

**A guide to the instruments and appliances required in various operations /  
by A.W. Mayo Robson.**

**Contributors**

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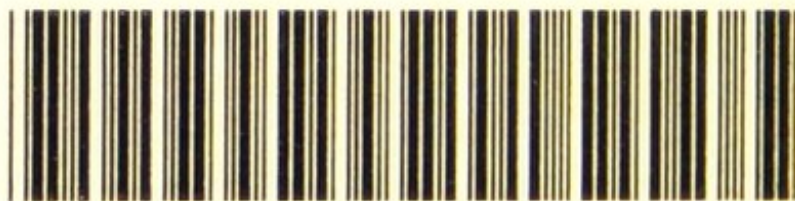
*Robson*

INSTRUMENTS AND APPLIANCES  
REQUIRED IN OPERATIONS.

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# A GUIDE

TO THE

# INSTRUMENTS AND APPLIANCES

REQUIRED IN VARIOUS OPERATIONS,

BY

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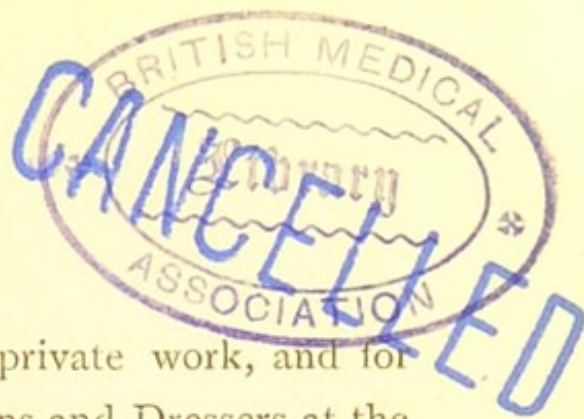




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HE want of such a guide for my private work, and for the use of my House Surgeons and Dressers at the Hospital to which I am attached, has led me to compile the following lists of the instruments required in various operations. I venture to issue it in book form, as I think that others may have felt the same need. No list can be complete for every surgeon, as some operators adopt different methods, and use instruments not ordinarily required ; hence, to obviate any real difficulty, a space has been left at the end of each list for such additions as may be found requisite.

In order to save the volume from being too bulky, the requirements of an ordinary antiseptic operation have been placed on the first page, and can easily be referred to, to complete the list of any special operation.

A.W.M.R.

HILLARY PLACE, LEEDS,  
*January 1st, 1889.*





## General Requirements of an Antiseptic Operation.

Anæsthetic and Inhaler.	Catgut Ligatures.
Gag.	Director.
Tongue Forceps.	Pressure Forceps.
Sponge on handle to clear mucus from throat.	Scissors.
Cocaine Solution 10 %	Retractors.
Subcutaneous Syringe.	Drainage Tubes.
Turpentine or Benzine to clean skin.	Needles.
Razor to shave skin.	Sutures (Catgut, Wire, or Silk).
Soap and Nail Brush.	Needle Holder.
Carbolic Oil.	Safety Pins, dry and asepticised.
Carbolic Spray or Eucalyptus Air Apparatus.	Sal-Alembroth or Carbolic Gauze.
Spirit for Lamp.	Salicylic or Salufer Wool.
Carbolic Acid Solution for Spray, 1 in 20.	Bandages of various kinds.
Carbolic Acid Solution for sponges and instruments, 1 in 40.	Elastic Bandage.
Perchloride of Mercury Solution, 1 in 2,000 ; or, Salufer Solution, 1 in 500.	Iodoform in Dredger.
Higginson's Syringe to wash out wound.	Adhesive Plaster.
Sponges, previously prepared.	Towels soaked in antiseptic solution and wrung out dry, to cover the parts adjoining the field of operation.
Scalpels.	Tray for spare instruments.
Dissecting Forceps.	Glass Measure.
Artery Forceps.	Kidney-shaped Dish.
	Flat Dish for Instruments and Bowl for Sponges.



### Removal of Tumour.

General Requirements of an Antiseptic Operation.

Breast or Excision Knife.

Vulsellum Forceps.

### Amputation of Breast.

General Requirements of an Antiseptic Operation.

Breast Knife.

Vulsellum Forceps.

### Incising Abscess.

General Requirements of an Antiseptic Operation.

Volkmann's Sharp Spoon.

### Injecting Abscess with Æthereal Solution of Iodoform.

Pneumatic Aspirator.

Dish for Pus.

Antiseptic Solution.

Saturated Solution of Iodoform in Æther.

Syringe capable of holding an ounce of fluid.

Pad of Antiseptic Wool.

Strapping.

Bandage.

### Ligature of Arteries in Continuity.

General Requirements of an Antiseptic Operation.

Aneurism Needle.

Special Ligature (Silk, Catgut, or Ox Aorta).

Tourniquet.

Sponge Holders.

### Arteriotomy.

Small Sharp Lancet or Scalpel.  
 Pad of Lint.  
 Carbolic Oil.  
 Sponge.  
 Adhesive Plaster.  
 Bandage.  
 Bowl to catch blood.

### Excision of Caseous Glands.

General Requirements of an  
 Antiseptic Operation.  
 Vulsellum Forceps.  
 Volkmann's Sharp Spoon.  
 Iodoform in Glycerine.

### Removal of Tumour from Brain.

Instruments as for Trephining.  
 Head to be previously shaved  
 and aseptised, and fis-  
 sures to be marked in ink,  
 or with nitrate of silver.

### Trephining the Skull.

General Requirements of an  
 Antiseptic Operation.  
 Elevator.  
 Raspatory.  
 Sequestrum Forceps.  
 Bone Nippers.  
 Ivory Points.  
 Thermo-Cautery.  
 Hey's Saw.  
 Probe.  
 Small Needle Holder.  
 Fine Curved Needles.  
 Fine Chromicised Catgut.  
 Aspirator or Exploring Syringe  
 Trocar and Canula.  
 Volkmann's Spoon.  
 Trephine.

### Trephining the Spine.

General Requirements of an  
 Antiseptic Operation.  
 Hey's Saw.  
 Bone Nippers.  
 Bone Forceps.

Thermo-Cautery.  
 Elevator.  
 Raspatory.  
 Probe.  
 Small Needle Holder.  
 Fine Half Curved Needles.  
 Fine Chromicised Gut.  
 Plaster of Paris Bandages, or  
 Special Spinal Jacket.  
 Macewen's Chisels.  
 Mallet.

### **Amputation at Hip Joint.**

General Requirements of an  
 Antiseptic Operation.  
 Lister's Aorta Compressor.  
 Esmarch's Bandage.  
 Davy's Lever.  
 Elastic Tourniquet.  
 Long Amputating Knife.  
 Excision Knife.  
 Lion Forceps.  
 Gouge.  
 Volkmann's Sharp Spoon.  
 Bone Nippers.

Bone Forceps.  
 Wheelhouse's Elevator.  
 Transfusion Apparatus.  
 Brandy, Beef Tea, and Opium  
 to administer by Rectum  
 if needful.  
 Rectal Syringe.  
 Probe.

### **Amputation at Shoulder Joint.**

General Requirements of an  
 Antiseptic Operation.  
 Key with handle covered with  
 Lint to compress Subcla-  
 vian Artery.  
 Elastic Tourniquet.  
 Long Amputating Knife.  
 Lion Forceps.  
 Bone Nippers.  
 Bone Forceps.  
 Volkmann's Sharp Spoon.  
 Probe.  
 Gouge.



## Amputation of Limb.

General Requirements of an Antiseptic Operation.

Elastic Tourniquet.

Esmarch's Bandage.

Amputating Knives.

Saw.

Bone Nippers.

Lion Forceps.

Linen Retractors, split into two tongues for thigh and arm, into three for leg and forearm.

Volkmann's Sharp Spoon.

Gouge.

Splint.

Probe.

## Excision of Joints.

General Requirements of an Antiseptic Operation.

Tourniquet.

Esmarch's Bandage.

