

DOYEN MAYO ROBSON

LANGENBECK

VETERINARY SURGICAL INSTRUMENTS AN ILLUSTRATED GUIDE

CROSS ACTION

PARKER KERR

SPENCER STITCH

SF
913
.V48
1997

COCHER ROCHESTER OSCHNER

ALLIS

CZERNY

THE COLLEGE OF
ANIMAL WELFARE



ADSONS

VETERINARY NURSING/VETERINARY SURGERY

BENNETT CILIA

CHEATLES

The current failure rate for students of Veterinary Nursing is high, due in part to the fact that there is a shortage of suitable texts available.

One key skill every student must acquire is the ability to differentiate between the various surgical instruments in use. In the past, the shortage of published material in this area has even meant students resorted to collecting equipment manufacturers' brochures for learning purposes!

This book will provide a timely guide to each of the instruments in common use. Illustrated throughout, *Veterinary Surgical Instruments: an illustrated guide* includes line drawings depicting the working heads of the instruments on an enlarged scale, as well as providing a concise description of their usage and design.

RELATED BUTTERWORTH HEINEMANN TITLES:

Oulton J E: *Veterinary Nursing: self-assessment questions and answers*
Book I, 1997, 0 7506 3731 5; Book II, 1997, 0 7506 3732 3

Lane D R, Cooper B: *Veterinary Nursing*, 6th Edition (two volumes), 1994, 0 7506 3417 0

College of Animal Welfare: multiple choice questions in veterinary nursing
Volume I, 1997, 0 7506 3611 4; Volume II, 1997, 0 7506 3612 2

College of Animal Welfare: case presentations in veterinary nursing, (forthcoming), 0 7506 3614 9



CASTROVIEJO



Butterworth-Heinemann
An imprint of Elsevier
books.elsevier.com

ISBN 0-7506-3613-0



9 780750 636131

Veterinary Surgical Instruments:
An Illustrated Guide

The College of Animal Welfare



BUTTERWORTH-HEINEMANN
An imprint of Elsevier Limited

© 1997 College of Animal Welfare. All rights reserved.

No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, without either the prior permission of the publishers or a licence permitting restricted copying in the United Kingdom issued by the Copyright Licensing Agency, 90 Tottenham Court Road, London W1T 4LP. Permissions may be sought directly from Elsevier's Health Sciences Rights Department in Philadelphia, USA: phone: (+1) 215 238 7869, fax: (+1) 215 238 2239, e-mail: healthpermissions@elsevier.com. You may also complete your request on-line via the Elsevier homepage (<http://www.elsevier.com>), by selecting 'Customer Support' and then 'Obtaining Permissions'.

First published 1997.
Reprinted 2005, 2006

ISBN 0 7506 3613 0

British Library Cataloguing in Publication Data
A catalogue record for this book is available from the British Library

Library of Congress Cataloging in Publication Data
A catalog record for this book is available from the Library of Congress

Notice

Medical knowledge is constantly changing. Standard safety precautions must be followed, but as new research and clinical experience broaden our knowledge, changes in treatment and drug therapy may become necessary or appropriate. Readers are advised to check the most current product information provided by the manufacturer of each drug to be administered to verify the recommended dose, the method and duration of administration, and contraindications. It is the responsibility of the practitioner, relying on experience and knowledge of the patient, to determine dosages and the best treatment for each individual patient. Neither the Publisher nor the editors/contributor assumes any liability for any injury and/or damage to persons or property arising from this publication.

The Publisher

ELSEVIER your source for books,
journals and multimedia
in the health sciences
www.elsevierhealth.com

Working together to grow
libraries in developing countries
www.elsevier.com | www.bookaid.org | www.sabre.org
ELSEVIER **BOOK AID** **International** **Sabre Foundation**

Typesetting and design by Coloursense Ltd., 95 Ashfield Street,
London E1

Transferred to digital printing 2006

SF
913
V48
1997
The
Publisher's
policy is to use
paper manufactured
from sustainable forests

Contents

GENERAL INSTRUMENTS	1
Artery Forceps	3
Kocher Rochester Oschner	4
Spencer Wells	4
Halstead Mosquito	4
Scissors	7
Mayo	8
Metzenbaum	8
Spencer Stitch	8
Carless	10
Standard	10
Lister	10
Dissecting Forceps	13
Standard, Plain and Toothed	14
Continental Standard (End Toothed)	14
Adsons	14
Emmett	16
Debakey	16
Tissue Forceps	19
Allis	20
Babcock	20
Duval	20
Visceral Clamps	23
Doyen Mayo-Robson	24
Parker-Kerr	24
Towel Clamps	27
Cross Action	28
Backhaus	28
Scalpel Handles and Blades	31
Scalpel Handles	32
Scalpel Blades	32
Retractors - Handheld	35
Langenbeck	36
Hohmann	36
Volkmann	36
Czerny	38

Retractors - Self Retaining	41	Sherman Plate	78
Gelpi	42	Dynamic Compression Plate	78
Travers	42	Reconstruction Plate	78
Cone	42	Cancellous Screw	80
Gosset	44	Cortical Screw	80
Balfour	44	Self Tapping Screw	80
Finochietto	44		
Needle Holders	47	ASIF Instruments	83
Gillies	48	Drill Bit	84
Mayo Hegar	48	Drill Guide	84
Bruce Clarke	48	Drill Sleeve	84
Olsen Hegar	50	Depth Gauge	86
McPhail	50	Tap	86
Diathermy Equipment	53	Tap Handle	86
Lead/Cable	54	Screwdriver	88
Quiver	54	Countersink	88
Beare Dissecting Forceps	56		
Robin Anchoring Clip	56	Ophthalmic Instruments	91
SPECIALIST EQUIPMENT	59	Iris Scissors	92
Orthopaedic Equipment	61	Tenotomy (Stevens) Scissors	92
Stille Chisel	62	Castroviejo Scissors	92
Stille Osteotome	62	Catford Forceps	94
Stille Gouge	62	Chalazion Forceps	94
Adson Periosteal Elevator	64	Bennett Cilia Forceps	94
Small Mallet	64	Capsulorhexis Forceps	96
Stille Luer Rongeurs	64	Micro Corneal Tying Forceps	96
Pennybacker Rongeurs	66	Capsule Forceps	96
Lempert Rongeurs	66	Kirby Expressor Hook and Lens Loop	98
Laminectomy Rongeurs	66	Williams Speculum	98
Paton Bone Cutting Forceps	68	Barraquer Speculum	98
Ruskin Liston Bone Cutting Forceps	68	Nettleship Dilator	100
Fergusson Bone Cutting Forceps	68	Castroviejo Needle Holders	100
Hey Grove Bone Holding Forceps	70		
Kern Bone Holding Forceps and Cutters	70	Dental Instruments	103
Jacobs Chuck for Intramedullary Pinning	70	Extraction Forceps	104
Wire Twisters	72	Dental Elevator	104
Graft Passer	72	Periosteal Elevator	104
Volkmann Curette	72	Subgingival Curette	106
Implants	75	Supragingival Scaler	106
Steinmann Pin	76	Dental Explorer	108
Rush Pin	76	Periodontal Probe	108
Venables Plate	76	Sharpening Stone	108
Miscellaneous Instruments	111		
Cusco Vaginal Speculum	112		
Hartmann Crocodile Forceps	112		
Rampley Sponge Holding Forceps	112		
Cheatle Sterilising Forceps	114		

Introduction

The aim of this book is to aid nurses and students to identify commonly used, widely available instruments. It has not been written to contain an exhaustive list of instruments (at present there are 378 designs of extraction forceps available in dentistry alone). It is very important to note that veterinary surgeons will always have personal preferences and uses for instruments.

Having studied this book it would be pleasing to think that the next time a veterinary surgeon says:

“Pass those things that have the funny shaped tips, you know, those double jointed things I always use. No, not those, the things next to them. Yeah! That’s them!”

You can confidently reply:

“Do you mean the Stille Luer Rongeurs?”

