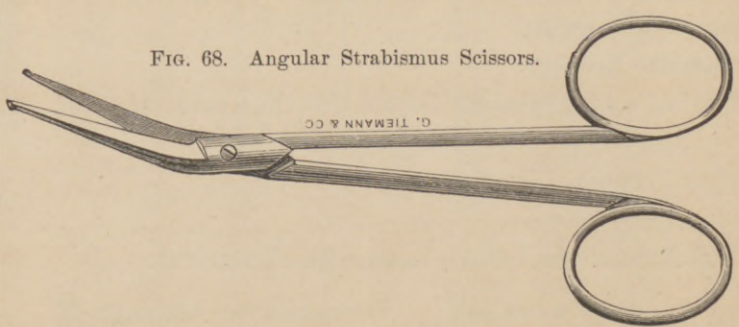


FIG. 68. Angular Strabismus Scissors.

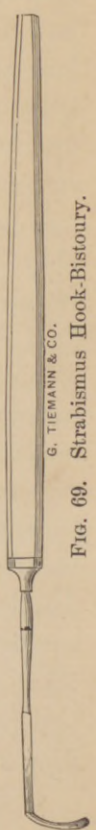


FIG. 69. Strabismus Hook-Bistoury.

SETS OF EYE INSTRUMENTS IN CASES.

AGNEW'S SET OF EYE INSTRUMENTS No. 9.

1	Agnew's Glass Syringe, metal mounted, with two silver points (for lachrymal disease),	$5 00
1	Set of Bowman's Probe's, Nos. 1 to 8,	3 00
1	Agnew's Knife, modified, longer than Weber's, and temper taken out of a quarter of an inch of the shank,	1 75
2	Strabismus Hooks, $1.25,	2 50
1	Pair of Strabismus Forceps,	1 25
1	Pair of Straight Scissors, small, rounded points,	1 50
1	Pair of Scissors, curved on the flat, delicate,	1 50
1	Pair of Iris Forceps, delicate,	1 50
1	Graefe's Linear Cataract Knife,	1 50
1	Liebreich's Linear Cataract Knife, narrow,	1 50
1	Cystotome,	1 25
1	Small Cataract Needle,	1 25
2	Stop Needles, $1.50,	3 00
1	Small Sharp Hook,	1 25
1	Graefe's Spring Speculum,	2 50
1	Paracentesis Needle, Desmarre's,	1 75
1	Iridectomy Knife, angular,	1 75
1	Pair of Fixation Forceps, spring-catch,	2 50
1	Pair of Prout's Needle Forceps,	3 50
6	Fine, Curved Suture Needles, and Fine Silk,	2 00
1	Double Lid Elevator, with hinge so as to shut up on itself,	3 00
1	Beer's Cataract Knife,	1 50
1	Pair of Large, Straight Scissors,	1 50
1	Pair of Large Scissors, curved on the flat, for enucleation,	1 50
1	Rosewood Case, lined with silk velvet,	8 50
	Amount,	$57 75

EYE INSTRUMENTS.

OPHTHALMOSCOPES.

FIG. 70. Liebreich's Ophthalmoscope.

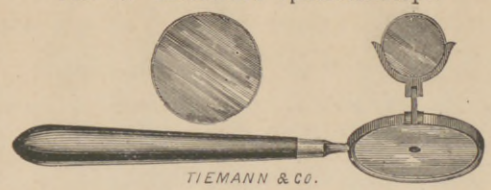
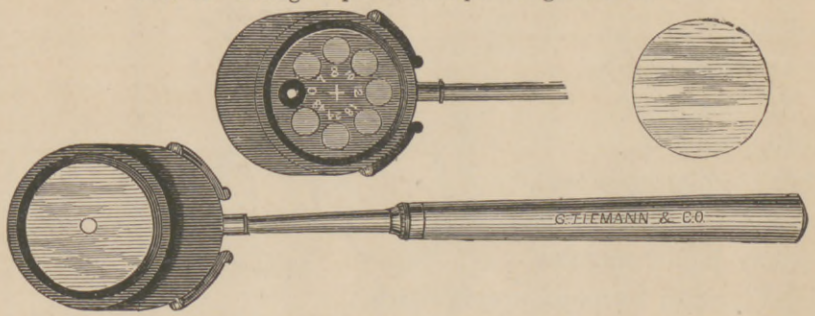


FIG. 71. Loring's Ophthalmoscope. Original Pattern.



Dr. Loring has devised a very elegant modification of this instrument. He has inserted into one disk all the numbers of lenses that were formerly contained in the three disks. The disk of his new instrument has two rows of glasses, each of which, by shifting the disk up and down, can be conveniently placed behind the aperture in the mirror. The glasses of each row can be changed without removing the instrument from the eye.

ON THE USE OF THE OPHTHALMOSCOPE.

BY JONATHAN HUTCHINSON, ESQ.,
Surgeon to the London Hospital.

Some of the simplest applications of optics to the observation of the eye, and the detection of diseased conditions, depend upon the fact that the transparent structures still reflect some light, and more when diseased than when healthy. Thus:

FIRSTLY. We examine the reflecting efficiency of the surface of the cornea, in order to determine its transparency. In cases in which there is no large opacity, but simply a case of general steaminess caused by an uneven surface, it may be difficult to detect it by direct inspection, but if we expose the eye to the light, and look at the image of the window-frame produced, we shall see directly that this image is blurred and indistinct, like that from a greasy mirror.

SECONDLY. We use what is called the catoptric test to determine the presence or absence of the lens. This depends upon the fact that the surfaces of the lens reflect images. Dilate the pupil well with atropia. Hold a small taper in front of the pupil in a dark room. You will observe, if the lens be present, three images: an anterior one, bright, distinct and erect—from the front surface of the cornea; a middle one, inverted, small, fairly distinct—from the concave posterior surface of the lens capsule; a posterior one, erect, indistinct—from the anterior surface of the lens capsule.

THIRDLY. Again, the surfaces of the crystalline lens easily become visible, by the light which they reflect, whenever we can see them obliquely. When the lens is in its normal position it is difficult, unless by oblique illumination, to see its surface; but if it is malplaced, as we sometimes find it, by congenital imperfection, or from injuries, then its surfaces, being oblique, become easily visible. Any one not aware of this fact would at once declare that the malplaced lens was also slightly opaque, and erroneous observations to that effect are to be found in some records of such cases.

In former days the catoptric test used to be much employed to determine the transparency, or otherwise, of the crystalline lens. Now, however, it has been wholly superseded by another discovery, which in its every-day usefulness is second only to that of the ophthalmoscope itself. I allude to oblique illumination. To accomplish this is the easiest matter possible, and by its aid any one of the slightest skill can, in almost all cases, determine at a glance the condition of the patient's pupil and of his crystalline lens. The smallest dots of pigment on the capsule, the least possible streaks of an incipient cataract, become by its aid conspicuously definite. We have no longer any need for the curious, but very disappointing, catoptric test (which fails us just when most needed, *i.e.*, in slight cases; for the discovery of cataract, in any stage whatever, is

now perfectly easy. For oblique illumination you need only a candle and a convex lens, say a two-inch. The pupil should be dilated with atropia, and the candle having been placed to one side the patient's head, the lens is held so as to receive its light, and concentrate it to a pencil, which is thrown upon the patient's eye. All the superficial parts, *i.e.*, the cornea, the iris, the pupil, and the lens, may thus be brilliantly lighted up. In addition to the illumination, we may also, with another lens, employ magnifying power, and thus inspect the state of things yet more accurately.

Oblique illumination is applicable to all morbid conditions of the cornea, iris, or lens, and to blood-clots in the anterior part of the vitreous or new growths which bulge forwards into the anterior half of the globe. You cannot, however, by its aid, see the fundus of the eye. To do this we must employ another instrument. Here let us ask the important question, Why is an ophthalmoscope necessary? Why can we not, by simply looking into the little round box, one inch deep, which constitutes an eyeball, see what is at its bottom? The answer is, that the eyeball is not simply a box, it is an optical instrument, and it is from its lens apparatus that the difficulty comes. The rays of light received by the eye are brought to a focus in the retina; back again from the retina they are reflected, and pass out of the eye, destined to depict somewhere an image of the retina itself. The lens apparatus, however, not only brings the rays passing in to a certain and definite focus on the retina, but it acts on those which pass back, and brings these also to a focus at a certain and definite place. There is no difficulty whatever in illuminating the fundus, any light held in front of the eye will do that, nor have the structures of the fundus any difficulty in reflecting light by which they themselves ought in turn to become visible. The difficulty is in bringing the eye of the observer into the line of the reflected rays; this without artificial aid is impossible, and hence the necessity for the ophthalmoscope.

I have said that every lens has a principal focus, or spot at which parallel rays which impinge upon it are made to meet by the convergence induced. Now, suppose that from this focus the rays are reflected back again, they must pass through the lens in the reverse direction, and will again become parallel. If, however, divergent rays be used, they will in returning be converged and made to meet at another focus in front of it. Inasmuch as the rays were at first not parallel but divergent, the focus at which, after passing through the lens, they meet, will not be at the same distance as that for parallel rays, but at a greater one. The distance will always be in exact proportion to the degree of divergence, and thus the two foci will always bear mutual relations to each other. If one be brought nearer to the lens the other will be further off, and *vice versâ*. Let us call them from this fact, that they maintain mutual relation, "*conjugate foci.*" You may observe, if you like, that although conjugate, they keep each other at a distance. It is absolutely necessary that you should observe that all the rays of light passing out from the eye take a direction towards this conjugate focus, and that thus an observer who would make use of them to see the fundus must bring his eye into their line. This line, however, is the same that the rays took in passing into the eye, and if you try to intercept those coming out, you will intercept those going in and cut off the source of illumination.

Thus if we hold a candle two feet in front of the observed eye, its rays, divergent, will be refracted in entering the eye, and will depict an image on the retina—they will then be reflected and again refracted in such a

manner that an image of the fundus will be found at the position of the candle flame, that being the position of the conjugate focus. If the observer puts his head in the direction of these rays between the candle and the observed eye, of course he stops the rays which should have entered from the candle, he illuminates only the outside of his own head, and the eye of his patient is left in shadow. If he tries to see by looking from beyond the candle, then the flame of the latter intercepts his view and dazzles his eye. What is wanted is some contrivance to enable the observer to bring his head into his own light. Now the mirror of the ophthalmoscope does this, a reflecting surface with a small hole in the middle, it practically makes the observer's eye the source of illumination, and brings it into the direction which the rays of light returning to their conjugate focus must take. Foreshadowed by Cumming, invented by Helmholtz, improved by Coccius, Reute, Liebreich, and many others, this little instrument, which has worked such a revolution in ophthalmic science, is thus simple in its essential principle.

The ophthalmoscope as in daily use, consists of two parts, a mirror and an object lens, and to these is often added an eye-piece as well. The mirror, however, is the essential, the other parts are accessories intended for different special purposes. Without troubling you with details respecting the various modifications of the instrument, I will now describe the use of the simplest of them—a reflecting mirror slightly concave, and with a perforation in its centre.

Having placed the patient's head in such a manner that the light (a lamp, candle, or gas-light) is on a level with his temple, and slightly behind it, and his face, as a consequence, in shadow, the observer sits in front and applies the ophthalmoscope mirror to his own eye. He should keep both eyes open that he may see where the light falls, and then move the mirror until the light falls full on the pupil of his patient. In a moment he will perceive the first fact which this instrument reveals, that the fundus is not black, as it has always appeared to be before, but that it is of a brilliant fire-red. He will, however, see nothing of the fundus distinctly, only a general red reflex. Now at this point the student must stop awhile and use his mirror, to inspect, first, the transparency of the cornea, and next, that of the lens and vitreous, and to do this he must make the patient move his eye in various directions. After a little practice he will be able to manage his light well, and to throw it with precision wherever he may wish, and to keep it steadily on any given part. At a first lesson he may even, with advantage, practice for awhile by illuminating the second button of the patient's waistcoat. Tact in directing the light having been obtained, we may now proceed further. Instruct the patient to look, not full in your face, but over one shoulder; if you are inspecting his *right* eye, over your *left* shoulder. You will, when he does this, notice at once that the tint of the light reflected from his fundus is changed, that it is no longer fire-red but canary-yellow. The reason of this is that a different part of the fundus is exposed to view, that, namely, of the optic disc itself, which is much lighter in color than the rest. The area of yellow is very large—occupies, indeed, the whole of the field, while we know that the disc itself is very small. This proves that the objects thus indistinctly seen are immensely magnified. Magnified by what? By the patient's own eye, which, as we have said, is equivalent to a lens of one-inch focus.

Hitherto, we have seen nothing distinctly, but if the observer now brings his head very close to his patient's face, he will be able with more

or less facility to observe the details at the bottom of the eye, the trunks of vessels of the retina, the optic disc, etc., etc. All these will be seen very large indeed, being still magnified by the patient's eye. What he sees now is equivalent to type looked at through a one-inch lens, placed exactly one inch in front of it.

[It is plain, then, that we cannot see the fundus of the eye without optical aid. Of such aid, we have our choice of the inverted and of the erect. Both are seen much magnified, the latter much more so than the former. For ordinary purposes the inverted image is used. It is seen very easily, and it brings a large field into view at once, so rendering the observer much less liable to inconvenience from slight motions of the patient's head. The examination of the erect image is chiefly useful for the inspection of detail, and even for these it requires great practice.]

Next I will attempt a few suggestions by which beginners, and those who use the instrument but seldom, may best hope to avoid mistakes.

1. Always indulge yourself in the use of atropine, and by its aid both enlarge the patient's pupil and paralyze his accommodation. Experts can manage without, and may sometimes smile at those who are obliged to use it, but the increased facility which it gives is such that no beginner should neglect it. The objection that it causes the patient inconvenience is a very trivial one. What the patient wants before all things is, that a correct opinion should be formed, and to this end he is quite prepared to make a little sacrifice of convenience. For want of the use of atropine I think I have known even experts overlook things which would have been apparent at a glance had it been used.

2. Always proceed on system. Examine the eye first without the object-lens, and ascertain the state of the cornea, lens, and vitreous. No mistake is easier to make, or more frequently made, than by the immediate employment of the inverted image to overlook the fact that the media are not perfectly transparent. With strong illumination you can look right through a slight opacity in the cornea, lens, or vitreous, and observe only that the retina and choroid are seen indistinctly. Many a diagnosis of "hazy retina" ought to have been "opaque vitreous." It is like criticising the beauty of a prospect, and declaring that it looks dull, when you have forgotten to observe that the window wanted cleaning. If you have any doubt as to the state of the cornea or lens, examine them by oblique illumination before going further. Many opacities in the cornea are so slight that you overlook them on naked-eye inspection, and also with the ophthalmoscope mirror, but find them directly by oblique illumination. Need I add that you must be very particular that your object-lens, when you use it, is quite clean. Any stains on it will be seen as if on the patient's retina.

3. Having completed your examination of the media, still proceed on system. The next duty is to estimate the length of the eyeball. A patient may come complaining that he is rapidly losing his sight, and you may find that it really has become so defective that he cannot read the largest ordinary print. You hastily assume that he must have some disease of the deep parts, some form of amaurosis. You proceed to ophthalmoscopic examination, and again hastily employ both mirror and object-lens, and it is quite possible that you may overlook altogether the fact that the eyeball is much too short and the patient hypermetropic. In high degrees of hypermetropia, if sudden failure of accommodation happen to occur, the defect in sight may often be so great as to draw the attention quite away from the right scent. I have already described the

method by which we ascertain whether an eye is abnormal as to length. For the benefit of the mere novice, I may, however, here add, that whenever, without the object-lens, any of the details of the fundus—vessels, disc, patches, etc.—are easily seen, he may be quite sure that the globe is either too long or too short, or that the lens is wanting. If these objects are seen very easily, and the image very bright and beautiful, then, in all probability, it is an inverted image, and the eye is myopic. If only large trunks of vessels have been seen, and these not easily kept in view, then probably it is the erect image, and the eye hypermetropic.

4. Still proceed on system. Having ascertained that the media are clear, and that the eyeball does not materially deviate from its normal length in either direction, you may now examine in succession the optic disc and its vessels, the retina, and choroid near to it, the yellow spot, and lastly, the outlying districts. I must mention each of these separately.

5. The Optic Disc. Note its shape, its margins, whether definite or otherwise, its color, and its level. Observe whether the vessels upon it are seen sharply or not, and look particularly as to how they conduct themselves at its margin. Distinguish between artery and vein, and note the size of each. It is a common mistake with young observers to pay attention to the vein only. In the healthy state the disc should be round, and its choroidal rim distinct and sharp ; the vessels on its surface should be seen with beautiful clearness, and the difference between vein and artery, as to size and color, should be readily distinguished. In the centre, or near it, and close to where the trunks of the vessels dip back, there will be seen a bright white patch. This white patch may be large and very conspicuous in some eyes, and small in others, whilst still the eye is not in the least diseased. As regards the vessels, you must distinguish between the large branches of those destined to supply the retina, and the minute ones which give a general pink tint to the nerve itself. The latter may be much diminished, whilst the former retain their size.

Amongst the more common peculiarities displayed by the disc in a state of disease, we have—

1st. The formation of crescents by its side, or of irregular circles around it in myopia.

2d. A jagged condition of the choroidal rim, indicating either the commencement of crescents, or the previous occurrence of inflammation (neuritis).

3d. A hazy semi-opaque appearance of the structures in which the retinal vessels run, by which the latter are in part concealed and rendered indistinct. In this state the margins of the choroidal rim are concealed, and the disc appears to be much increased in size, and to be limited by a shaded, indistinct edge. This "woolly" condition implies neuritis.

4th. The disc may be too red or too pale. The pallor sometimes amounts to absolute whiteness, sometimes it is blue-white, and sometimes it is a dirty gray tint. Sometimes the pallor affects the whole disc surface, and at others only a part. If only a part, the third next to the yellow spot is that usually affected, and in commencing cases this is always the first to suffer. The pallor may indicate mere anæmia, with, perhaps, primary atrophy, or it may indicate an anæmia and atrophy which are secondary to inflammation. It requires much experience to decide this point.

5th. The disc, instead of being on the same level as the rest of the retina, may be pushed backwards, or cupped as it is called. This cupping will be recognized by carefully tracing the main trunks of vessels and

observing whether they curve on passing over the choroidal margin. If the cup is well marked, the vessels will bend so much that they are lost sight of at the edge of the disc, to be found again on its surface, looking much smaller and paler than those in the retina, and requiring a little movement of the object-lens to bring them well out. Cups of this kind imply intra-ocular pressure, the characteristic of the disease known as glaucoma. With them pulsation of the vessels may often be observed.

Having carefully studied the disc, your attention will next be directed to the retina and its vessels. The retina ought to be almost perfectly transparent, but in dark eyes—and particularly in members of the dark races—a delicate haze, or bloom-of-plum appearance, may be observed in it, especially near to the yellow spot. You ought to be able to trace the retinal vessels with the greatest ease. If this cannot be done, then inflammation of some kind or degree is present. The grand characteristic of inflammation, as far as the retina is concerned, is opacity. This opacity may vary from the merest haze to that of the dense white or gray pellicle. By this haze the trunks of the vessels will probably be more or less concealed, but if the deeper layers of the retina are affected, their concealment may not be much. You will remember that the retina consists of three principal layers—that of rods and bulbs, which is close to the choroid, and probably fed by it, that of nerve cells, granular matter, etc., in the middle, and that of nerve-tubes (derived from the optic), etc., which is innermost. It is in the latter layer only that the arteria and vena centralis run: these vessels have nothing to do with the deeper or outer layers. The inflammation may affect chiefly either the inner or outer layer, being in the one case a neuro-retinitis, in the other a choroido-retinitis.

In some cases of retinitis, as in that which attends Bright's disease, hemorrhages are very common.

The yellow spot is recognized almost as much by its negative features as by any distinctive peculiarities. It is situate a little to apparent nasal side (inverted image) of the optic disc, and is exactly opposite the observer when the patient looks at the ophthalmoscope mirror. No large vessels cross it. It is more highly pigmented than the neighboring parts, and also often looks rather hazy and indistinct. It is here that the deposits characteristic of Bright's disease are earliest seen.

The choroid is the tissue which gives color and glow to the fundus. It may vary exceedingly within the limits of health, and its variations will cause apparent haze, or otherwise, in the retina. Before trusting yourself to any ophthalmoscopic descriptions whatever, examine carefully the differences in the eyes of fair and of dark persons. In the latter you will find the choroidal epithelium full of pigment, and showing dark mapped-out areas, which might easily be supposed to be morbid, whilst the vessels of the choroid are concealed. In the fair-complexioned eye the leashes of vessels will be seen with marvelous brilliancy and beauty, and the suspicion of atrophy will be suggested.

It is much more common to see the results of inflammation in the choroid than to trace the early stages of such. The results are permanent, and very conspicuous. The epithelium may be absorbed in large patches, usually with masses of black pigment remaining. The absorption may implicate deeper layers, and be attended by atrophy of the vascular rete and exposure of the sclerotic. The patchy condition in a case of choroiditis disseminata may be compared to that of a piece of well-marked tortoise-shell.

Inflammation of the choroid in patches is usually of syphilitic origin.

Atrophy of the choroid, independent of inflammation, is frequent in advanced states of myopia.

Inspection of the outlying districts of the fundus is easily done, by making the patient look upwards, downwards, etc., strongly. It should never be omitted; for not unfrequently changes may here be discovered which will be the key to the case. It is here that the dots of pigment, characteristic of retinitis pigmentosa, will be first found. Here also, in syphilitic inflammation of limited degree, patches may be sometimes found when there are none in the central parts of the fundus.

Having mentioned some of the chief morbid conditions to be expected, I will now specify some of the errors into which novices with the instrument are likely to fall. Like all other instrumental aids—and the stethoscope is a prominent example—the ophthalmoscope must be expected to lead to many mistakes. It is difficult to use, and requires long experience before the observer can trust his own interpretation of what he has seen. Want of familiarity with the varying conditions which may be met in health, is a main cause of error. Thus a well-pigmented choroid in a dark complexioned person may be easily misapprehended. A very large physiological cup may be taken for "white atrophy," or for a glaucoma cup; a margin of black pigment at the edge of the disc may be attributed to disease; and alterations in size of vessels, which are peculiar to the individual, may be supposed to imply anæmia or congestion. It is possible, also, in a highly pigmented eye, to mistake the yellow spot itself for the remains of a blood clot. As to the common error of fancying the retina hazy when the appearances are due to opacity in one or other of the media, I have, I think, already said enough.

Degrees of vascularity are especially difficult of satisfactory comparison. You will hear one authority assert that the disc or retina is congested, when another will declare that they are quite normal. Let me warn you against the diagnosis of "congested retina." In four out of five of the cases in which the words "hyperæmic retina" are used, they are probably employed in error. Both in the optic disc and in the retina, the size of the vessels may differ widely and be still within the bounds of health. Just as one person may have a florid cheek and red ears, and another pale ones, yet both be in good health, so may the color of the optic disc and the size of the retinal vessels differ. The conditions of the circulation in the retina are such as to make any condition analogous to erythema of the skin simply impossible. If you find the retina visibly reddened, be sure that it is not simply "congested," but stained by effusion, in fact, inflamed. The individual arteries are too far apart to give any general red color to the whole. The interpretation of congestion must rest on the enlargement of their trunks only; and this, which is a comparative question, is very difficult to estimate. The old notions as to active congestions preceding inflammation, must be abandoned for the retina, as elsewhere. We now know that cell changes are the essential factors in inflammation, and that it is these that induce vascular changes. I do not by any means deny that the optic disc and retina may in some cases contain too much blood, and yet show no trace of inflammation; but I feel sure that these conditions are far less frequent than they are thought, and I warn the beginner against the fatal facility of explaining amblyopia by discovering congestion.—*Clinical Reports of London Hospital*, 1867–8, *p.* 182

EYE INSTRUMENTS.

KNAPP'S DOUBLE-DISK OPHTHALMOSCOPE.

FIG. 72. *a*, Front View (Mirror). *b*, Lens, Disks, and Cover (Removed).

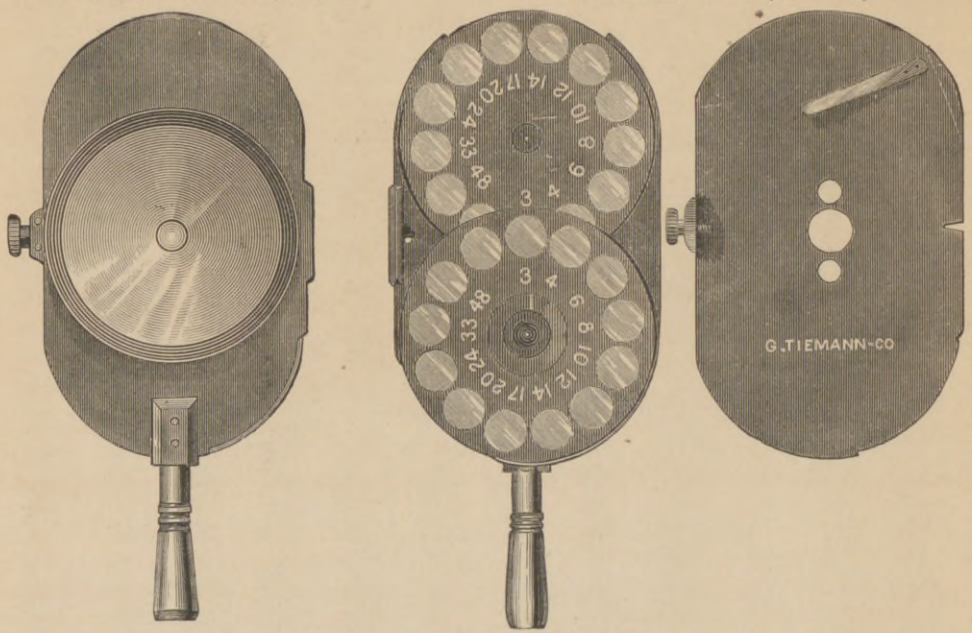
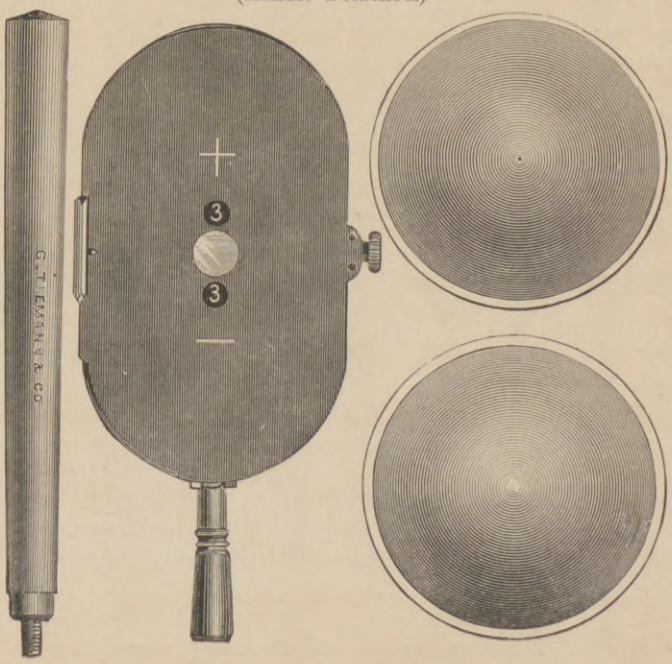


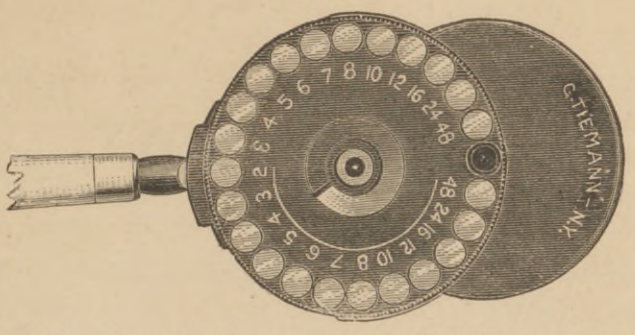
FIG. 73. Back View of Knapp's Ophthalmoscope and Magnifying Lenses. (Handle Detached.)



EYE INSTRUMENTS.

KNAPP'S SINGLE-DISK OPHTHALMOSCOPE.

FIG. 74.



To use these instruments conveniently, Dr. Knapp arranged a table which shows the most suitable combinations, representing, in near approximation, the numbers of spectacles contained in our ordinary trial-cases. Furthermore, he has calculated the shortening and elongation of the optical axis corresponding to each convex and concave glass. A third table refers to aphakial eyes, *i. e.*, eyes in which the crystalline lens is absent. These tables will be sold with the instrument, and may be hung up in the ophthalmoscope room for reference whenever we want to determine the location of any object in the background of the eye. The measurement of the height of an elevation or the depth of a depression requires no more than the ophthalmoscopic determination of the location of the two remotest points of the morbid parts, and the addition or subtraction of their corresponding values as found in the table.

For other kinds of Ophthalmoscopes, Snellen's Test Types, Test Glasses, etc., see *Specified Price-List.*

FIG. 75. Pupillometer.

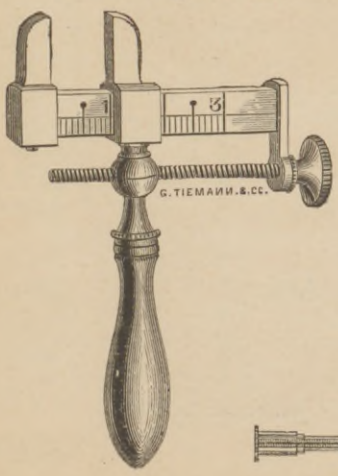
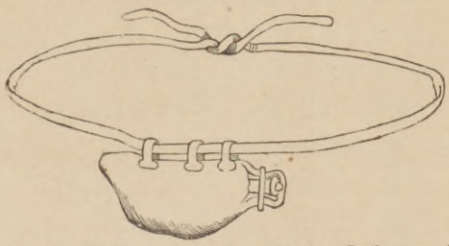


FIG. 76. Turnbull's Rubber Ice-Bag.



For the Application of Cold to Subdue Inflammation.

FIG. 77. Livingston's Elastic Probe.

KNAPP'S SET OF EYE INSTRUMENTS.

2	Strabismus Hooks,	$1 25,	$2 50
1	Beer's Cataract Knife,		1 50
1	Graefe's Knife, for Linear Extraction,		1 50
1	Small Scalpel,		1 50
1	Knapp's Foreign-Body Hook, silver,		2 00
1	Discission Needle,		1 25
1	Foreign-Body Needle,		1 25
1	Cystotome and Daviel's Spoon,		2 50
1	Spatula Hook,		1 25
1	Angular Iridectomy Knife,		1 75
1	Bowman's Lachrymal Knife,		1 75
1	Pair of Fixation Forceps, spring-catch,		2 00
1	Pair of Strabismus Scissors, curved,		1 50
2	Desmarrè's Lid-Holders,	$1 75,	3 50
1	Porte Caustic, hard-rubber and silver,		1 00
1	Hard-Rubber Copper-Holder,		1 50
1	Pair of Sand's Needle Forceps,		4 50
1	Pair of Iridectomy Forceps, plain,		1 50
1	Pair of Iridectomy Scissors,		1 50
1	Pair of Knapp's Entropium Forceps,		4 00
1	Hard-Rubber Spatula, broad,		1 00
1	Pair of Cilia Forceps,		1 25
½	Doz. Suture Needles and Silk,		1 25
1	Bowman's Probe, Nos. 3 and 4,		75
1	Morocco Case, pocket size,		6 00
		Amount,	$50 00
With 1	Liebreich's Ophthalmoscope,		$56 00
1	Knapp's Ophthalmoscope (see Figs. 72, 73) instead of Liebreich's,		$85 00

EYE INSTRUMENTS.