Excision Knife.

Butcher's Saw.

Amputating Saw.

Lion Forceps.

Periosteal Raspatory.

Volkmann's Sharp Spoon.

Gouge.

Bone Forceps.

Sequestrum Forceps.

Chisel and Mallet.

Gimlet or Drill for suturing bone.

Wheelhouse's Elevator.

Iodoformed Glycerine.

Splint.

## Excision of Bones.

General Requirements of an Antiseptic Operation.

Esmarch's Bandage and Tourniquet.

Metacarpal Saw.

Chain Saw.

Hey's Saw.

Lion Forceps.

Bone Nippers.

Sequestrum Forceps.

Raspatory.

Volkmann's Sharp Spoon.

Gouge.

Splint.

Elevator.

### Operation for Epulis.

Anæsthetic and Inhaler.  
 Gag and Tongue Forceps.  
 Tooth Forceps.  
 Bone Nippers of various  
 shapes, and Bone Forceps.  
 Scalpels.  
 Scissors.  
 Artery Forceps.  
 Catgut Ligatures.  
 Paquelin's Cautery.  
 Whitehead's Varnish.  
 Antiseptic Lotion.  
 Sponges on Handles.

### Excision of Upper Jaw.

Chloroform or A.C.E. Mixture.  
 Gag.  
 Sponges on Handles.  
 Tracheotomy Tube and Tape.  
 Medium sized Sponge with  
 Tape attached, to plug  
 fauces if needful.  
 Scalpels.  
 Dissecting Forceps.

Scissors.  
 Tooth Forceps.  
 Artery Forceps.  
 Pressure Forceps.  
 Bone Nippers.  
 Sequestrum Forceps.  
 Metacarpal Saw.  
 Lion Forceps.  
 Vulsellum Forceps.  
 Solid Perchloride of Iron.  
 Paquelin's Cautery.  
 Catgut Ligatures.  
 Needles.  
 Wire Sutures.  
 Hare Lip Pins.  
 Whitehead's Varnish.  
 Iodoform.  
 Collodion.

### Excision of Lower Jaw.

Same Instruments as for  
 Excision of Upper Jaw.  
 Chain Saw.  
 Ivory Points for plugging  
 vessels.  
 Raspatory.



### **Annandale's Operation for Suture of Semi- lunar Cartilage.**

General Requirements of an  
Antiseptic Operation.

Esmarch's Bandage and  
Tourniquet.

Splint.

### **Removal of Loose Car- tilage from Knee.**

General Requirements of an  
Antiseptic Operation.

Esmarch's Bandage and  
Tourniquet.

Splint.

### **Osteotomy.**

General Requirements of an  
Antiseptic Operation.

Bag of Sand.

Esmarch's Bandage and  
Tourniquet.

Macewen's Osteotomes.

Macewen's Chisels.

Mallet.

Padded Splint.

### **Macewen's Operation for Genu Valgum.**

Instruments as for Osteotomy.

### **Ogston's Operation.**

General Requirements of an  
Antiseptic Operation.

Ogston's Knife.

Ogston's Saw.

Splint.

Esmarch's Bandage and  
Tourniquet.

### **Adams' Operation on Neck of Femur.**

General Requirements of an  
Antiseptic Operation.

Adams' Knife.

Adams' Saw.

Splint.



### Osteoplasty.

General requirements of an  
Antiseptic Operation.  
Living Bone recently removed.  
Bone Nippers.  
Esmarch's Bandage and  
Tourniquet.

### Operation for Ununited Fracture.

General Requirements of an  
Antiseptic Operation.  
Gowan's Osteotome.  
Fine Saw.  
Hey's Saw.  
Butcher's Saw.  
Chain Saw.  
Chisel and Mallet.  
Woakes' Drill.  
Gimlet with Eye near point.  
Wire Suture.  
Splints.  
Esmarch's Bandage and  
Tourniquet.

### Removal of Necrosed Bone.

(*Sequestrotomy.*)

Anæsthetic and Inhaler.  
Gag and Tongue Forceps.  
Esmarch's Bandage and Tour  
niquet.  
Bigelow's Sinus Dilator.  
Scalpels.  
Dissecting Forceps.  
Bone Nippers.  
Sequestrum Forceps of various  
shapes.  
Raspatory.  
Artery Forceps.  
Catgut Ligatures.  
Volkmann's Spoon.  
Iodoform.  
Probe and Director.  
Retractors.  
Chisel and Mallet.  
Gouge.  
Trephine.  
Needle and Sutures.  
Sponges.  
Antiseptic Gauze.  
Antiseptic Solution.  
Higginson's Syringe.

Drainage Tube.

Turpentine.

Antiseptic Wool.

Bandages.

Elastic Bandage to retain dressing in position.

### Operation for Removal of Bullet.

General Requirements of an Antiseptic Operation.

Bullet Forceps of various patterns.

Nélaton's Gun-shot Probe.

Vertebrated Probe.

Scoop.

Bullet Extractor.

Wire Snare.

Elastic Tourniquet.

### Nerve Suturing.

General Requirements of an Antiseptic Operation.

Esmarch's Bandage.

Elastic Tourniquet.

Splint.

### Neurotomy, Neurectomy, and Nerve Stretching.

General Requirements of an Antiseptic Operation.

Aneurism Needle.

Blunt Hook.

Torsion Forceps.

### Nerve Grafting.

General Requirements of Antiseptic Operation.

Aneurism Needle.

Elastic Tourniquet.

Newly removed Nerve.

Splint.

### Tenotomy.

Anæsthetic and Inhaler.

Gag and Tongue Forceps.

Tenotomy Knives, sharp and blunt ended.

Lint.

Carbolic Oil.

Adhesive Plaster.  
 Bandage.  
 Splint.  
 Bandages rolled in Plaster of Paris.  
 Loose Plaster.  
 Basin of Water for wetting Bandages.

### Suture of Tendons.

General Requirements of an Antiseptic Operation.  
 Esmarch's Bandage and Touriquet.  
 Splint.

### General Requirements of a Plastic Operation.

Aniline Pencil to map out flaps.  
 Razor.  
 Anæsthetic and Inhaler, with Gag, Tongue Forceps, and Sponge on Handle.

Sponges.  
 Antiseptic Solution.  
 Scalpels.  
 Dissecting Forceps.  
 Artery Forceps.  
 Needle-holder.  
 Needles.  
 Catgut Ligatures.  
 Wire Sutures.  
 Hare Lip Pins.  
 Waxed Silk.  
 Collodion.  
 Adhesive Plaster.  
 Antiseptic Wool.  
 Flannel Bandage.  
 Wire Nippers.  
 Pressure Forceps.  
 Scissors.  
 Iodoform.

### Hare Lip Operation.

Sheet to Wrap Child in.  
 Chloroform : Gag : Tongue Forceps.  
 Bull-dog Forceps.



Fine Scalpel.  
 Artery Forceps.  
 Dissecting Forceps.  
 Raspatory.  
 Hare Lip Pins.  
 Waxed Silk for Suture.  
 Catgut Ligatures.  
 Scissors.  
 Fine Curved Needles.  
 Needle-holder.  
 Sequestrum Forceps with  
     broad ends.  
 Bone Nippers.  
 Thermo-Cautery.  
 Cheek Compressor.  
 Adhesive Plaster.  
 Fine Sponges.  
 Sponges on Handles.

### Operation for Epispadias.

General Requirements of a  
     Plastic Operation (*see*  
     *page 14*).  
 Catheter.  
 Drainage Tube.

### Excision of Epithelioma of Lip.

Anæsthetic and Inhaler ; or,  
     Cocaine Solution (10 %).  
 Subcutaneous Syringe.  
 Bull-dog Forceps.  
 Scalpel.  
 Scissors.  
 Hare Lip Pins.  
 Wire Nippers.  
 Waxed Silk.  
 Catgut Ligatures.  
 Artery Forceps.  
 Sponges.  
 Collodion.  
 Adhesive Plaster.  
 Bandage.