General Instruments

Artery Forceps

Scissors

Dissecting Forceps

Tissue Forceps

Visceral Clamps

Towel Clamps

Scalpel Handles and Blades

Retractors - Handheld

Retractors - Self Retaining

Needle Holders

Diathermy Equipment

Artery Forceps

Common Features

Ratchet to maintain a closed position

Serrated blades

Clamp tightly shut

Ring grip for fingers

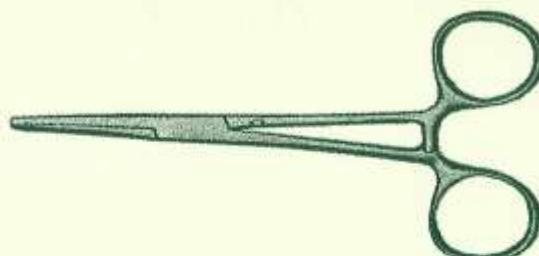
Screw or box joint

Use

Occlusion of blood vessels

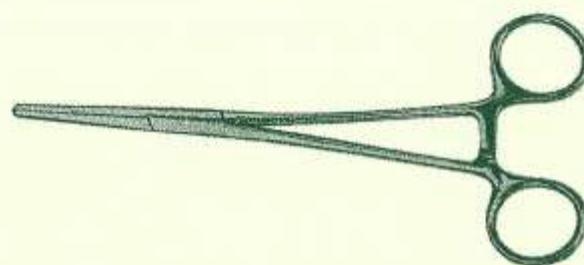
Kocher Rochester Oschner

Name	Kocher Rochester Oschner (straight and curved)
Purpose	Clamping blood vessels
Size	13 - 20 cm
Distinguishing Features	Teeth at tips
Similar Instruments	Mayo Oschner



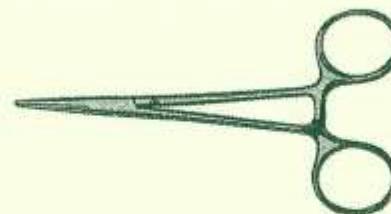
Spencer Wells

Name	Spencer Wells (straight and curved)
Purpose	Clamping blood vessels
Size	13 - 20 cm
Distinguishing Features	None
Similar Instruments	Mayo, Moynihan, Rochester



Halstead Mosquito

Name	Halstead Mosquito (straight and curved)
Purpose	Clamping small blood vessels
Size	12.5 cm
Distinguishing Features	Small, fine tipped artery forceps
Similar Instruments	Kelly



Scissors

Common Features

Two blades

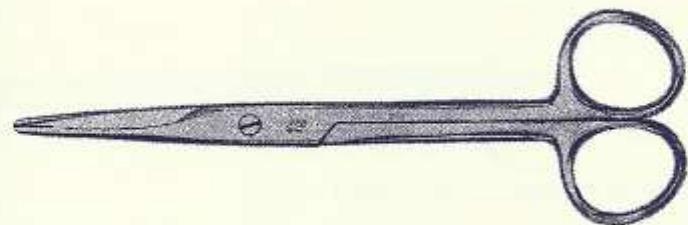
Uses

Sharp and blunt soft tissue dissection (not skin)

Suture cutting

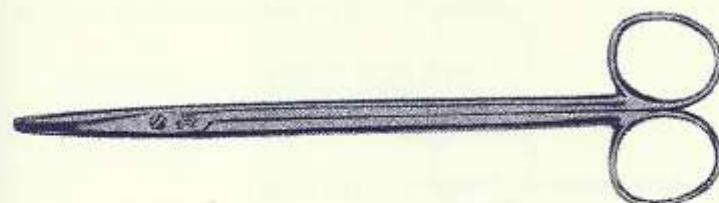
Mayo

Name	Mayo (straight and curved)
Purpose	Soft tissue dissection and cutting
Size	14 - 21.5 cm
Distinguishing Features	Smooth tips
Similar Instruments	Mayo-Stille, Aufrichts



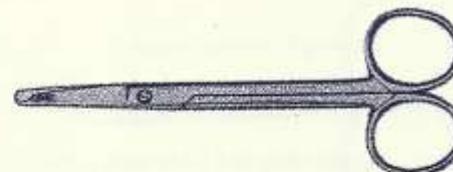
Metzenbaum

Name	Metzenbaum
Purpose	Soft tissue dissection (fine)
Size	14 - 21.5 cm
Distinguishing Features	Long handle, short blade
Similar Instruments	Nelson, McIndoe



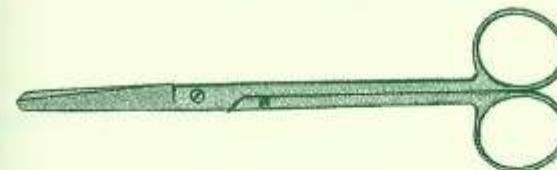
Spencer Stitch

Name	Spencer Stitch
Purpose	Suture removal
Size	9 - 13 cm
Distinguishing Features	Shape of tip specifically for sutures
Similar Instruments	None



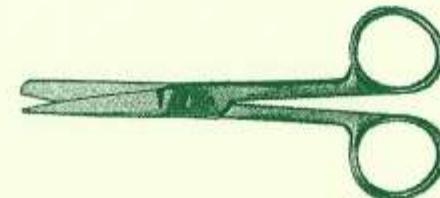
Carless

Name	Carless
Purpose	Suture cutting
Size	17 - 20 cm
Distinguishing Features	Square, blunt tips
Similar Instruments	Standard blunt/blunt



Standard

Name	Standard (straight and curved, sharp or blunt.)
Purpose	Cutting fur or sutures
Size	10 - 20 cm
Distinguishing Features	Different shaped blades
Similar Instruments	Nurses scissors



Lister

Name	Lister
Purpose	Bandage cutting/removal
Size	14 - 20 cm
Distinguishing Features	Angled beyond joint with a flattened tip
Similar Instruments	Stadler



Dissecting Forceps

Common Features

Handle with serration for grip

Tips may be rat toothed or serrated

Use

Intermittent, temporary grasping of:

tissue

skin

soft tissue

viscera

Standard, Plain and Toothed

Name	Continental Standard
Purpose	Handling soft tissue
Size	11.5 - 30 cm
Distinguishing Features	Rounded serrated tips
Similar Instruments	Bonney (plain) Lane



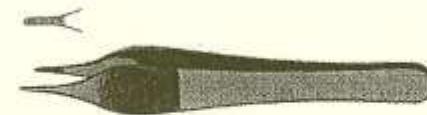
Continental Standard (End Toothed)

Name	Continental Standard (End Toothed)
Purpose	Handling skin
Size	11.5 - 30 cm
Distinguishing Features	Narrow, rat toothed tips
Similar Instruments	Semkin, Gillies



Adsons

Name	Adsons (plain end)
Purpose	Fine handling of soft tissue
Size	13 - 18 cm
Distinguishing Features	Widened area proximal to the tips
Similar Instruments	Gillies, McIndoe



Emmett

Name	Emmett
Purpose	Handling deep, soft tissue (e.g., uterus)
Size	20 cm
Distinguishing Features	Long, thin tips with a broad proximal portion
Similar Instrument	None



Debakey

Name	Debakey
Purpose	Atraumatic handling of viscera Useful for abdominal and thoracic surgery
Size	15 cm, 18 cm, 19.5 cm
Distinguishing Features	Longitudinal grooves along both tips
Similar Instruments	Cooley Forceps



Tissue Forceps

Common Features

Ring grip for fingers

Ratchet maintains a closed position

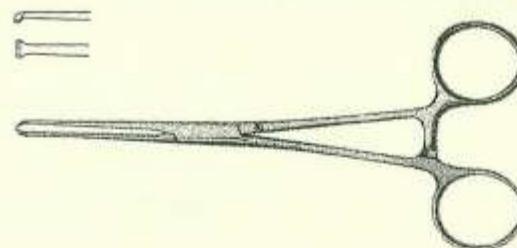
Tip has a fine area of contact

Uses

Prolonged grasping of soft tissue or viscera

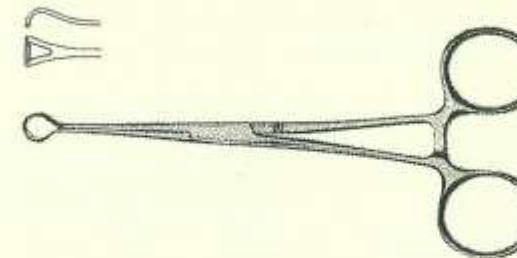
Allis

Name	Allis
Purpose	Handling soft tissue (not viscera)
Size	15cm, 20 cm
Distinguishing Features	Tip rounded with teeth on the gripping surface
Similar Instruments	Judd-Allis, Stiles