FIXATION INSTRUMENTS.

TO STEADY THE EYEBALL FOR AN OPERATION.

FIG. 78 Ball's Double Hook, for Extirpation.

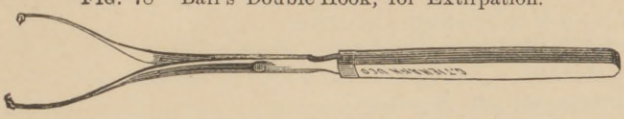


FIG. 79. Double-Hook, for Fixing the Eye.

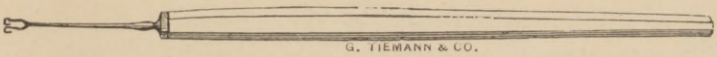


FIG. 80. Three-Pointed Ophthalmostate.

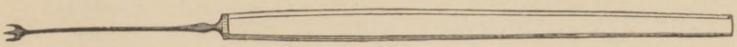


FIG. 81. Noyes' Fixation Forceps.

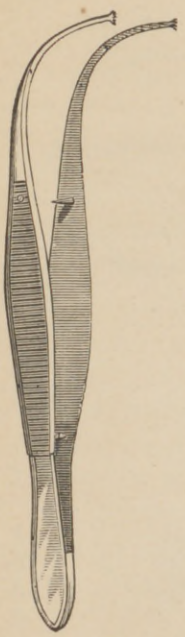


FIG. 82. Pamard's Pique, for Fixing the Eye.

FIG. 83. Jaeger's Ophthalmostate.

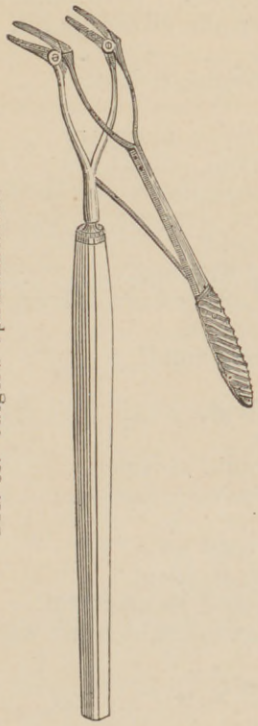


FIG. 84. Noyes' Ophthalmostate.

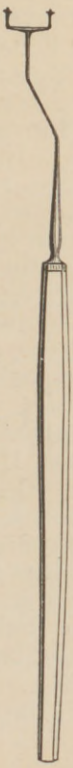


FIG. 85. Graefe's Fixation Forceps.

UNITED STATES ARMY STAFF SURGEON'S EYE, EAR, AND THROAT SET.---1873.

1	Anel's Silver Eye Syringe, with three Points, silver and gold.	$12 00
1	Set of Bowman's Probes and Director.	3 75
1	Beer's Cataract Knife,	1 50
1	Keratome, angular,	1 75
1	Desmarre's Paracentesis Needle,	1 75
1	Graefe's Linear Cataract Knife, concave.	1 50
1	Daviel's Curette,	1 50
1	Curved Eye-Needle, medium size,	1 25
1	Dix's Spud,	1 25
1	Bowman's Stop-Needle,	1 50
1	Weber's Straight Canalicula Knife, soft shank,	1 75
2	Desmarre's Lid Holders, closed, $1 75,	3 50
1	Tyrrell's Blunt Iris Hook, soft shank,	1 25
1	Cystotome, soft shank,	1 50
1	Tyrrell's Sharp Iris Hook, soft shank,	1 25
2	Strabismus Hooks, flat points, 1 perforated to carry ligature, $1 25,	2 50
1	Hard-Rubber Scoop, German silver shank,	1 75
1	Graefe's Eye Speculum,	2 50
1	Pair of Iris Scissors, straight, delicate,	1 50
1	Pair of Cilia Forceps,	1 25
1	Pair of Graefe's Iris Forceps, angular,	1 50
1	Pair of Iris Scissors, curved on the flat,	1 50
1	Pair of Strabismus Scissors, curved on the flat, with blunted points,	1 50
1	Pair of Fixation Forceps, straight, spring-catch,	2 00
1	Liebreich's Ophthalmoscope,	6 00
1	Pair of Wilde's Angular Forceps,	1 75
1	Set of three Toynbee's Ear Specula, silver,	5 50
1	Laryngeal Mirror, oval, large,	1 50
1	Circular Laryngeal Mirror, small,	1 25
1	Gross' Ear Spoon,	1 00
1	Eustachean Catheter, silver,	2 00
1	California Brush-Holder,	2 50
2	Small Glass Bottles, ground stoppers,	50
1	Yard Silver Suture Wire, very fine,	50
6	Fine Suture Needles,	1 20
1	Skein Fine Suture Silk, and wax,	20
1	Jaeger's Horn Plate (Lid Holder),	1 00
1	Laryngoscopic Reflector and Head-Band,	8 00
1	Mahogany Case, brass-bound, and lined with silk velvet,	15 00
1	Leather Pouch,	5 00
1	Set of Jaeger's Test Types,	50
	Amount,	$106 40

EYE INSTRUMENTS.

INSTRUMENTS FOR REMOVING FOREIGN BODIES FROM THE EYE-BALL AND ORBIT.

FIG. 86. Dix's Spud.

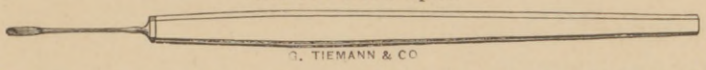


FIG. 87. Couching Needle.

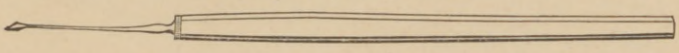


FIG. 88 Carron de Villard's Needle.

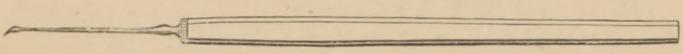


FIG. 89. Angular Needle.

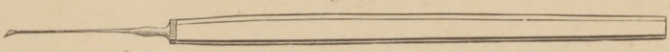


FIG. 90. Gouge.

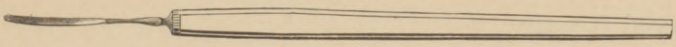


FIG. 91. Spatula. (German Silver or Hard-Rubber.)

FIG. 92. Daviel's Curette.

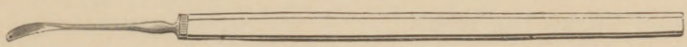


FIG. 93. Hard-Rubber Spoon.

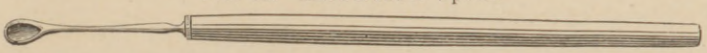
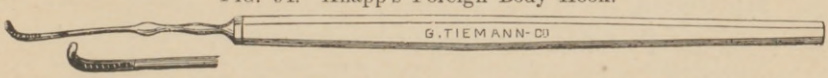


FIG. 94. Knapp's Foreign Body Hook.



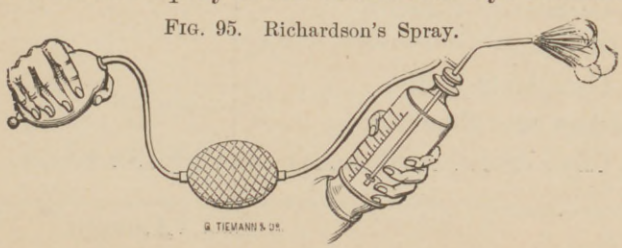
ON HAND.

EYE-GLASSES FOR BATHING THE EYE,

SYRINGES FOR WASHING THE EYE, EYE DOUCHES, ETC.

Richardson's Spray is one of the best Eye Douches.

FIG. 95. Richardson's Spray.



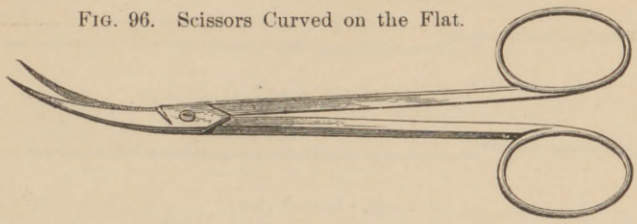
SET OF EYE AND EAR INSTRUMENTS No. 13.

1	Beer's Cataract Knife,	$1 50
1	Desmarre's Scarificator,	1 50
1	Graefe's Linear Knife,	1 50
1	Jaeger's Straight Keratome,	1 50
1	Jaeger's Angular Keratome,	1 75
1	Tenotome,	1 50
1	Strabismus Tenaculum,	1 25
1	Critchet's Scoop,	1 75
1	Broad Straight Needle, for Paracentesis,	1 25
1	Broad Curved Needle, for removing foreign bodies,	1 25
1	Fine Curved Needle,	1 25
1	Fine Straight Needle,	1 25
1	Dix's Spud, for removing foreign bodies,	1 25
1	Tyrrell's Blunt Iris Hook,	1 25
1	Cystotome, for lacerating the capsule,	1 50
1	Curette and Sharp Iris Hook,	2 50
1	Pair of Straight Iris Scissors,	1 50
1	Pair of Curved Iris Scissors,	1 50
1	Pair of Strabismus Scissors,	1 50
1	Gross' Ear Spoon,	1 00
1	Pair of Noyes' Fixation Forceps,	2 00
1	Pair of Cilia Forceps,	1 25
1	Pair of Strabismus Forceps,	1 25
1	Pair of Iris Forceps,	1 50
1	Holcomb's Cotton Probe,	60
1	Set of Bowman's Silver Probes, Nos. 1 to 8,	3 00
1	Bowman's Canalicula Director,	50
1	Simrock's Otoscope,	5 00
1	Bowman's Canalicula Knife,	1 75
6	Suture Needles, and Fine Silk,	1 25
1	Rosewood Case, brass-bound, and lined with silk velvet,	10 50
	Amount,	$57 85

EYE INSTRUMENTS.

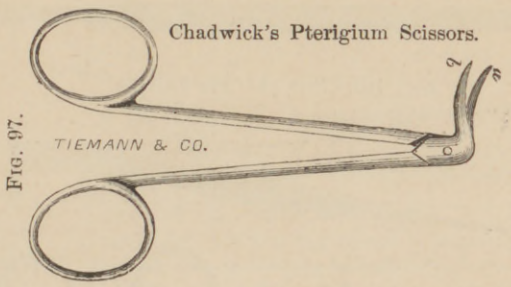
INSTRUMENTS FOR OPERATING ON TUMORS OF THE CONJUNCTIVA.

FIG. 96. Scissors Curved on the Flat.



[See also Double-Hook, Figs. 78 to 80; Scalpels, Figs. 54, 55, 56; Forceps, Figs. 81 to 85; Rubber Spatula for the application of Ointment; Hard-Rubber and Silver, Silver and Platina Caustic Cases, Camel's-Hair Brushes, for applying Caustic Solutions, etc.]

FIG. 97. Chadwick's Pterigium Scissors.



INSTRUMENTS FOR PARACENTESIS CORNEÆ.

FIG. 98. Desmarre's Paracentesis Trocar.

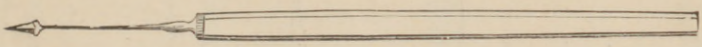


FIG. 99. Broad Paracentesis Needle.

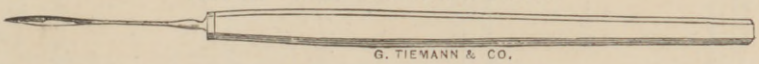


FIG. 100. Paracentesis Trocars.

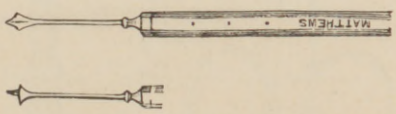
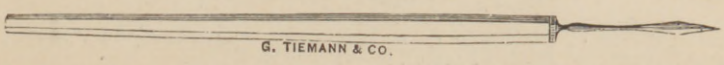


FIG. 101. Very Broad Paracentesis Needle.



EYE INSTRUMENTS.

IRIS INSTRUMENTS.

FOR ARTIFICIAL PUPIL, IRIDECTOMY, DISLOCATING THE NATURAL PUPIL, AND INCISION.

FIG. 102. Jaeger's Straight Keratome.

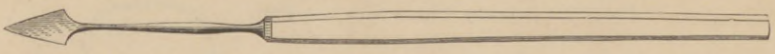


FIG. 103. Jaeger's Angular Keratome.

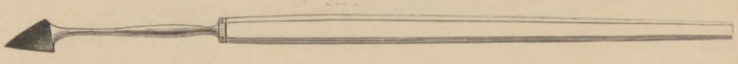


FIG. 104. Broad Needle.

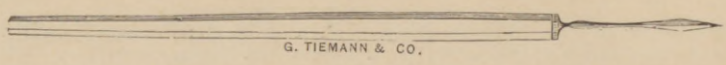


FIG. 105. Welker's Iridectomy Instrument.

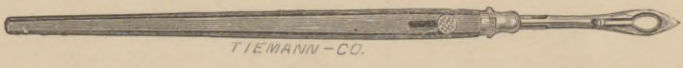


FIG. 106. Straight Iris Forceps.

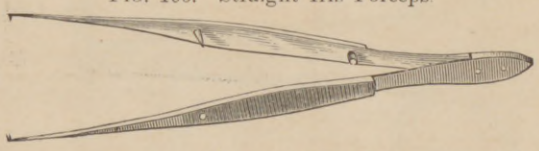


FIG. 107. Tyrrell's Sharp Hook.*

FIG. 108. Tyrrell's Blunt Hook.

FIG. 109. Althof's Iridectomy Scissors.

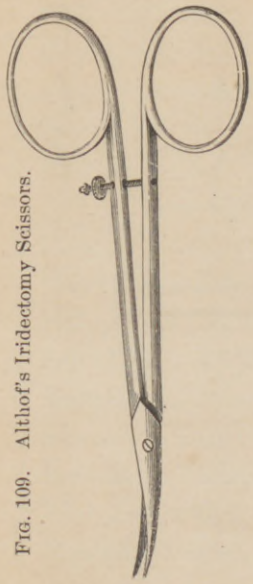


FIG. 110. Curved Iris Scissors.

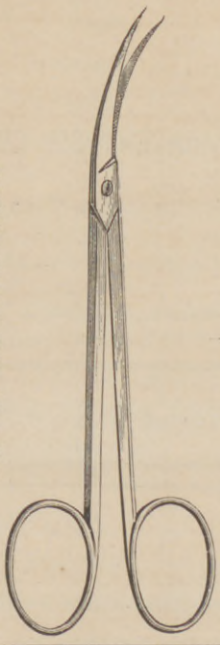


FIG. 111. Straight Iris Scissors.

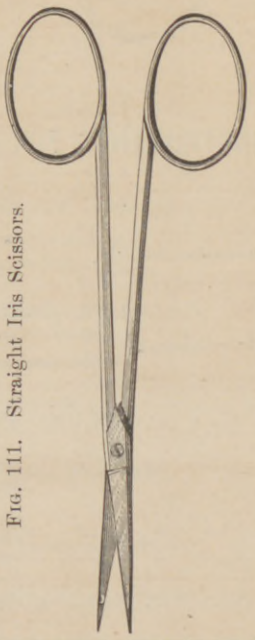
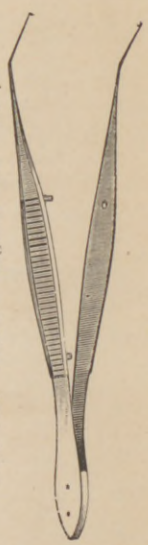


FIG. 112. Graefe's Angular Iris Forceps.



* Many other patterns of Iris Hooks on hand, such as Weber's Capsular Hooks, single and double, right and left curves; Bader's Fixator, Noyes' Iris Hook, etc.

EYE INSTRUMENTS.

INSTRUMENTS USED IN OPERATIONS FOR CATARACT.

FIGS. 113, 114, 115. Beer's Cataract Knives, three sizes.

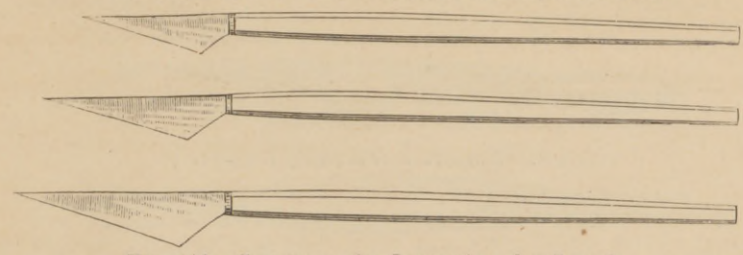


FIG. 116. Cystotome, for Lacerating the Capsule.

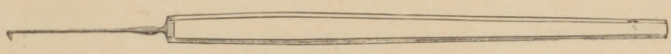


FIG. 117. Tyrrell's Blunt Hook.

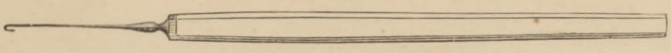


FIG. 118. Graefe's Linear Knife.

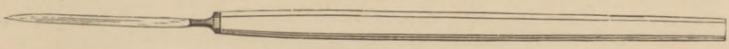


FIG. 119. Graefe's Tractor.

FIG. 120. Graefe's Lens Scoop.

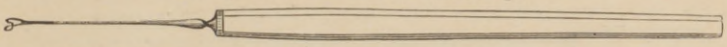


FIG. 121. Hard-Rubber or Shell Lens Spoon.

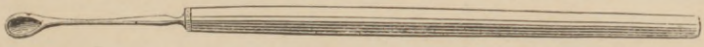


FIG. 122. Critchet's Hooked Needle.

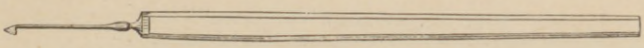


FIG. 123. Luzardi's Hooked Needle.

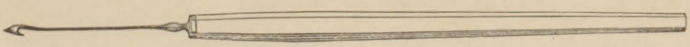


FIG. 124. Silver Lens Scoop and Cystotome.

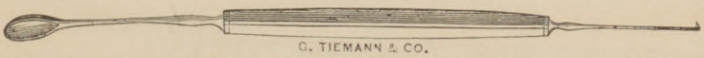


FIG. 125. Fenestrated Lens Scoop.

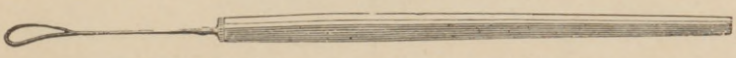


FIG. 126. Knife, for Enlarging the Section.

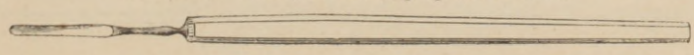


FIG. 127. Angular Bistoury, for enlarging the Section.

FIG. 128. Straight Knife, for enlarging the Section.

EYE INSTRUMENTS.

INSTRUMENTS USED IN OPERATIONS FOR CATARACT.

FIG. 129. Lanne's Forceps-Needle, for False Membranes.

FIG. 130. Liebreich's Rotating Iris Forceps

FIG. 131. Walton's Self-Holding Iris Forceps.

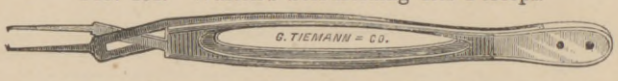


FIG. 132. Hayes' Knife-Needle.

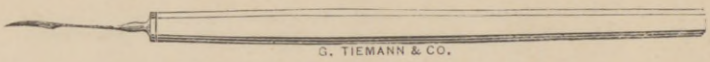


FIG. 133. Iris Knife.

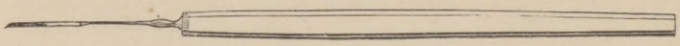


FIG. 134. Iris Knife with a Stop.

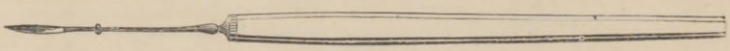


FIG. 135. Sickle-Shaped Iris Knife

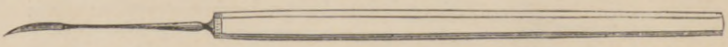


FIG. 136. Knife-Needle.

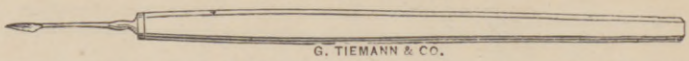


FIG. 137. Noyes' Iris Scissors.

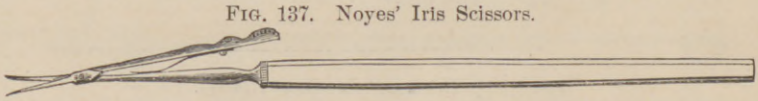


FIG. 138. Wilde's Canulated Needle.

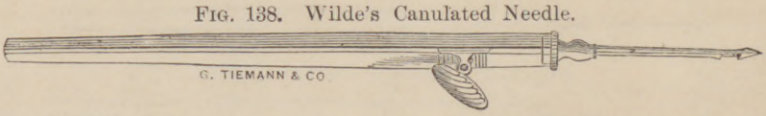
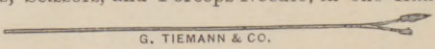


FIG. 139. Wilde's Canulated Forceps, Scissors, and Forceps-Needle, in one Handle.



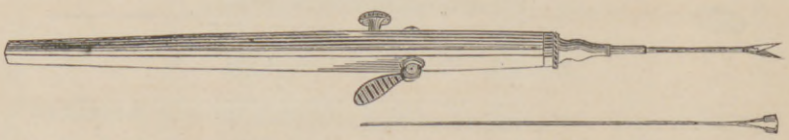
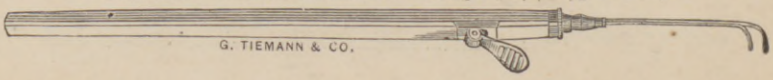


FIG. 140. Wilde's Canulated Forceps (Lithotriptor-like).



EYE INSTRUMENTS.

INSTRUMENTS USED IN OPERATIONS FOR CATARACT.

FIG. 141. Double-Edged Iris Knife.

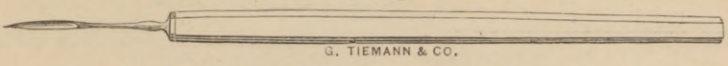


FIG. 142. Bowman's Stop-Needle.

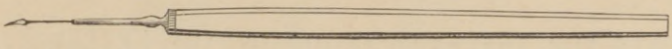


FIG. 143. Beer's Straight Cataract Needle.

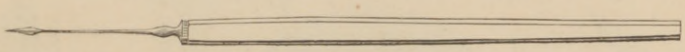


FIG. 144. Narrow, Straight Cataract Needle.

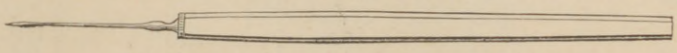


FIG. 145. Walton's Round-Pointed Needle.

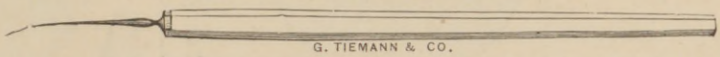


FIG. 146. Levi's Needle, with an Eye.

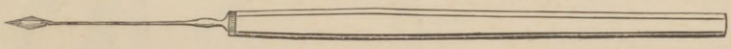


FIG. 147. Walton's Grooved Needle, for Soft Cataract.

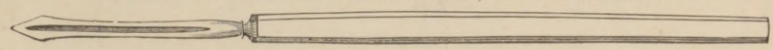


FIG. 148. Tattoeing Needle (for the Coloring of White Spots in the Cornea).

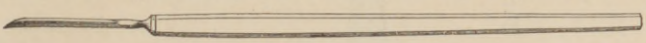


FIG. 149. Baader's Tattoeing Needle.

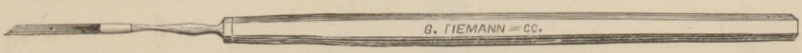


FIG. 150. Agnew's Tattoeing Needle.

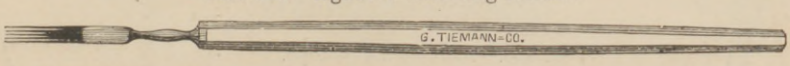


FIG. 151. Blanchet's Instrument for Exhausting Soft Cataract.

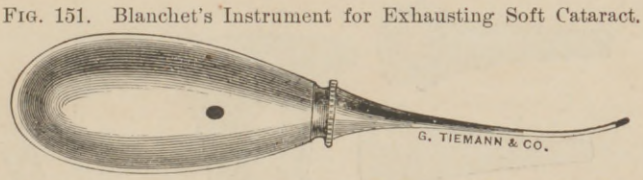
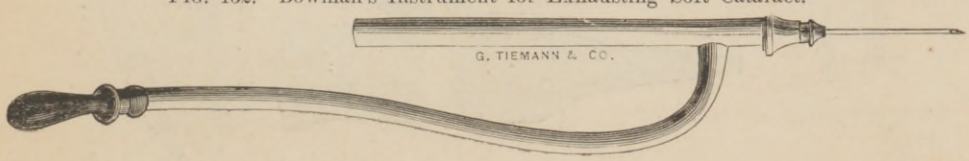
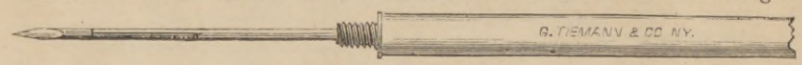


FIG. 152. Bowman's Instrument for Exhausting Soft Cataract.



EAR INSTRUMENTS.

FIG. 153. Ear Piercer, to Perforate the Lobe for the Insertion of Ear-rings.



INSTRUMENTS FOR THE EXAMINATION OF THE EXTERNAL MEATUS.

FIG. 154. Wilde's Ear Gorgeret.

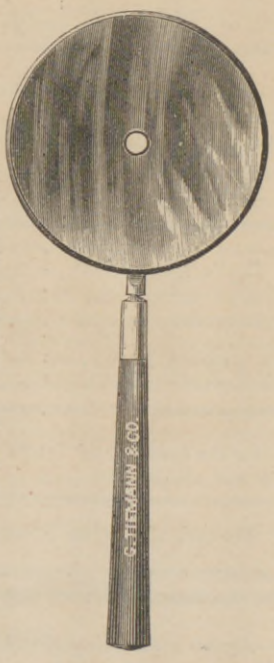


FIG. 155. Troeltsch's Ear Mirror.

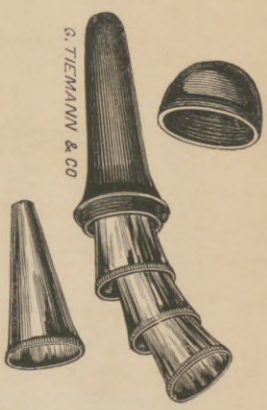


FIG. 156. Wilde's Tubular Specula and Case.

FIG. 157. Kramer's Speculum.

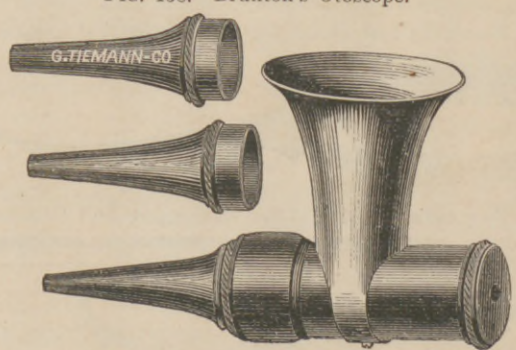


FIG. 158. Brunton's Otoscope.

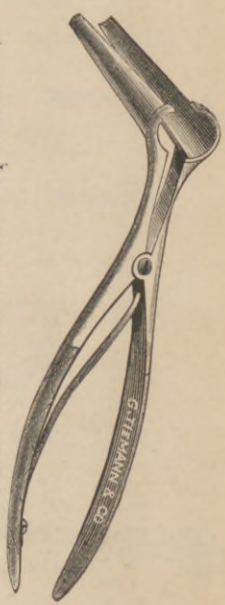


FIG. 159. German Silver Bivalve Speculum.

EAR INSTRUMENTS.

INSTRUMENTS FOR THE EXAMINATION OF THE EXTERNAL MEATUS.

FIG. 160. Clark's Otoscope.

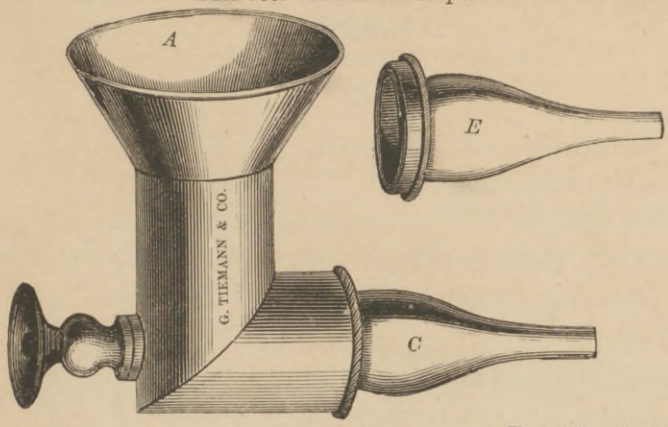


FIG. 161. Knapp's Ear Specula.

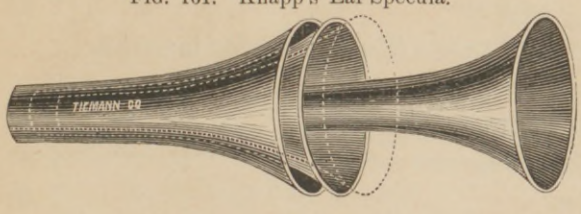


FIG. 162. Tubular Specula of Hard Rubber.

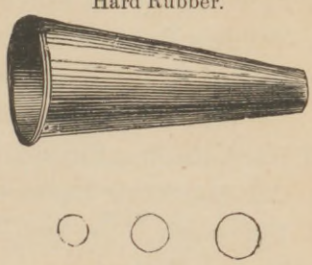


FIG. 163. Toynbee's Ear Specula.

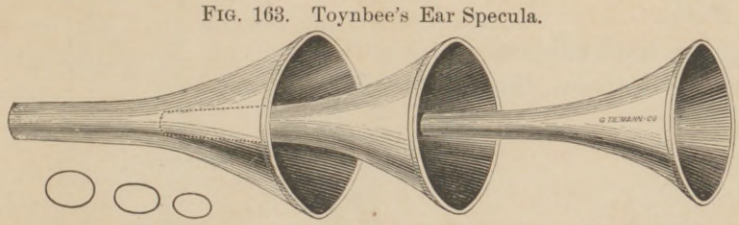


FIG. 164. Simrock's Otoscope, with Lens.

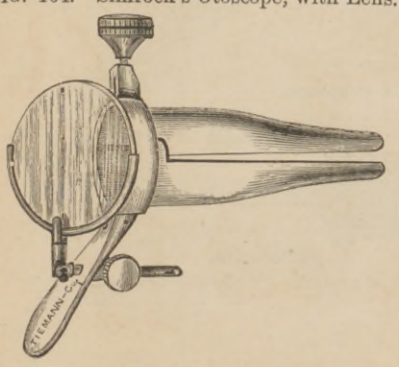


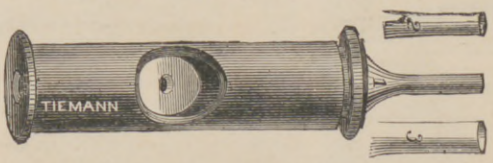
FIG. 165. Speir's Self-retaining Ear Speculum.

EAR INSTRUMENTS IN CASES.

POLITZER'S COMPLETE SET OF EAR INSTRUMENTS.