### Rhinoplasty.

Instruments as for Plastic  
     Operation (*see page 14*).  
 Wash Leather Pattern.  
 Gum Elastic Catheter, cut  
     for Nostrils.

**Cheiroplasty.**

General Requirements of a  
Plastic Operation (*see*  
*page 14*).

**Seraping Lupus.**

Anæsthetic and Inhaler.  
Gag, Tongue Forceps, and  
Sponge on Handle.  
Volkmann's Sharp Spoon.  
Glycerine of Carbolic Acid.  
Camel's Hair Brush.  
Gamgee Tissue.  
Bandage.

**Operations for Nævus.**  
**(A.) Excision.**

General Requirements of an  
Antiseptic Operation.  
Elastic Tourniquet.

**(B.) Ligature.**

Anæsthetic and Inhaler.  
Gag and Tongue Forceps.  
Straight and Curved Needles  
in Handles.  
Scalpel.  
Scissors.  
Strong Asepticised Silk.  
Sponge.  
Iodoform in Dredger.  
Antiseptic Wool.  
Bandage.

**(C.) Cautery.**

Anæsthetic and Inhaler.  
Gag and Tongue Forceps.  
Spirit Lamp.  
Hulke's Cautery.  
Galvano-Cautery.  
Paquelin's Cautery.  
Carbolic Oil.  
Lint.  
Bandage.



**(D.) Electrolysis.**

Battery, coupled for intensity.  
 Sponge Rheophore.  
 Fine Gold Needle.  
 Carbolic Oil.  
 Lint.  
 Bandage.  
 Collodion.

**(E.) Injecting.**

Hypodermic Injection Syringe.  
 Solution of Perchloride of Iron,  
 or Solution of Tannin, 40  
 grains to the ounce.  
 Pad of Wool or Lint.  
 Bandage.

**(F.) by Seton.**

Silk Sutures steeped in  
 Solution of Perchloride of  
 Iron.  
 Needle in Handle.  
 Scalpel.  
 Pad of Wool.  
 Bandage.

**Ovariectomy.**

Anæsthetic and Inhaler.  
 Gag and Tongue Forceps.  
 Sponge on Handle to clear  
 mucus from throat.  
 Catheter.  
 Turpentine to clean skin  
 Razor.  
 Nail Brush and Soap.  
 Carbolic Oil.  
 Carbolic Spray Apparatus.  
 Spirit for Lamp.  
 Carbolic Solution, 1 in 20 for  
 the Spray; 1 in 40 for  
 Sponges and Instruments.  
 Perchloride of Mercury Sol-  
 ution, 1 in 2,000 for hands.  
 Higginson's Syringe.  
 Glass Measure.  
 Tray for spare Instruments.  
 Flat Dish for Instruments.  
 Bowls for Sponges and Hands.  
 Bucket for Fluid.  
 Thin Towels, wet with Carbolic  
 Solution, to cover parts  
 adjoining wound.  
 Mackintosh.  
 Two clean Aprons with chest  
 flaps.



12 Sponges.

Scalpels.

Dissecting Forceps.

Artery Forceps.

Pressure Forceps.

Ordinary Director.

Catgut Ligatures.

Scissors.

Retractors.

Probe-ended Bistoury.

Broad Director.

Ovarian Trocar and Tube.

Lister's Sinus Forceps.

Aneurism Needle.

Curved Needle in Handle.

Spencer Wells' Pedicle Forceps.

Ovarian Forceps.

Vulsella.

Koeberlé's Serre-œuf and  
Armed Pins.

Stout Aseptic Silk Ligatures.

Handles for tying Ligatures.

Fine Aseptic Silk and Fine  
Round Needles for Enterorrhaphy, if required.

Glass Drainage Tubes.

Rubber Drainage Tubes.

Sheet of India-rubber.

Paquelin's Thermo-Cautery.

Perchloride of Iron, Solid and  
Liquid.

Sponge Holders.

Needles.

Needle Holder.

Aspirator.

Antiseptic Wool.

Many-tailed Bandage.

Adhesive Plaster cut in strips,  
2 or 3 inches wide.

Elastic Tourniquet for Uterus,  
if required.

Elastic Bandage to secure  
dressings.

Safety Pins.

Subcutaneous Syringe.

Æther.

Brandy.

Atropine Solution.

Morphia Solution.

Sponges and Instruments to be  
counted before and after  
operation.

### **Herniotomy. (Kelotomy.)**

General Requirements of an  
Antiseptic Operation.

Hernia Knives.

Probe-ended Bistoury.

Key's Director.

Broad Director.

Fine Hook for Tense Sac.

Probe.

Aspirator.

Fine Round Needles.

Fine Silk Sutures.

Needle in Handle.

Strong Aseptic Silk.

Wire Sutures.

### **Radical Cure of Hernia.**

General Requirements of an  
Antiseptic Operation.

Curved Needle in Handle.

Strong Asepticised Silk.

Silver Wire.

### **Laparotomy.**

General Requirements of an  
Antiseptic Operation.

Other Instruments according  
to the case.

### **Hysterectomy (Abdominal).**

Instruments as for Ovariectomy.

Koeberlé's Serrenocud, or  
Lawson Tait's Clamp with  
pins.

Strong Elastic Ligature.

### **Cæsarean Section.**

Same Instruments as for  
Ovariectomy.

### **Porro's Operation.**

Same Instruments as for  
Hysterectomy.



### **Gastrostomy.**

General Requirements of an Antiseptic Operation.

Hare Lip Pins.

Needle in Handle.

Nibbed Forceps.

### **Gastrotomy and Loreta's Operation.**

General Requirements of an Antiseptic Operation.

Weiss's Dilator, or a Two-bladed Urethral Dilator.

### **Splenotomy and Splenectomy.**

Same as for Ovariectomy, with the exception of the Ovariectomy Trocar and Koeberlé's Serrengueud.

### **Cholecystotomy.**

General Requirements of an Antiseptic Operation.

Aspirator.

Small Lithotomy Scoop.

Small Lithotomy Forceps.

Lister's Sinus Forceps.

Broad-bladed Forceps, with blades coated with Wash Leather.

Long Carrier Forceps.

Fine Round Needle for Perforating Stone.

Small Curved Needles.

Small Needle Holder.

### **Cholecystectomy.**

Same Instruments as for Cholecystotomy.

### **Chole-cyst-enterostomy.**

General Requirements of an Antiseptic Operation.

Fine Elastic Ligatures for clamping Bowel.



Fine Round Needles.  
 Small Needle Holder.  
 Fine Aseptic Silk.

### Enterotomy, Enterorrhaphy and Enterectomy.

General Requirements of an  
 Antiseptic Operation.  
 Intestinal Clamp.  
 Fine Elastic Ligature.  
 Fine Round Sewing Needles.  
 Fine Aseptic Silk.  
 Bantock's Tube.  
 India-rubber Sheeting.  
 Senn's Perforated Bone Plates.

### Hepatotomy.

General Requirements of an  
 Antiseptic Operation.  
 Aspirator.  
 Paquelin's Cautery.  
 Lithotomy Scoop.

Volkmann's Spoon.  
 Bone Forceps, Bone Nippers,  
 and Raspator, if excision  
 of Ribs be required.

### Lumbar Colotomy.

General Requirements of an  
 Antiseptic Operation, ex-  
 cept spray.  
 Large Curved Needle.  
 Aniline Pencil.  
 Tape Measure.  
 Firm Pillow covered with  
 Mackintosh.  
 Silk or Wire Sutures.  
 Absorbent Wool.  
 Marine Lint.

### Inguinal Colotomy or Sigmoidostomy.

General Requirements of an  
 Antiseptic Operation.

## Nephrotomy and Nephrolithotomy.

General Requirements of an Antiseptic Operation.

Teevan's Sound.

Exploring Syringe.

Lithotomy Forceps.

Dressing Forceps.

Long Exploring Needle.

Paquelin's Cautery.

Large Retractors.