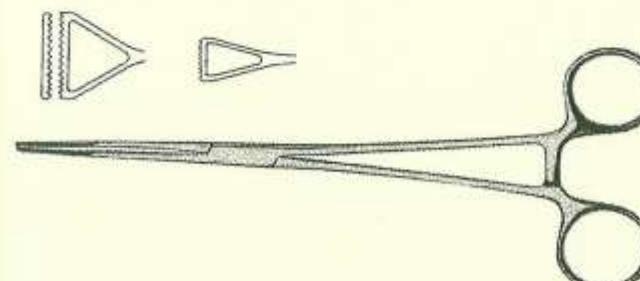
Babcock

Name	Babcock Intestinal Forceps
Purpose	Handling soft tissue and viscera
Size	15 - 23 cm
Distinguishing Features	Tip shape triangular and curved longitudinal lines on the grasping surface Finer ends than the Allis Tissue Forceps
Similar Instruments	Duval



Duval

Name	Duval
Purpose	Handling soft tissue and viscera (lung lobes)
Size	19 cm
Distinguishing Features	Flattened triangular tip Fine teeth along the gripping surface
Similar Instruments	Babcock



Visceral Clamps

Common Features

Ring grip for fingers

Ratchet maintains a closed position

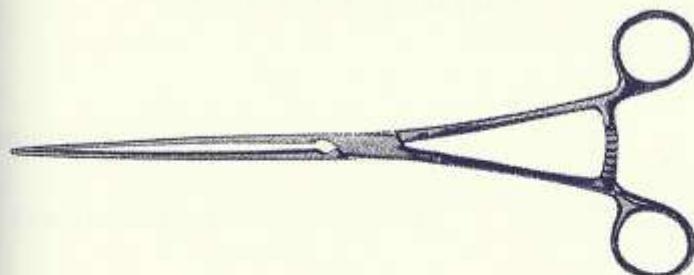
Flattened, elongated clamps

Use

Occluding visceral lumen

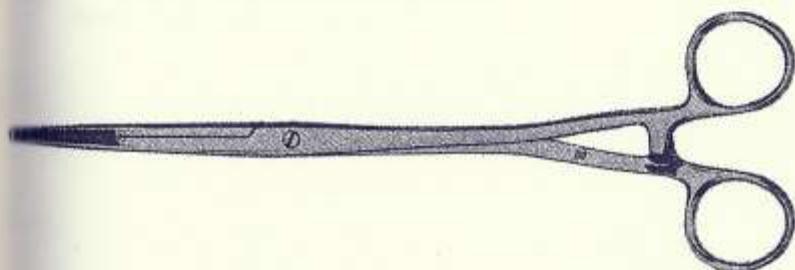
Doyen Mayo-Robson

Name	Doyen Mayo-Robson
Purpose	Visceral occlusion (intestine and stomach)
Size	24 cm
Distinguishing Features	Gap between grasping surfaces
Similar Instruments	Lane



Parker-Kerr

Name	Parker-Kerr
Purpose	Occlusion of viscera, e.g., cervix
Size	25 cm
Distinguishing Features	Heavy forceps with curved tips and screw joint No gap between the grasping surfaces
Similar Instruments	Geary Grant Cholecystectomy Forceps



Towel Clamps

Common Features

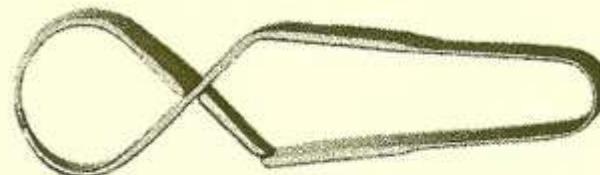
Sharp curved tips which cross over

Use

Anchoring drapes to the patient

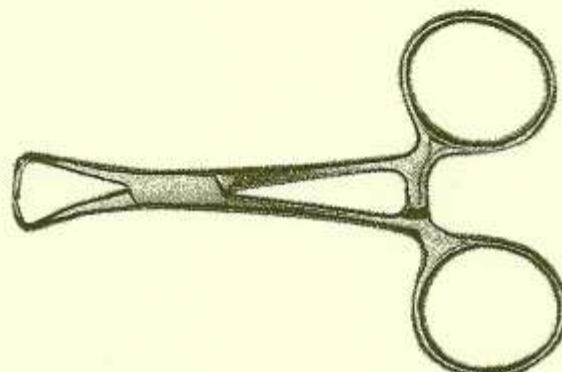
Cross Action

Name	Cross Action
Purpose	Anchoring drapes to the surgical field
Size	9.5 - 13.5 cm
Distinguishing Features	Spring type cross action
Similar Instruments	Jones, Schaedel



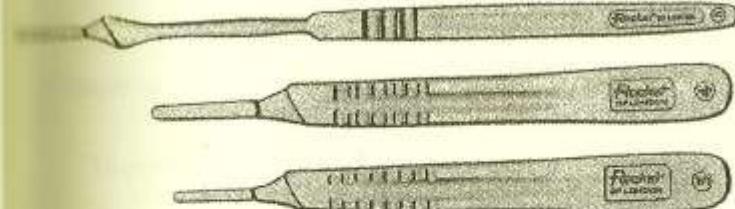
Backhaus

Name	Backhaus
Purpose	Anchoring drapes to the surgical field
Size	9.5 cm
Distinguishing Features	Box joint and ratchet
Similar Instruments	Duff (has teeth at tip and screw joint)



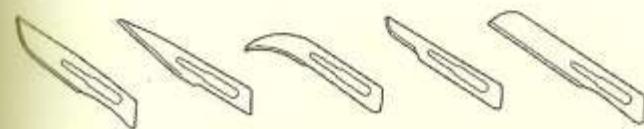
Scalpel Handles

Name	Scalpel Handles, Size No 3, 4 and 5
Purpose	For attachment of scalpel blades
Size	No 3, 4 and 5
Distinguishing Features	The No 5 handle is longer and narrow None of them could be mistaken for anything else
Similar Instruments	None



Scalpel Blades

Name	Scalpel Blades, Size Nos 10, 11, 12, 15 and 20
Purpose	Tissue incision and transection
Size	Nos 10, 11, 12, 15 and 20
Distinguishing Features	See illustrations
Similar Instruments	None



Retractors - Handheld

Common Features

Grooved handle

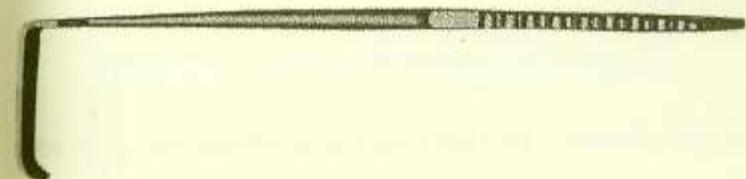
Hook-like end - may be flattened

Uses

Retraction of soft tissue, viscera and bone

Langenbeck

Name	Langenbeck
Purpose	Soft tissue retraction to expose other structures
Size	23 x 7 mm, 44 x 13 mm, 64 x 26 mm
Distinguishing Features	Flat blade "L" shaped retractor Grooved handle
Similar Instruments	Morris



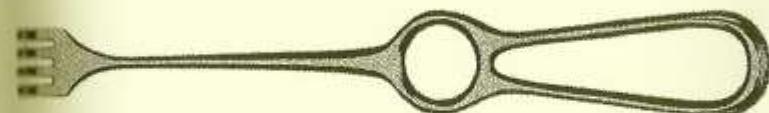
Hohmann

Name	Hohmann
Purpose	Retraction within a joint
Size	12 mm and 18 mm wide
Distinguishing Features	Small beak at the tip of the retractor
Similar Instruments	None



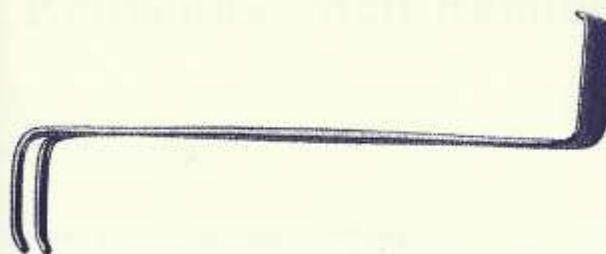
Volkmann

Name	Volkmann
Purpose	Retraction of tendon and muscle to expose other structures
Size	21.5 cm
Distinguishing Features	Tip looks like a rake
Similar Instruments	Senn



Czerny

Name	Czerny
Purpose	Soft tissue retraction
Size	18 cm
Distinguishing Features	Flat blade at one end and a double prong at the other
Similar Instruments	Mathieu