1	Reflector, with handle and headband,	$6 50
3	Hard-Rubber Ear Specula,	1 50
1	Hard-Rubber Curette,	1 00
1	Daviel's Curette, German silver,	1 50
1	Hook, for removing foreign bodies,	1 00
1	Polypus Knife,	1 25
1	Tympanum Perforator, angular,	1 50
1	Wilde's Angular Forceps, spring,	1 50
1	Pair of Polypus Forceps,	2 50
1	Wilde's Polypus Snare,	3 50
1	Pair of Eyelet Forceps and eight Eyelets (Politzer's), for insertion into the perforated tympanum,	3 75
3	Hard-Rubber Eustachian Catheters,	3 00
1	German Silver Eustachian Catheter,	1 50
1	Diagnostic Tube and Explorer,	2 50
1	Tuning Fork,	1 25
1	Ear Syringe, hard rubber,	1 25
1	Morocco-covered case, lined with velvet,	5 00
	Amount,	$40 00

FIG. 166. Hassenstein's Otoscope.



EAR INSTRUMENTS.

INSTRUMENTS FOR OPERATING ON THE MEMBRANA TYMPANI, ETC.

FIG. 167. Toynbee's Artificial Tympanum.

FIG. 168. Gruber's Sickle-shaped Polypus Knife.

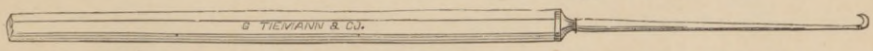


FIG. 169. Simrock's Scissors, for Operating on the Tympanum and Small Bones of the Ear.

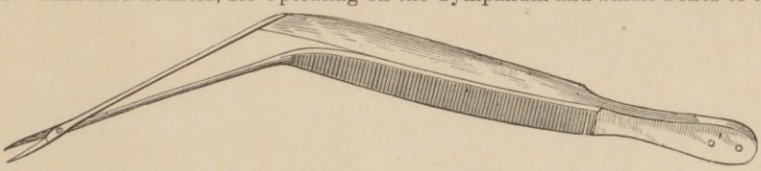


FIG. 170. Politzer's Tympanum Perforator, Angular.

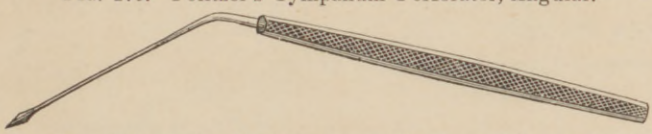


FIG. 171. Politzer's Tympanum Perforator, Straight.

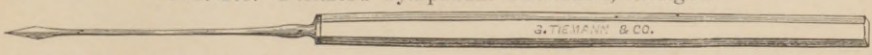


FIG. 172. Politzer's Forceps, for Introducing Eyelets into the Perforated Tympanum.

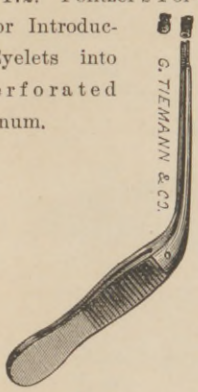


FIG. 173. Bonafont's Eustachian Catheter-Holder.

FIG. 174. Pomeroy's Kramer's Eustachian Catheter-Holder.

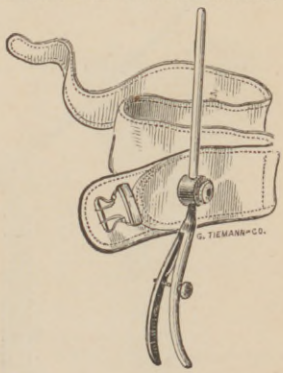


FIG. 175. Politzer's Meatus Knife.

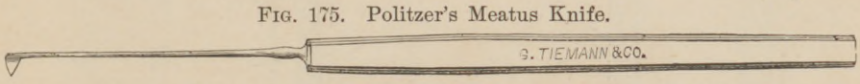
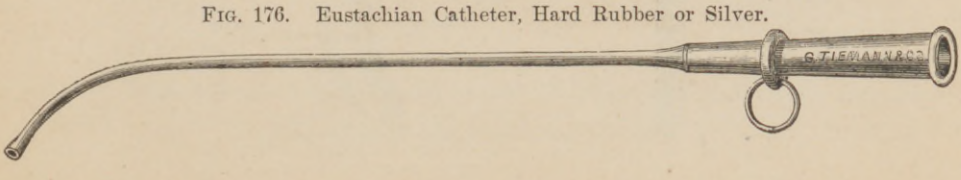


FIG. 176. Eustachian Catheter, Hard Rubber or Silver.



EAR INSTRUMENTS IN CASES.

POLITZER'S SMALL SET OF EAR INSTRUMENTS.

1 Troeltsch's Mirror, with handle,	$3 50
3 Hard-Rubber Ear Specula,	1 50
1 Hard-Rubber Curette,	1 00
1 Curette and Hook, steel,	1 00
1 Polypus Knife, steel,	75
1 Pair of Angular Forceps,	1 50
1 Wilde's Polypus Snare,	3 50
2 Hard-Rubber Eustachian Catheters,	2 00
1 Diagnostic Tube and Explorer,	2 50
1 Hard-Rubber Syringe,	1 25
1 Morocco-covered Case, lined with velvet,	3 50
Amount,	$22 00

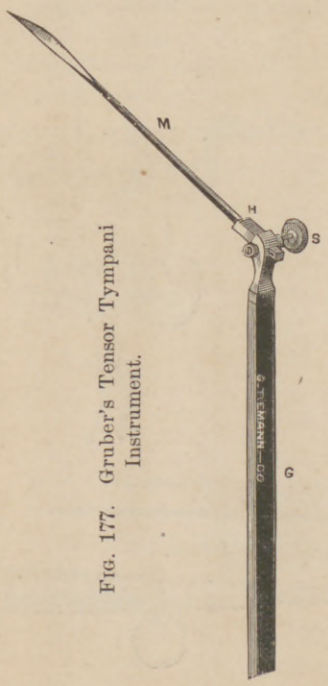


FIG. 177. Gruber's Tensor Tympani Instrument.

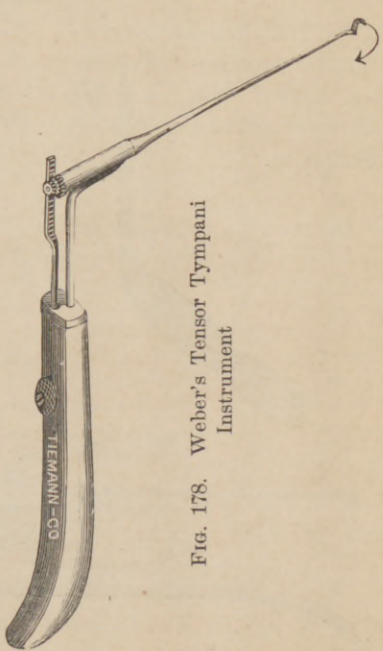


FIG. 178. Weber's Tensor Tympani Instrument

EAR INSTRUMENTS.

INSTRUMENTS FOR THE EUSTACHIAN CANAL.

FIG. 179. Politzer's Air-Bag, for Inflating the Eustachian Canal.

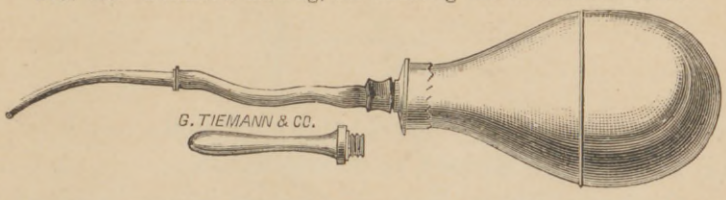


FIG. 180. Politzer's Air-Bag with Roosa's Attachment, for Treating Diseases of the Middle Ear.

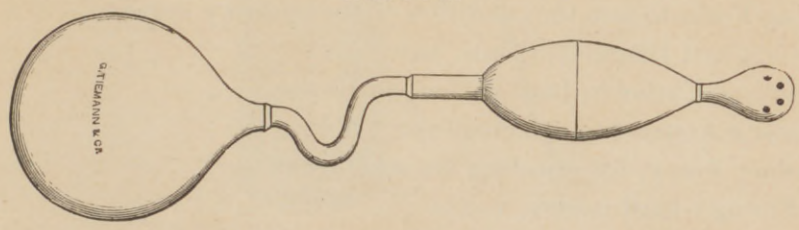


FIG. 181. Buttle's Inhaler, and for Forcing Medicated Vapors into the Eustachian Canal.

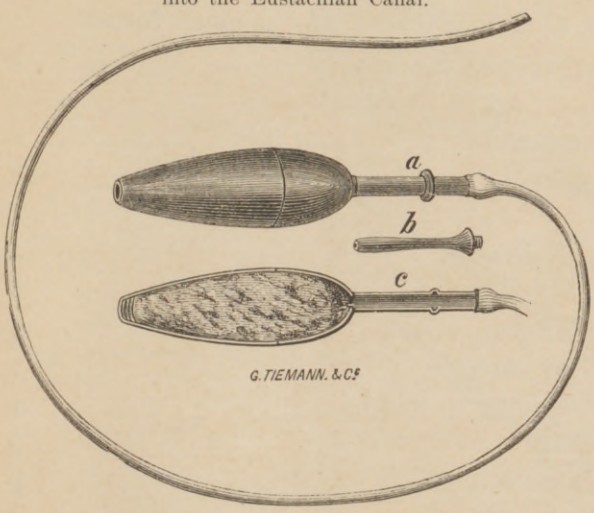


FIG. 182. Sexton's India-Rubber Nozzle for Politzer's Air-Bag.

Knapp's, Simrock's, Allen's, and other *Nozzles* for Politzer's Air-Bags.
Kramer's Air-Press to Order.

EAR INSTRUMENTS IN CASES.

TURNBULL'S SET OF EAR INSTRUMENTS.

1	Troeltsch's Ear Mirror, with handle and headband,	$6 50
1	Set of (3) Rhinoscopic Mirrors, to fit one handle,	4 50
1	Set of (3) Gruber's Tubular Specula, German Silver, in a case, to be carried in the vest-pocket,	3 50
1	Tuning Fork, to test the condition of the auditory nerve,	1 25
1	Explorer and Diagnostic Tube, pair,	2 50
1	Eustachian Catheter, hard rubber, small size,	1 00
1	Politzer's Apparatus, attachable to,	2 00
1	Capillary Spray, for injecting the middle ear,	3 00
1	Ear Syringe, hard rubber,	1 25
1	Turnbull's Curette, soft silver,	1 75
1	Turnbull's Angular Forceps, for removing foreign bodies,	1 75
1	Turnbull's Sickle-shaped Knife and Curette, for opening furunculous abscess in the external meatus,	2 50
1	Ear Spout,	1 50
1	Clarke's Douche, for the ear and eye,	2 50
1	Wilde's Polypus Snare,	3 50
1	Probe,	35
1	Pair of Polypus Forceps, Politzer's,	3 00
1	Gruber's Tenotome, Fig. 177 (3 blades),	5 00
1	Politzer's Tympanum Perforator,	1 50
1	Catarrhal Syringe, posterior nares,	1 50
1	Pair Thudichum's Nasal Specula, r. and l.,	1 50
1	Rauchfuss' Powder Blower,	2 50
1	Drill, for perforating mastoid cells,	8 00
1	Morocco-covered case, lined with velvet,	6 00
	Amount,	$68 00

EAR INSTRUMENTS.

INSTRUMENTS FOR THE EUSTACHIAN CANAL.

FIG. 183. Fullgraff's Eustachian Spray.

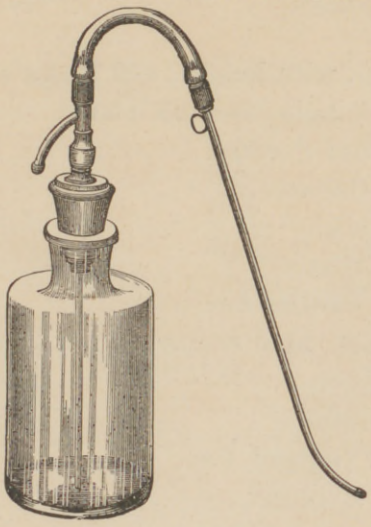
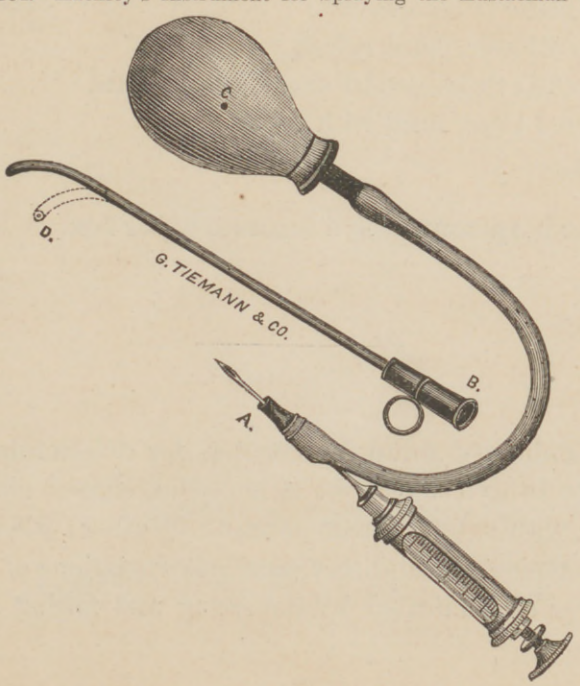


FIG. 184. Hackley's Instrument for Spraying the Eustachian Canal.



ROOSA'S SET OF EAR INSTRUMENTS.

1	Troeltsch's Ear Mirror, with handle, and Roosa's Head-band,	$6 50
1	Set of three Wilde's Tubular Specula, plated,	3 00
1	Pair of Wilde's Angular Forceps,	1 75
1	Scalpel and Daviel's Curette,	2 50
1	Holcomb's Cotton Probe,	60
1	Eustachian Catheter, silver,	1 50
1	Eustachian Catheter, hard rubber,	1 50
1	Posterior Nares Syringe, hard rubber,	1 50
1	Ear Syringe, hard rubber,	1 25
1	Roosa's Iodine Apparatus,	2 50
6	Toynbee's Artificial Tympanii, 30c.,	1 80
1	Diagnostic Tube and Explorer,	2 50
1	Tuning Fork (C),	1 25
1	Siegle's Pneumatic Otoscope,	5 00
1	Small Powder-Blower, hard rubber,	1 25
1	Set of Blake's Ear Snares and Paracentesis Needle,	5 50
1	Morocco-covered Case, lined with velvet,	3 50
		$43 40
	And 1 Politzer's Apparatus, in a separate paper box,	$2 00

FIG. 186 is Politzer's Aural Manometer, for determining whether the Eustachian Tube is open or closed: A horseshoe-shaped glass tube, which is partly filled with a solution of carmine in ether; when the nozzle is tightly pressed against the auditory canal, the variations of pressure of air in the middle ear are indicated by the rising and falling of the colored fluid.

EAR INSTRUMENTS.

DIAGNOSTIC INSTRUMENTS.

FIG. 185. Ear Probe, Steel, Angular.

FIG. 186. Politzer's Ear Manometer.

FIG. 187. Toynbee's Diagnostic Tube.

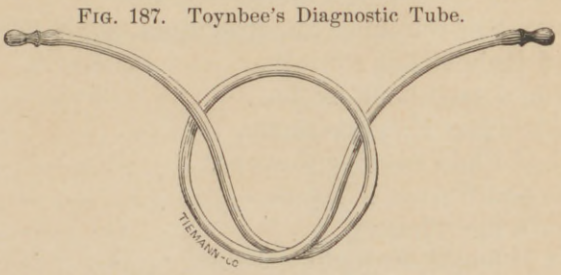


FIG. 188. Siegle's Aural Speculum.

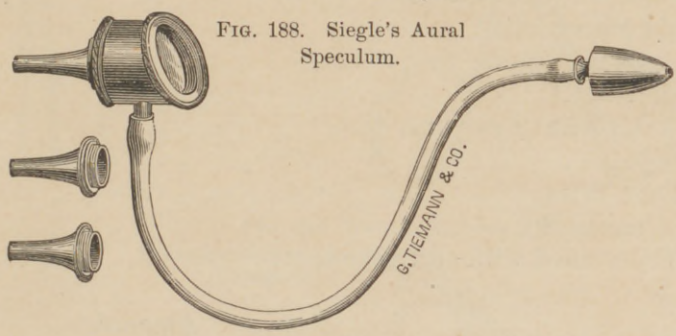


FIG. 189. Toynbee's Explorer. (Made to fit Fig. 190.)

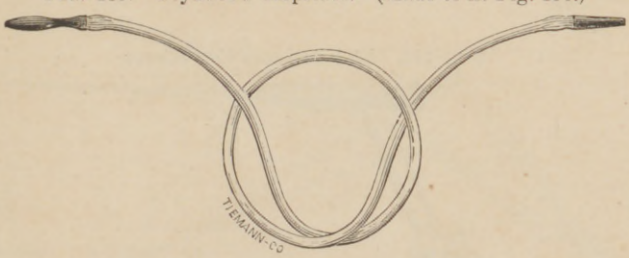


FIG. 190. Eustachian Catheter.

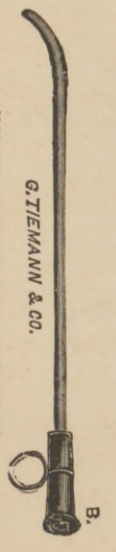


FIG. 191. Conversation Tube.

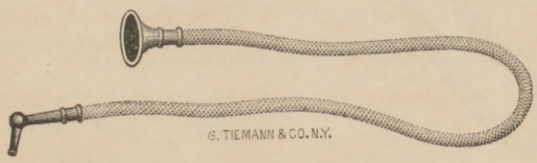
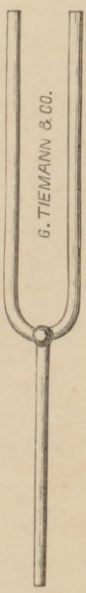


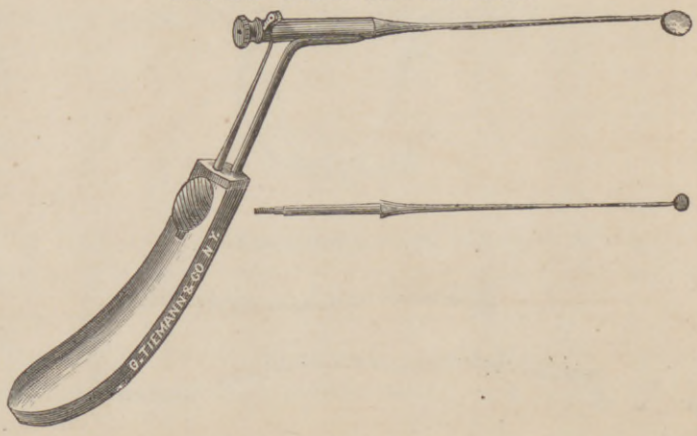
FIG. 192. Tuning Fork (Diapason).



SPEIR'S SET OF EAR INSTRUMENTS.

1	Tympanum Perforator,	$1 50
1	Eustachian Cauterizer,	1 50
1	Speir's Ear Scoop (Curette),	1 00
1	Virgin Silver Eustachian Catheter,	2 00
1	Hook for Removing Foreign Bodies,	1 50
1	Speir's Self-retaining Ear Speculum,	4 50
1	Hard-Rubber Ear Syringe,	1 25
1	Wilde's Angular Forceps,	1 75
1	Wilde's Ear Polypus Snare,	3 50
1	Pair of Plain Slender Forceps,	1 00
1	Lens and Frame, 2″ focus,	2 00
1	Speir's Ear Cleaner,	75
1	Pair of Small, Straight Scissors,	1 50
1	Tympanum Manometer,	2 50
1	Speir's Aural Reflector,	4 50
1	Ear Probe,	60
6	Toynbee's Artificial Tympana, 30c.,	1 80
1	Glass Brush,	40
1	Coil of Silver Wire,	50
2	Atropine Glasses, 20c.,	40
1	Morocco Case, lined with silk velvet,	6 00
	Amount,	$40 45

FIG. 193. Blake's Inner-Ear Mirror.



EAR INSTRUMENTS.

INSTRUMENTS FOR REMOVING FOREIGN BODIES, FLAKES OF EPIDERMIS, WAX, HAIRS, POLYPI, FLUID SECRETIONS, ETC.

FIG. 194. Politzer's Hard-Rubber Ear Spoon.

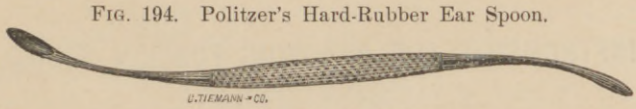
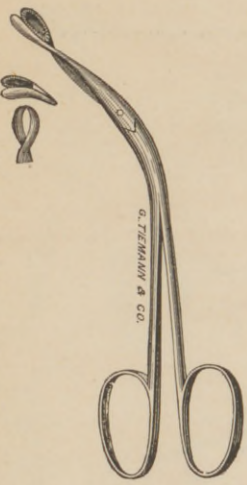


FIG. 195. Allen's Polypus Forceps, and for Removing Foreign Bodies.

FIG. 196. Politzer's Polypus Forceps.



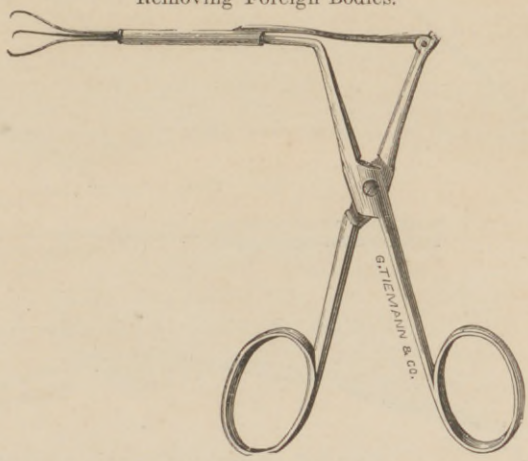


FIG. 197. Blake's Polypus Snare.

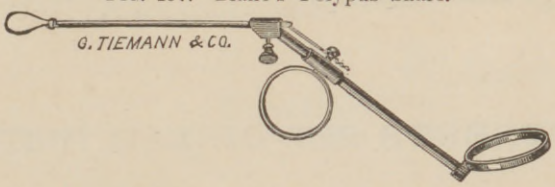


FIG. 198. Wilde's Polypus Snare.

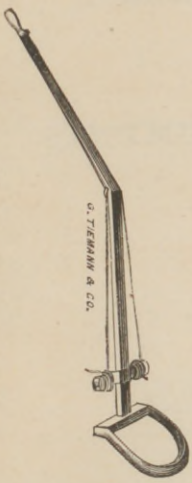


FIG. 199. Bumstead's Canulated Forceps.

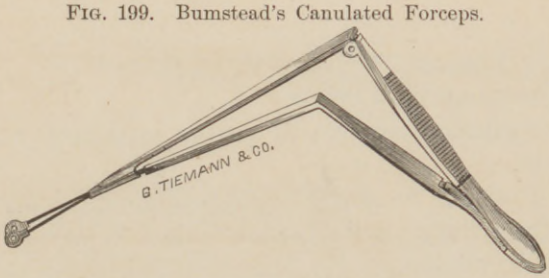


FIG. 200. Elastic Caustic-Holder

FIG. 201. Speir's Ear Curette.

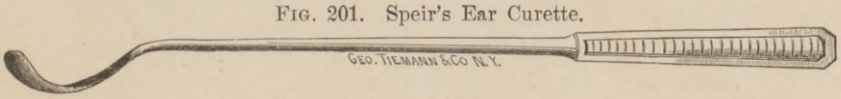
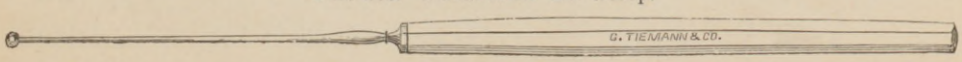


FIG. 202. Fenestrated Ear Scoop.



EAR INSTRUMENTS.

INSTRUMENTS FOR REMOVING FOREIGN BODIES.

FIG. 203. Angular Ear Hook.

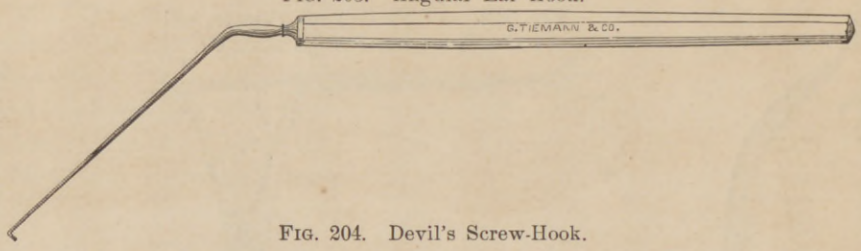


FIG. 204. Devil's Screw-Hook.

FIG. 205. Elsberg's Angular Screw-Hook.

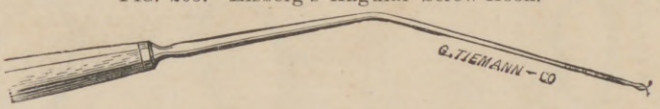
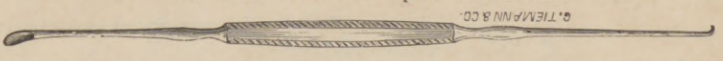


FIG. 206. Gross' Ear Spoon and Hook.



TOYNBEE'S SET OF EAR INSTRUMENTS.

3	Silver Ear Specula (Toynbee's),	$5 50
1	Pair of Rectangular Forceps,	1 75
1	Metallic Syringe with two Rings (or hard rubber),	1 50
1	Ear Spout,	1 50
1	Wilde's Polypus Snare,	3 50
1	Pair of Ring Polypus Forceps,	2 00
4	Artificial Tympana,	1 20
1	Otoscope (Diagnostic Tube) and Explorer,	2 50
1	Eustachian Catheter, hard rubber,	1 00
1	Morocco-covered Case, lined with velvet,	2 75
	Amount,	$23 20

EAR INSTRUMENTS.

FIG. 207. Hinton's Polypus Forceps.

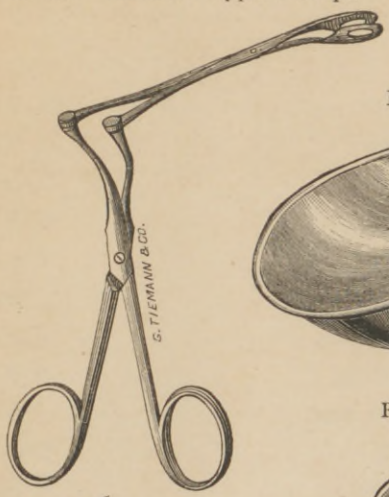


FIG. 208. Eiterbecken (Pus Basin), Brass.

FIG. 209. Pus Basin, Hard Rubber or Tin.

FIG. 210. Lucae's Reflux Ear Douche.

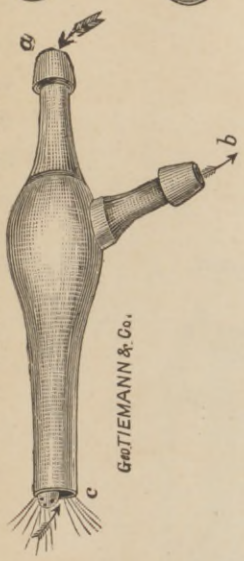


FIG. 211. Itard's Rubber-Bag Ear Syringe, with Stop-cock.

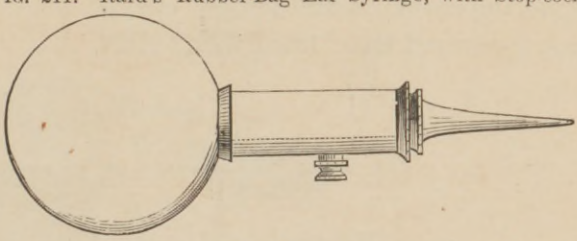


FIG. 212. Knapp's Powder-Blower.

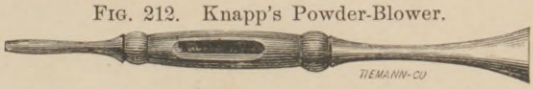
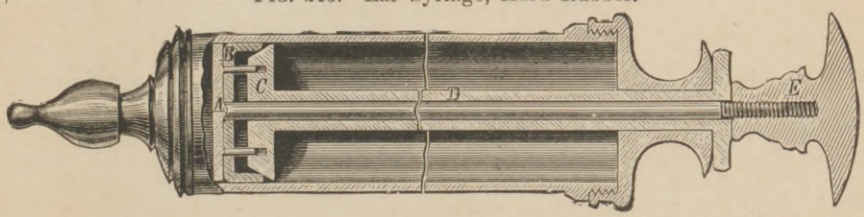


FIG. 213. Ear Syringe, Hard Rubber.



Tin, Brass, and Hard-Rubber Ear Basins, Ear Spouts, Glass and Metal Ear Syringes, Ruschenberger's Ear Douche, etc., always on hand.

SEXTON'S SET OF EAR INSTRUMENTS.

3	Eustachian Catheters, nickel-plated, $1.50,	$4 50
3	Ear Specula, nickel-plated, oxidized inside,	4 50
1	Hard-Rubber Ear Syringe,	1 50
1	Diagnostic Tube, ivory and ebony fittings,	2 50
1	Soft-Rubber Insufflator,	1 50
1	Glass Nose-Piece, with rubber hose attached,	40
1	Pair of Long-bladed Forceps, for foreign bodies,	2 25
1	Blake's Polypus Snare, Sexton's modification,	3 50
1	Connecting-Piece, for use with catheter and bag,	50
2	Rhinoscopic Mirrors, ebony handles, $1.25,	2 50
1	Troeltsch's Mirror, with head-piece and handle,	6 50
1	Pipette, for strong solutions,	15
2	Hard-Rubber Probes, for holding cotton, etc., 20c.,	40
1	Hard-Rubber Ear Spoon,	1 00
1	Tongue Depressor, nickel-plated, Sass',	3 50
1	Morocco-covered Case, lined with velvet,	3 50
	Amount,	$38 70

EAR SYRINGES AND EAR DOUCHES

OF ALL DESCRIPTIONS,

Constantly on hand, such as

Ruschenberger's Ear Syringe,
Kramer's Ear Syringe,
Glass Ear Syringe,
Hard-Rubber Ear Syringe,
Agnew's Ear Douche,
Clark's Ear Douche,
Thudichum's Ear and Nose Douche,
Erhard's Apparatus for Generating Vapors,
Ear Spouts of various patterns, etc., etc.

EAR INSTRUMENTS.

FIG. 214. Dewee's Vapor Douche, for the Application of Anæsthetic and Stimulating Vapors

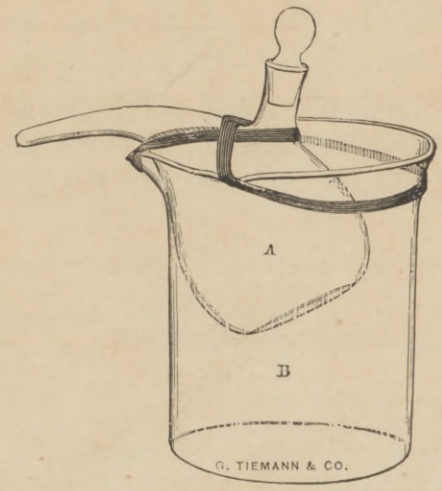
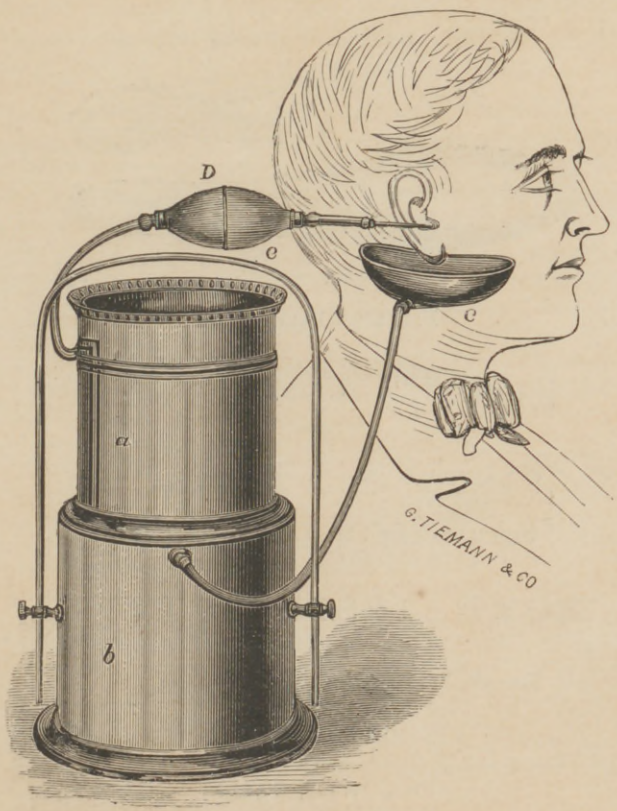


FIG. 215. Sexton's Ear Douche.