Sandbag or Firm Pillow.

## Nephrorraphy.

General Requirements of an Antiseptic Operation.

Thick Catgut Ligature.

Needle in Handle.

## Nephrectomy.

### A. (Abdominal).

Instruments as for Ovariectomy excepting Ovarian Trocar and Uterine Clamp.

### B. (Lumbar).

General Requirements of an Antiseptic Operation.

Stout Aseptic Silk Ligatures.

Two pairs of Pedicle Forceps.

Needle in Handle.

Paquelin's Cautery.

Large Retractors.

Sandbag to place under Abdomen.

## Paracentesis Abdominis.

Cocaine Solution, and Subcutaneous Syringe.

Trocar with India-rubber Tube.

Pad of Lint.

Antiseptic Wool.

Carbolic Oil.

Scissors.

Adhesive Plaster.

Many-tailed Bandage.

Bucket for Fluid.



### Aspiration.

Pneumatic Aspirator.  
Dish for Fluid.  
Antiseptic Solution.  
Pad of Antiseptic Wool.  
Adhesive Plaster.  
Bandage.  
Carbolic Oil.  
Scissors.

### Transfusion of Blood.

The Blood Donor.  
Bleeding Lancet.  
Vessel to Receive Blood.  
Scalpel.  
Dissecting Forceps.  
Aneurism Needle.  
Catgut Ligatures.  
Scissors.  
Aveling's Transfusion Apparatus.  
Salt Solution (about a teaspoonful to a tumblerful of water) or Phosphate of Soda Solution.  
Large Glass Measure.

Antiseptic Lotion.

Sponge.

Needle.

Carbolic Oil.

Lint.

Bandage.

Brandy.

Ether and Subcutaneous Injection Syringe.

Tape Bandage.

Staff to hold in hand of Donor.

### Dilating Stricture of Urethra.

Filiform Bougies.

Fine Flexible Catheters.

Silver Catheters.

Lister's Sounds.

Carbolic Oil.

Glycerine.

Silk and Strapping to secure Bougies.

Tape and Bandage to secure Catheter.

Scissors.



Cocaine Solution (10 %), with small Syringe.

Anæsthetic and Inhaler, if needful.

Warm Blankets.

Hot Water Bottles.

5 grs. Quinine Powders.

### Internal Urethrotomy.

Anæsthetic and Inhaler.

Gag and Tongue Forceps.

Silver Catheter.

Thompson's Urethrotome.

Flexible Catheter.

Carbolic Oil.

Tape and Bandage, or Silk and Strapping, to secure Catheter.

Scissors.

Antiseptic Solution.

Higginson's Syringe.

Cocaine Solution, 5 %, and Syringe.

### Perineal Section, or External Urethrotomy, or Wheelhouse's Operation.

Anæsthetic and Inhaler.

Gag and Tongue Forceps.

Manacles.

Wheelhouse's Hooked Staff.

Nibbed Forceps.

Scalpels.

Silver Catheter.

Probe.

Probe Director.

Teale's Gorget.

Tenaculum.

Celluloid Drainage Tube for Bladder.

Curved Needle and Wire Suture to fix Tube.

Artery Forceps.

Ligatures.

Sponges.

Carbolic Oil.

Lister's Graduated Sounds.

Antiseptic Wool and Bandage.

Antiseptic Solution.

Higginson's Syringe.

Iodoform.

### Operation for Extravasation of Urine.

Instruments as for Perineal Section.

### Operation for Urethral Calculus.

Anæsthetic and Inhaler.

Gag and Tongue Forceps.

Probe.

Urethral Forceps.

Fine Dressing Forceps.

Urethral Lithotrite Forceps.

Loop of Wire set in long Handle.

Silver and Flexible Catheters.

Carbolic Oil.

Scalpels.

Artery Forceps.

Dissecting Forceps.

Ligatures.

Needles.

Sutures.

Sponges.

Nibbed Forceps.

Grooved Staff.

Antiseptic Wool.

Bandage.

### Sounding for Stone.

Anæsthetic and Inhaler.

Gag and Tongue Forceps.

Syringe to Inject Bladder.

Boracic Lotion.

Hollow and Solid Sounds.

Carbolic Oil.

### Lithotrity.

Anæsthetic and Inhaler.

Gag and Tongue Forceps.

Cocaine Solution (10 %) with Syringe.

Catheter.

Boracic Solution.

Syringe to fit Catheter.

Sound.

Lithotrites.

Evacuating Tubes.

Clover's or Bigelow's Evacuator.

Muslin to strain Urine.

Scalpel to incise meatus, if needful.



## Lithotomy.

### (Perineal.)

Anæsthetic and Inhaler.  
 Gag and Tongue Forceps.  
 Manacles.  
 Sound.  
 Grooved Staff.  
 Razor.  
 Carbolic Oil.  
 Scalpels.  
 Antiseptic Lotion.  
 Artery Forceps.  
 Catgut Ligatures.  
 Tenaculum.  
 Sponges.  
 Lithotomy Knife.  
 Probe.  
 Teale's Gorget.  
 Lithotomy Scoop.  
 Lithotomy Forceps.  
 Probe-ended Bistoury.  
 Lithotrite.  
 Lithotribe.  
 Petticoated Tube.  
 Browne's Tampon.  
 Drainage Tube.

Higginson's Syringe.

Antiseptic Wool.

T Bandage.

## Lithotomy (Supra-Pubic).

General Requirements of an  
 Antiseptic Operation.

Sound.

Soft and Silver Catheters.

Pear-shaped India-rubber Bag  
 with Tube, to distend  
 Rectum.

Higginson's Syringe.

Tape Ligature for Penis.

Boracic Lotion.

Tenaculum.

Lithotomy Forceps of several  
 sizes.

Lithotomy Scoop.

Drainage Tube for Bladder.

## Perineal Cystotomy.

Anæsthetic and Inhaler.

Gag and Tongue Forceps.

Central Grooved Staff.



Long Straight Bistoury.  
 Oil.  
 Teale's Gorget.  
 Drainage Tube of Silver or  
 Celluloid.  
 Artery Forceps.  
 Ligatures.  
 Tenaculum.  
 Iodoform.  
 Needles and Holder.  
 Silver Suture.  
 T Bandage.  
 Sponges.  
 Antiseptic Wool and Bandage.  
 Antiseptic Lotion.  
 Higginson's Syringe.

### Circumcision.

Anæsthetic with Inhaler.  
 Tongue Forceps and Gag.  
 Sponges.  
 Antiseptic Solution.  
 Small Straight Bistoury.  
 Forceps with Long Parallel  
 Blades, or Special Clamp.  
 Artery Forceps.

Catgut Ligatures.  
 Needle.  
 Needle Holder.  
 Director.  
 Scissors.  
 Carbolic Oil.  
 Lint.  
 T Bandage.

### Supra-Pubic Cystotomy for Tumour of the Bladder.

General Requirements of an  
 Antiseptic Operation.  
 India-rubber Bag with Tube  
 for Distending Rectum.  
 Boracic Solution.  
 Soft Catheter.  
 Silver Catheter.  
 Tape Ligature.  
 Higginson's Syringe.  
 Tenaculum.  
 Curved Scissors.  
 Electric Light.  
 Galvano-Cautery.  
 Vulsellum Forceps.  
 Thompson's Bladder Tumour  
 Forceps.

Large Drainage Tube with one or two perforations near the extremity.

Solid Perchloride of Iron.

Dieffenbach's Forceps.

Volkmann's Spoon.

### Prostatectomy.

Same Instruments as for Supra-Pubic Cystotomy for Tumour.

### Castration.

General Requirements of an Antiseptic Operation.

Needle in Handle.

Stout Aseptic Silk Ligature.

### Excision of Varicocele.

General Requirements of an Antiseptic Operation.

Aneurism Needle.

### Tapping Hydrocele.

Trocar and Canula.

Wax Vesta and Long Tube.

Carbolic Oil.

Pad of Lint.

Strapping.

Vessel to catch fluid.