Retractors - Self Retaining

Common Features

Ratchet which maintains open position

Uses

Prolonged retraction of soft tissue, viscera and bone

Gelpi

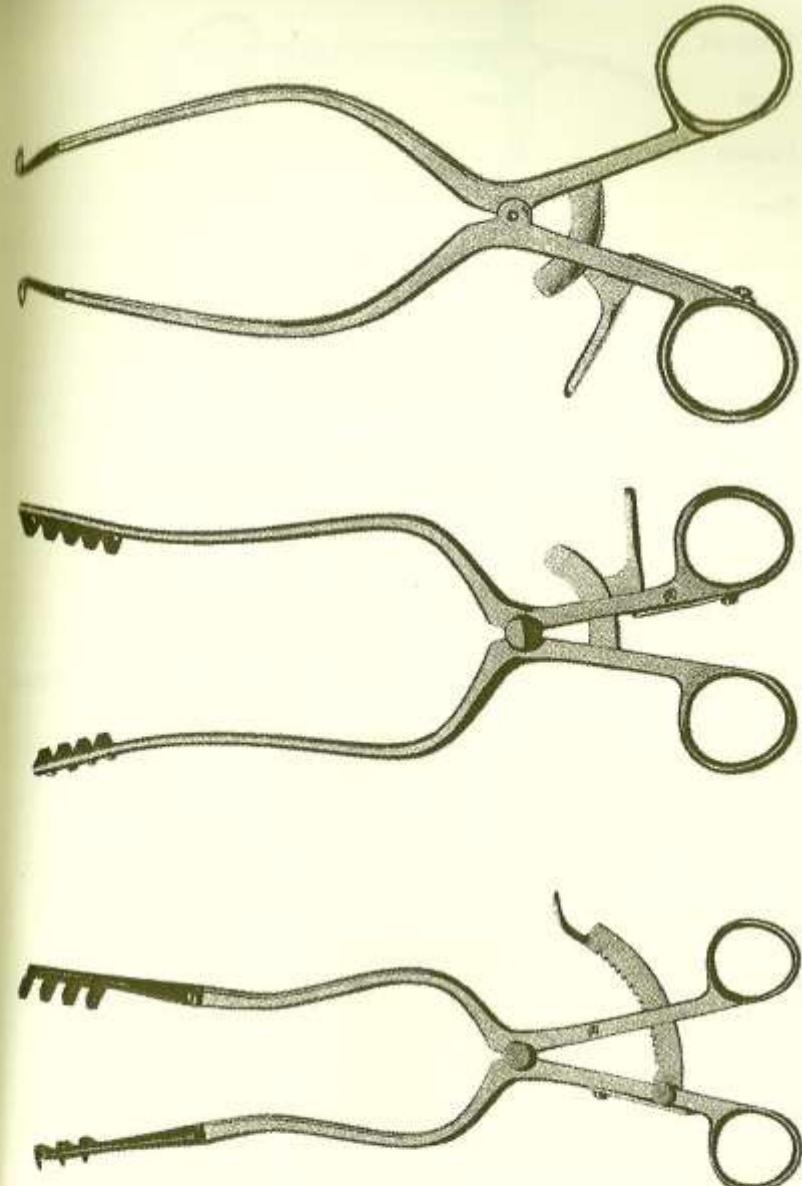
Name	Gelpi (sharp or blunt)
Purpose	Muscle and joint retraction
Size	18 cm
Distinguishing Features	Single pronged outwardly turning tips
Similar Instruments	None

Travers

Name	Travers
Purpose	Muscle and joint retraction
Size	20 cm
Distinguishing Features	Four teeth on each side with blunt tips
Similar Instruments	West Weislander (smaller than Travers being 14 cm) Weislander (four teeth on one side and three teeth on the other - smaller than Travers being 14 cm)

Cone

Name	Cone
Purpose	Retraction of muscle during orthopaedic procedures
Size	25 cm
Distinguishing Features	Joints half way along the arms to allow a flexible field of retraction
Similar Instruments	Travers, West, Weislander (none of these have the joint along each arm)



Gosset

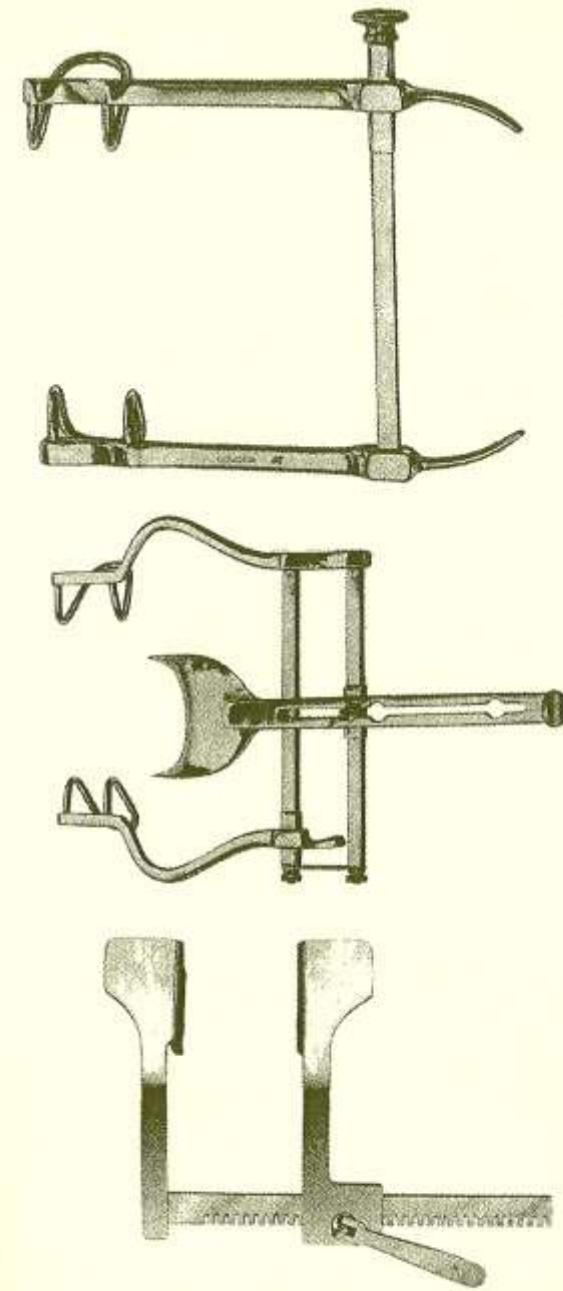
Name	Gosset
Purpose	Abdominal wall retraction
Size	Adult and infant sizes
Distinguishing Features	Square shape with straight arms No central retraction blade
Similar Instruments	None

Balfour

Name	Balfour
Purpose	Abdominal wall and liver retraction
Size	Standard size
Distinguishing Features	Curved arms and a central refractor blade with a wingnut
Similar Instrument	Bourne

Finochietto

Name	Finochietto
Purpose	Rib spreaders
Size	Standard size
Distinguishing Features	Toothed bracket (comb like) for retractor blade attachment
Similar Instruments	Tuffier



Needle Holders

Common Features

Flat tips of blades with stippled surface

Often have ring shaped finger grips

Often have ratchet to maintain closure

May be combined with scissor blades

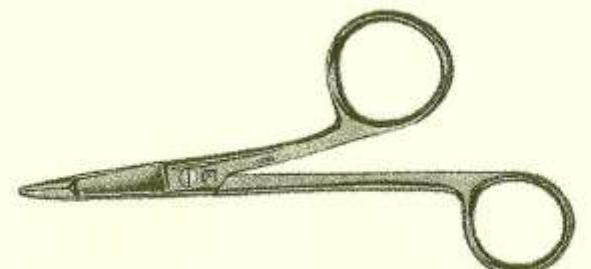
Uses

Holding needles

Cutting sutures

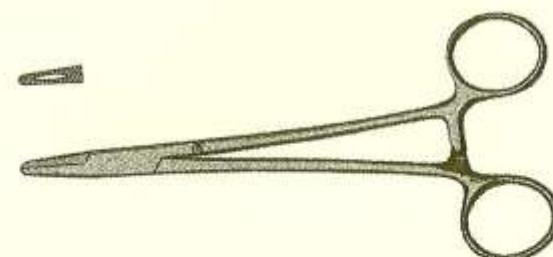
Gillies

Name	Gillies (handheld)
Purpose	Holding needles and cutting sutures
Size	16 cm
Distinguishing Features	One handle shorter than the other with larger thumb/finger grip Has a cutting edge
Similar Instruments	None