EAR INSTRUMENTS.

INSTRUMENTS FOR PERFORATING THE MASTOID PROCESS IN CASES OF ABSCESS, PURULENT INFLAMMATION, SUPPURATION OF THE MIDDLE EAR, AND FOR THE REMOVAL OF NECROSED BONE.

FIG. 216. Drills with Guard, for Perforating the Mastoid Process.

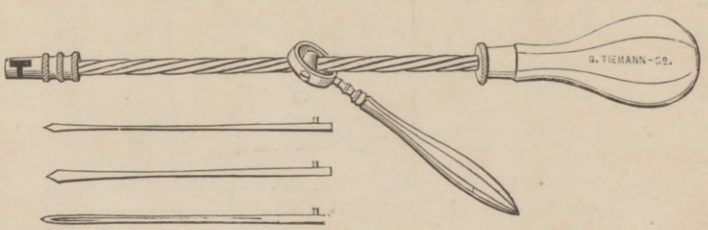


FIG. 217. Rongeur, or Gouging Forceps.

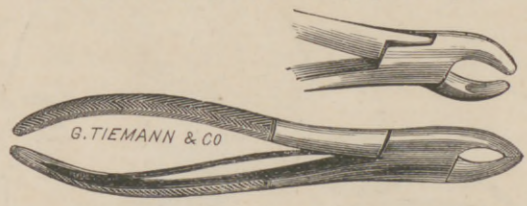


FIG. 218. Hand-Gouge.

See also our Catalogue, Part 1st,

BONE INSTRUMENTS.

FIG. 34, FIG. 35, FIG. 36, FIG. 83. FIG. 84.

And for Scalpels,

FIGS. 17, 18, 19, 20.

EAR TRUMPETS.

A DESCRIPTION OF MECHANICAL APPLIANCES FOR IMPROVING THE CONDITION OF THE DEAF, BY ENABLING THEM TO HEAR MORE DISTINCTLY THE HUMAN VOICE, MUSIC, AND SOUNDS GENERALLY.

IN view of the very limited remarks on Ear Trumpets, even by the best authors on *Aural Surgery*, and in answer to the many inquiries respecting them, we will attempt to describe in these pages the most useful kinds, hoping thereby to meet the wishes of many of our friends who have addressed us on that subject.

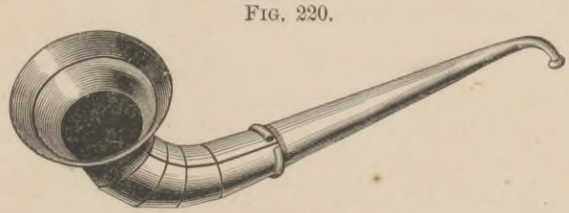
FIG. 219.

The smallest auricular or Hearing Instruments are *Silver Cornets*, Fig. 219, *a*, *b*. They will prove efficient in cases of obstruction of the *meatus auditorius*, by reason of contraction, or the presence of polypii. Keeping the canal open, and admitting air to the tympanum, they will sometimes start its dormant functions. As they come in contact with inflamed or otherwise diseased structures, they ought to be made of gold or silver, and never of inferior metal. Fig. 219, *c*, represents an

ARTIFICIAL TYMPANUM.

In order to diminish the evil results occurring from perforation of the drum, it has been recommended by Toynbee, of London, to insert an artificial one, and thus close the opening. The instrument consists of a thin plate of vulcanized India-rubber, about one centimeter in diameter, in the centre of which a fine silver wire, about an inch long, is fastened. This wire has a ring on its outer end, by which it can be easily removed. This artificial membrane is pressed against the remains of the natural one, causing sometimes truly a magical effect. (Vide Toynbee on Diseases of the Ear, Philadelphia ed., page 191 and others.) Patients should never apply them, before they are properly instructed by their physicians.

FIG. 220.



EAR TRUMPETS.

So called on account of their similarity in form to the well-known musical instrument, but, in principle, the very reverse; for, whilst the latter produces and emits sound (air waves), the *Ear Trumpet*, on the contrary, absorbs, concentrates, and conducts it. They are made in various forms, and may be said to consist of three parts:

EAR TRUMPETS.

FIG. 221.

The mouth, the neck, and the ear piece. The mouth, or large opening, is turned toward the speaker. The larger this part of the instrument is, the greater its power will be. The neck, conical in shape, connects the mouth to the ear-piece.

FIG. 222.

FIG. 223.

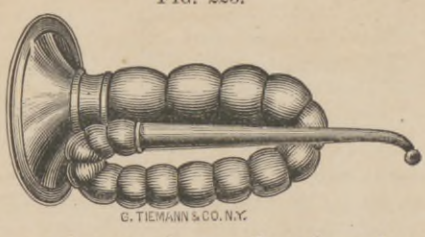
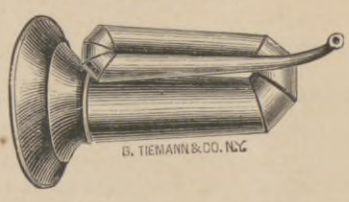


FIG. 224.



The neck may be made of various lengths; in a straight line, also in curves, or angles, without impairing the power of the instrument. The *Ear-piece* is simply the small, well-rounded open extremity, of proper size to fit the auditory canal.

THE DIPPER TRUMPET,

Fig. 225, is the most powerful instrument, best adapted to hear public lectures, or sermons, and will be found efficient where the smaller-sized trumpets have failed.

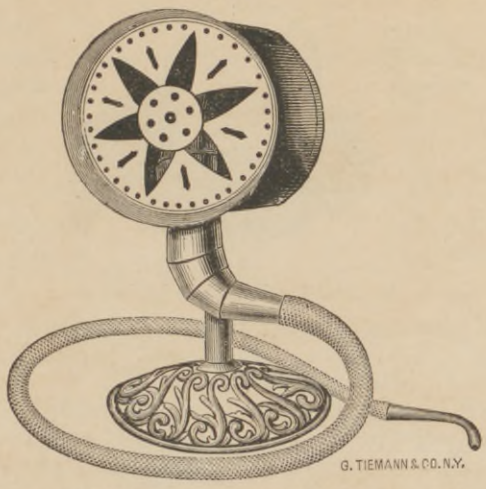
FIG. 225.

FIG. 226.

They differ from the ordinary Trumpet in shape and construction. The mouth-piece is closed by a perforated metal plate. The neck is at a right angle to it and reaches clear inside, in a curved line, nearly striking the bottom. Air waves passing through the little apertures of the mouth-piece, will touch the bottom, which, being in form of a parabola, reflects them toward a common centre. This common centre is the neck of the instrument. All of the waves being forced into this channel and conducted to the ear, will operate with increased power. Like the common Trumpet, they are made in various forms to suit the fancy of the patient. (Figs. 225, 226, 227.) The power of the instrument is not dependent on its form, but bears minute relations to size, increasing or diminishing with the other.

EAR TRUMPETS.

FIG. 227.



THE EAR OF DIONISIUS.

This instrument is constructed on the Dipper principle. The mouth-piece is of rather large proportions, varying from eight inches to one foot in diameter. It rests on an iron base, on a swivel, so that the opening of the mouth can be turned easily to any direction. The neck is a long, tapering, elastic tube, the collapsing of which is prevented by a spiral wire inside, and is overspun with silk or mohair. The ear-piece is made of horn, hard rubber, or ivory. It is intended for the use of VERY deaf persons, who wish to hear the general conversation in their parlor, or who desire to attend public lectures, church, or concerts. The instrument is placed on the floor, near the patient's seat, and the mouth directed toward the speaker, while the ear-piece is held in place by the patient. The dipper-shaped instrument will reward the person accommodating himself to its rather awkward form, as the sound is conveyed by means of it more distinctly than by any other instrument.

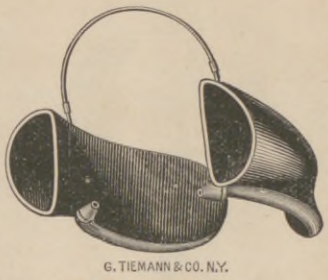
FIG. 228.

THE CONVERSATION TUBE

is of the same general construction as the trumpet. The mouth-piece is small, about two inches in diameter. The neck, about a yard or more in length, is made of spiral wire covered with India-rubber, and overspun with mohair or silk, being very flexible, and terminating again in the ear-piece. This instrument will convey the merest whisper, so that a third person can not hear the conversation carried on by means of it. It may be worn suspended around the neck, or rolled up and put into the pocket, but it is not so well adapted for general use as the Trumpet, being more in-

EAR TRUMPETS.

FIG. 229.



tended for use among friends and members of a family. The person who wants to convey his thoughts to his deaf friend speaks through the bell-shaped opening at one end, whilst the deaf person holds the other end to his ear. The tubes are sometimes made eight to twelve feet long, so that the mouth-piece may be passed around a whole circle of friends, without obliging any one of them to leave his seat.

THE AURICLES

consist of two Ramshorn-shaped trumpets, connected by an adjustable spring, passing over the crown of the head. They are flattened on one side in order to fit closer. The mouth-piece, being above the ear, is pointed forward ; the neck passing back and downward close to the ear, *tapering* toward the ear-piece, which is made of soft rubber or ivory. They are very *easily concealed*, especially by ladies, who can dress their hair over them, and are most desirable for such persons who wish to hear and carry on general conversation without being necessitated to use the *Trumpet;* for instance, Lawyers, Ministers, Teachers, Shop-keepers, and others.

FIG. 230.

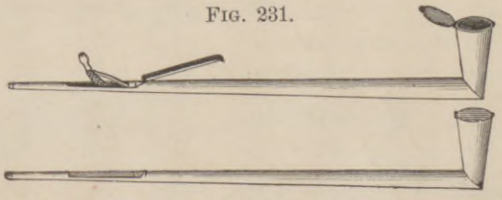
Closed. *Open.*

TELESCOPIC TRUMPETS,

very portable, and trumpets in the shape of

WALKING CANES,

FIG. 231.



and numerous other forms of more or less merit have been made.

FIG. 232.

In the foregoing, we have described the *normal acoustic instruments* to aid in hearing. *All magnify* and *increase* sound, but in the same way as a person obliged to use *spectacles* will have to suit the focus to his eye, so a deaf person will find one trumpet better suited to his special case than another.

NASAL INSTRUMENTS.

FIG. 233. Robert & Collins' Nasal Speculum.

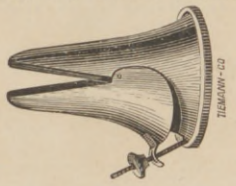


FIG. 234. Bivalve Nasal Speculum. German Silver.

FIG. 235. Elsberg's Nasal Speculum.

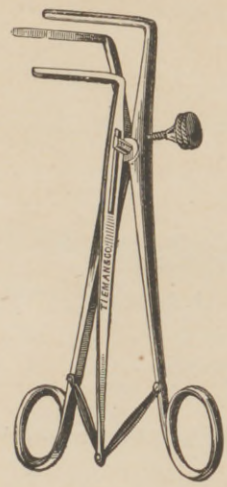


FIG. 236. Steel Nasal Speculum.

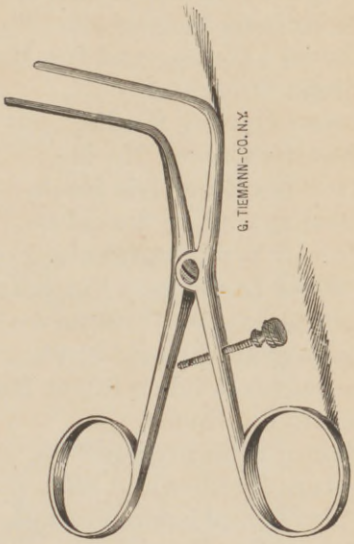


FIG. 237. Frankel's Nasal Speculum.

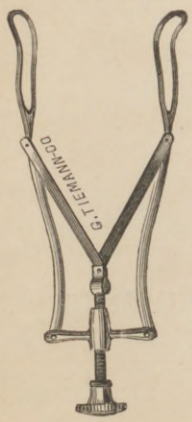


FIG. 238. Folsom's Nasal Speculum.

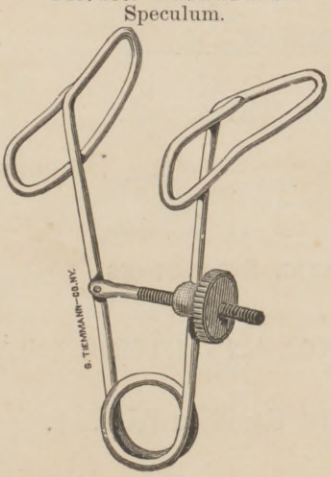
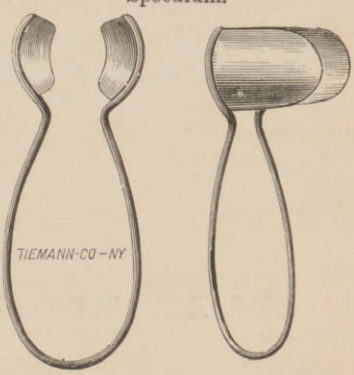


FIG. 239. Thudichum's Nasal Speculum.



VEDDER'S EYE, EAR, AND THROAT SET.

1	Gilt Tongue Depressor,	$3 50
1	Set Bowman's Probes, for dilating the Canalicula,	3 00
1	Bowman's Director,	75
1	Bowman's Canalicula Knife,	1 75
1	Beer's Cataract Knife,	1 50
1	Desmarre's Scarificator,	1 50
1	Iris Knife,	1 50
1	Jaeger's Straight Keratome,	1 50
1	Jaeger's Angular Keratome,	1 75
1	Strabismus Tenaculum,	1 25
1	Daviel's Curette and Iris Hook,	2 50
1	Broad Straight Needle,	1 25
1	Broad Curved Needle,	1 25
1	Delicate Curved Needle,	1 25
1	Tyrrell's Blunt Iris Hook,	1 25
1	Lawrence's Eye Speculum,	2 50
1	Pair of Wilde's Angular Forceps,	1 75
1	Pair of Lawrence's Entropium Forceps,	3 00
1	Laryngoscope, Tiemann & Co.'s Head-band,	8 00
2	Laryngeal Mirrors, $1.25,	2 50
1	Set of (3) Wilde's Silver Ear Specula,	4 50
1	Gross' Ear Spoon,	1 00
1	Pair of Cilia Forceps,	1 25
6	Suture Needles and Silk,	1 25
1	Pair of Strabismus Forceps,	1 25
1	Pair of Iris Forceps,	1 50
1	Pair of Straight Scissors,	1 50
1	Pair of Curved Scissors,	1 50
1	Posterior Nares Syringe with an Ear Nozzle,	2 00
1	Liebreich's Ophthalmoscope,	6 00
1	Rosewood Case lined with Silk Velvet,	12 00
	Amount,	$77 00

SPECIAL SELECTIONS
OF
EYE, EAR, THROAT, OR ANY OTHER INSTRUMENTS,
PUT UP IN CASES, TO ORDER.

NASAL INSTRUMENTS.

FIG. 240. Thudichum's Nasal Douche.

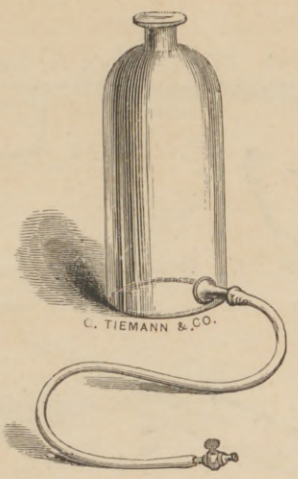


FIG. 241. Nasal Polypus Forceps.

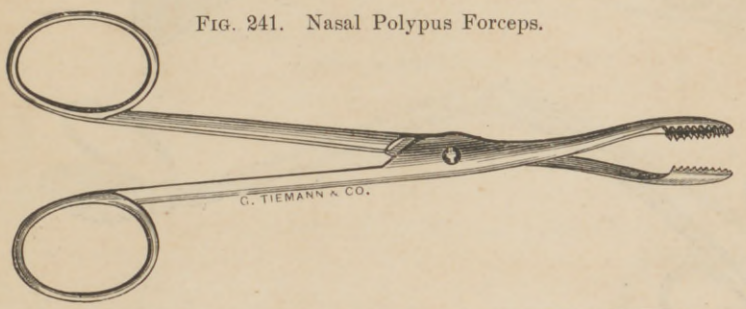


FIG. 242. Polypus Forceps, Crossing Blades.

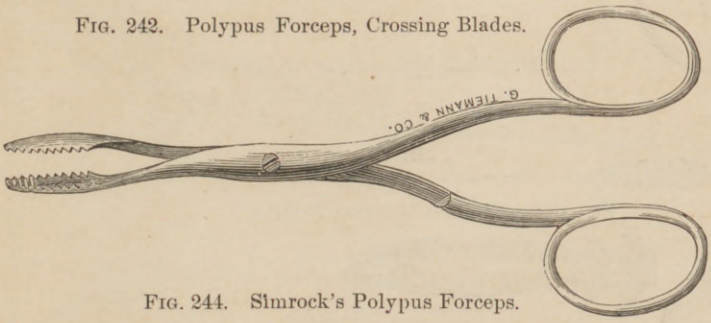


FIG. 243. Gross' Polypus Forceps.

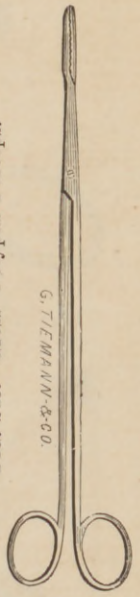


FIG. 244. Simrock's Polypus Forceps.

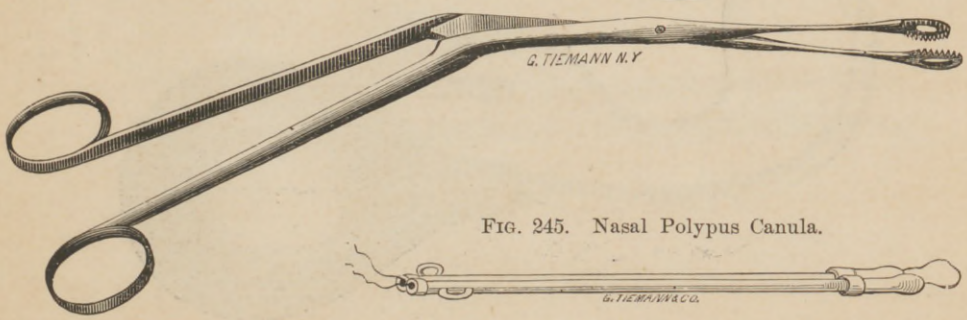


FIG. 245. Nasal Polypus Canula.

NASAL INSTRUMENTS.

FIG. 246. Pelocq's Canula for Epistaxis.

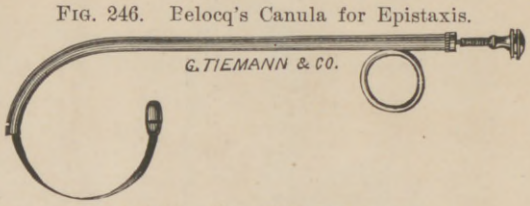


FIG. 247. Simrock's Rhinoscope.

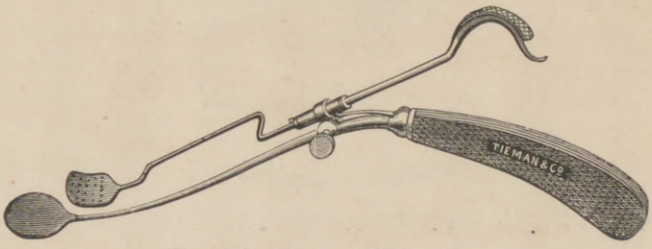


FIG. 248. Duplay's Rhinoscope.

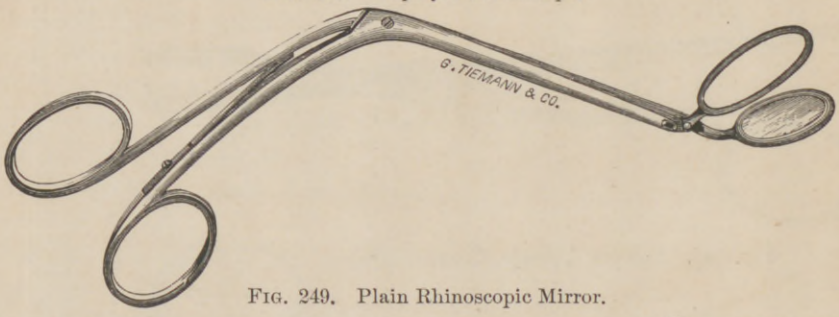


FIG. 249. Plain Rhinoscopic Mirror.

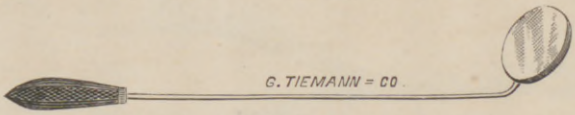
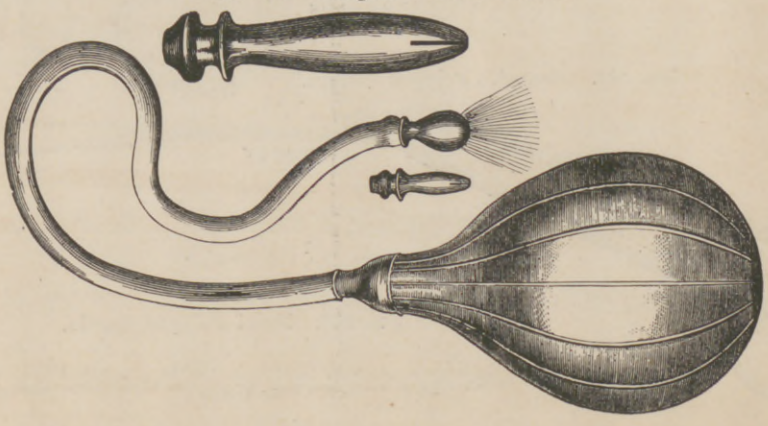


FIG. 250. Füllgraff's Nasal Douche.



HARELIP INSTRUMENTS.

FIG. 251. Buck's Pin Conductor.

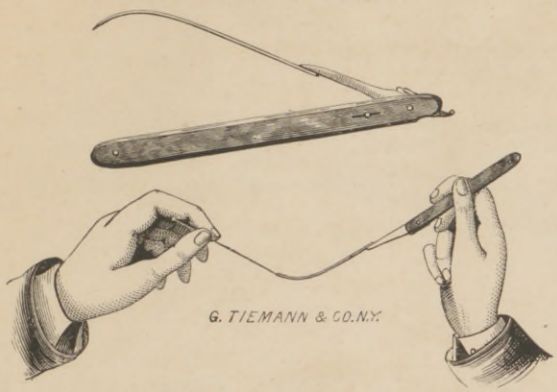


FIG. 252. Hutchison's Harelip Forceps

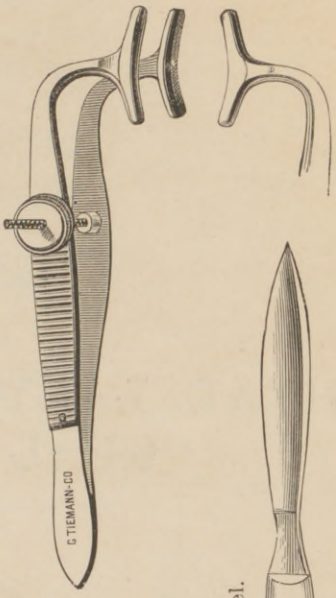


FIG. 253. Prince's Harelip Clamp.

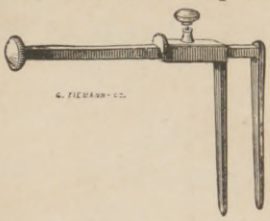


FIG. 254. Scalpel.

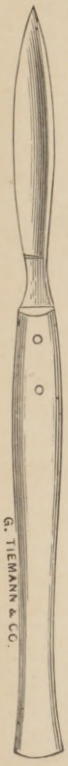


FIG. 255. Scalpel.

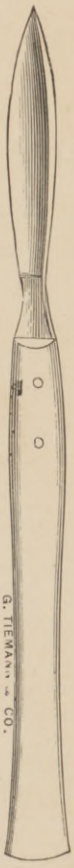


FIG. 256. Harelip Scissors, Angular.

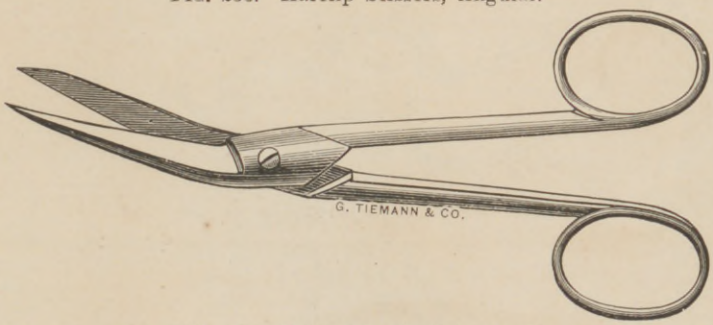
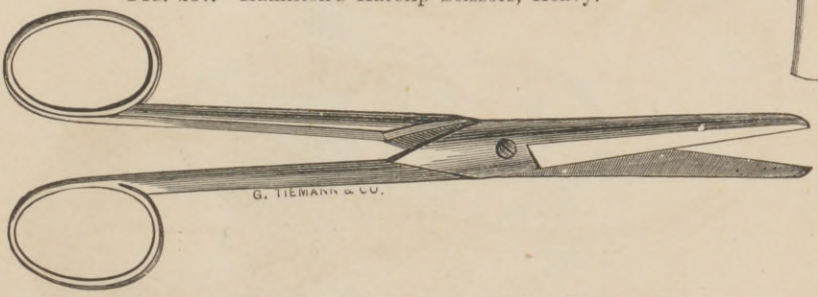


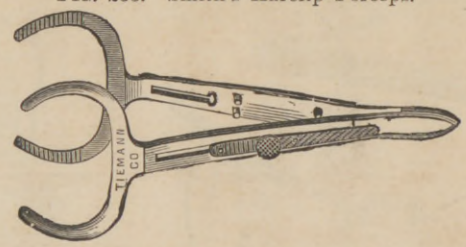
FIG. 257. Hamilton's Harelip Scissors, Heavy.



Silver Harelip Pins with Removable Steel Points.
Plastic Pins of all Sizes.

HARELIP INSTRUMENTS.

FIG. 258. Smith's Harelip Forceps.



ORAL, LARYNGEAL, AND ŒSOPHAGEAL INSTRUMENTS.

SPECULA ORIS.

FIG. 259. Mussey's Mouth-Gag.

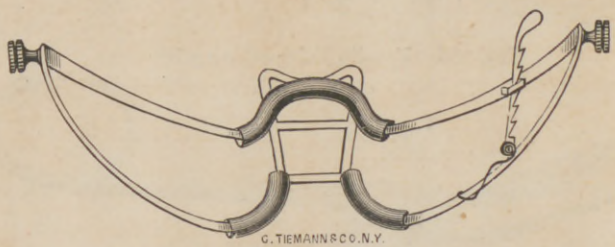
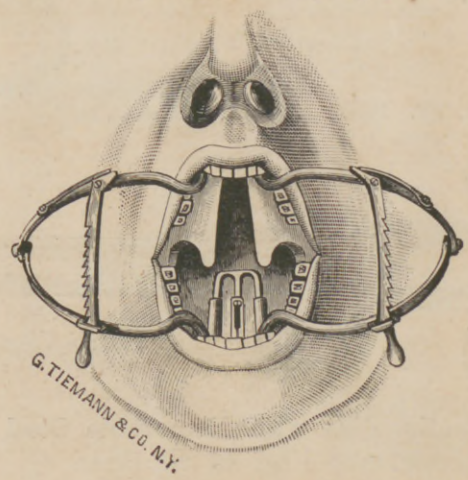


FIG. 260. Whitehead's Mouth-Gag (*in situ*).



ORAL, LARYNGEAL, AND ŒSOPHAGEAL INSTRUMENTS.

SPECULA ORIS.

FIG. 261. Whitehead's First Mouth-Gag.

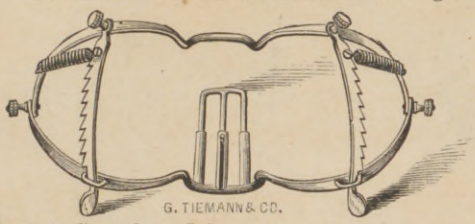


FIG. 262. Mott's Heister's Speculum Oris.

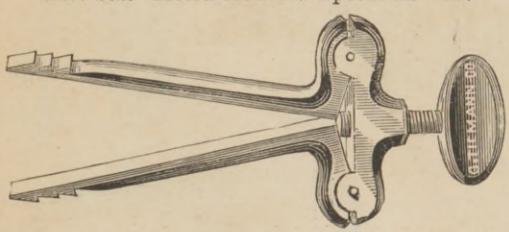


FIG. 263. Westmoreland's Speculum Oris, for Reducing Lockjaw.

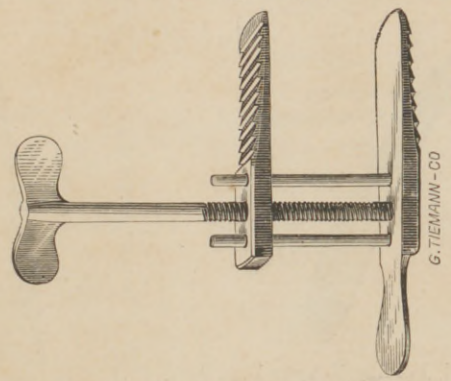
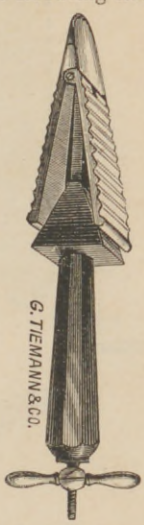
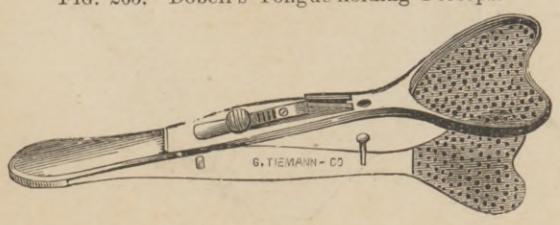


FIG. 264. Goodwillie's Speculum Oris, for Reducing Lockjaw.



For Gross', and other Specula, see Price List.