### Radical Cure of Hydrocele (A) By Injection.

Instruments required in simple Tapping, and in addition. Tincture of Iodine and Syringe with nozzle to fit the Canula.

### (B) By Incision.

Instruments required in an Antiseptic Operation.

### Amputation of Penis.

Anæsthetic and Inhaler.

Gag and Tongue Forceps.

Flexible Catheter.



Clover's Clamp, or Elastic Ligature.

Carbolic Oil.

Razor.

Long Straight Bistoury.

Artery Forceps.

Pressure Forceps.

Dissecting Forceps.

Scissors.

Catgut Ligatures.

Needles.

Needle Holder.

Lint.

T Bandage.

Hare Lip Pins.

Sponges.

Antiseptic Solution.

Iodoform.

### Thiersch's Operation.

Same Instruments as for Amputation of Penis, and in addition Wheelhouse's Staff for Perineal Section.

### Proctectomy. (Excision of Rectum.)

Anæsthetic and Inhaler.

Gag and Tongue Forceps.

Manacles.

Curved sharp-pointed Bistoury.

Sponges on Handles.

Carbolic Oil.

Salufer Solution (1 in 500).

Higginson's Syringe.

Sim's Speculum, or Large Retractors.

Scalpels.

Scissors Curved on Flat.

Artery Forceps.

Pressure Forceps.

Catgut Ligatures.

Curved Needles and Holder.

Silkworm Gut Sutures.

Dissecting Forceps.

Galvanic Cautery, or Paquelin's Cautery.

Ecraseur.

Volkmann's Spoon.

Iodoform in Dredger.

Large Drainage Tube.

Salicylic or Salufer Wool.



Iodoform Gauze.

T Bandage.

Safety Pins.

### Proctotomy (Incision of Rectum) for Stricture.

Anæsthetic and Inhaler.

Gag and Tongue Forceps.

Manacles.

Salufer Solution.

Higginson's Syringe.

Sponges on Handles.

Curved Pointed Bistoury.

Probe-ended Bistoury.

Artery Forceps.

Pressure Forceps.

Catgut Ligatures.

Iodoform in Dredger.

Iodoform Gauze.

Rectal Bougies.

Salicylic or Salufer Wool.

T Bandages.

Safety Pins.

Scissors.

Carbolic Oil.

### Fistula in Ano.

Anæsthetic and Inhaler.

Gag and Tongue Forceps.

Razor to Shave Skin.

Carbolic Oil.

Salufer Lotion.

Higginson's Syringe.

Sponges.

Scalpels.

Director.

Curved Bistouries, Sharp and  
Probe-ended.

Artery Forceps.

Pressure Forceps.

Catgut Ligatures.

Volkman's Sharp Spoon.

Weiss's Dilator.

Scissors.

Probe.

Rectal Speculum.

Cautery.

Iodoform.

Antiseptic Gauze.

Salicylic or Salufer Wool.

T Bandage.

Safety Pins.

Morphia Suppository

## Stretching Sphincter Ani.

Anæsthetic and Inhaler.  
Gag and Tongue Forceps.  
Weiss's Dilator with Broad  
Blades.  
Vaseline.  
Lint.  
Carbolic Oil.  
Cotton Wool.

Catgut or Silk Ligatures.  
Sponges.  
Pressure Forceps.  
Cotton Wool.  
Lint.  
Morphia Suppository.  
T Bandage.  
Safety Pins.  
Needle Holder.  
Iodoform.  
Antiseptic Lotion.  
Higginson's Syringe.

## Hæmorrhoids.

### A. Excision (Whitehead's Operation).

Manacles.  
Anæsthetic and Inhaler.  
Gag and Tongue Forceps.  
Vaseline.  
Carbolic Oil.  
Rectal Dilator.  
Vulsellum Forceps.  
Pile Forceps.  
Scissors Curved on Flat.  
Artery Forceps

### B. Operation by Cautery.

Instruments as for Excision.  
Smith's Clamp.  
Paquelin's Cautery.

### (C.) By Ligature.

Instruments, &c., as for Ex-  
cision.  
Needle in Handle.  
Waxed Silk.

(D.) Treatment by Application of Nitric Acid.

Anæsthetic with Gag, Tongue Forceps, and Sponge in Holder.

Weiss's Dilator.

Olive Oil.

Glass Rod and Cotton Wool.

Strong Nitric Acid.

Lint.

Absorbent Cotton.

T Bandage.

**Œsophagotomy.**

Anæsthetic and Inhaler.

Gag and Tongue Forceps.

Œsophageal Bougie.

Silver Catheter, No. 12.

Sponges.

Antiseptic Solution.

Higginson's Syringe to wash out wound.

Scalpels.

Retractors.

Scissors.

Œsophageal Forceps.

Artery Forceps.

Pressure Forceps.

Catgut Ligatures.

Needle Holder.

Needles.

Sutures.

Dissecting Forceps.

Iodoform in Dredger.

Drainage Tube.

Sal-Alembroth Gauze.

Salicylic or Salufer Wool.

Bandages.

Safety Pins.

**Excision of Tonsils.**

Gag.

Anæsthetic and Inhaler.

Vulsellum Forceps.

Tonsil Guillotine.

Ice.

Tongue Depressor.

Blunt-ended Bistoury with the proximal end covered with Plaster.

Sponges on Handles.

Perchloride of Iron.



## Amputation of the Tongue.

(Patient to be shaved previously)

### (A.) Whitehead's Opera- tion (Excision with Scissors).

Chloroform.

Mouth Gag.

Scissors, curved on the flat.

Vulsellum Forceps.

Stout Cord.

Needle in Handle.

Artery Forceps.

Dissecting Forceps.

Pressure Forceps.

Sponges on Handles.

Catgut Ligatures.

Tracheotomy Tube.

Trendelenberg's Tampon, or  
Spongewith Tape round centre  
to plug Pharynx.

Antiseptic Solution.

Whitehead's Varnish.

Paquelin's Cautery.

Cheek Retractor.

Tenaculum.

Iodoform.

### (B) Nunneley's Operation by Ecraseur.

Same instruments as for White-  
head's Operation, with the  
addition of Nunneley's  
Broad Needle to carry  
Ecraseur Wire, and the  
Ecraseur.

### (C) By Galvano-Ecraseur.

Same ins'tuments as for White-  
head's Operation, with the  
addition of the Galvano-  
Ecraseur and Battery.

### (D) Excision of Tongue and Floor of Mouth, with Division of Jaw, by Syme's Method.

Same instruments as for White-  
head's Operation, with  
the addition of Galvano-  
écraseur and Battery.

Narrow Saw.

Bone Nippers.

Drill or Gimlet.

Wire Suture.

Wire Nippers.

Hare Lip Pins.

Collodion.  
Waxed Silk.  
Lint.  
Bandage.

### (E) Kocher's Method.

Same instruments as for White-head's Operation.

### Thyrotomy.

Anæsthetic and Inhaler.  
Gag and Tongue Forceps.  
Razor to Shave Skin.  
Sponges.  
Carbolic Lotion (1 in 40).  
Scalpels.  
Dissecting Forceps.  
Director.  
Retractors.  
Scissors.  
Artery Forceps.  
Pressure Forceps.  
Catgut Ligatures.  
Volkman's Spoon.  
Paquelin's Cautery.  
Needle Holder.

Needles.  
Wire Suture.  
Iodoform in Dredger.  
Tracheotomy Tube.  
Tenaculum.  
Tape.  
Plaster.  
Sal-Alembroth Gauze.  
Salicylic or Salufer Wool  
Bandages.  
Safety Pins.

### Excision of Larynx.

Same Instruments as for  
Thyrotomy.

### Excision of Thyroid Gland.

General Requirements of an  
Antiseptic Operation.  
Paquelin's Cautery.  
Galvano-Cautery.  
Strong Asepticised Silk.  
Tracheotomy Tube with Tapes.  
Aneurism Needle.