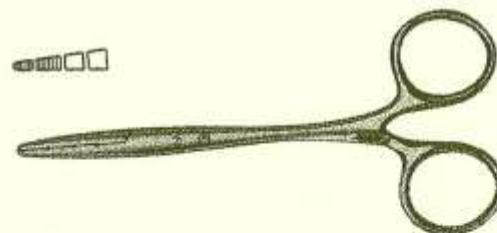
Mayo Hagar

Name	Mayo Hagar (self retaining) (gold handles indicate Tungsten Carbide tips)
Purpose	Holding needles
Size	14 - 20 cm
Distinguishing Features	Flat tips not serrated (as in artery forceps) Indentation on grasping surface (see picture) which similar instruments do not have
Similar Instruments	Wright



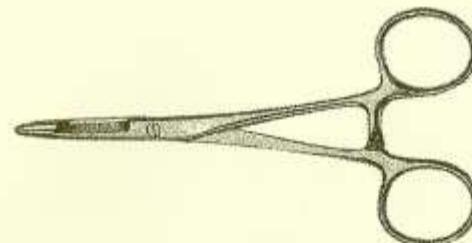
Bruce Clarke

Name	Bruce Clarke (self retaining)
Purpose	Holding needles
Size	13 cm
Distinguishing Features	When closed, small circular holes are apparent along the length of the grasping surface
Similar Instruments	None



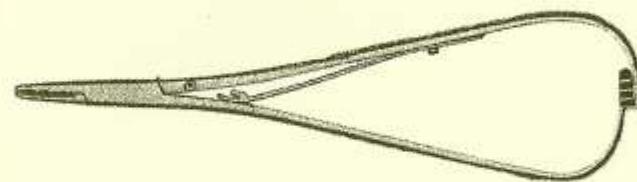
Olsen Hegar

Name	Olsen Hegar (self retaining)
Purpose	Holding needles and cutting sutures
Size	14 cm and 17 cm
Distinguishing Features	Scissors incorporated distal to the needle holding tips
Similar Instruments	None



McPhail

Name	McPhail (self retaining with copper lined jaw)
Purpose	Holding needles
Size	18 cm
Distinguishing Features	Copper lined jaws and pear shaped handles
Similar Instruments	None



Lead/Cable

Name	Lead/cable (red rubber)
Purpose	For attachment of diathermy blade/forceps to the machine
Size	Standard length
Distinguishing Features	Hook at one end for attachment to the diathermy machine Usually made of red rubber
Similar Instruments	Bipolar diathermy cable

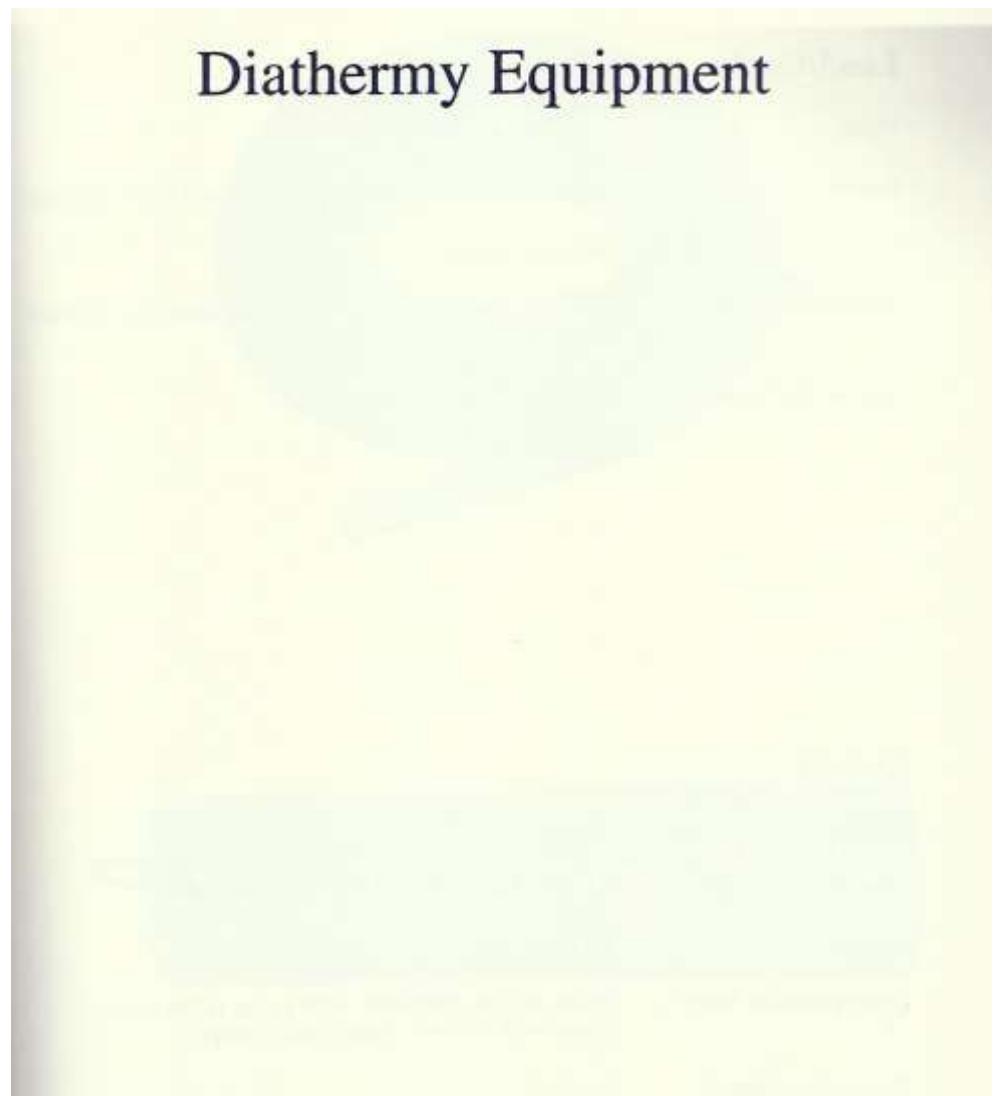


Quiver

Name	Quiver
Purpose	Holding diathermy blade/forceps/scissors
Size	Standard size
Distinguishing Features	Plastic hollow container with a ring at the top to secure with a towel clamp onto a drape
Similar Instruments	None



Diathermy Equipment



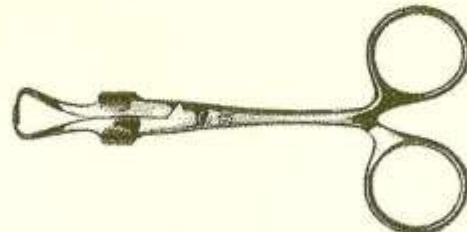
Beare Dissecting Forceps

Name	Beare Dissecting Forceps
Purpose	Holding tissues/vessels while diathermy takes place
Size	15 cm
Distinguishing Features	Rubber coated forceps (except tip and insertion) to connect to a diathermy lead
Similar Instruments	Waugh



Robin Anchoring Clip

Name	Robin Anchoring Clip
Purpose	Anchoring diathermy lead to drapes
Size	13 cm
Distinguishing Features	Bracket on either side of the body to hold diathermy lead
Similar Instruments	Could be confused with a Backhaus Towel Clamp



Specialist Equipment

Orthopaedic Equipment

Implants

ASIF Equipment (Association for the Study of Internal Fixation)

Ophthalmic Instruments

Dental Instruments

Miscellaneous Instruments

Orthopaedic Equipment

Chisel

Name	Stille Chisel
Purpose	To shave bone
Size	20 cm
Distinguishing Features	Bevelled on <u>one</u> side only to allow the instrument to sit flush with bone
Similar Instruments	Osteotome



Osteotome

Name	Stille Osteotome
Purpose	To make a precise bone cut (e.g., trochanteric osteotomy, excision arthroplasty)
Size	20 cm
Distinguishing Features	Tip bevelled on <u>both</u> sides
Similar Instruments	Chisel



Gouge

Name	Stille Gouge
Purpose	To shave bone where bone contouring is needed
Size	20 cm
Distinguishing Features	Crescent moon-shaped tip
Similar Instruments	Osteotome, Chisel, Periosteal Elevator