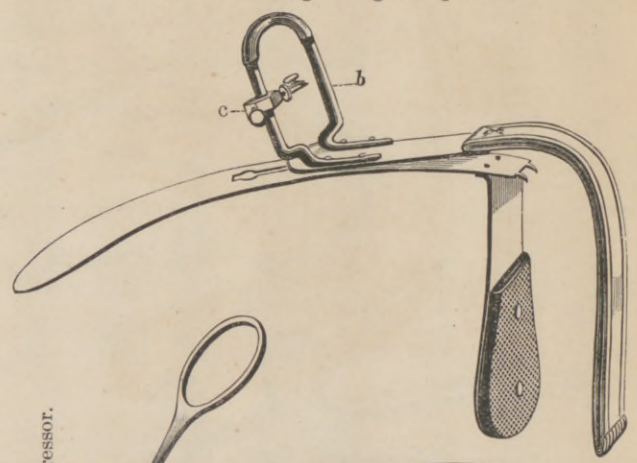
FIG. 265. Dobell's Tongue-holding Forceps.



ORAL, LARYNGEAL, AND ŒSOPHAGEAL INSTRUMENTS.

TONGUE DEPRESSORS.

FIG. 267. Elsberg's Tongue Depressor.



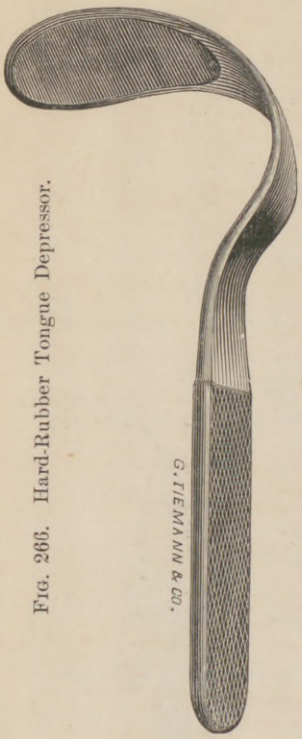


FIG. 266. Hard-Rubber Tongue Depressor.

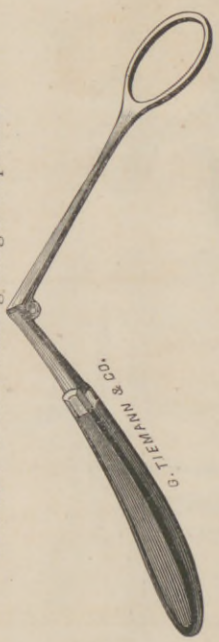


FIG. 268. Green's Folding Tongue Depressor.

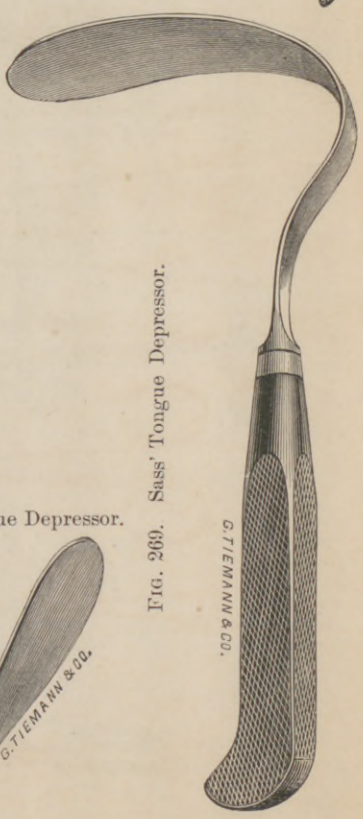


FIG. 269. Sass' Tongue Depressor.

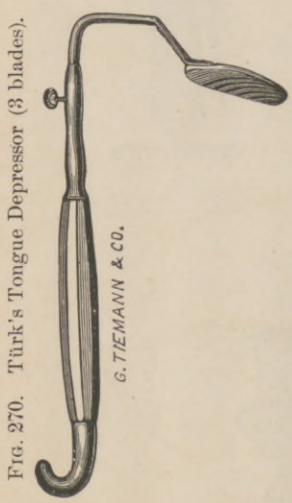
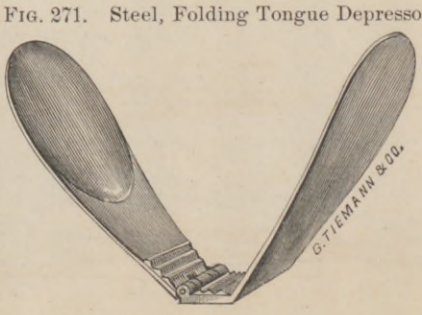


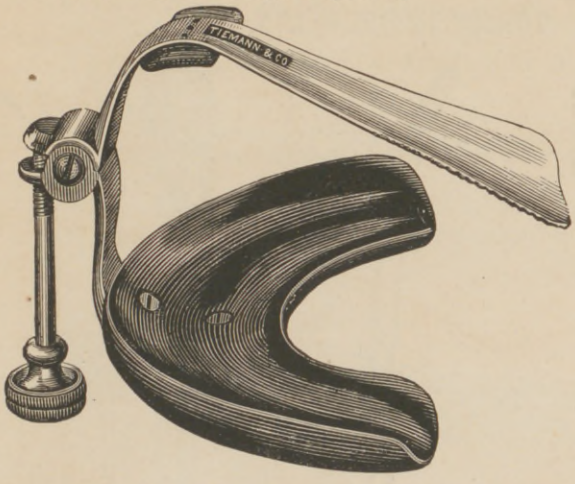
FIG. 270. Türk's Tongue Depressor (3 blades).

FIG. 271. Steel, Folding Tongue Depressor.



ORAL, LARYNGEAL, AND ŒSOPHAGEAL INSTRUMENTS.

FIG. 272. Church's Tongue Depressor.



For other kinds of DEPRESSORS, See Price List.

TONSIL AND UVULA INSTRUMENTS.

FIG. 273. Tenaculum Forceps, for Seizing. (Vulsellum.)

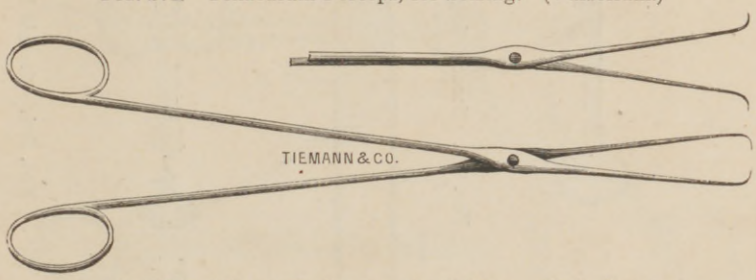


FIG. 274. Musseux's Forceps, for Seizing. (Vulsellum.)

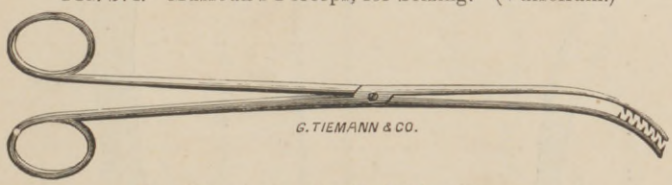


FIG. 275. Langenbeck's Seizing Forceps.

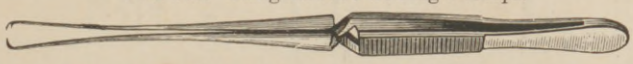
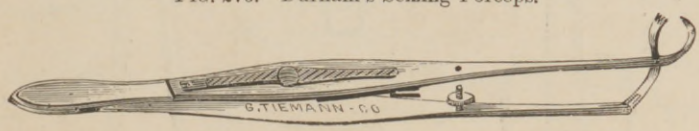


FIG. 276. Durham's Seizing Forceps.



ORAL, LARYNGEAL, AND ŒSOPHAGEAL INSTRUMENTS.

TONSIL INSTRUMENTS.

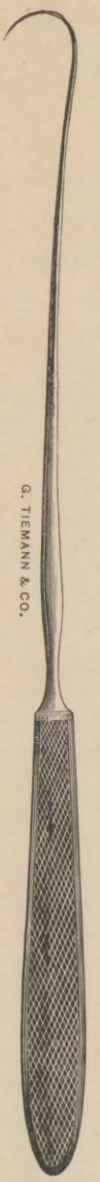


FIG. 277. Tonsil Hook.

FIG. 278. Billing's (U. S. A.) Tonsilotome.

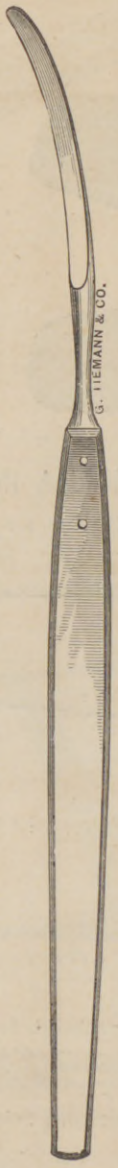


FIG. 279. Green's Tonsil Bistoury.

FIG. 280. Tiemann & Co.'s Uvulatome.

FIG. 281. Green's Double-Hook.

FIG. 282. Vulsellum.

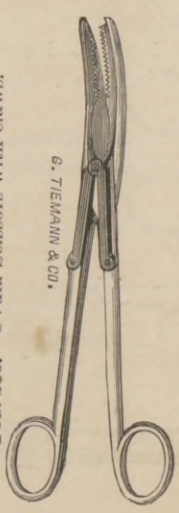


FIG. 283. Uvula Scissors with claws.

ORAL, LARYNGEAL, AND ŒSOPHAGEAL INSTRUMENTS.

TONSIL INSTRUMENTS.

FIG. 284. Tonsil Scissors, Curved on the Flat.

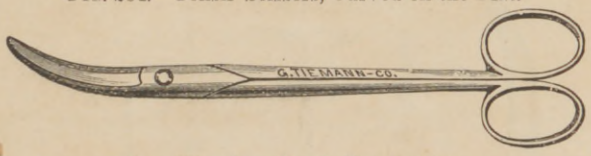


FIG. 285. Hamilton's Tonsilotome.

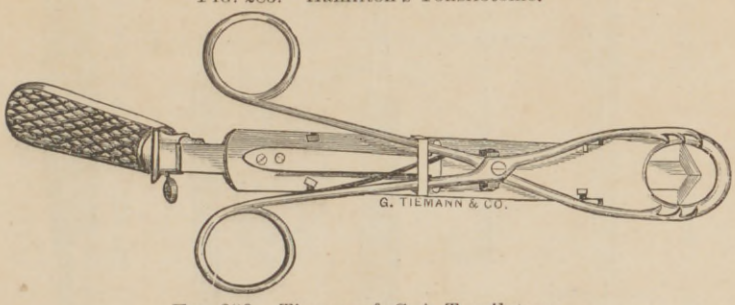


FIG. 286. Tiemann & Co.'s Tonsilotome.

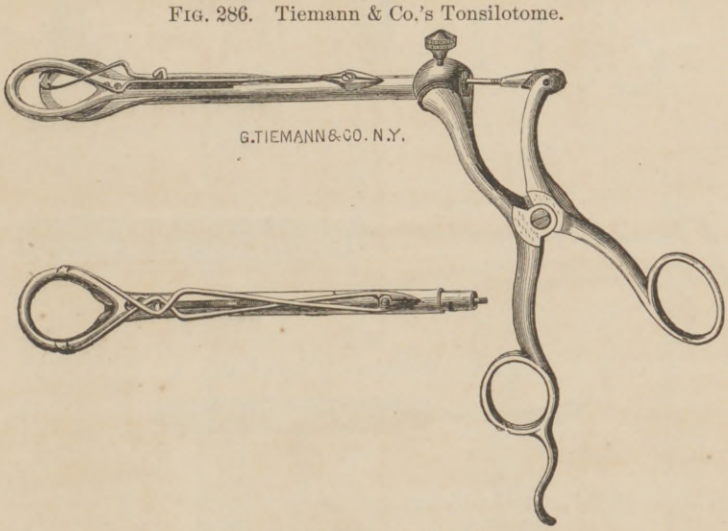
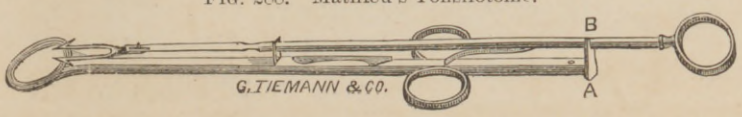


FIG. 287. Fahnestock's Tonsilotome.

FIG. 288. Mathieu's Tonsilotome.



ORAL, LARYNGEAL, AND ŒSOPHAGEAL INSTRUMENTS.

STAPHYLORRHAPHY AND URANISCOPLASTIC INSTRUMENTS.

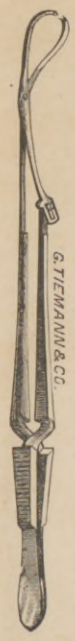


FIG. 289. Whitehead's Seizing Forceps.

FIG. 290. Curved Scissors, for Dividing the Muscles.

FIG. 291. Whitehead's Knives, for Paring the Edges.

FIG. 292. Whitehead's Hoe, for Dividing Muco-Periosteal Membrane.

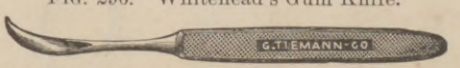
FIG. 293. Sayre's Periosteotome.

FIG. 294. Tenaculum, for Pulling the Velum aside, Holding the Edges of Flaps, etc.

FIG. 297. Sims' Adjuster. (For Wire Sutures.)

FIG. 295. Whitehead's Spiral Needle, for Sutures.

FIG. 296. Whitehead's Gum Knife.



Richardson's Spray Instrument,
Sponge Probangs, Mouth-Gags,
Langenbeck's Raspatories,
Sims' Needle-Holder,
Roux's Needle-Holder,
Silver Wire, for Sutures,
Wire Needles, Hollow Needles,
Suture Silk, etc., etc.

FIG. 298. Sims' Wire-Twisting Forceps.

ORAL, LARYNGEAL, AND ŒSOPHAGEAL INSTRUMENTS.

STAPHYLORRHAPHY AND URANISCOPLASTIC INSTRUMENTS.

FIG. 298. Dieffenbach's Cheek Retractors, Elastic.

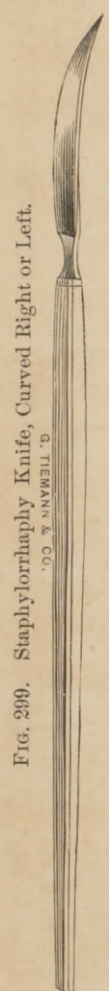


FIG. 299. Staphylorrhaphy Knife, Curved Right or Left.

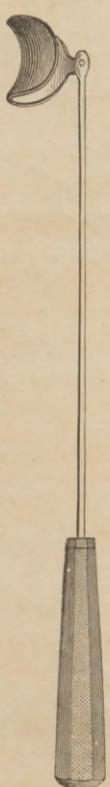


FIG. 301. Cheek Retractor.

FIG. 302. Goodwillie's Periosteum Levator.

FIG. 303. Goodwillie's Oral Saw.

FIG. 304. Goodwillie's Periosteum Levator.

FIG. 305. Seizing Forceps.

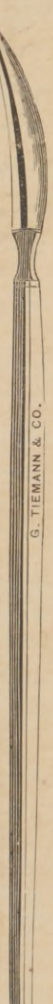


FIG. 300. Double-edged Staphylorrhaphy Knife.

ORAL, LARYNGEAL, AND ŒSOPHAGEAL INSTRUMENTS.

LARYNGOSCOPIC INSTRUMENTS.

FIG. 306. Czermak's Laryngoscope.

FIG. 307. Henry's Bull's-Eye Illuminator.

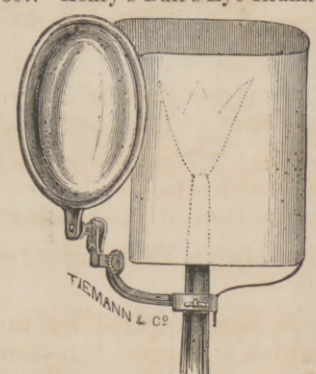
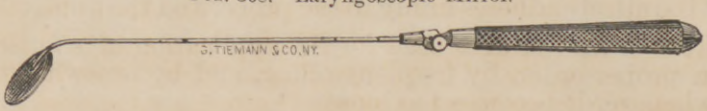


FIG. 308. Laryngoscopic Mirror.



ORAL, LARYNGEAL, AND ŒSOPHAGEAL INSTRUMENTS.

FIG. 309. Tiemann & Co.'s Laryngoscope, with Head-Band.

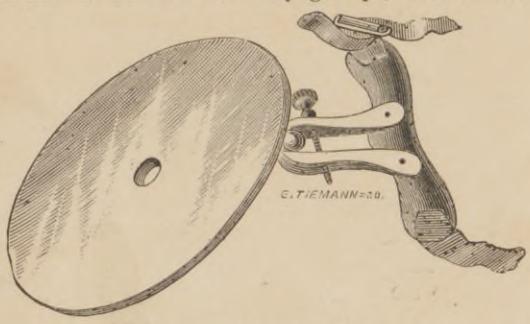


FIG. 310. Application of Tiemann & Co.'s Laryngoscope.

The Laryngeal Instruments represented on the following pages are designed by distinguished Laryngoscopists of Europe and America, and recommend themselves, on account of their great simplicity, for general use.

Before using the *Laryngeal Mirror* (to prevent deposits of moisture), warm it over a spirit lamp, as the immersion in hot water, recommended by some, favors the decomposition of the silver coating of the glass.

Sponge-holders are preferable to Probangs, because the same piece of sponge need not be used twice.

Solid Nitrate of Silver is best applied by means of Lente's or other Probes, the extremity of which is dipped into some Nitrate of Silver fused over a spirit lamp, in either a porcelain or platinum cup. In this way a coating of the nitrate adheres firmly to the probe, and the application is safe.

The pistons of all Syringes used for the application of solutions should be kept in proper order, by frequent oiling, and by renewing the leather packing whenever it becomes too loose.

ON THE USE OF THE LARYNGOSCOPE.

BY DR. E. H. SIEVEKING,

Physician in Ordinary to the Prince of Wales, and to St. Mary's Hospital.

BEFORE speaking of laryngeal pathology as exhibited by the laryngoscope, let me say a few words anent the apparatus to be employed, the method of using it, and the points to be observed.

What do you want to do? In plain English, you want to look round a corner into a dark hole. This sounds paradoxical, but the paradox is solved by the laryngoscope.

The light, either of the sun or of a lamp, is received on a mirror attached to the observer's forehead, from which it is reflected on to a small mirror which is introduced into the fauces of the patient, and from this mirror again the light is thrown down upon and into the larynx. The angle of incidence being equal to the angle of reflection, you have merely to place your mirrors in such a relation to one another, as to secure the proper direction of the rays of light, and a perfect and distinct image of the parts illuminated will be visible on the small mirror.

The sun can not be relied upon at any hour of the day; and patients would not, even if the sun were always shining, present themselves when his rays penetrated a given locality. We therefore find it much more convenient to trust to artificial light altogether, and accordingly have recourse to a gas moderator, or a paraffin oil lamp, which are not amenable to the caprices of the weather.

It is well to darken the room in which you make your examination; but even this is not absolutely necessary if the light is protected by a convex mirror on one side, and concentrated by one or more lenses on the other. Various apparatuses have been devised for the purpose of intensifying the light. The lamp should be placed close to the patient's head, on either side most convenient to the observer, and so that the lamp and the patient's and observer's heads are in the same horizontal plane. The patient, sitting erect, should push his head back so as to straighten the neck, and facilitate the introduction of the small mirror.

Before attempting to do this, the observer should first ascertain that the reflector is properly adjusted. If he finds that the mouth is fully illuminated, he may fairly conclude that he will be able to throw the light upon the fauces. Beginners generally find a little difficulty in adjusting the reflector, but this is speedily surmounted. Whether you place your mirror on your forehead, or whether you prefer to use it fixed to a lamp, is a matter of little moment. Try both ways, and adopt the one you like best. The mirror I employ has a central uncovered spot. It is an improvement upon the original mirror employed by the father of laryngoscopy, Professor Czermak. I admit that with Professor Czermak's instrument I had a difficulty in seeing through the central orifice, but with this modification I find it advantageous first to adjust the reflector so that

I am enabled to see the fauces through the opening, with the eye covered with the reflector, and then I am certain to have the proper axis for both eyes. After you have satisfied yourselves that the lamp and the reflector (which is fixed on the head by an elastic band passing over the forehead) are in the right position, tell your patient to open his mouth widely, to protrude the tongue, and to breathe freely. Some patients will permit you to see into their larynx without in any way fixing the tongue, but this is the exception. As a rule, it is necessary that the patient, or the observer, should take hold of the tip of the tongue with a handkerchief or towel, or to use a tongue depressor, to prevent this "unruly organ" from slipping back. Without this precaution, you very often fail in your endeavors to see below the epiglottis. Your next step, after having got your patient in the proper position, is to warm the laryngeal mirror. This is necessary, to prevent the vapor of respiration being precipitated on, and dimming the mirror; but take care not to overheat it. As a precaution, it is well to test the temperature, by applying the back of the mirror to your own cheek.

Take hold of the stem of the mirror as if you were holding a pen; introduce it into the mouth without touching the tongue, teeth, or lips, sinking the hand at first, and then raising it gradually, so as to allow the mirror to form a curve until it reaches the uvula. Almost the whole secret of the manipulation in laryngoscopy consists in this. If you touch the lips or teeth, you tease the patient, but if you touch the tongue, you are certain to excite reflex action, and the root of the tongue will arch up to impede your view. *Audacem fortuna juvat.* Push your mirror, after having passed the janitors, well against the uvula, and you will rarely meet with any serious impediment in getting a proper view of the larynx. An unsteady hand creates difficulties which need not exist, by bringing the mirror into contact with other parts than the uvula and soft palate. These are not very sensitive, but if you tease the root of the tongue, or the arches of the palate, you infallibly excite reflex action, which will necessitate the withdrawal of the instrument. Having placed your mirror at an angle of about 45° with the horizon, it is well to rest the little finger of the right hand against the patient's cheek, by which means you will steady the instrument. You then secure a proper illumination of the laryngeal mirror, and by the necessary manipulation, which practice alone can teach, you successively examine all the parts exposed to view.

In making the examination and recording the facts observed, you must remember that you are looking into a mirror, which represents the parts in a different relation from their real position. The epiglottis, which in nature is turned from the observer, is represented as opening towards him; the base of the tongue, which is in front of the epiglottis, appears in the mirror behind it; and the vocal cords equally occupy in the mirror a reversed position from that which they really possess. As laryngoscopic illustrations represent the appearances as seen in the mirror, it is necessary to remember the true relation, in order to understand the drawing correctly. The lateral relations will cause less difficulty than the antero-posterior relations. What ordinarily appears to be the left or right, in the subject of observation placed before us, still continues so. We readily make the necessary allowances here from the habit engendered by custom; but it is different in regard to objects placed in front of each other, and reflected in a mirror, because for this our daily life offers us fewer precedents. Perhaps the easiest way to realize the position of the parts as seen in the mirror, is to imagine yourselves looking at the

epiglottis and vocal cords, through a hole in the cervical portion of the vertebral column. To the beginner I would say, make your first experiment upon a case in which you are informed there is no special difficulty; remember the rules laid down; bear in mind the anatomy of the parts, and the direction in which you wish to carry the light; and, with a light and steady hand, you will scarcely fail, after one or two attempts, to see that which is ordinarily visible by the aid of this instrument.

Now, what are you to look for? The first point that always attracts the attention of the observer, after having got the light and the mirror duly placed, is the epiglottis. It is the Cape of Good Hope of the laryngoscopists, and it is at times a difficult matter, a very difficult matter, to round the Cape. You will find that it varies as much in form as the nose, and its position not unfrequently is so prone as to render a good view of the subjacent parts almost an impossibility. Then, too, in irritable persons it undergoes a variety of contortions and contractions, which give it a character for muscularity greater than anatomists show it to possess. Still, as a rule, it serves merely as a land-mark anatomically and pathologically; anatomically, because its well-known relations tell you in what direction to look for more important organs; pathologically, because the appearance of the mucous membrane covering the epiglottis is often a valuable indication as to the state of the subjacent parts. Examine the epiglottis carefully, the form, the color, the attachments. It should be perfectly smooth, of a pale, yellowish rose hue, and symmetrical. Look at the fossa formed by the front of the epiglottis with the base of the tongue, and note the state of any secretions upon or near the epiglottis. In disease you will see its color varying from the dull white of anæmia to every shade of uniform, or streaky and patchy redness. It may present ulcers of varying size and depth; it may be deformed by old cicatrices or congenital malformation; tumefaction from inflammatory or œdematous thickening of the mucous and submucous layers may present itself; and it may exhibit extravasations of blood, or be more or less bathed in pus, or covered with a mucous secretion. Similar conditions may be discovered in the glotto-epiglottid fossa, or on the glotto-epiglottid folds. In order to see the parts subjacent to the epiglottis, you will have to depress the handle of your mirror somewhat, so as successively to illuminate the posterior surface of the epiglottis; the arytenoid cartilages, with the corpuscula Santorini and Wrisbergii; the superior thyro-arytenoid folds, or the false vocal cords, as they are also called; and by turning the mirror laterally, you will examine the right and left sides of the introitus laryngis, and especially the state of the ventricles of the larynx. These are cul-de-sacs intervening between the vocal cords proper, and the superior thyro-arytenoid folds. The state of the ventricles has an important bearing on the production of the voice, inasmuch as their patulousness is essential to the free vibration of the vocal cords, and the due production of voice. If the mucous membrane of the ventricles is swollen, the pitch and sonorousness of the voice is interfered with, and the more the pouch is obliterated, the greater will be the interference with phonation. It is here that various secretions form and accumulate, and you will readily understand why these should more or less affect the voice, as they present obstacles to the passage of the air, or diminish the vibrations of the aërial pulse. If the secretions are viscid, you may at times be puzzled by strings of mucus extending across the entrance of the larynx, closely simulating the vocal cords themselves. Little patches

of secretion may also simulate ulcers. The sponge or brush will readily remove such secretions, and show the condition of the subjacent membrane. The ventricles, moreover, are the frequent seat of morbid growths. All these points having been noted, you seek the vocal cords themselves.

In a healthy larynx the vocal cords stand out, with a clear pearly sheen which is peculiarly characteristic. Once seen, the appearance is not to be forgotten; and you will often, in doubtful cases of laryngeal disease, rejoice at recognizing this striking feature, because it will prove that the most important part involved in phonation (so far as the larynx is concerned) is healthy. The vocal cords, or inferior thyro-arytenoid ligaments, are mainly composed of yellow elastic tissue, but are endowed with the most marvelous capability of minute vibratile adjustment, subject to the controlling power of the will, exercised through the arytenoid, thyro-arytenoid, crico-arytenoid, and other muscles. It has been calculated that no less than one hundred muscles are brought into action in the ordinary modulation of the voice, but the note which is uttered depends upon the exact degree of tension of two ligaments, at the utmost seven lines in length, which is mainly determined by the two sets of muscles mentioned. You will have a measure of the minuteness of this adjustment when you reflect, that a practised singer is capable of uttering three hundred different notes at will, for each of which, on this minute vibrating cord, a different stop must be applied.

The vocal cords are covered with mucous membrane, distinguished from the mucous membrane of the rest of the larynx, which is ciliated, by being squamous. The mucous membrane overlies the elastic tissue of the cords, and is liable—though to a much less extent than the mucous membrane in the vicinity—to congestion, and the various morbid changes which are seen in this tissue elsewhere. An accurate knowledge of the anatomy and physiology of the parts will enable you more fully to appreciate the importance of minute shades of difference in the appearance of the parts. A roughness of the surface or a discoloration, which would lead to no palpable results elsewhere, here affects the comfort, the occupation, the life of the patient, and is therefore well deserving the study of the practitioner by any additional physical means that may be placed at our disposal. Here, too, we have a good illustration of the difference between vital morbid conditions, and the condition of the same parts as seen after death; a difference that you should always bear in mind, as you may otherwise easily be misled into a wrong interpretation of the phenomena presented on the post-mortem table. If you had merely seen the interior of a larynx, removed from the body, you would scarcely anticipate the marked contrast that exists in life between the vocal cords and the adjacent parts, nor would it be possible satisfactorily to determine the mode in which the variations of sound are produced by the vocal cords. You will find that there was much uncertainty as to the theory to be adopted regarding vocalization, even in Müller's time; and it was not until after the practical introduction of the laryngoscope by Czermak, that the study became satisfactory and the conclusions definite. If I name Czermak, it is not because I do not appreciate the labors of others in this field; but whatever others have done, he certainly has compelled us all, by the demonstration of the comparative facility of laryngoscopic examination, to make it a part of our medical studies.

It would be an injustice, in speaking of the subject, not to mention the name of M. Garcia, a well-known singer and amateur physiologist,

who established by laryngoscopic examination much that is now known as to the physiology of the larynx before Czermak had made known his method; but the pearl that M. Garcia discovered was not appreciated by our profession, and therefore, so far as the medical world are concerned, laryngoscope remained an unknown quantity until the appearance of Czermak's monograph.

It is not my object, for the present, to do more than to interest you in the practical employment of the laryngoscope in the recognition and treatment of disease; therefore I do not attempt to lay before you an account of laryngeal physiology—a branch of science which is capable of further development, and which some of you may feel called upon to promote. Allow me yet to revert to a few points connected with the pathology of the larynx, to which I would draw your attention, as illustrating the value of this mode of investigating disease. The practical examination of the numerous cases that present themselves in our hospital, will serve to impress upon your memory and comprehension more vividly what I now merely show you *veluti in speculo.*

I have spoken of various morbid changes seen in or near the vocal cords, showing increased or diminished vascularity, congestive or œdematous swelling, ulceration, cicatrices, growths, all of which I have myself seen. If you consider the muscular and the nervous functions of the parts, you will expect to see these also materially affected by disease. The *plus*—evidenced by spasm—is not likely to be very visible, because it will not leave you time for any thing but immediate action to relieve your patient; but the *minus* of paralytic conditions is frequently observable in the irregular action, or want of action, of one or both vocal cords. It is here that stimulation, and notably the direct application of galvanism, is often of palpable benefit. And you will not examine many larynges before you will satisfy yourselves of the perfect facility with which you may direct the galvanic current, as well as any other medicinal application, to any given part of the larynx.

I have not, however, quite done yet. You may see further than the vocal cords. Their under surface can at present only be examined when there is a hole in the trachea, and at least one instructive instance is on record where this mode of exploration was practiced with much benefit to the patient. But these are refinements of practice upon which it is unnecessary to dwell. I now merely speak of the ordinary employment of the laryngoscope, and I wish to remind you, that having explored the entrance to the larynx and the vocal cords, you should examine, as far as may be, the trachea. It is generally easy to recognize several rings of this tube, and you may, when the larynx is capacious and the patient steady, penetrate to the very bifurcation of the trachea. The only morbid conditions that I have definitely recognized in the trachea, have been scattered ulcers; but it is manifest that, especially in those cases in which foreign bodies have slipped through the glottis, the discovery of their exact site by the laryngoscope may, as it already has been, prove of great practical value to the surgeon.

There is no better mode of initiating yourself into the practice of laryngoscopy than to examine your own larynges, or those of your fellow-students. By this kind of exercitation, you will familiarize yourself with the use of the instrument, no less than with the healthy condition of the parts. M. Garcia's interesting observations were entirely the result of examination made upon his own vocal cords, and as there is room for a further cultivation of this field of physiology, each of you may be enabled

to advance science in this direction. But apart from this, the mere dexterity of manipulation will be increased by the practice recommended, and if you know from experience in your own persons how to behave, you will more readily advise your patients what to do, and sympathize with their difficulties. Not every one, however, is a suitable subject for autolaryngoscopy; the narrowness of the introitus laryngis and the prone condition of the epiglottis, no less than an unusual irritability of the parts, frequently render the process extremely difficult. Various methods have been suggested for the removal of undue irritability, such as the inhalation of small quantities of chloroform, the application of bromide of potassium, or the use of astringent gargles. Every now and then, even after you have acquired sufficient dexterity in the use of the instrument, you will meet with cases which present insuperable difficulties. You are then no worse off than your predecessors were without the laryngoscope. You will have to fall back upon those other symptoms which your knowledge of physiology and pathology will teach you to appreciate, and which this instrument is not intended to supersede.—*Lancet, April* 8, 1865, *p.* 360.