**Incision of Thyroid Cyst.**

General requirements of an  
Antiseptic Operation.  
Volkmann's Spoon.

**Injection of Thyroid Cyst.**

Trocar and Canula.  
Small Injection Syringe.  
Tr. Perchloride of Iron.

**Tracheotomy.**

Cocaine Solution, 10 %, and  
Subcutaneous Syringe.  
Anæsthetic and Inhaler.  
Gag and Tongue Forceps.  
Scalpels.  
Director.  
Dissecting Forceps.  
Artery Forceps.  
Catgut Ligatures.  
Scissors.  
Blunt Hooks.  
Sharp Hook.

Tracheotomy Tube and Tapes.

Pressure Forceps.

Sponges.

Durham's Forceps.

Probe.

Flexible Urethral Catheter,  
No. 8.

Silver Suture.

Needles.

Tracheal Brush.

Sponges on Holders.

Iodoform in Dredger.

Lint.

Vaseline.

**Laryngotomy.**

Anæsthetic and Inhaler.  
Gag and Tongue Forceps.  
Cocaine Solution, 10 %.  
Subcutaneous Syringe.  
Scalpel.  
Director.  
Dissecting Forceps.  
Laryngotomy Tube and Tapes.  
Artery Forceps.



Catgut Ligatures.  
 Pressure Forceps.  
 Scissors.  
 Sharp and Blunt Hooks.  
 Sponges.  
 Needles.  
 Sutures.  
 Iodoform in Dredger.  
 Lint.  
 Vaseline.

### Intubation of Larynx.

O'Dwyer's Tubes.  
 Gag for Mouth.  
 Long Curved Forceps.  
 Tube Retractor.  
 Instruments required for  
 Tracheotomy.

### Endo-Laryngeal Operations.

Suitable Lamp.  
 Reflector for Forehead.  
 Laryngeal Mirrors.  
 Towel for Patient to hold  
 Tongue forward.

Tongue Depressor.  
 Laryngeal Forceps.  
 Laryngeal Galvano-Cautery.  
 Laryngeal Scissors.  
 Laryngeal Brush.  
 Cocaine Solution, 5 %.

### Staphylorrhaphy, or Operation for Cleft Soft Palate.

Chloroform or A.C.E. Mix-  
 ture.  
 Cocaine Solution.  
 Smith's Gag.  
 Sponges on Handles.  
 Cleft Palate Knives.  
 Long-handled Curved Scissors.  
 Long Slender Toothed Forceps.  
 Long-handled Needles, with  
 Eye at Point.  
 Rectangular Needles in Long  
 Handles.  
 Fine Silk Sutures.  
 Silver Sutures.  
 Paquein's Cautery.  
 Ice.  
 Ordinary Scissors.

### **Uranoplasty, or Operation for Cleft Hard Palate.**

Same instruments as for  
Staphylorrhaphy, and in  
addition :

Raspatory.

Elevator.

Chisel and Mallet.

### **Operation for Polypus Nasi.**

Polypus Snare.

Reflecting Mirror for Forehead.

Nasal Speculum.

Tannic Acid Snuff.

Nasal Douche.

Cocaine Solution, 2 %.

Hand Spray Apparatus.

Polypus Forceps.

### **Plugging Posterior Nares.**

Bellocq's Sound.

Flexible Catheter.

Lint.

Strong Silk.

Scissors.

Long Forceps.

Sponges.

Ice.

### **Rouge's Operation.**

Gag and Tongue Forceps.

Anæsthetic and Inhaler.

Scalpel.

Scissors.

Retractors.

Artery Forceps.

Catgut Ligatures.

Volkmann's Spoon.

Whitehead's Varnish.

Sponges and Holders.

Lint and String to plug  
Posterior Nares if required.

Iodoform.

Ecraseur.

Polypus Forceps.



### Operation for Removal of Post Nasal Vegetations.

Gag.

Hartmann's Curette.

Volkman's Spoon, curved on the flat.

Sponges on Holders.

Anæsthetic, if required.

Nasal Douche.

### Dilating Operation for Nasal Stenosis.

Anæsthetic and Inhaler.

Gag and Tongue Forceps.

Hewetson's Modification of Bigelow's Dilator.

Sponges on Handles.

### Incising Empyema.

General Requirements of an Antiseptic Operation.

Trocar or Exploring Syringe.

Raspatory.

Bone Nippers.

Sequestrum Forceps.

### Estlander's Operation.

Same Instruments as for Empyema.

### Abscess of Lung.

(Pneumotomy.)

Same Instruments as for Empyema.

Paquelin's Cautery.

Aspirator.

### Paracentesis Thoracis.

Aspirator, or

Trocar fitted with India-rubber tubing.

Basin for Fluid.

Pad of Lint.

Carbolic Oil.

Adhesive Plaster.

Scissors.

Bandage.



## Emmet's Operation for Suture of Lacerated Cervix Uteri.

Anæsthetic and Inhaler.  
Gag and Tongue Forceps.  
Manacles or Clover's Crutch.  
Antiseptic Solution.  
Higginson's Syringe and  
Vaginal Tube.  
Long Scissors.  
Long Nibbed Forceps.  
Scalpel on Long Handle.  
Sims' Hook.  
Dissecting Forceps.  
Stout slightly curved Needles.  
Needle Holders.  
Wire Suture.  
Uterine Sound.  
Elastic Tourniquet for Cervix.  
Sponges on Handles.  
Vulsellum Forceps.  
Sims' Speculum.  
Perchloride of Iron.

## Colpo-Hysterectomy.

Anæsthetic and Inhaler.  
Gag and Tongue Forceps.

Manacles.  
Antiseptic Solution.  
Straight and Curved Scissors.  
Dissecting Forceps.  
Nibbed Forceps.  
Scalpels.  
Artery Forceps.  
Ligatures.  
Pressure Forceps.  
Spencer Wells' Pedicle Forceps  
Paquelin's Cautery.  
Needle in Handle.  
Strong Asepticised Silk.  
Ligature Tightener.  
Curved Needles.  
Needle Holder.  
Catgut Ligatures.  
Large Drainage Tube.  
Sims' Catheter.  
Male Catheter.  
Vaginal Retractors.  
Sims' Speculum.  
Vulsellum Forceps.  
Sponge Holders.  
Sponges on Handles.  
Iodoform.  
Antiseptic Gauze.  
Antiseptic Wool.

## Supra-Vaginal Amputation of Cervix Uteri.

Anæsthetic and Inhaler.  
 Gag and Tongue Forceps.  
 Manacles or Clover's Crutch.  
 Antiseptic Solution.  
 Silver Male Catheter.  
 Vulsellum Forceps.  
 Sims' Speculum.  
 Pressure Forceps.  
 Artery Forceps.  
 Catgut Ligatures.  
 Small Sponges on Handles.  
 Scalpels.  
 Scissors, curved on flat.  
 Long-handled Straight Scissors  
 Strong Asepticised Silk.  
 Curved Needle in Handle.  
 Paquelin's Cautery.  
 Perchloride of Iron.  
 Ecraseur.  
 Galvano-Cautery.  
 Chloride of Zinc Solution.  
 Ice.  
 Antiseptic Wool.  
 Antiseptic Gauze.  
 Drainage Tube.

## Exploring Uterus.

Anæsthetic and Inhaler.  
 Gag and Tongue Forceps.  
 Manacles.  
 Antiseptic Solution.  
 Higginson's Syringe with  
 Vaginal Tube.  
 Hégar's Dilators.  
 Vulsellum Forceps.  
 Volkmann's Spoon.  
 Fuming Nitric Acid or Strong  
 Carbolic Acid or Iodized  
 Phenol.  
 Carrier Forceps.  
 Wool and Bandages.

## Division of Cervix Uteri.

Anæsthetic and Inhaler.  
 Gag and Tongue Forceps.  
 Sims' Speculum.  
 Manacles, if required.  
 Antiseptic Solution.  
 Higginson's Syringe.  
 Hysterotome.  
 Simpson's Sound.  
 Antiseptic Gauze.  
 Sponges on Holders.