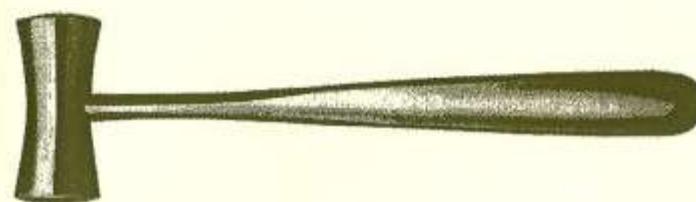
Periosteal Elevator

Name	Adson Periosteal Elevator
Purpose	Raise periosteum from bone before plating or drilling
Size	Jaw width 7 mm
Distinguishing Features	Rounded, curved tip
Similar Instruments	Bristow, Farabeuf



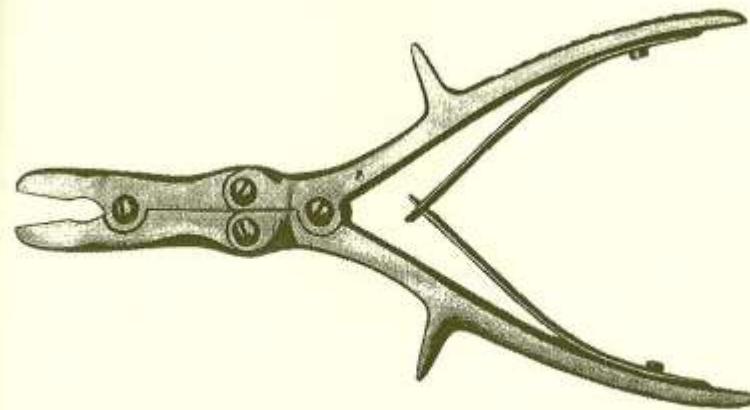
Mallet

Name	Small Mallet
Purpose	For use with chisels, gouges and osteotomes
Size	Weight 250 g (8.5 oz)
Distinguishing Features	It looks like a mallet
Similar Instruments	Heath



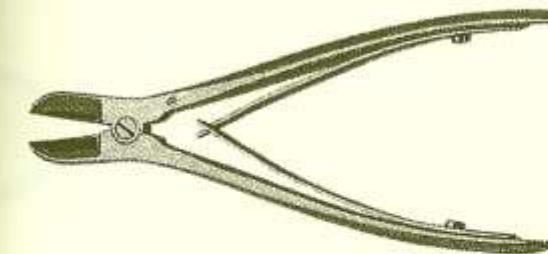
Rongeurs

Name	Stille Luer Rongeurs
Purpose	Nibbling pieces of bone
Size	21.5 cm
Distinguishing Features	Double action joint, small projections on handles Lever action to spring back into open position Cup like cutting tips
Similar Instruments	Jansen Middleton



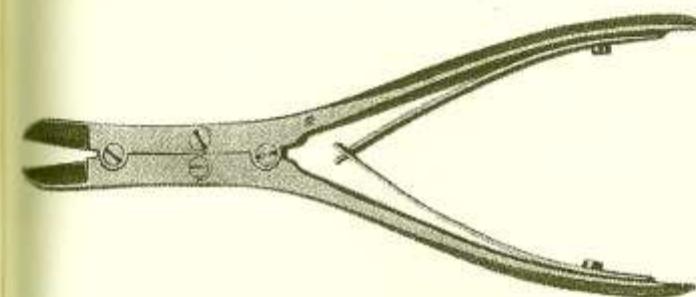
Bone Cutting Forceps

Name	Paton Bone Cutting Forceps
Purpose	To cut pieces of bone
Size	14 cm
Distinguishing Features	Single action bone cutting forceps Lever action in the centre Flat, sloping blades.
Similar Instruments	Liston



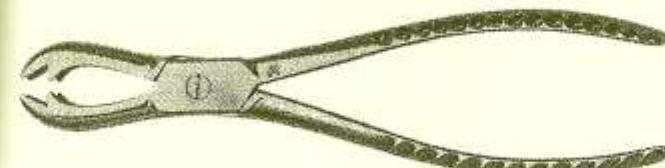
Bone Cutting Forceps

Name	Ruskin Liston (angled and straight) Bone Cutting Forceps
Purpose	To cut pieces of bone
Size	15 cm and 20 cm
Distinguishing Features	Double action joint allowing for less physical force to cut bone Delicate cutting blades
Similar Instruments	None



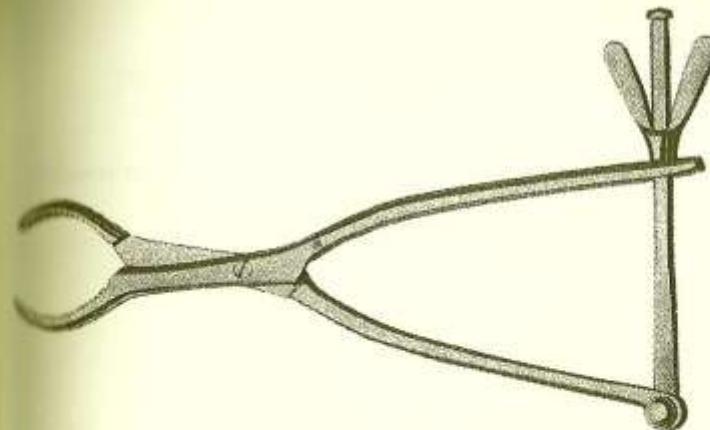
Bone Holding Forceps

Name	Fergusson Bone Holding Forceps
Purpose	Securing bone to prevent movement during orthopaedic procedures
Size	15 cm
Distinguishing Features	Heavy instrument Double toothed grip at the tip Not self retaining
Similar Instruments	None



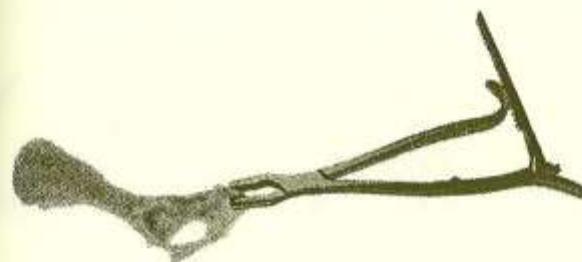
Bone Holding Forceps

Name	Hey Grove Bone Holding Forceps
Purpose	Securing bone to prevent movement during orthopaedic procedures
Size	20, 25 and 30 cm
Distinguishing Features	Wing nut maintains closure of the tips
Similar Instruments	None



Bone Holding Forceps

Name	Kern Bone Holding Forceps
Purpose	Securing bone to prevent movement during orthopaedic procedures
Size	15cm and 16 cm
Distinguishing Features	Four pointed prongs on jaws for a non-slip grip
Similar Instruments	Lane Bone Holding Forceps



Jacobs Chuck for Intramedullary Pinning

Name	Jacobs Chuck for intramedullary pinning
Purpose	Introduction or extraction of pins, e.g., K wires and Steinmann pins
Size	Small (4 mm capacity) Standard (6 mm capacity)
Distinguishing Features	A very heavy instrument It has a hole through the centre of it to allow pin to be held Has a key with it to close aperture of three teeth around pin
Similar Instruments	None



Implants

Implants

Pins

Name	Steinmann Pin (trochar, bevelled, screw tips)
Purpose	Orthopaedics
Size	Various diameters 1.6 - 8 mm
Distinguishing Features	The diameter of the pin indicate the pin type Kirschner pins have much smaller diameters
Similar Instruments	Kirschner wire/pin



Pins

Name	Rush Pin
Purpose	Used in pairs for repair of the proximal and distal third of long bones
Size	2.5 mm + 3 mm diameter (various lengths)
Distinguishing Features	Looks like a shepherd's crook at one end, flattened at the other end
Similar Instruments	None



Plates

Name	Venables Plate
Purpose	Fracture fixation
Size	Various lengths and numbers of holes
Distinguishing Features	Rectangular plate with <u>round</u> holes
Similar Instruments	Dynamic Compression Plate



Plates

Name	Sherman Plate
Purpose	Fracture fixation
Size	Various lengths and numbers of holes
Distinguishing Features	The plate looks like the tracks on a sherman tank, ie, narrower between the holes
Similar Instruments	Burns and Lane



Plates

Name	Dynamic Compression Plate
Purpose	Fracture fixation and compression
Size	1.5 mm, 2.0 mm, 2.7 mm, 3.5 mm and 4.5 mm (narrow and broad)
Distinguishing Features	Rectangular plate with <u>oval</u> holes
Similar Instruments	Venables Plate