SETS OF LARYNGOSCOPIC INSTRUMENTS IN CASES.

LARYNGOSCOPIC SET No. 1.

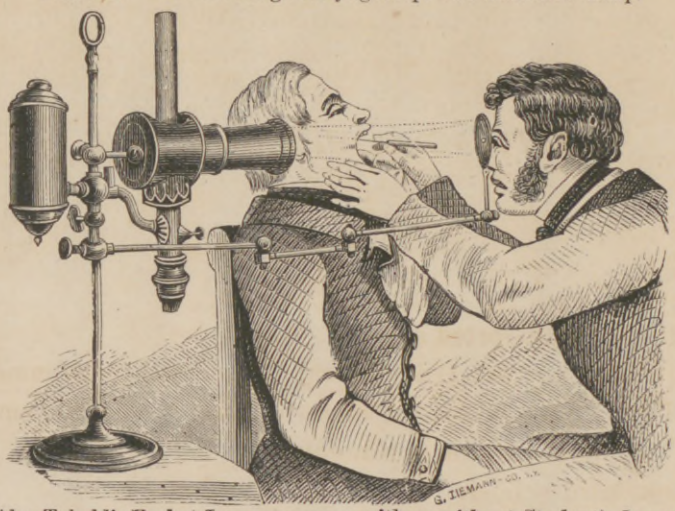
1 Reflector, 11-inch focal distance, 3-inch diameter, with Tiemann & Co.'s Head-band,
2 Laryngeal Mirrors,
1 Lente's Caustic Probe,
1 Morocco Case, lined with Velvet, ... $14 00

LARYNGOSCOPIC SET No. 2.

1 Tongue Depressor, steel handle, japanned,
1 Reflector, 11-inch focal distance, 3¼-inch diameter, with Tiemann & Co.'s Head-band, ball and socket movement,
3 Laryngeal Mirrors, assorted sizes,
1 Sponge-Holder, delicate,
1 Lente's Silver Caustic Probe,
1 Morocco Case, lined with Velvet, ... $20 00

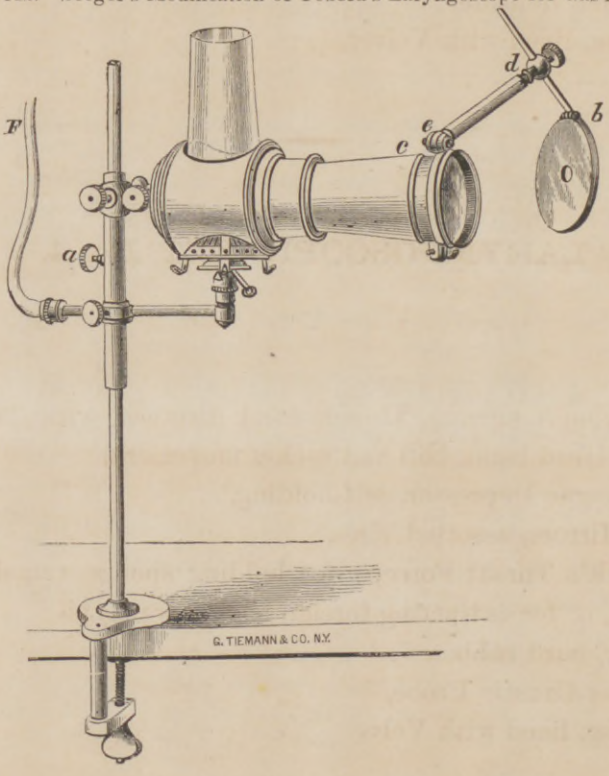
ORAL, LARYNGEAL, AND ŒSOPHAGEAL INSTRUMENTS.

FIG. 311. Tobold's Large Laryngoscope and Student's Lamp.



Also Tobold's Pocket Laryngoscopes, with or without Student's Lamp.

FIG. 312. Seeger's Modification of Tobold's Laryngoscope for Gas-light.



LARYNGOSCOPIC INSTRUMENTS IN CASES.

LARYNGOSCOPIC SET No. 3.

3 Laryngeal Mirrors, assorted sizes,
1 Reflector (frontal mirror), 11-inch focal distance, 3¼-inch diameter, with Tiemann & Co.'s Head-band, ball and socket movement,
1 Church's Tongue Depressor, self-holding,
1 Uvula Hook, hard rubber,
1 Lente's Silver Caustic Probe,
1 Sponge-Holder, delicate,
1 Morocco Case, lined with Velvet, ... $25 00

LARYNGOSCOPIC SET No. 4.

1 Reflector (frontal mirror), 11-inch focal distance, with Tiemann & Co.'s Head-band, ball and socket movement,
1 Church's Tongue Depressor, self-holding,
3 Laryngeal Mirrors, assorted sizes,
1 Pair Simrock's Throat Forceps, for holding sponge, camel's-hair brushes, or for extracting foreign bodies or polypii,
1 Uvula Hook, hard rubber,
1 Lente's Silver Caustic Probe,
1 Morocco Case, lined with Velvet, ... $28 00

ORAL, LARYNGEAL, AND ŒSOPHAGEAL INSTRUMENTS.

FIG. 313. Mackenzie's Light Concentrator.

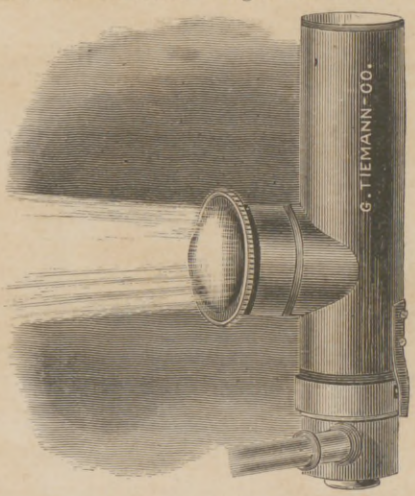
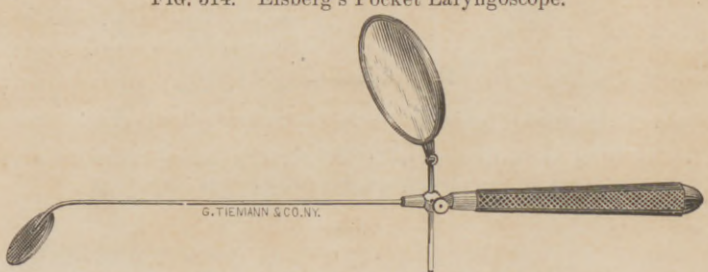


FIG. 314. Elsberg's Pocket Laryngoscope.

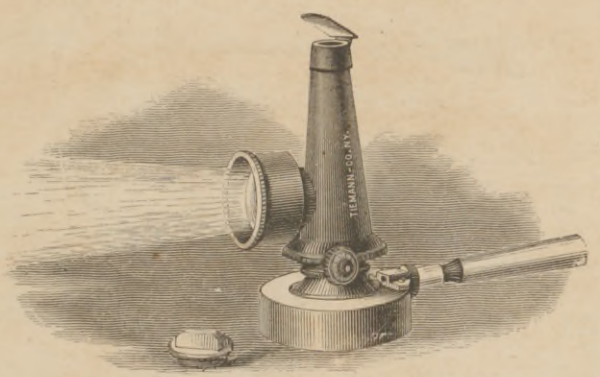


TO ORDER.

STUDENTS' LAMPS,
DIRECT LIGHT CONDENSERS,
RECIPRO-LARYNGOSCOPES,
SMITH'S MIRROR-HOLDERS,
SEMELEDER'S SPECTACLE-FRAME LARYNGOSCOPES,
WALDAU'S REFLECTORS,
CUTTER'S AUTO-LARYNGOSCOPE,
ETC., ETC., ETC.

ORAL, LARYNGEAL, AND ŒSOPHAGEAL INSTRUMENTS.

FIG. 315. Pocket Illuminator.



The instrument is mainly constructed of brass, and is provided with a lamp for kerosene or oil, the wick admitting of an easy adjustment by means of a side-screw. The handle can be folded against the chimney, so that the instrument can be packed in a small compass. The light passes through a convex lens, and can, by means of a sliding cap, be focused at varying distances, from two to five inches. It may prove useful in operations upon the ear, vagina, rectum, and throat, and may be of great service in operations at night, where a strong and reliable light may not always be obtainable.

Haywood Smith's Scissors (see Fig. 321), with adjustable points, possess many advantages, and admit of a wide range of adaptation. As will be seen, it is a long scissors, the blades of which are attached to their respective shafts by universal joints, allowing the said blades to be deflected and fixed at any required angle. As a single instrument it will be seen to be a combination of many, and will doubtless prove of great value to such as are called to operate upon the uterus and throat. The peculiar situations of tumors in these localities very often require a particular curve or angle for easy and effectual manipulation; and when such necessary conditions can be fulfilled at the moment of the operation, the advantages of the instrument as a whole are quite apparent.

ORAL, LARYNGEAL, AND ŒSOPHAGEAL INSTRUMENTS.

FIGS. 316, 317, 318. Tobold's Laryngeal Knives.

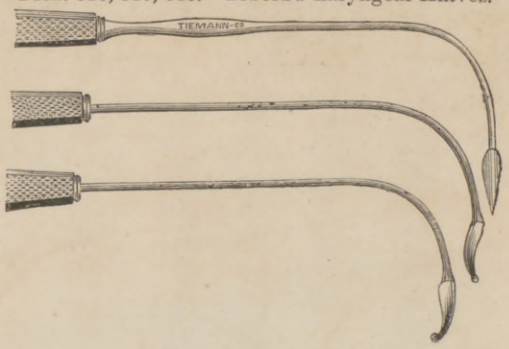


FIG. 319. Grant's Œdema Glottis Instrument.

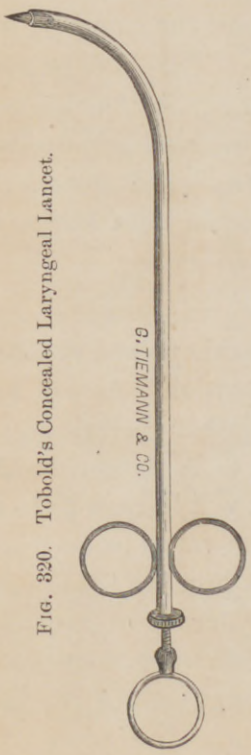


FIG. 320. Tobold's Concealed Laryngeal Lancet.

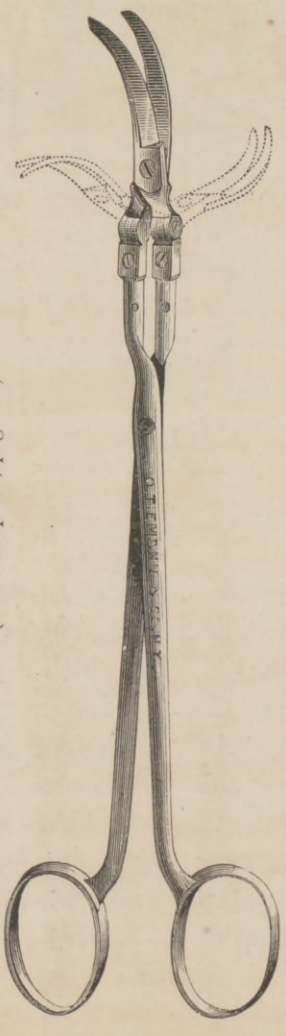


FIG. 321. Haywood Smith's Scissors, Movable Points. (See description, page 79.)

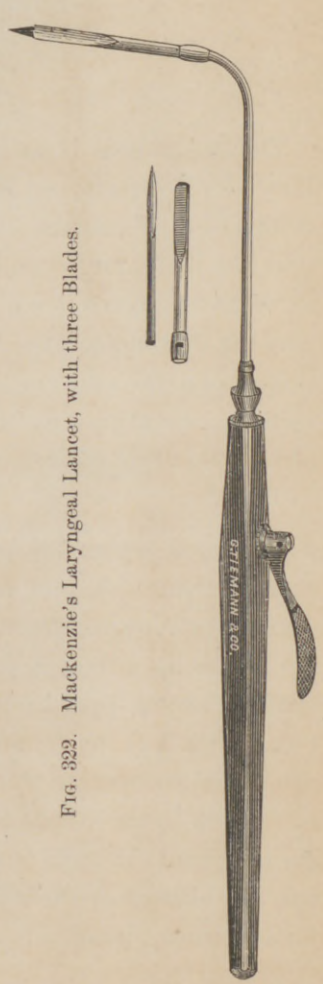
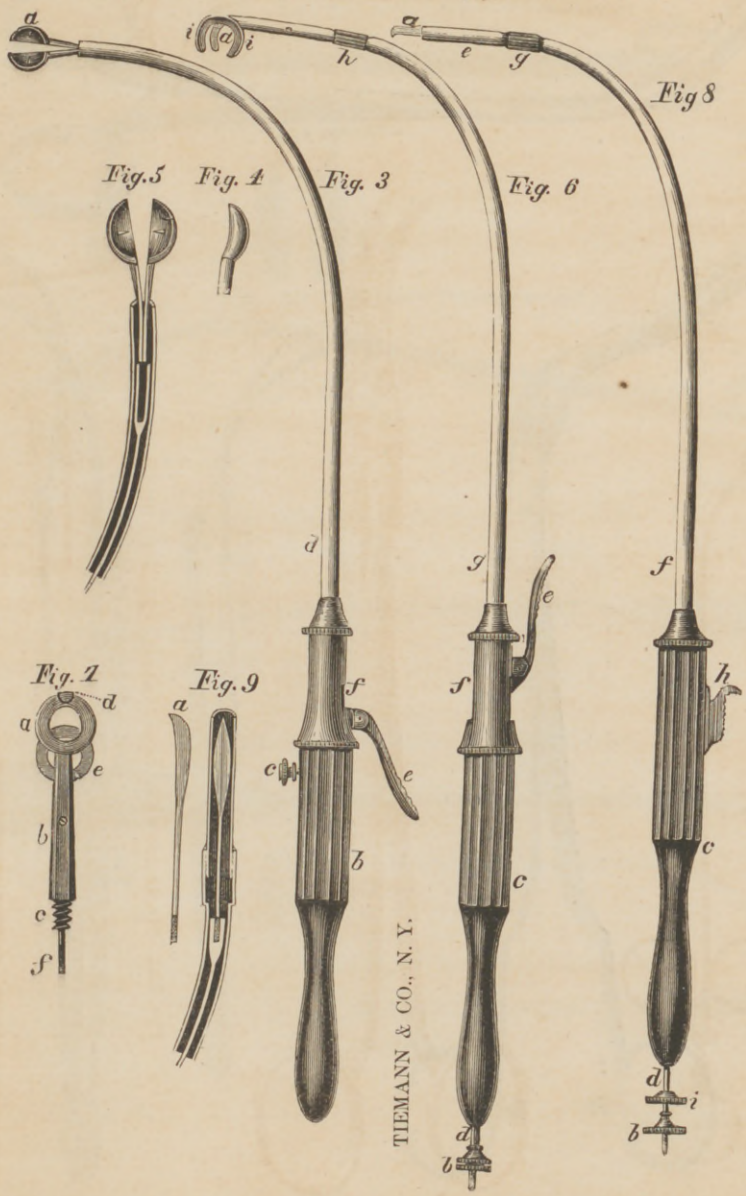


FIG. 322. Mackenzie's Laryngeal Lancet, with three Blades.

ORAL, LARYNGEAL, AND ŒSOPHAGEAL INSTRUMENTS.

FIGS. 323, 324, 325. Semeleder's Laryngeal Instruments.



ORAL, LARYNGEAL, AND ŒSOPHAGEAL INSTRUMENTS.

FIG. 326. Buck's Throat Lancet.

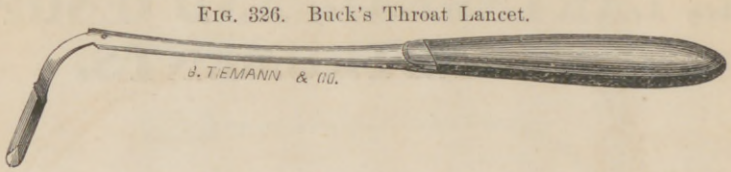


FIG. 327. Buck's Throat Forceps.

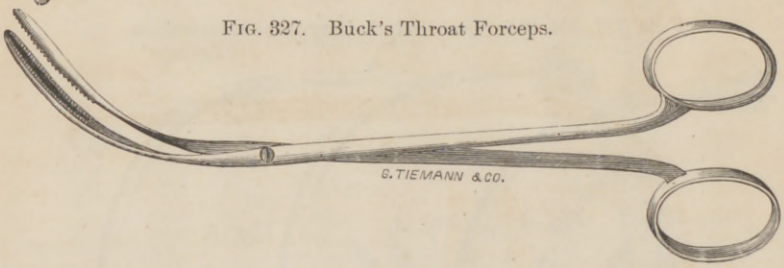


FIG. 328. Cuskoe's Throat Forceps.

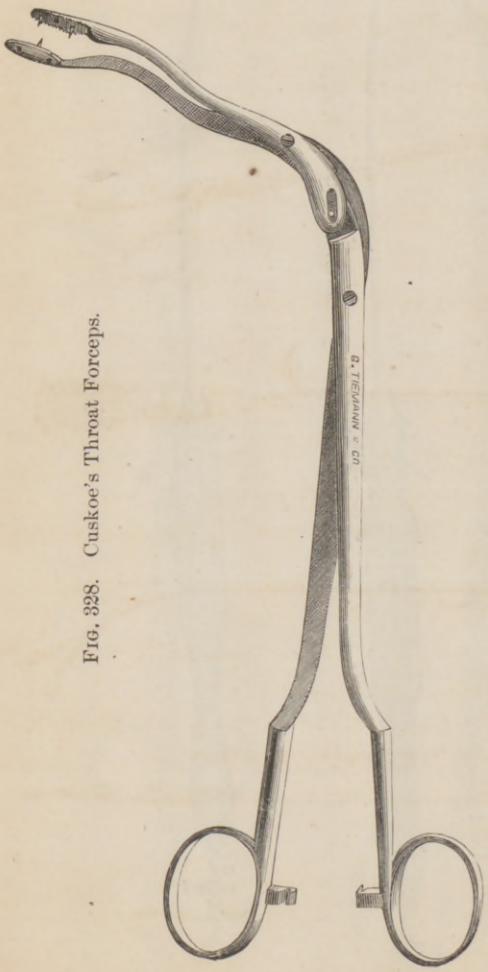


FIG. 329. Simrock's Laryngeal Forceps.

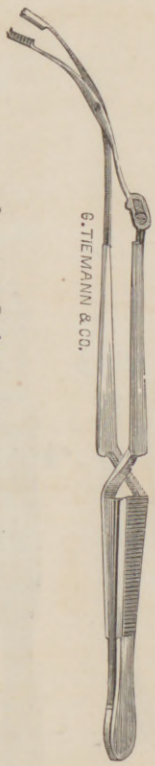
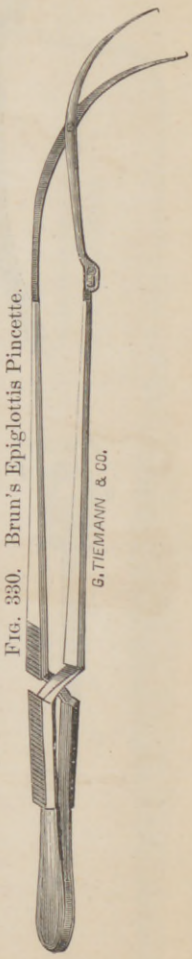


FIG. 330. Brun's Epiglottis Pincette.



ORAL, LARYNGEAL, AND ŒSOPHAGEAL INSTRUMENTS.

FIG. 331. Burge's Throat Forceps.

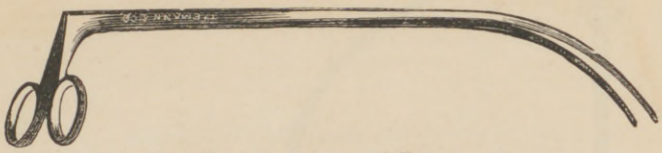


FIG. 332. Fauvel's Laryngeal Polypus Forceps.

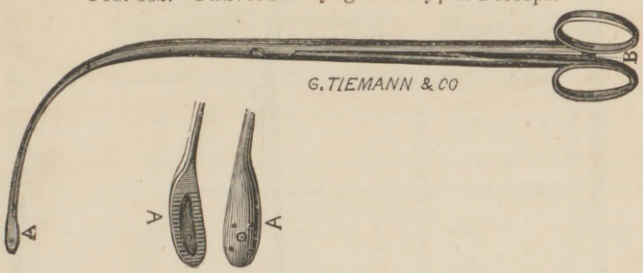


FIG. 333. Mathieu's Throat Forceps.

FIG. 334. Schaffer's Throat (and Uterine) Scoop.

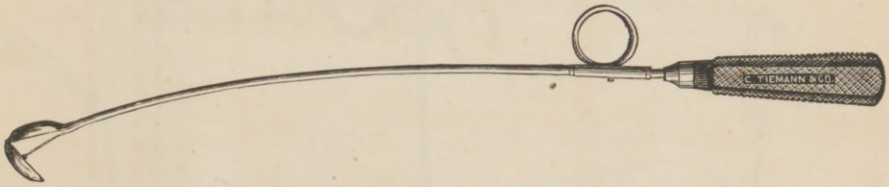


FIG. 335. Tiemann & Co.'s Laryngeal Scoop.

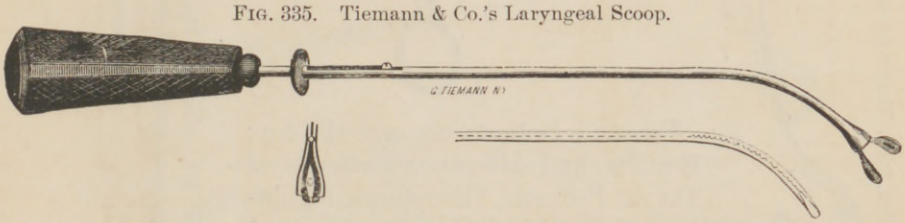
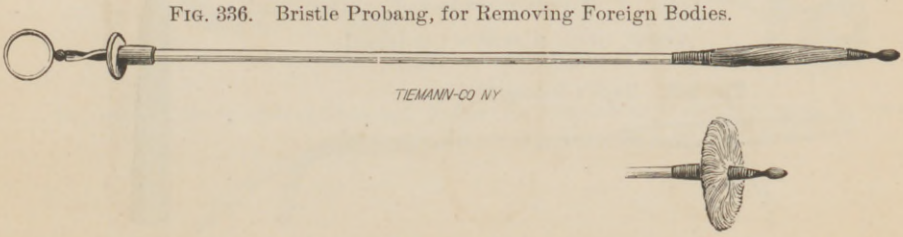


FIG. 336. Bristle Probang, for Removing Foreign Bodies.



ORAL, LARYNGEAL, AND ŒSOPHAGEAL INSTRUMENTS.

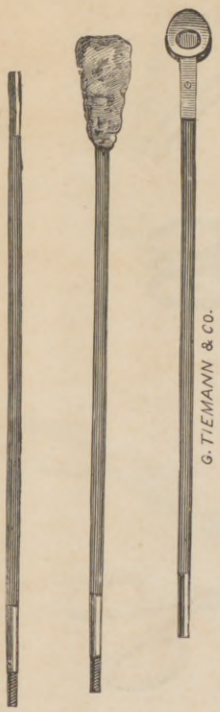


FIG. 337. Probang, with Silver Bucket, in three parts.

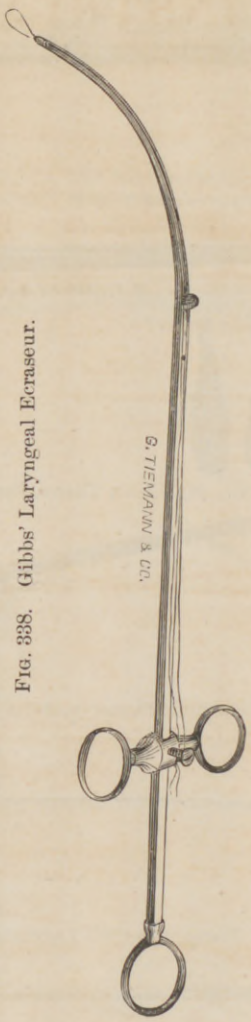


FIG. 338. Gibbs' Laryngeal Ecraseur.

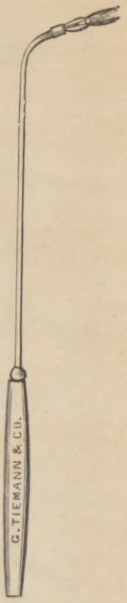


FIG. 339. California Brush-Holder.

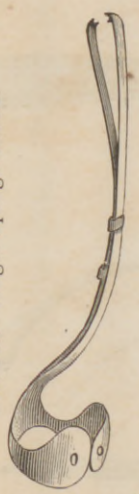


FIG. 340. Finger Sponge-Holder.

Tobold's Delicate Sponge-Holder; Bond's, and all other patterns of Throat Forceps, Œsophageal Dilators of Rubber, Hard Rubber and vory, etc., always on hand.

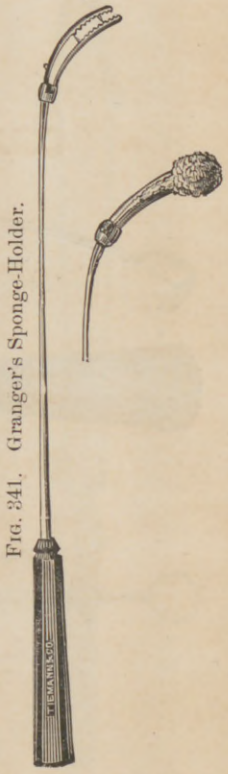


FIG. 341. Granger's Sponge-Holder.

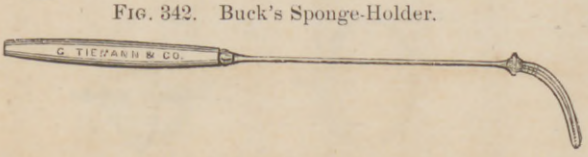


FIG. 342. Buck's Sponge-Holder.

ORAL, LARYNGEAL, AND ŒSOPHAGEAL INSTRUMENTS.

FIG. 343. Child's Brush and Caustic-Holder.

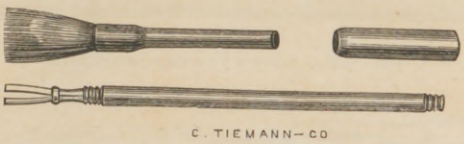


FIG. 344. Brush-Holder, Flexible Stem, with twelve Brushes.

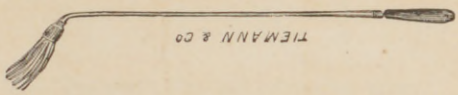


FIG. 345. Laryngeal Caustic Carrier, Concealed.

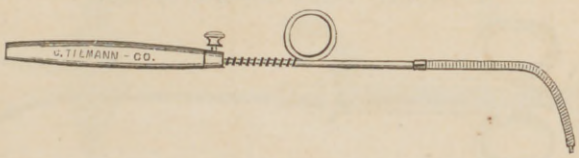


FIG. 346. Lente's Probe (for Caustic).

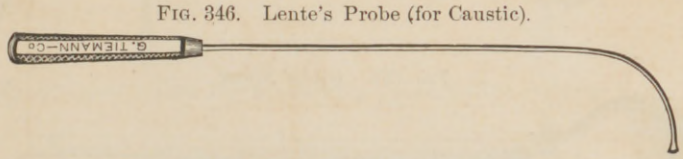


FIG. 347. Seeger's Brush-Holder.

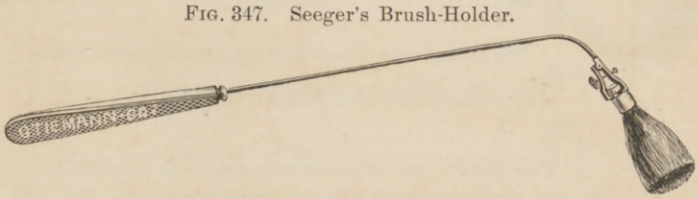


FIG. 348. Elsberg's Insufflator, or Powder-Blower.

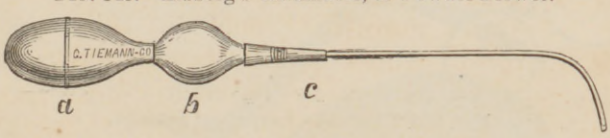
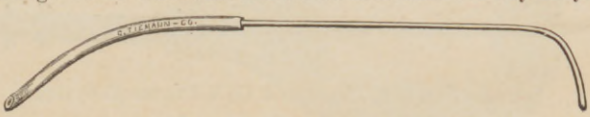


FIG. 349. Elsberg's Silver Tube and Rubber for attachment to any Laryngeal Syringe.



ORAL, LARYNGEAL, AND ŒSOPHAGEAL INSTRUMENTS.

FIG. 350. Laryngeal Powder-Blower, Hard Rubber.

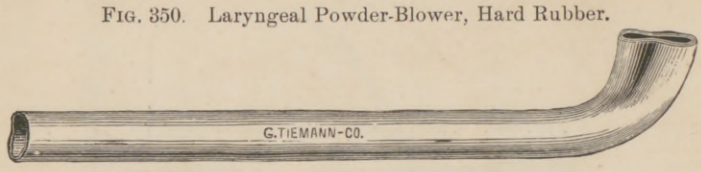


FIG. 351. Clay's Powder Insufflator.

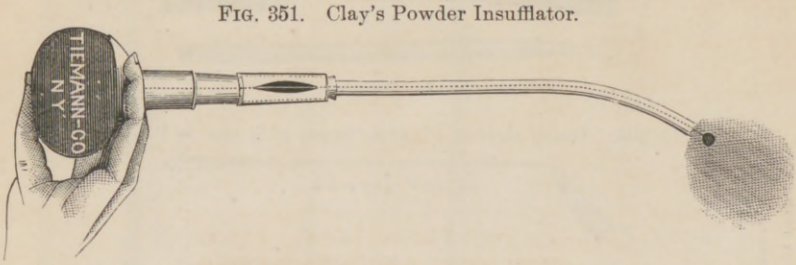


FIG. 352. Türk's Laryngeal Syringe.

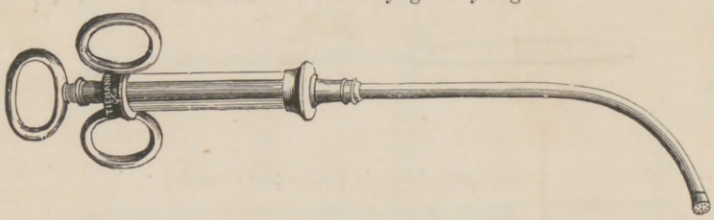


FIG. 353. Gibbs' Spray.

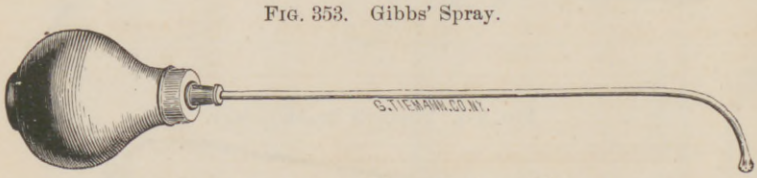


FIG. 354. Hunter's Throat Syringe, Silver.