### Operation for Enucleation of Fibroid of Uterus per Vaginum.

Anæsthetic and Inhaler.  
Gag and Tongue Forceps.  
Manacles.  
Antiseptic Solution.  
Higginson's Syringe with  
Vaginal Tube.  
Hégar's Dilators.  
Volkman's Spoon.  
Vulsellum Forceps.  
Aveling's Polyptribe.  
Ecraseur and Wire.  
Curved Scissors with Long  
Handles.  
Short Midwifery Forceps.  
Lithotomy Forceps.  
Perchloride of Iron, in Solu-  
tion and Solid.

### Apostoli's Operation for Fibroid of Uterus, by Electrolysis.

Antiseptic Solution.  
Higginson's Syringe with  
Vaginal Tube.

Large Clay Electrode.  
Platinum Electrode.  
Insulated Wires.  
Battery, capable of giving a  
current of 350 miliampères.  
Galvanometer.  
Vaseline or Carbolic Oil.

### Dilating Female Urethra.

Anæsthetic and Inhaler.  
Gag and Tongue Forceps.  
Manacles.  
Oil.  
Weiss's Dilator.  
Celluloid Drainage Tube.  
T Bandage.  
Absorbent Wool.  
Cocaine Solution, 10 %.  
Subcutaneous Syringe.

### Buchanan's Lithotomy in Female.

Same Instruments as for  
Perineal Lithotomy in the  
Male (*see page 26*).

### Perineorrhaphy.

Anæsthetic and Inhaler.  
 Gag and Tongue Forceps.  
 Manacles.  
 Higginson's Syringe with Vaginal Tube.  
 Antiseptic Solution.  
 Scalpels.  
 Dissecting Forceps.  
 Nibbed Forceps.  
 Artery Forceps.  
 Pressure Forceps.  
 Curved Needle in Handle.  
 Scissors.  
 Curved Needles.  
 Needle Holder.  
 Catgut Ligatures.  
 Wire Sutures.  
 Sims' Catheter, with long Tube attached.  
 Antiseptic Wool.  
 Sponges.  
 Oil.

### Vesico-Vaginal Fistula and Recto-Vaginal Fistula.

Anæsthetic and Inhaler.  
 Gag and Tongue Forceps.  
 Manacles.  
 Antiseptic Solution.  
 Higginson's Syringe with Vaginal Tube.  
 Sims' Speculum.  
 Scalpels set in Long Handles with laterally - inclined Blades.  
 Long-handled Curved Scissors.  
 Long-handled Nibbed Forceps.  
 Sims' Hook.  
 Narrow Curved Spatula.  
 Hollow Needles to carry Silver Wire.  
 Fine Rectangular Needle in Long Handle.  
 Silver Wire.  
 Sims' Catheter.  
 Curved Bougie to use as Probe.  
 Catgut Ligatures.  
 Artery Forceps.  
 Curved Needles.  
 Needle-holder.  
 Dissecting Forceps.



Lead Clamp for perforating Shot.

Split Shot.

Forceps for placing and pinching Shot.

Small Sponges on Handles.

Ice.

Carbolic Oil.

### **Excision of Spina Bifida.**

General Requirements of an Antiseptic Operation.

### **Morton's Operation for Spina Bifida.**

Small Trocar and Canula.

Injection Syringe, with

Nozzle to fit Canula.

Morton's Fluid.

(Iodine, gr. 10 ; Potas. Iodid, gr. 30 ; Glycerine, an oz.), about half a drachm to be used.

Pad of Lint.

Collodion.

Bandage.

### **Avulsion of Ingrowing Toe Nail.**

Cocaine Solution, 10 per cent.

Subcutaneous Syringe.

Anæsthetic and Inhaler.

Gag and Tongue Forceps.

Scalpel.

Dissecting Forceps.

Artery Forceps.

Catgut Ligatures.

Avulsion Forceps.

Small Volkmann's Spoon.

Scissors.

Iodoform.

Antiseptic Lotion.

Sponges.

Iodoform Gauze.

Antiseptic Wool.

Bandage.

### **Excision of Eyeball.**

Anæsthetic and Inhaler.

Gag and Tongue Forceps.

Antiseptic Solution.

Sponges.  
 Eye Speculum.  
 Strabismus Hook.  
 Strabismus Scissors.  
 Toothed Forceps.  
 Broad blunt-ended Scissors,  
     curved on flat.  
 Pad of Antiseptic Wool.  
 Bandage.  
 Higginson's Syringe.  
 China Tray for Instruments  
     (obtained from Weiss).

### Mule's Operation.

Anæsthetic and Inhaler.  
 Gag and Tongue Forceps.  
 Speculum.  
 Fixation Forceps.  
 Græfe's Knife.  
 Volkmann's Spoon.  
 Glass Ball.  
 Mule's Apparatus for holding  
     and expelling Glass Ball.  
 Fine Curved Needle.  
 Needle-holder.

Sutures—catgut or horsehair.  
 Antiseptic Lotion.  
 Pads, Strapping, and Bandage.  
 Scissors.  
 China Tray for Instruments.  
 Sponges.

### Operation for Ectropion.

General Requirements of a  
 Plastic Operation (*see page*  
 15).

### Operation for Entropion.

Anæsthetic and Inhaler.  
 Gag and Tongue Forceps.  
 Fine Forceps.  
 Fine Curved Forceps.  
 Fine Sutures.  
 Half-curved Needle.  
 Needle-holder.  
 Collodion.



**Abseission.**

Anæsthetic and Inhaler.  
 Gag and Tongue Forceps.  
 Speculum and Fixation Forceps.  
 Græfe's Knife.  
 Scoop.  
 Fine Curved Needle.  
 Needle-holder.  
 Sutures—catgut or horsehair.  
 Antiseptic Lotion.  
 Antiseptic Pad.  
 Bandage.  
 Scissors.  
 China Tray for Instruments.

**Cataract (Hard).**

Sulphate of Eserine solution  
 (4 grs. to an ounce).  
 Cocaine Solution (10 per cent.)  
 Anæsthetic and Inhaler.  
 Gag and Tongue Forceps.  
 Spring Speculum.  
 Cystotome or Lacerating  
 Needle.

Fixation Forceps.  
 Cataract Knives.  
 Scoop or Curette.  
 Iridectomy Forceps.  
 Iridectomy Scissors.  
 Platinum Spatula to adjust  
 edges of wound.  
 Antiseptic Solution.  
 Sponges.  
 Pad of Antiseptic Wool.  
 Bandage.  
 Atropine Drops.  
 Adhesive Plaster.  
 Eyelashes to be previously cut  
 and Eye washed with  
 Antiseptic Solution.  
 Eucalyptus Air Apparatus.  
 China Tray for Instruments.

**Cataract (Soft).****'Suction Operation.'**

Anæsthetic and Inhaler.  
 Gag and Tongue Forceps.  
 Atropine Drops.  
 Cocaine Solution.

Spring Speculum.  
 Toothed Forceps.  
 Teale's Suction Apparatus  
 Broad Needle for incising  
     cornea.  
 Sponges.  
 Antiseptic Solution.  
 Pad.  
 Bandage.  
 Adhesive Plaster.  
 China Tray for Instruments.

### Needling Operation.

Anæsthetic and Inhaler.  
 Gag and Tongue Forceps.  
 Cocaine Solution.  
 Atropine.  
 Speculum.  
 Two Lacerating Needles.  
 Fixation Forceps.  
 Pad.  
 Bandage.  
 Sponge.  
 Antiseptic Lotion.  
 China Tray for Instruments.

### Iridectomy.

Solution of Sulphate of Eserine  
     (4 grs. to ounce).  
 Cocaine Solution.  
 Anæsthetic and Inhaler.  
 Gag and Tongue Forceps.  
 Speculum.  
 Fixation Forceps.  
 Triangular Iridectomy Knives.  
 Iris Forceps.  
 Iris Hook.  
 Iris Scissors.  
 Light Curved Scissors.  
 Pad of Antiseptic Wool.  
 Bandage.  
 Atropine Drops.  
 Sponges.  
 Antiseptic Solution.  
 Adhesive Plaster.  
 China Tray for Instruments.