Plates

Name	Reconstruction Plate
Purpose	Fracture fixation and compression
Size	2 mm, 2.4 mm, 2.7 mm, 3.5 mm and 4.5 mm
Distinguishing Features	Rectangular plate with <u>oval</u> holes and bites taken out of each side
Similar Instruments	None



Screws

Name	Cancellous Screw (pre-tapped)
Purpose	For securing a plate to cancellous bone and re-attaching bone fragments
Size	3.5 mm, 4 mm and 6.5 mm
Distinguishing Features	Coarser thread than cortical screw for better "bite" into bone Blunt tip
Similar Instruments	Cortical Bone Screw



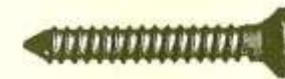
Screws

Name	Cortical Screw (pre-tapped)
Purpose	For securing a plate to cortical bone and re-attaching bone fragments
Size	2.0 mm, 2.7 mm, 3.5 mm and 4.5 mm
Distinguishing Features	Fine wedge shaped thread Hexagonal shaped hole in head Blunt tip
Similar Instruments	Cancellous Screws (pre-tapped)



Screws

Name	Self tapping Screw
Purpose	Plate fixation and re-attachment of bone fragments
Size	2.0 mm, 2.7 mm and 3.5 mm
Distinguishing Features	Sharp tip
Similar Instruments	Cancellous /cortical pre-tapped screws



ASIF Equipment
Association for the Study of Internal Fixation

Drill Bit

Name	Drill Bit (quick coupling)
Purpose	To drill a hole into bone
Size	1.1 - 4.5 mm diameter
Distinguishing Features	Distal end tapered for quick coupling (as with tap)
Similar Instruments	Drill bit for other drills and Jacob Chuck



Drill Guide

Name	Drill Guide
Purpose	To guide and support the drill bit into the correct position during drilling through a plate in the neutral and load positions
Size	Must correspond with drill bit and plate sizes
Distinguishing Features	Long body with angled tips with coloured inserts at both ends
Similar Instruments	Other drill guides



Drill Sleeve

Name	Drill Sleeve
Purpose	To protect tissue from drill bits and taps
Size	Must correspond with the drill bit
Distinguishing Features	Long body with angled tips of uniform shape
Similar Instruments	Universal drill guide



Depth Gauge

Name	Depth Gauge
Purpose	Measures the depth of the hole made in bone to enable exact length of screw to be selected
Size	One for 4.5 to 6.5 mm screws One for 2.7 to 4.0 mm screws One for 1.5 to 2.0 mm screws
Distinguishing Features	Narrow hooked tip and an adjustable ruler
Similar Instruments	None



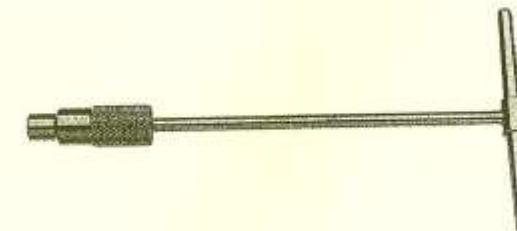
Tap

Name	Tap for Cortical Bone Screws
Purpose	Cuts a thread into bone for the secure anchoring of non-self tapping screws
Size	Must correspond with screw size
Distinguishing Features	Distal end looks like the screw thread with vertical grooves cut into it. Quick coupling distal end (as with drill bit)
Similar Instruments	Tap for cancellous bone screws (thread is deeper)



Tap Handle

Name	Tap Handle (with quick couple)
Purpose	For attachment of the tap to enable use by the operator
Size	Corresponds with screw sizes
Distinguishing Features	The tap handle for the 2.7 mm, 3.5 mm and 4.5 mm cortical and 6.5 mm cancellous screws is T shaped
Similar Instruments	None



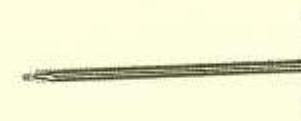
Screwdriver

Name	Screwdriver
Purpose	To screw screws into bone
Size	Corresponds with screw size
Distinguishing Features	All ASIF screwdrivers have a hexagonal head
Similar Instruments	None



Countersink (Quick Coupling)

Name	Countersink (quick coupling)
Purpose	To allow screws to sit flush with bone when a plate is not being used It also disperses forces from below the screw head.
Size	To correspond with screw size
Distinguishing Features	Fluted tip with nipple on end
Similar Instruments	None



Ophthalmic Instruments

Scissors

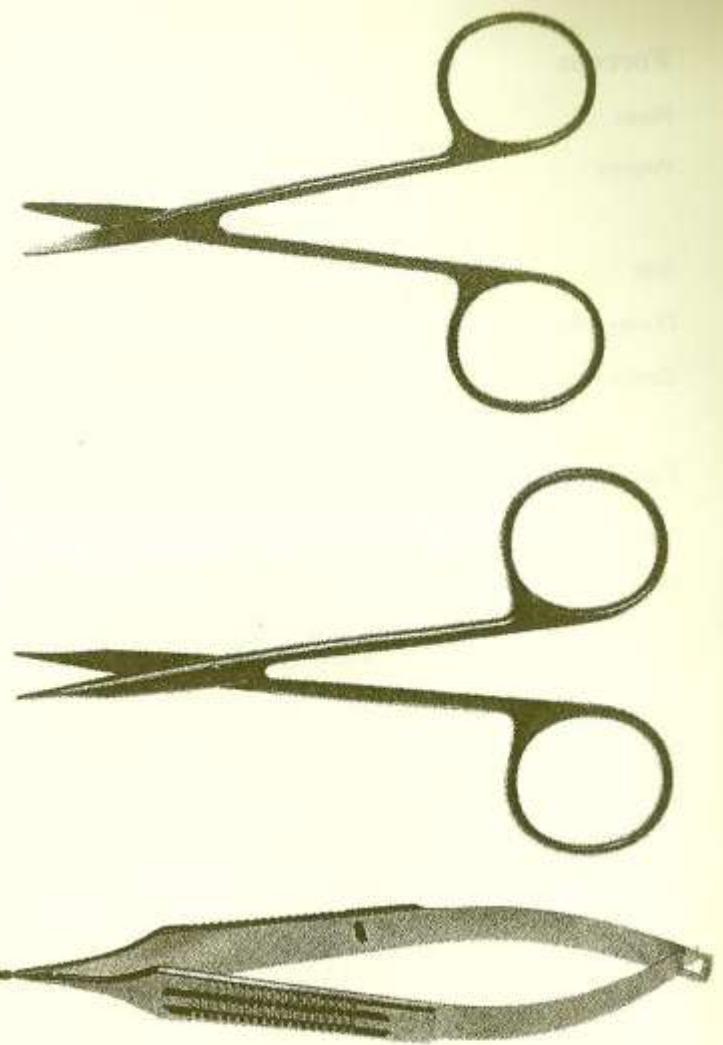
Name	Iris Scissors
Purpose	Cutting the iris. General purpose conjunctival scissors
Size	12 mm cutting length
Distinguishing Features	Small sharp scissors
Similar Instruments	Williamson - Noble Iris Scissors

Scissors

Name	Tenotomy (Stevens)
Purpose	For fine dissection during intra-ocular surgery
Size	20 - 35 mm blade length
Distinguishing Features	A tapering shaped end
Similar Instruments	None

Scissors

Name	Castroviejo - Vannus Capsulotomy (straight and curved)
Purpose	To cut away the anterior lens capsule during cataract surgery
Size	6 mm cutting length
Distinguishing Features	Spring action pear shaped handle and tiny blades
Similar Instruments	None



Forceps

Name	Catford Micro-corneal Forceps (with or without teeth)
Purpose	Atraumatic grasping of the cornea and sutures There is a tying platform which allows sutures to be held without risk of fraying
Size	9 cm long
Distinguishing Features	Very fine tips with a tying platform
Similar Instruments	Castroviejo, MacPherson and Harms Forceps



Forceps

Name	Chalazion Forceps
Purpose	To stabilise the eyelids and provide haemostasis during surgery on the lids They also protect the underlying globe during cryosurgery.
Size	Plate width 26 mm. Instrument length 8.5 cm..
Distinguishing Features	Oval tip with solid back plate
Similar Instruments	Tarsal Cyst Forceps, Wilde Entropian Forceps



Forceps

Name	Bennett Cilia Forceps
Purpose	For plucking distichia (extra eye lashes)
Size	6.5 mm long
Distinguishing Features	Small round tips with a hole in the centre
Similar Instruments	Round-end Cilia Forceps