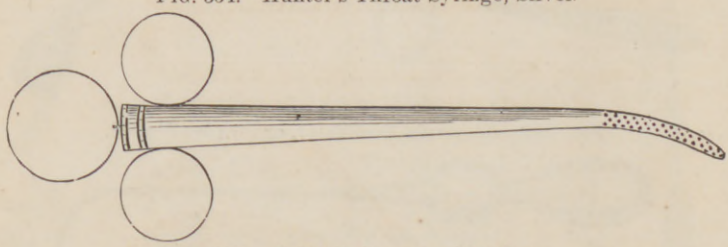
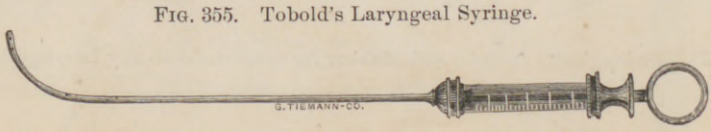


FIG. 355. Tobold's Laryngeal Syringe.



See also Fig. 394, Tiemann & Co.'s Universal Syringe.

ORAL, LARYNGEAL, AND ŒSOPHAGEAL INSTRUMENTS.

FIG. 356. Fullgraf's Laryngo-Tracheal Douche.

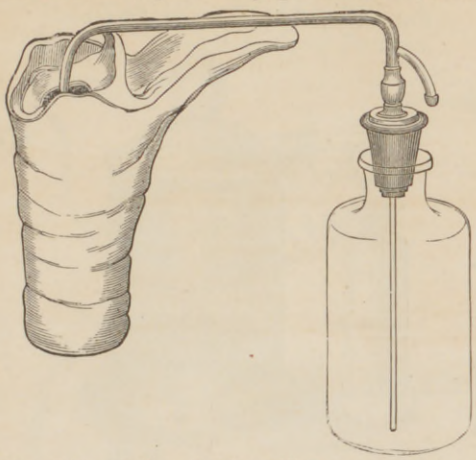


FIG. 357. Fullgraf's Flat-Bill Laryngeal Spray.

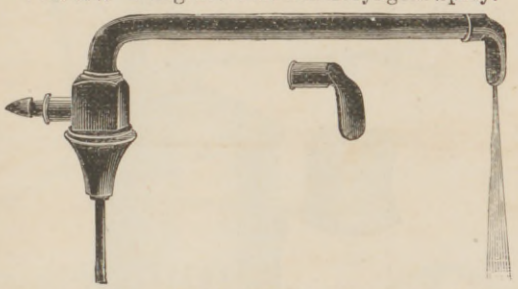


FIG. 358. Fullgraf's Glass Powder-Blowing Tubes, for the Posterior Nares.

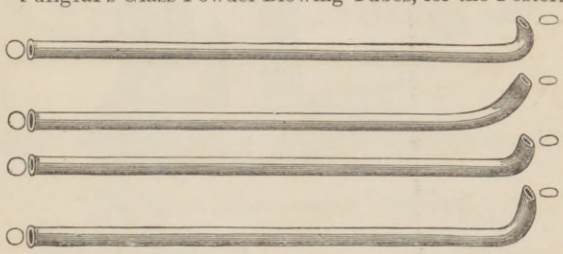
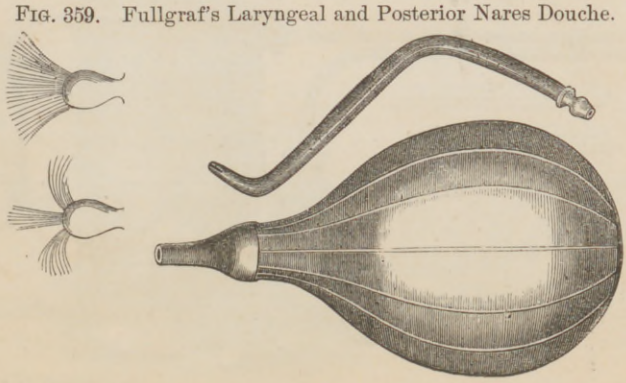


FIG. 359. Fullgraf's Laryngeal and Posterior Nares Douche.



ORAL, LARYNGEAL, AND ŒSOPHAGEAL INSTRUMENTS.

INHALING APPARATUS.

FIG. 360. Bergson's Steam Atomizer.

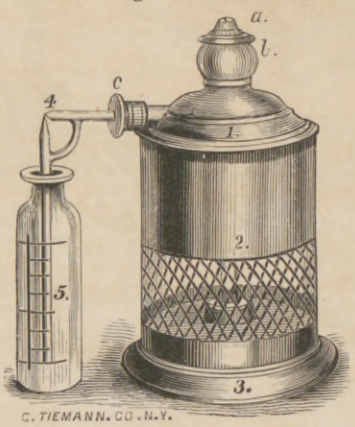


FIG. 361. Tiemann & Co.'s Steam Atomizer.

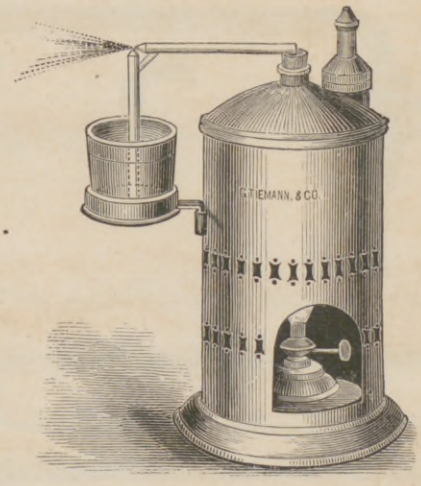
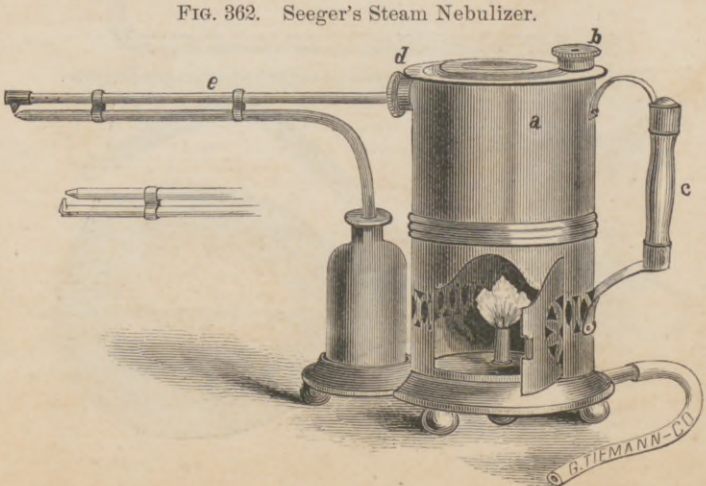


FIG. 362. Seeger's Steam Nebulizer.



All other Steam Atomizers for sale. Directions for use accompany each Instrument.

ORAL, LARYNGEAL, AND ŒSOPHAGEAL INSTRUMENTS.

INHALING APPARATUS.

FIG. 363. Richardson's Spray Producer.

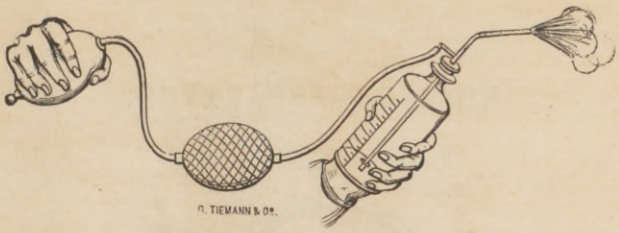


FIG. 364. Sass' Spray Producer

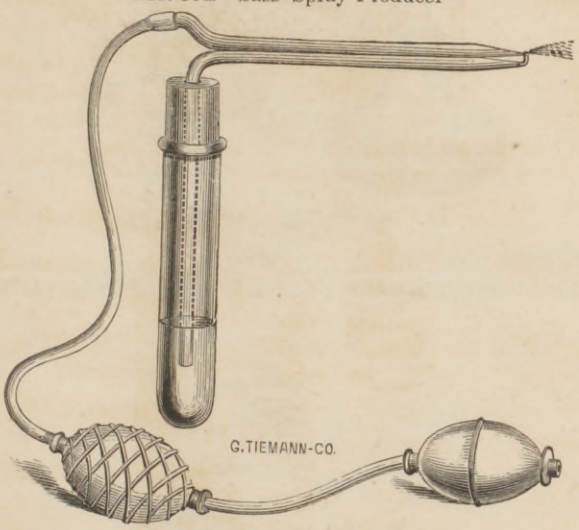
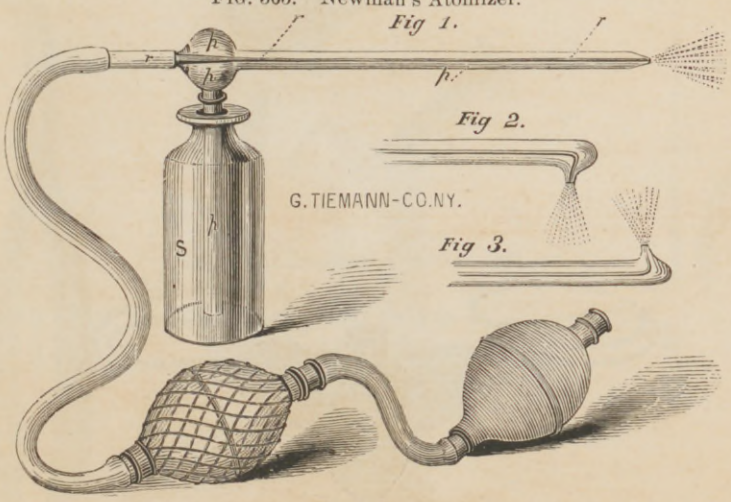


FIG. 365. Newman's Atomizer.

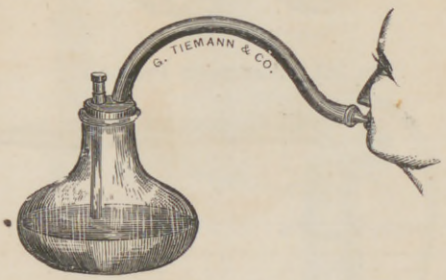


Also Maunder's, Clark's, Levin's, and other Spray Producers on hand.

ORAL, LARYNGEAL, AND ŒSOPHAGEAL INSTRUMENTS.

INHALING APPARATUS.

FIG. 366. Hunter's Inhaler.



Also Gay's Inhalers, Croup Kettles.

FIG. 367. Jeffrey's Respirator, for the Mouth, and Mouth and Nose.

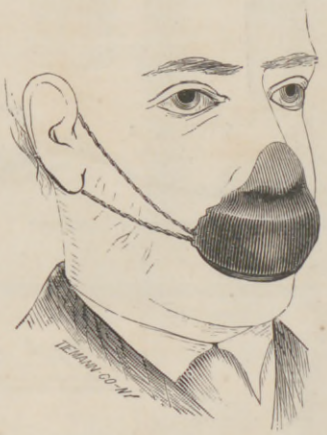


FIG. 368. Dobell's Residual Air-Pump.

TRACHEOTOMY INSTRUMENTS.

FIG. 369. Buck's Tracheotomy Guide.

FIG. 370. Langenbeck's Tracheotomy Double-Hook.

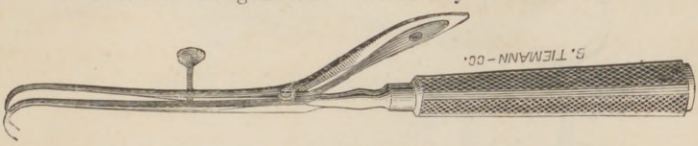


FIG. 373. Tiemann & Co.'s Tracheotome and Dilator.

FIG. 371. Tracheotomy Scalpel, Probe Point.

FIG. 372. Tracheotomy Scalpel, Sharp Point.

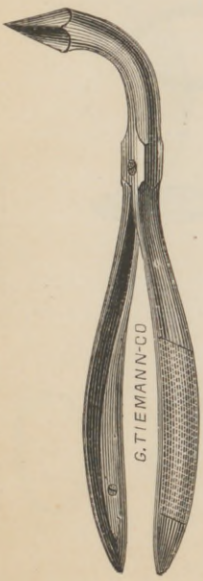


FIG. 374. Pitha's Tracheotome and Dilator.

FIG. 375. Tracheotomy Blunt Hook.

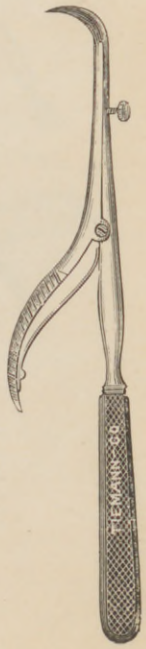


FIG. 376. Langenbeck's Tracheotome.

TRACHEOTOMY INSTRUMENTS.

FIG. 377. Trousseau's Dilator, to facilitate the Introduction of Canulas.

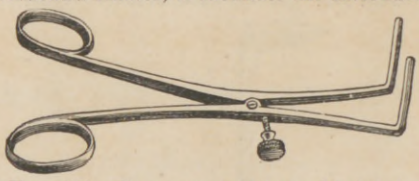


FIG. 378. Trousseau's Dilator, Modified.

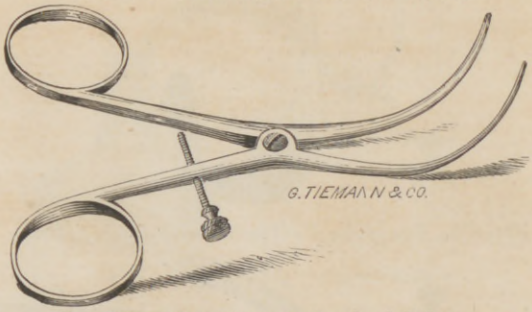


FIG. 379. Chassaignac's Tracheal Dilator.

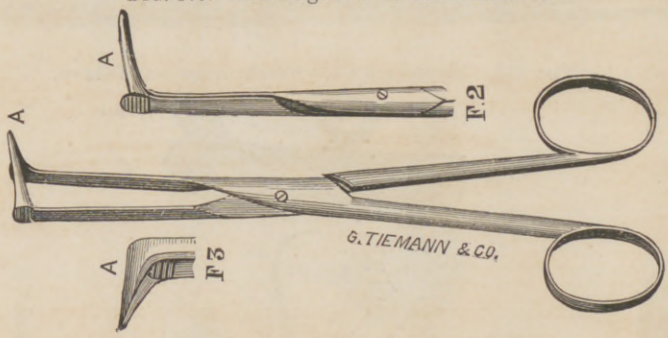
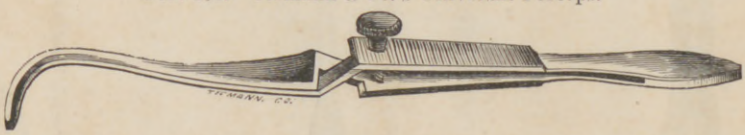
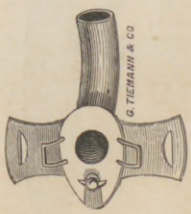


FIG. 380. Tiemann & Co.'s Universal Forceps.



Delaborde's Tracheal Dilator is like Fig. 235.

FIG. 381. Silver Trachea Canula.



TRACHEOTOMY INSTRUMENTS.

FIG. 382. Double Trachea Tube, Movable Plate, Silver.

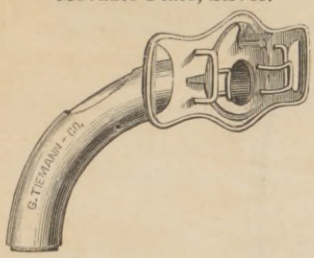


FIG. 383. Double Trachea Tube, Silver, Plain.

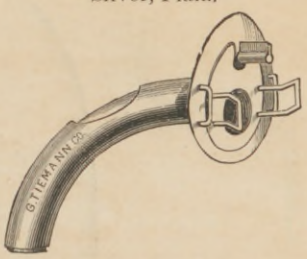


FIG. 384. Mop, for Cleaning Canulas *in situ*.

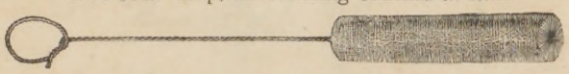
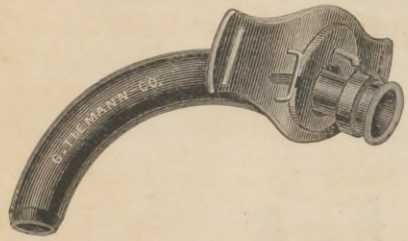


FIG. 386. Gendron's Split Canula, Silver.

FIG. 385. Trachea Canula, Hard Rubber.



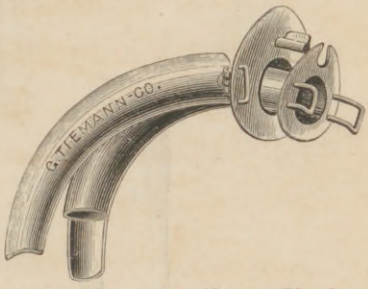


FIG. 387. Trousseau's Forceps, for Removing Clots of Blood or Mucus from the Canula while *in situ*.

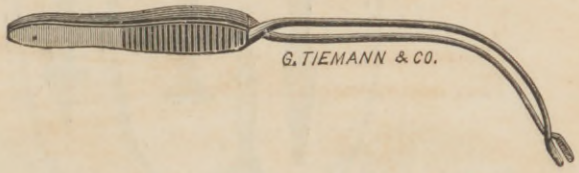


FIG. 389. Johnson's Double Canula and Obdurator. Modification of Durham's.

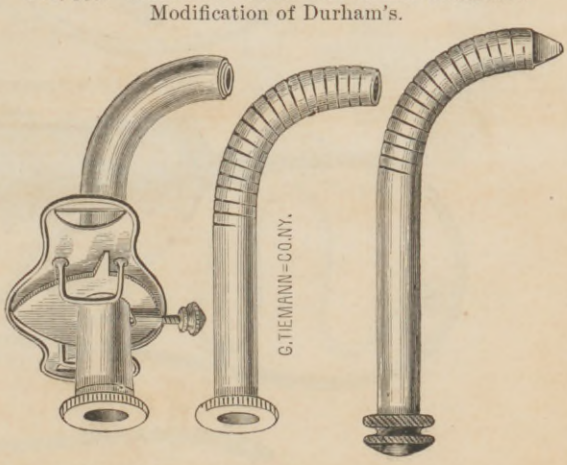


FIG. 388. Tiemann & Co.'s Tracheal Forceps, for Removing Foreign Bodies.

FIG. 390. Lever Stomach-Pump (Enema Apparatus), and for the Attachment of Bowditch's Trocars for Aspiration in Paracentesis Thoracis, etc. Directions for use accompany each Apparatus.

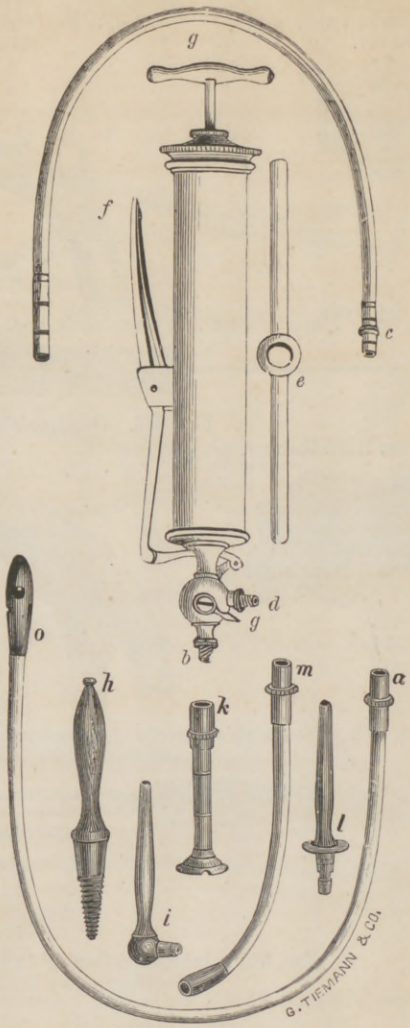


FIG. 391. Tiemann & Co.'s Stomach-Pump.

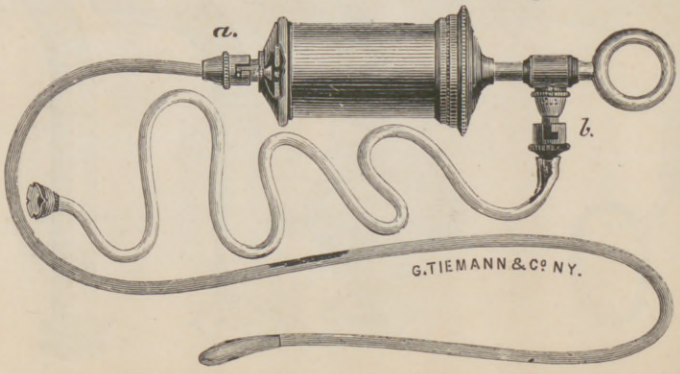
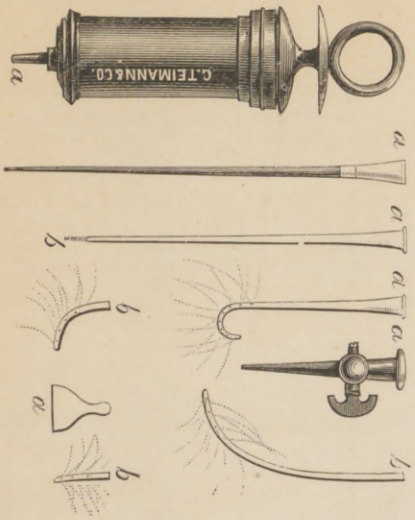
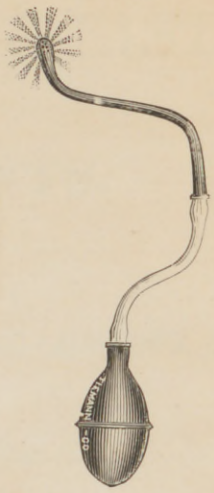


FIG. 392. Tiemann & Co.'s Universal Syringe.



For Injections of Caustic Solutions, etc.; applicable to the Uterus, Male and Female Urethra and Bladder, Ear, Larynx, Nares; with a Hard-Rubber Stop-cock to fit Catheter, or Trocars, for Hydrocele, etc.

FIG. 393. Warner's Catarrhal Douche.



END OF PART II.

SPECIFIED PRICE-LIST.

EYE INSTRUMENTS.

Page 1 to to 33.

INSTRUMENTS FOR OPERATIONS ON THE LIDS AND LACHRYMAL DUCTS.

Figs. 1 to 58.

Fig.		
	Adams' Entropium Forceps, two triangular Rings,	$2 50
1	Cross-Bar Entropium Forceps,	2 25
2	Laurence's Eye-lid Tourniquet,	3 00
3	Tiemann & Co.'s Entropium Forceps, with knife,	7 00
4	Snellen's Entropium Forceps, r. and l.,	2 50
5	Desmarre's Entropium Forceps, original,	3 00
	Desmarre's Entropium Forceps, T. & Co.'s model, shell plate,	3 00
6	Jaeger's Plate Lid-holder, hard rubber,	1 00
	Jaeger's Plate Lid-holder, tortoise-shell,	2 00
7	Henry's Depillating Forceps,	2 50
8	Tiemann & Co.'s Entropium Forceps, with knife,	7 50
9	Cilia Forceps,	1 00 to 1 25
10	Ratti's Trichiasis Forceps, spring catch,	3 00
11	Prout's Entropium Forceps,	4 00
	Desmarre's Forked Forceps, to hold soft parts steady for the passage of suture needles,	1 50
12	Stoke's Eye-lid Compressor,	3 00
	Charriere's Forceps for continued Pressure,	1 75
13	Knapp's Entropium Forceps,	4 00
	Jaeger's Lid-holder and Plate, combined,	2 50
	Pomperat's Open Lid-holder, or Elevator,	1 75
	Luzardi's Open Lid-holder, or Elevator,	3 00
14	Plain Wire Eye Speculum,	0 80 to 1 00
15	Graefe's Eye Speculum,	2 50
16	Plain Wire Eye Speculum, medium or small,	0 80 to 1 00
17	Noyes' Improved Eye Speculum, steel, gilt,	5 00
	Noyes' Improved Eye Speculum, steel, nickel-plated,	4 50
18	Noyes' Plain Eye Speculum,	1 75

FIG.

19 Liebold's Eye Speculum, ... $2 50
20 Hart's Eye Speculum, ... 1 50

FIG. A. Galante's Eye Speculum.

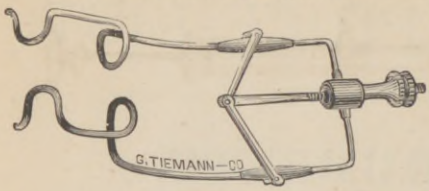
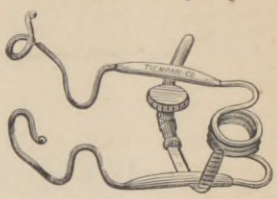
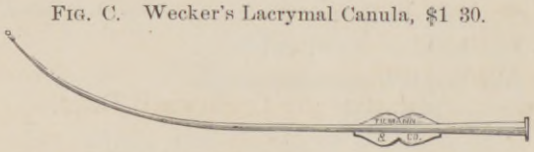


FIG. B. Liebreich's Eye Speculum.



A Galante's Eye Speculum, ... $4 00
B Liebreich's Eye Speculum, ... 2 50
Laurence's Eye Speculum, ... 3 00
21 22 Desmarre's Eye-lid Retractors, ... 1 75
23 Weber's Graduated Canalicula Dilator, ... 1 00
24 Speir's Lachrymal Catheter, silver, ... 1 00
25 Anel's Eye Syringe, silver, silver and gold points, . . 12 00
Anel's Eye Syringe, hard rubber, silver and gold points, . . 5 50
26 McFarlan's Lachrymal Syringe, hard rubber, one silver point, 3 50
27 Drop Glass for the Eye, ... 20
28 Liebold's Subpalpebral Syringe, ... 1 50
29 Agnew's Lachrymal Syringe, ... 5 00

FIG. C. Wecker's Lacrymal Canula, $1 30.



30 Anel's Probe, silver, ... 50
31 Bowman's Director, ... 75
32 33 34 35 Set of Bowman's Probes, silver, ... 3 00
32 33 34 35 Set of Bowman's Probes, hard rubber, ... 2 00
36 Galezowsky's Canalicula Dilator, ... 2 50
37 Bowman's Canalicula Knife (to fit Director, Fig. 31), . . 1 75
38 Gensoul's Canula, for Cauterizing the Nasal Duct, . . . 3 00
39 Desmarre's Scarificator, ... 1 50
40 Maunoir's Canalicula Scissors, ... 1 50 to 2 00
41 Stilling's Canalicula Knife, ... 1 50
42 Weber's Curved Canalicula Knife, ... 1 75
43 Weber's Half-curved Canalicula Knife, ... 1 75
44 Desmarre's Cautery Iron, for Obliterating the Sac, . . . 3 00
45 Desmarre's many-pronged Hook, for Obliterating the Sac, . 2 00
46 Noyes' Movable-Blade Canalicula Knife, ... 4 00
47 Noyes' Plain Canalicula Knife, ... 1 75
48 Parker's Fistula Lachrymalis Knife, ... 1 75

FIG.

49 Jaeger's Bistoury Caché for the Canalicula, ... $8 00
50 Beaumont's Concealed Canalicula Knife, ... 8 00

FIG. D. Girard Teulon's Canalicula Instrument, $8.00.

51 Agnew's Canalicula Knife, ... 1 75
52 Sand's Needle-Forceps, ... 4 50
53 Prout's Needle-Forceps, ... 3 50
54 55 56 Scalpels, for operating on the Lids and Face, . . 1 50
Bistouries for opening Lachrymal Tumors, the Lachrymal Sac, and Nasal Duct, ... 1 50 to 1 75
Manfredi's Speculum, for the obliteration of the Sac, . . 5 50
Gensoul's Lachrymal Catheter, silver, ... 2 00
Forceps, for introducing Lachrymal Canulæ, ... 2 00
Cloquet's Hooked Stilet, for extracting Canulas from the Nasal Duct, ... 1 00
57 Silver Style, ... 50c. to 75
Lead Style, ... 30
Gold Style, ... 1 50 to 5 00
58 Lachrymal Canula, silver and gold, ... 50c. to 5 00
Suture Needles, very fine, ... 20
Suture Silk, skein, ... 10c. to 35
Silver Suture Wire, yard, ... 50
Seatangle Tents, for dilating the Lachrymal Duct, . . . 25

STRABISMUS INSTRUMENTS.

FIG. 59 to 69.

59 Straight Strabismus Forceps, delicate, ... 1 25
60 Curved Strabismus Forceps, ... 1 25
61 Strabometer, ivory, ... 2 20
62 Strabismus Tenaculum, large, ... 1 25
63 Strabismus Tenaculum, small, ... 1 25
Strabismus Tenaculum, with an eye near the point, for carrying ligatures, ... 1 25
Strabismus Tenaculum, with bulbous or flat points, . . 1 25
64 Strabismus Scissors, curved on the flat, ... 1 50
Strabismus Scissors, curved edgewise, ... 1 50
65 Strabismus Forceps, heavy, ... 1 25
66 Half-curved Strabismus Tenaculum, ... 1 25
67 Double Hook, for fixing the Eye, ... 1 50
68 Strabismus Scissors, angular curve, ... 1 50
69 Strabismus Hook-Bistoury, ... 2 50

FIG.

Guerrin's Z shaped Tenotomy Knife, ... $2 50
Probe-Pointed Delicate Bistoury, ... 1 75
Sharp-Pointed Bistoury, ... 1 75

(DIAGNOSIS.)

OPHTHALMOSCOPES. PUPILLOMETERS, TEST GLASSES, ETC.

70 Liebreich's Ophthalmoscope, ... 6 00
71 Loring's Ophthalmoscope, ... 20 00 to 35 00
Coccius' Ophthalmoscope, ... 7 50
Cuscoe's Ophthalmoscope, ... 45 00
Desmarre's Ophthalmoscope, ... 6 50
72 73 Knapp's Double Disk Ophthalmoscope, ... 35 00
74 Knapp's Single Disk Ophthalmoscope, ... 20 00
Follin's Ophthalmoscope, ... 12 00
Graefe's Ophthalmoscope, ... 6 50
Galezowsky's Ophthalmoscope, ... 22 00
Stellwag's Ophthalmoscope, ... 15 00
Nachét's Ophthalmoscope, best, ... 12 00
Nachét's Ophthalmoscope, plain, ... 8 00
Plain Reflector and Object Lens, ... 3 50
Allen's Ophthalmoscope, ... 3 75
Binocular Ophthalmoscope, ... 30 00

Autophthalmoscopes, and other kinds, to order.

75 Pupillometer, ... 5 00
Optometer, plain, ... 3 50
Trial (Test) Glasses, cylindrical, spherical, and prismatic, in Sets, 25 00 to 100 00
Stenopaic Cylinders, circular perforation, ... 3 50
Stenopaic Cylinders, slits, ... 1 00 to 3 00
Graefe's Optometer, ... 20 00

EYE GOGGLES, pair, ... 1 50 to 3 00
EYE SHADES, ... 50 to 4 00
TEST DRUMS, to try the edge and points of eye instruments, 75
EYE PROTECTORS, plain and colored mica, . . 75c. to 1 50
EYE PROTECTORS, gauze and mica, ... 1 50

FOR DEMONSTRATION:

Magnified Preparation of the Eye, in papier-mache, 45 00 to 60 00
Ophthalmic Phantome, a papier-mache mask with an apparatus to hold animals' eyes, for the purpose of practicing operations, 18 00 to 24 00
Artificial Eye, for experimenting and practicing in the use of the Ophthalmoscope, ... 30 00
76 Turnbull's Rubber Ice-Bag, ... 2 00
77 Livingston's Elastic Probe, ... 2 50

FIXATION INSTRUMENTS.