### Strabismus.

Anæsthetic and Inhaler.  
 Gag and Tongue Forceps.  
 Antiseptic Solution.



Cocaine Solution (10 per cent.).

Conjunctival Forceps.

Strabismus Hook.

Strabismus Scissors.

Fine Curved Needle.

Needle-holder.

Fine Catgut and Silk.

Sponge.

Pad.

Bandage.

Spring Speculum.

### Shortening Tendon of Internal or External Rectus.

Anæsthetic and Inhaler.

Gag and Tongue Forceps.

Speculum.

Fixation Forceps.

Strabismus Scissors.

Strabismus Hook.

Nibbed Forceps.

Small Curved Needle.

Needle-holder.

Catgut or Horsehair.

Antiseptic Lotion.

Pads and Strapping.

Dish for Instruments.

### Syndectomy.

Anæsthetic and Inhaler.

Gag and Tongue Forceps.

Cocaine Solution, 10 ° 10.

Speculum.

Conjunctival Forceps.

Small Straight Scissors.

Small Curved Scissors.

Pad and Strapping.

Solution of Atropine.

Glycer. Ac. Carbolic B.P.

### Symblepharon. Teale's Operation.

Cocaine Solution or Anæsthetic and Inhaler.

Speculum.

Fixation Forceps.

Small Dissecting Forceps.  
 Small Scalpel.  
 Græfe's Knife.  
 Scissors—Straight and Curved.  
 Artery Forceps.  
 Fine Curved Needle.  
 Needle-holder.  
 Sutures—Fine Catgut or  
                   Horsehair.  
 Antiseptic Lotion.  
 Antiseptic Wool, Pads, and  
                   Strapping.  
 A Rabbit, to be killed, if  
                   grafting of Conjunctiva be  
                   required.  
 Dish for Instruments.

### Removal of Foreign Body from Conjunctiva, or from Cornea.

Cocaine Solution, 10 %.  
 Speculum.  
 Conjunctival Forceps.  
 Spud.  
 Castor Oil.

### Operation for Epiphora.

Cocaine Solution.  
 Weber's Knife for slitting  
                   canaliculus.  
 Fine Director.  
 Græfe's Knife.  
 Lachrymal Duct Probes.

### Removal of Steel or Iron from Interior of Globe.

Speculum.  
 Battery and Electro-Magnet.  
 Magnetic Needle.  
 Fixation Forceps.  
 Fine Dissecting Forceps, or  
 Lister's Sinus Forceps.  
 Græfe's Knife.  
 Iridectomy Knife.  
 Antiseptic Lotion.  
 Pads and Strapping.  
 Eserine Solution.  
 Atropine Solution.  
 China Tray for Instruments.



### **Sæmisch's Section for Hypopyon.**

Cocaine Solution.  
Speculum.  
Fixation Forceps.  
Græfe's Knife.  
Scoop.  
Antiseptic Lotion.  
Pads and Strapping.  
Tray for Instruments.

### **Lupus of Eyelids.**

Anæsthetic and Inhaler.  
Gag and Tongue Forceps.  
Volkman's Sharp Spoons.  
Glycer. Ac. Carbolic.  
Camel's Hair Brush.  
Dressing and Bandage.

### **For Cauterising Corneal Ulcer.**

Cocaine Solution.  
Speculum.

Fixation Forceps.  
Scraper.  
Hulke's Cautery.  
Lotion.  
Pads and Strapping.

### **Electrolytic Operation for Trichiasis.**

Constant Current Battery.  
Gold Needle Electrode.  
Large Pad Electrode.  
Fine Forceps.

### **Removal of Polypus from Ear.**

Wilde's Snare.  
Aural Polypus Forceps.  
Antiseptic Lotion.  
Syringe.  
Antiseptic Wool.  
Cocaine Solution, 10 %.  
Fine Volkman's Spoons.  
Iodoform.  
Boracic Acid.

## Exostosis of External Meatus.

Antiseptic Lotion.  
 Anæsthetic and Inhaler.  
 Dental Drill, complete.  
 Special Gouges.  
 Gag and Tongue Forceps.  
 Syringe.  
 Antiseptic Wool.  
 Lister's Sinus Forceps.  
 Bandage.  
 Iodoform.

## Operation for Mastoid Inflammation.

General Requirements of Antiseptic Operation, except spray.  
 Joiner's Gimlets, three sizes.  
 Woake's Trephine and Drill.  
 Gouge.  
 Sharp Spoons.  
 Probe.  
 Chisel and Mallet.

## Bedroom.

Sanitary condition of house to be attended to before the day of operation.  
 Room to be thoroughly cleansed.  
 Walls and Ceiling to be brushed or rubbed over with bread.  
 Carpets to be removed, floor to be scrubbed, and clean white drugget to be laid down.  
 Old Curtains to be removed and replaced by clean ones.  
 Windows to open readily.  
 Fire in winter or Oil Lamp in summer, in fire place, to maintain circulation of air.  
 Temperature to be maintained at from 60° to 62° Fahr.  
 Two Spring Iron Bedsteads with hair mattresses.  
 Pillows.  
 Blankets.  
 6 sets of Sheets and Pillow Cases.  
 2 pieces of Macintosh, 2ft. 6in. square.  
 Hot Water Bottles or Bags.  
 Water Cushion.



Absorbent Wool.  
 Towels.  
 Bed Cradle.  
 Bed Pan.  
 Bed Urinal.  
 Night Stool.  
 Bed Rest.  
 Bed Table.  
 Feeding Cup.  
 Kettle and Tea equipage.  
 Medicine Measure.  
 Food Warmer with spirit lamp.  
 Matches.  
 Fan.  
 Diet Chart.  
 Temperature Chart.  
 Basin.  
 Cold Water.  
 Carbolic Acid or some disinfectant.  
 Ice.  
 Night Lights.

### Operating Room.

Sanitary condition of house to be attended to before the day of operation.  
 Room to be thoroughly cleansed.  
 Walls and Ceiling to be brushed or rubbed over with bread.  
 Carpet to be removed, floor to be scrubbed, and clean drugget to be laid down.  
 Old Curtains to be removed and replaced by clean ones.  
 Windows to open readily.  
 Good Light.  
 Temperature of room to be 65° Fahr.  
 Operating Table 5ft. long, 2ft. wide, 2ft. 8in. high, approximately.  
 Blankets to cover table and patient.  
 Two Pillows.  
 Mackintosh Sheet.  
 Smooth Towels.  
 Blanket or tray of sawdust to catch blood.  
 Slop Jar.  
 Safety Pins.

Hand Lamp with reflector.  
Feeding Cup.  
Enema Syringe.  
Hot and Cold Water.  
Basin, for washing hands.  
Antiseptic Solutions.  
Brandy.  
Ammonia.  
Absorbent Wool.  
Vaseline.  
Morphia and Subcutaneous  
Syringe.  
Ether and Subcutaneous  
Syringe.  
Nitrite of Amyl.  
Instruments and Dressing  
according to operation.  
A Quart Jar containing car-  
bolic solution, 1 in 20.

Two Wash-hand Basins for  
sponges, containing car-  
bolic solution, 1 in 40.  
One Shallow Instrument Bowl  
(*e.g.*, pie-dish), containing  
carbolic solution, 1 in 40.  
One Shallow Bowl for ligatures  
and sutures, containing  
carbolic solution, 1 in 40.  
One Pint Basin for perchloride  
solution, 1 in 2,000, for  
steeping gauze.  
One Quart Basin for per-  
chloride solution, 1 in  
2,000, for dipping hands  
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Large Tray for spare Instru-  
ments and Dressings.





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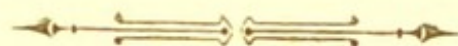
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