FIG.		
78	Ball's Double Hook, with slide,	$3 00
79	Double Hook, sharp, for insertion into the sclerotica,	1 50
80	Three-Pointed Ophthalmostate,	1 50
81	Noyes' Fixation Forceps, curved,	2 00
82	Pamard's Pique,	1 50
	Velpeau's Ophthalmostate,	2 00
83	Jaeger's Ophthalmostate,	8 00
84	Noyes' Ophthalmostate,	2 00
85	Graefe's Fixation Forceps, with spring,	2 00
	Carron de Villard's Fixation Forceps, with slide,	3 00
	Desmarre's Claw for the Fingers-Point,	1 50

INSTRUMENTS FOR REMOVING FOREIGN BODIES FROM THE EYE-BALL AND ORBIT.

86	Dix's Spud,	1 25
87	Couching Needle,	1 25
88	Carron de Villard's Needle,	1 25
89	Angular Needle,	1 25
90	Gouge, grooved,	1 50
91	Spatula, German-silver,	1 25
91	Spatula, hard rubber,	75
92	Daviel's Curette,	1 50
93	Hard-Rubber Spoon,	75
94	Knapp's Foreign Body Hook, silver,	2 00
95	Richardson's Spray, silver tube for douching,	6 50
	Agnew's Eye Douche,	3 50
	Clark's Eye Douche,	2 50
	Eye Bath, Glass,	50
	Eye Douche, attached to Davidson's Syringe,	3 00
	Hard-Rubber Syringe, plain,	1 50
	Liebold's Subpalpebral Syringe, Fig. 28,	1 50
	Anel's Syringe, hard rubber and silver, Fig. 25,	5 50
	McFarlan's Syringe, Fig. 26,	3 50

INSTRUMENTS FOR OPERATING ON TUMORS, ETC, OF THE CONJUNCTIVA.

95	Tumor Forceps, with claws,	1 50
	Double Hook, Fig. 78,	1 50
	Scalpels, Figs. 54, 55, 56,	1 50
96	Scissors, curved on the flat, various sizes,	1 50
	Crotchet de Diable,	1 75
	Hard-Rubber Caustic Case,	75c. to 1 00
	Silver Caustic Case,	2 50
	Silver and Platina Caustic Case	3 50

FIG.

Hard-Rubber Spatula, for the application of ointment, . . $ 75
Silver Spatulas, ... 1 50
Camel's-Hair Brushes, ... 3c. to 15

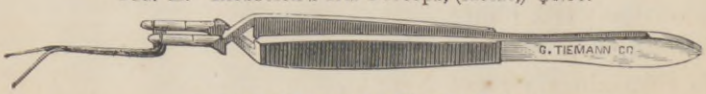
INSTRUMENTS FOR OPERATING ON THE CORNEA AND IRIS.

97 Chadwick's Pterigium Scissors, ... 6 00
98 Desmarre's Paracentesis Corneæ Trocar, long point, . . 1 75
99 Broad, Straight, Paracentesis Needle, ... 1 25
100 Paracentesis Trocar, short point, ... 1 75
101 Very Broad Paracentesis Needle, ... 1 25

ARTIFICIAL PUPIL AND CATARACT INSTRUMENTS, FOR THE VARIOUS MODES OF OPERATING.

102 Jaeger's Straight Keratome, ... 1 50
103 Jaeger's Angular Keratome, ... 1 75
Weber's Concave Keratome, ... 2 00
Walton's Keratomes, two sizes, ... 1 50
Furnari's Double-Edged Knife, ... 1 75
Beer's Cornea Knives, Figs. 113, 114, 115, ... 1 50
104 Broad Needle, ... 1 50
105 Welker's Iridectomy Instrument, ... 12 00
Knives for Enlarging the Corneal Section, Figs. 126, 127, 128,
106 Straight Iris Forceps, ... 1 50
107 Tyrrell's Sharp Hook, ... 1 25
108 Tyrrell's Blunt Hook, ... 1 25
109 Althof's Iridectomy Scissors, ... 5 50
110 Iris Scissors, curved flatwise, ... 1 50
111 Straight Iris Scissors, ... 1 50
Angular Curved Iris Scissors, ... 1 75
Maunoir's Iris Scissors, ... 1 75
Gibson's Iris Scissors, ... 4 50
Hall's Iris Scissors (Sheepshear-like), ... 4 50
112 Graefe's Iris Forceps, angular, very fine, ... 1 75
Fischer's Curved Iris Forceps, short handles, ... 1 50
Iris Forceps, plain cross-teeth, ... 1 50

FIG. E. Liebreich's Iris Forceps, (latest,) $6.50.



CATARACT INSTRUMENTS.

113 Beer's Cataract Knife, small, ... 1 50
114 Beer's Cataract Knife, medium, ... 1 50
115 Beer's Cataract Knife, large, ... 1 50
116 Cystotome, for lacerating the Capsule, ... 1 50

BRANCH STORE, 107 EAST 28TH ST., N. Y.

FIG.		
117	Tyrrell's Blunt Hook,	$1 25
	Tyrrell's Sharp Hook, Fig. 107,	1 25
	Critchet's Sharp Hook,	1 25
	Beer's Sharp Hook,	1 25
	Noyes' Sharp Hook,	1 25
118	Graefe's Linear Knife,	1 50
118	Graefe's Knife, Noyes' modification,	1 50
119	Graefe's Tractor,	1 50
120	Graefe's Lens Scoop,	1 75
121	Hard-Rubber Lens Scoop, plain,	75
	Hard-Rubber Lens Scoop, ivory handle, fine,	2 00
	Schuft-Waldau Scoop,	1 75
	Critchet's Scoop,	1 75
122	Critchet's Hooked Needle,	1 25
123	Luzardi's Hooked Needle,	1 50
124	Silver Lens Scoop and Cystotome,	2 50
125	Fenestrated Lens Scoop,	1 75
126	Desmarre's Knife, for enlarging the Corneal Section,	1 50
127	Right Angular Curved Corneal Section Knife,	1 75
127	Left Angular Curved Corneal Section Knife,	1 75
128	Straight Knife, for enlarging the Corneal Section,	1 50
129	Lanne's Forcep Needle, for False Membranes,	4 50
130	Liebreich's Rotating Iris Forceps,	4 00
131	Walton's Self-holding Iris Forceps,	2 50
	Liebreich's Iris Forceps, with side and front teeth,	2 50
	Wilde's Canulated Iris Forceps,	12 00
	Graefe's Straight and Angular Iris Forceps,	1 50
132	Hayes' Knife-Needle,	1 50
133	Iris Knife,	1 50
134	Iris Knife, with Stop,	1 75
135	Sickle-shaped Iris Knife,	1 75
136	Knife-Needle,	1 50
137	Noyes' Iris Scissors,	4 50
138	Wilde's Canulated Needle,	12 00
139	Wilde's Canulated Forceps, Scissors and Forcep Needle, to fit one handle,	15 00
140	Wilde's Canulated Forceps (Lithotriptor-like),	12 00
141	Double-edged Iris Knife,	2 00
142	Bowman's Stop Needle,	1 50
143	Beer's Straight Cataract Needle,	1 25
144	Narrow, Straight Cataract Needle,	1 25
	Beer's Straight Needle,	1 25
	Beer's Curved Needle,	1 25
	Rosa's Sickle-shaped Needle,	1 25
	Langenbeck's Needle,	1 25

FIG.		
	Luzardi's Hooked Needle, Fig. 123,	$1 50
	Depuytren's Curved Needle,	1 25
	Scarpa's Curved Needle,	1 25
145	Walton's Needle, for Depression,	1 25
	Walter's Needle,	1 25
	Gerdi's Double-branched Depression Needle,	14 00
	Villardi's Angular Needle,	1 25
	Sickle-shaped Capsular Knife, Fig. 135,	2 00
	Graefe's Cystotome,	1 25
	Desmarre's Cystotome,	1 50
	Hayes' Knife-Needle, Fig. 132,	1 50
146	Levi's Needle, with an Eye,	1 75
147	Walton's Grooved Needle, for Soft Cataract,	2 00
148	Grooved Tattooing Needle,	1 75
149	Baader's Tattooing Needle,	2 00
150	Agnew's Tattooing Needle,	2 00
151	Blanchet's Instrument for Exhausting Soft Cataract,	2 25
152	Bowman's Instrument for Exhausting Soft Cataract,	4 50
	Up. De Graff's Instrument for Exhaustion of a Soft Lens,	4 50

INSTRUMENTS FOR EXTIRPATION OF THE EYE BALL.

Double Hook, for holding the Eye-Ball, Fig. 78,	3 00
Vulsellum Forceps, of various patterns,	2 00 to 3 00
Stout Scissors, curved on the flat,	1 50
Straight Scissors,	1 50
Angular Scissors,	1 50
Forceps with Claws,	1 50 to 3 00
Double-edged Staphylotomes,	2 00

Boyer's, Richter's, Wenzel's, Zehender's, and other designs of Instruments, to order.

EAR INSTRUMENTS.

FIG.

153 Ear Piercer, to perforate the lobe for the insertion of ear-rings, $1 50

INSTRUMENTS FOR THE EXAMINATION OF THE EXTERNAL MEATUS.

154 Wilde's Ear Gorgeret, German-silver, ... 1 00
155 Troeltsch's Ear Mirror, ... 3 00 to 4 00
156 Wilde's Tubular Specula, 3 in a set, silver, ... 4 50
Wilde's Tubular Specula, 3 in a set, plated, . . . 3 50
157 Kramer's Ear Speculum, ... 3 00
158 Brunton's Otoscope, hard rubber and plated metal, . . 8 00
159 German-silver Bivalve Ear Speculum, ... 2 00
160 Clark's Otoscope, silver or nickel-plated, ... 12 00
161 Knapp's Tubular Specula, 3 in a set, silver, ... 5 50
162 Tubular Specula, hard rubber, each, ... 50c. to 75
163 Toynbee's Ear Specula, 3 in a set, silver, ... 5 50
164 Simrock's Otoscope, with lens, ... 5 00
165 Speir's Self-retaining Ear Speculum, ... 4 00
166 Hassenstein's Otoscope, ... 6 00
Bonafont's Bivalve Speculum, ... 3 00
Itard's Bivalve Speculum, curved blades, ... 3 00
Holcomb's Porcelain Tubular Speculum, ... 50
Sexton's Tubular Specula, 3 in a set, plated, . . . 3 00
Troeltsch's Mirror, with Roosa's Head-band, ... 6 00
Troeltsch's Mirror, with Tiemann & Co.'s Head-band, . 6 50
Miller's Lamp, very fine finish in brass, ... 15 00

For Tobold's and other Illuminators, see "Laryngoscopes."

INSTRUMENTS FOR OPERATIONS ON THE MEMBRANA TYMPANI.

Politzer's Meatus Knife, Fig. 175, ... 1 50
167 Toynbee's Artificial Tympanum, ... 30
168 Gruber's Sickle-shaped Polypus Knife, ... 1 50
169 Simrock's Scissors, for operating on the tympanum and small bones of the ear, ... 4 50
170 Politzer's Tympanum Perforator, angular steel handle, . 1 00
171 Politzer's Tympanum Perforator, straight ivory handle, . . 1 50
Delau's Tympanum Perforator, ... 4 00
Fabrici's Trepan, for removing a circular portion of the tympanum, ... 2 50
172 Politzer's Eyelets, to prevent reunion of the perforated tympanum, each, ... 30
Politzer's Forceps, for introducing the eyelets into the perforated tympanum, to prevent reunion, ... 1 50

INSTRUMENTS FOR THE EUSTACHIAN CANAL.

FIG. F. Wire Nose Clamps for holding the Eustachian Catheter, $1.00

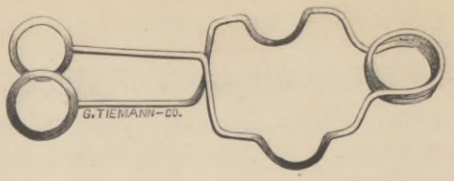


FIG.		
173	Bonafont's Eustachian Catheter Holder,	$2 00
174	Pomeroy's Kramer's Eustachian Catheter Holder,	3 50
175	Politzer's Meatus Knife, ivory handle,	1 50
176	Eustachian Catheter, hard rubber,	1 00
	Eustachian Catheter, pure flexible silver,	2 00
	Eustachian Catheter, coin silver,	1 50
	Eustachian Catheter, nickel-plated,	1 00
	Blanchet's Eustachian Catheter, graduated, silver,	3 00 to 8 00
177	Gruber's Tensor Tympani Instrument,	3 00
178	Weber's Tensor Tympani Instrument,	8 00
179	Politzer's Air Bag, for inflating the eustachian canal,	2 00 to 2 50
180	Politzer's Air Bag, with Roosa's Attachment, for treating diseases of the middle ear,	4 50
181	Buttle's Inhaler, for forcing medicated vapors into the eustachian canal,	2 50
182	Sexton's India-Rubber Nozzle,	75
	Politzer's Air Bag, Knapp's Nozzle,	2 50
	Politzer's Air Bag, Allen's Nozzles,	4 00
183	Füllgraff's Eustachian Spray,	6 00
184	Hackley's Instrument for Spraying the Eustachian Canal,	6 50

DIAGNOSTIC INSTRUMENTS.

185	Ear Probe, steel, angular,	75
	Ear Probe, silver, plain,	37
	Ear Probe, whalebone,	25
	Ear Probe, hard rubber,	20
186	Ear Manometer,	75
187	Toynbee's Diagnostic Tube,	1 00 to 1 25
188	Siegle's Aural Speculum,	5 00
189	Toynbee's Explorer, to fit an Eustachian Catheter,	1 25
190	Eustachian Catheter, silver,	1 50
191	Conversation Tube,	3 00 to 16 00
192	Tuning Fork, C or A,	1 25
193	Blake's Inner Ear Mirror,	8 00

INSTRUMENTS FOR REMOVING FOREIGN BODIES, FLAKES OF EPIDERMIS, WAX, HAIR, POLYPI, FLUID SECRETIONS, ETC.

FIG.		
194	Politzer's Hard-Rubber Ear Spoon,	$1 00
195	Allen's Polypus Forceps, and for removing foreign bodies,	4 50
196	Politzer's Polypus Forceps, for removing foreign bodies,	3 00
197	Blake's Polypus Snare,	3 50
198	Wilde's Polypus Snare,	3 50
199	Bumstead's Canulated Forceps,	4 50
200	Elastic Caustic Holder,	2 00
201	Speir's Ear Curette,	1 25
	Fenestrated Ear Scoop,	1 50
	Toynbee's Lever Ring Forceps,	14 00
	Toynbee's Ring Forceps, angular,	1 75
	Wilde's Angular Forceps,	1 75
	Civiale's Ear Scoop,	5 00
	Holcomb's Cotton Probe,	75
	Bonafont's Lint Carrier,	75
203	Angular Ear Hook,	1 50
204	Devil's Screw Hook,	2 00
205	Elsberg's Angular Screw Hook,	2 00
206	Gross's Ear Spoon and Hook,	1 00
207	Hinton's Polypus Forceps,	4 00
208	Eiterbecken (Pus Basin), brass,	3 00 to 5 00
209	Pus Basin, hard rubber,	5 00 to 8 00
	Pus Basin, tin,	75 to 2 00
210	Lucae's Reflux Ear Douche, hard rubber,	1 50
211	Itard's Rubber-Bag Ear Syringe, with Stopcock,	2 50
212	Knapp's Powder Blower,	1 50
	Weir's Powder Blower,	
213	Ear Syringe, hard rubber,	1 50
	Ear Syringe, metal, 3 rings,	3 00
	Ear Syringe, brass, 3 rings, ivory nozzle,	4 00
	Ruschenberger's Ear Syringe,	5 50
	Kramer's Ear Syringe, metal,	1 50
	Glass Ear Syringe,	75
	Agnew's Douche,	1 50
	Clark's Douche, Ear and Nose,	1 50
	Tudichum's Douche, Ear and Nose,	1 50
214	Dewee's Vapor Douche,	2 00
215	Sexton's Ear Douche,	6 00
	Erhardt's Apparatus for generating vapors,	30 00
	Hosmer's Ear Spout,	50c. to 1 00

INSTRUMENTS FOR PERFORATING THE MASTOID PROCESS, IN CASES OF ABSCESS, PURULENT INFLAMMATION, SUPPURATIONS OF THE MIDDLE EAR, AND FOR THE REMOVAL OF NECROSED BONE.

Fig.		
216	Drill with Guard, for perforating the mastoid process,	$7 00
217	Rongeur, or Bone-Gouging Forceps, straight or curved,	3 50
218	Curved Hand Gouge,	1 50

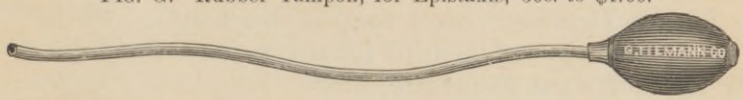
EAR TRUMPETS.

219	(a) Silver Cornets, per pair,	2 50
	(b) Silver Cornets, per pair,	3 00
	(c) Artificial Tympanum,	30
220	German-Silver Ear Trumpet,	6 00
221	Bronzed and Japanned Ear Trumpet,	3 00
222	Bronzed and Japanned Ear Trumpet,	2 25 to 4 00
223	Bronzed and Japanned Ear Trumpet,	4 00
224	Bronzed and Japanned Ear Trumpet,	2 25 to 3 50
	German-Silver Ear Trumpet,	3 50 to 5 00
225 226	Dipper Trumpet, Bronzed and Japanned,	4 50
227	The Ear of Dyonisius,	16 00 to 30 00
228	Conversation Tube, plain black mounts,	3 00
	Conversation Tube, silk, ivory mounts,	8 00 to 16 00
229	Auricles, per pair,	5 00
230	Telescopic Trumpet, German-Silver,	4 50
231	Cane Hearing Trumpet,	6 00 to 25 00
232	Bronzed and Japanned Trumpets,	2 50 to 3 50

NASAL INSTRUMENTS.

FIG.		
233	Robert & Collins' Nasal Speculum, German-Silver,	$3 50
	Robert & Collins' Nasal Speculum, hard-rubber,	3 50
234	Bivalve German-Silver Nasal Speculum,	2 50
235	Elsberg's Trivalve Nasal Speculum,	5 00
236	Steel Nasal Speculum,	3 00
237	Frankel's Nasal Speculum,	4 50
238	Folsom's Nasal Speculum,	2 00
239	Thudichum's Nasal Speculum, plain,	1 50
240	Thudichum's Nasal Douche,	1 50
241	Nasal Polypus Forceps,	2 25
242	Nasal Polypus Forceps, crossing-blades,	2 25
	Plain Polypus Dressing Forceps,	1 50
243	Gross's Polypus Forceps,	2 25
244	Simrock's Angular Polypus Forceps,	3 00
245	Nasal Polypus Canula, silver,	1 50 to 3 00

FIG. G. Rubber Tampon, for Epistaxis, 50c. to $1.00.



246	Belocq's Canula for Epistaxis, silver,	3 00
247	Simrock's Rhinoscope,	8 50
248	Duplay's Rhinoscope,	8 50
249	Plain Rhinoscopic Mirror,	1 25
	See also Laryngeal Mirrors,	1 25
250	Füllgraff's Nasal Douche,	3 50
	Posterior Nares Syringe, hard-rubber,	1 50
	Syphon Nasal Douche,	2 00

For Reflectors and Head-Bands, see Laryngoscopes.

HARELIP INSTRUMENTS.

251	Buck's Pin Conductor,	$1 00 to 1 50
252	Hutchison's Harelip Forceps,	3 00
253	Prince's Harelip Clamp,	3 00
254	Scalpel, ivory handle,	1 00 to 1 50
255	Scalpel, ebony handle,	80c. to 1 25
256	Angular Harelip Scissors,	1 50 to 2 50
257	Hamilton's Harelip Scissors,	2 25
	Silver Harelip Pins, removable points,	50
	Plastic Pins of all sizes, per 100,	50
258	Smith's Harelip Forceps,	6 00

ORAL, LARYNGEAL, AND ŒSOPHAGEAL INSTRUMENTS.

FIG.		
259	Mussey's Mouth Gag,	$7 00
260	Whitehead's Mouth Gag,	12 00
261	Whitehead's First Mouth Gag,	10 00
262	Heister's Speculum Oris,	6 00
263	Westmoreland's Speculum Oris,	6 00
264	Goodwillie's Speculum Oris,	8 00
	Gross's Speculum Oris, for reducing Lockjaw,	6 00
265	Dobell's Tongue Holding Forceps,	6 00
266	Hard-Rubber Tongue Depressor,	2 00
267	Elsberg's Tongue Depressor,	4 50
268	Green's Folding Tongue Depressor,	2 50
	Green's Plain Tongue Depressor, straight,	1 50
269	Sass's Tongue Depressor, steel, hard-rubber handle,	3 50
270	Türk's Tongue Depressor, with 3 blades,	4 50
271	Steel Folding Tongue Depressor,	1 25
	Plain Steel Japanned Tongue Depressor,	1 00
272	Churche's Self-holding Tongue Depressor,	6 50
	Cuskoe's Forceps, for holding the tongue,	5 50
	Ebony Handle and Steel Tongue Depressor,	2 00 to 3 00
	Hard-Rubber Handle Tongue Depressor,	2 00 to 3 00

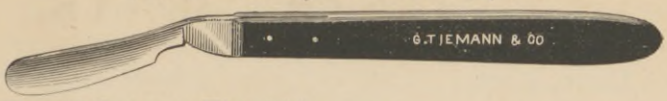
TONSIL AND UVULA INSTRUMENTS.

273	Tenaculum Forceps, for seizing,	2 50
274	Musseux's Vulsellum Forceps,	2 50
275	Langenbeck's Seizing Forceps,	3 00
276	Durham's Seizing Forceps,	4 50
277	Tonsil Hook,	2 00
278	Billing's Tonsilotome,	12 00
279	Green's Tonsil Bistoury, plain,	2 00
	Green's Tonsil Bistoury, ivory-ferule,	2 25
280	Tiemann & Co.'s Uvulatome,	8 00 to 9 00
281	Green's Double Hook,	3 00
282	Vulsellum,	2 25
283	Uvula Scissors, with claws,	6 00
284	Tonsil Scissors, curved on the flat,	4 50
285	Hamilton's Tonsilotome,	15 00
286	Tiemann & Co.'s Tonsilotome, one blade,	15 00
	Tiemann & Co.'s Tonsilotome, two blades,	24 00

FIG.

287 Fahnestock's Tonsilotome, ... $8 00
288 Mathieu's Tonsilotome, ... 12 00

FIG. H. Yearsley's Tonsil Knife, $2.00.



Buck's Tonsil Lancet, Fig. 326, ... 2 00
Tonsil Scarifier, concealed blade, ... 6 00
Graefe's Tonsil Forceps, plain, ... 1 50
Mackenzie's Instrument for cauterizing Tonsils, ... 8 00

STAPHYLORRHAPHY AND URANISCOPLASTIC INSTRUMENTS.

Whitehead's Mouth Gag, see Figs. 260, 261.

289 Whitehead's Seizing Forceps, ... 4 50
290 Whitehead's Scissors, for dividing the muscles, ... 4 50
291 Whitehead's Paring Knives, each, ... 1 50
292 Whitehead's Hoe, for dividing membrane, ... 1 50
293 Sayre's Pereosteotome, ... 2 00
294 Tenaculum, ... 1 50
295 Whitehead's Spiral Needle, for sutures, ... 1 75
Richardson's Spray, for clearing the throat of blood, Fig. 363, 6 50
296 Whitehead's Gum Knife, Fig. 296, ... 1 50
297 Whitehead's Modification of Sims's Adjuster, ... 1 50
298 Sims's Wire-Twisting Forceps, ... 4 00
Dieffenbach's Cheek Retractors, ... 2 50
299 Staphylorrhaphy Knife, right or left, ... 2 50
300 Double-edged Staphylorrhaphy Knife, ... 2 50
301 Cheek Retractor, German-Silver, jointed, ... 3 00
302 Goodwillie's Pereosteum Levator, ... 2 00
303 Goodwillie's Oral Saw, ... 3 50 to 5 00
304 Goodwillie's Pereosteum Levator, ... 2 00
305 Seizing Forceps, ... 2 50
Langenbeek's Raspatories, ... 1 50
Richter's Angular Scissors, ... 4 00
Sims's Needle-Holder, ... 2 50
Roux's Needle-Holder, ... 8 00
Silver Wire for Sutures, per yard, ... 50

Wire Needles, etc., see page 24, first part of our catalogue.
Suture Silk, 10c. to 20c. a skein.

LARYNGEAL AND ŒSOPHAGEAL INSTRUMENTS.

306 Czermak's Laryngoscope, ... 10 00
307 Henry's Bull's-Eye Illuminator, ... 9 00
308 Laryngoscopic Mirror, screw handle, ... 2 00

FIG.		
	Laryngoscopic Mirror, plain,	$1 25
309	Tiemann & Co.'s Laryngoscope, with head-band,	8 00
310	Application of Laryngoscope, with head-band,	8 00
311	Tobold's Laryngoscope and Student's Lamp,	30 00
	Tobold's Laryngoscope, pocket size,	22 00
	Student's Lamp, alone,	6 00

Sets of Laryngeal Instruments in cases, see page 75, etc.

312	Seeger's Modification of Tobold's Laryngoscope for gas-light,	34 00
	Semeleder's Spectacle-Frame Laryngoscope,	8 00
313	Mackenzie's Light Concentrator,	9 00
314	Elsberg's Pocket Laryngoscope,	6 00
315	Pocket Illuminator,	4 50
316	Tobold's Laryngeal Knife, lanciform,	1 50
317	Tobold's Laryngeal Knife, convex-edged,	1 50
318	Tobold's Laryngeal Knife, concave-edged,	1 50
319	Grant's Œdema Glottis Instrument,	1 50
320	Tobold's Concealed Laryngeal Lancet,	4 00
321	Haywood Smith's Scissors,	12 00
322	Mackenzie's Laryngeal Lancet, with 3 blades,	14 00
323 324 325	Semeleder's Laryngeal Instruments, each,	10 00
326	Buck's Throat (and Tonsil) Lancet,	2 50
327	Buck's Throat Forceps,	3 00
328	Cuskoe's Throat Forceps,	7 00
329	Simrock's Laryngeal Forceps,	4 50
330	Brun's Epiglottis Pincette,	4 50
331	Burge's Throat Forceps,	4 50
332	Fauvel's Laryngeal Polypus Forceps,	4 00
333	Mathieu's Throat Forceps,	6 00
334	Schaffer's Throat Scoop,	8 00
335	Tiemann & Co.'s Laryngeal Scoop,	6 00
336	Bristle Probang, for removing foreign bodies,	1 50 to 3 00
337	Probang with Silver Bucket, in three parts,	3 00
338	Gibb's Laryngeal Ecraseur,	3 00
339	California Brush Holder,	2 50
340	Finger Sponge Holder,	1 50
341	Granger's Sponge Holder,	2 00
342	Buck's Sponge Holder, steel,	1 50
	Buck's Sponge Holder, iron,	1 00
	Bond's Throat Forceps,	2 50
343	Child's Brush and Caustic Holder,	2 50
344	Brush Holder, flexible stem, with 12 brushes,	2 00
	Brush Holder, plain,	75

FIG.		
	Caustic Carrier, silver,	$1 50
345	Laryngeal Caustic Carrier, concealed,	2 50
346	Lente's Silver Probe,	1 25
	Camel's-hair Brushes,	3c. to 10
	Probangs, plain,	20c. to 50
347	Seeger's Brush Holder,	2 50
348	Elsberg's Insufflator, or Powder Blower,	2 25
349	Elsberg's Tube and Rubber Attachment, for Laryngeal Syringe,	1 50
350	Laryngeal Powder Blower, hard-rubber,	2 00
351	Clay's Powder Insufflator,	2 25
	Leffert's Powder Insufflator,	2 25
352	Türk's Laryngeal Syringe,	3 50
353	Gibb's Spray,	3 50
354	Hunter's Throat Syringe,	3 50
355	Tobold's Laryngeal Syringe,	4 50
356	Füllgraff's Laryngo-Tracheal Douche,	6 00
357	Füllgraff's Flat-Bill Laryngeal Spray,	6 00
358	Füllgraff's Glass Powder-blowing Tubes,	40
359	Füllgraff's Laryngeal and Posterior Nares Douche,	3 00

INHALING APPARATUS.

360	Bergson's Steam Atomizer,	4 50
361	Tiemann & Co.'s Steam Atomizer,	5 00
362	Seeger's Steam Nebalizer,	12 00
363	Richardson's Spray Producer, silver, one point,	6 00
	Richardson's Spray Producer, silver, two points,	6 50
364	Sass's Spray Producer,	4 00 to 6 00
365	Newman's Atomizer, 3 tubes,	7 00
	Maunder's Spray Producer,	2 00
	Clark's Spray Producer,	4 00
366	Hunter's Inhaler,	1 50 to 2 00
	Gay's Inhaler,	5 50
	Croup Kettle,	6 00
367	Jeffrey's Respirator, for mouth alone,	2 50
	Jeffrey's Respirator, for mouth and nose,	3 00
368	Dobell's Residual Air Pump,	3 00

TRACHEOTOMY INSTRUMENTS.

FIG.		
369	Buck's Tracheotomy Guide,	$2 00
370	Langenbeck's Tracheotomy Double Hook,	3 00
371	Tracheotomy Scalpel, probe-pointed,	1 50
372	Tracheotomy Scalpel, sharp-pointed,	1 50
373	Tiemann & Co.'s Tracheotome and Dilater,	3 50
374	Pitha's Tracheotome and Dilator,	3 50
375	Tracheotomy Blunt Hook. (Retractor,)	1 50
376	Langenbeck's Tracheotome,	4 00
377	Trousseau's Dilator, angular,	2 50
378	Trousseau's Dilator, curved,	2 50
379	Chassaignac's Tracheal Dilator,	3 00
380	Tiemann & Co.'s Universal Forceps,	2 50
	Delaborde's Tracheal Dilator, Fig. 235,	5 00
381	Silver Trachea Canula, single, plain,	4 00
382	Silver Trachea Canula, double, movable plate,	8 00
383	Silver Trachea Canula, double, plain,	6 00
384	Canula Mop,	75
385	Hard-Rubber Trachea Canula,	4 00
386	Gendron's Split Trachea Canula, silver,	8 00
387	Trousseau's Forceps, for removing foreign bodies from canula,	4 00
388	Tiemann & Co.'s Foreign Body Forceps, for the Trachea,	4 50
389	Johnson's Double Canula and Obdurator,	10 00

390	Brass Lever Stomach Pump, in case,	18 00
391	Tiemann & Co.'s Stomach Pump,	12 00
392	Tiemann & Co.'s Universal Syringe, in case,	12 00
393	Warner's Catarrhal Douche,	2 00

Branch of GEO. TIEMANN & CO.

STOHLMANN, PFARRE & CO.'S

Surgical Instrument Store,

107 East 28th Street, near 4th Avenue,

New-York City.

F. A. STOHLMANN. EDWARD PFARRE.

GEO. TIEMANN & CO.'S

SURGICAL INSTRUMENT STORE,

(Old Stand, Established 1826.*)*

67 Chatham Street, Corner of New Chambers Street,

NEW-YORK CITY.

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