Forceps

Name	Capsulorhexis Forceps
Purpose	To grasp and tear the lens capsule
Size	11 cm (length)
Distinguishing Features	Very fine tips with hooked ends
Similar Instruments	None



Forceps

Name	Micro-corneal Tying Forceps
Purpose	To tie very fine suture material (e.g., 10/0 Polyglactin 9/0)
Size	11 cm (length)
Distinguishing Features	Fine 'buck tooth' like tips
Similar Instruments	MacPherson Tying Forceps



Forceps

Name	Capsule Forceps
Purpose	To grab the anterior lens capsule during extra-capsular cataract extraction
Size	11 cm (length)
Distinguishing Features	Cross action, wide handle
Similar Instruments	None



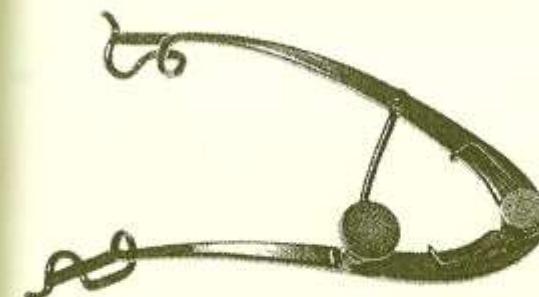
Hook

Name	Kirby Expressor Hook and Lens Loop
Purpose	Used during extra-capsular and intra-capsular lens removal The hook is used from the outside to put pressure on the lens and exteriorise it The loop is placed into the anterior chamber to help 'catch' the lens
Size	15 cm long
Distinguishing Features	It has a loop at one end and a blunt hook at the other
Similar Instruments	None have this combination



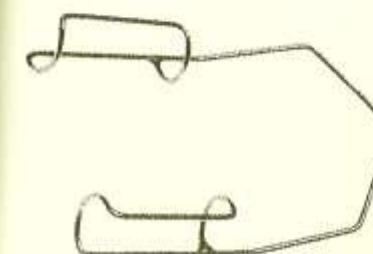
Speculum

Name	Williams Speculum
Purpose	To retract eyelids to allow access to eye ball
Size	8.5 cm long
Distinguishing Features	An adjustable screw at distal end to allow self retention
Similar Instruments	Clark and Lang Speculae



Speculum

Name	Barraquer Speculum
Purpose	To retract eye lids to allow access to the eye ball
Size	5 cm long
Distinguishing Features	Small fine speculum with no screw adjustment
Similar Instruments	Brown and Pierse Speculae



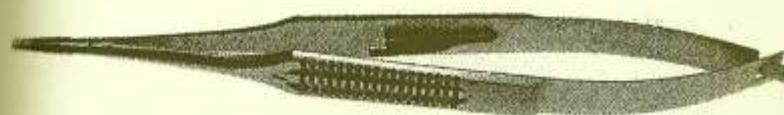
Dilator

Name	Nettleship Dilator
Purpose	To dilate narrow canals, eg. lacrimal duct
Size	11 cm
Distinguishing Features	It looks like a miniature javelin with longitudinal lines along the handle
Similar Instruments	Wilder Lacrimal Dilator (cross-hatching along the handle)



Needle Holders

Name	Castroviejo (Micro) Needle Holders
Purpose	Holding needles for suturing
Size	13 cm (length)
Distinguishing Features	Flat handles with no finger rings
Similar Instruments	Weiss, Troutman and Catford



Dental Instruments

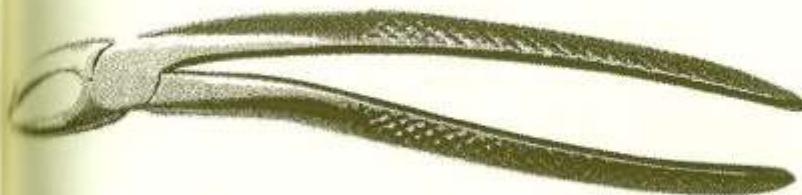
Common Features

All hand instruments should be held in a modified pen grip

Many hand instruments are superficially similar and need careful studying to recognise their differences

Extraction Forceps

Name	Extraction Forceps (small and large)
Purpose	Extraction of the multi-rooted teeth in the dog and cat
Size	15 cm long (small), 20 cm long (large)
Distinguishing Features	Cup like cutting tips (similar to rongeurs)
Similar Instruments	Calculus Forceps



Dental Elevator

Name	Dental Elevator (chisel)
Purpose	To separate the attachment of the tooth root to the alveolar bone
Size	A variety of tip sizes to fit teeth of differing size and root diameter
Distinguishing Features	Single ended instrument with relatively large hexagonal or octagonal handles



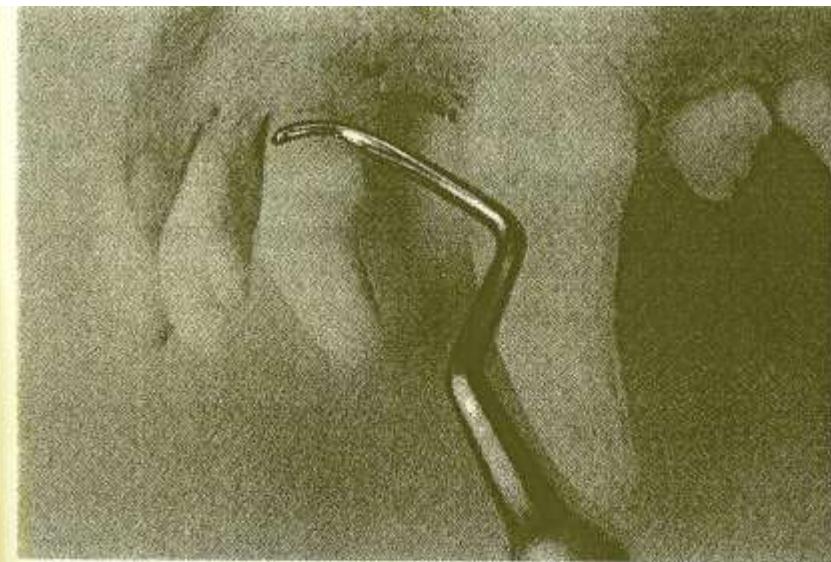
Periosteal Elevator

Name	Periosteal Elevator (double ended)
Purpose	To elevate the gingiva to expose bone during tooth extractions and oral surgery
Size	16 cm long
Distinguishing Features	Angled, rounded tip
Similar Instruments	Dental Mixing Spatula, Dental Luxator



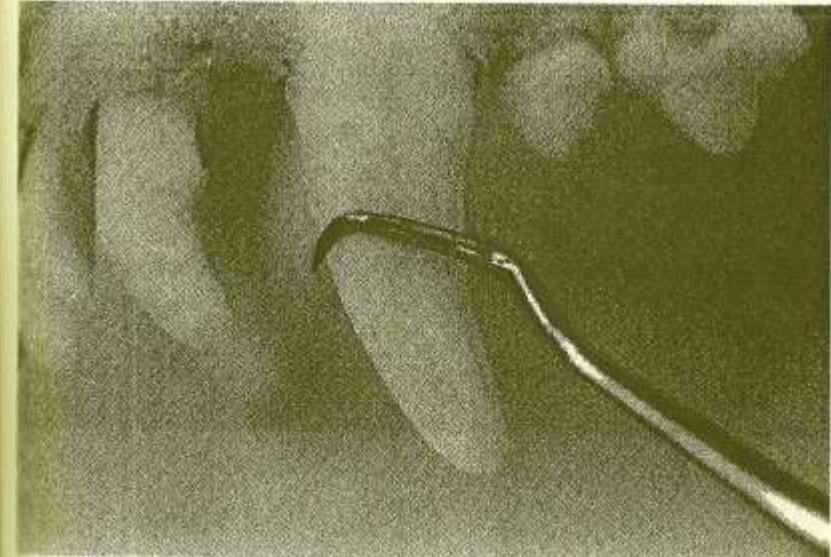
Subgingival Curette

Name	Subgingival Curette
	Universal: two cutting surfaces allowing either side to be used
	Dedicated: one cutting surface allowing one side only to be used
Purpose	To remove deposits of food, plaque and calculus from the <u>subgingival</u> area
Size	16 cm long
Distinguishing Features	The blade has a rounded tip and the back is curved
Similar Instruments	Supragingival scaler



Supragingival Scaler

Name	Supragingival Scaler
	Universal: two cutting surfaces allowing either side to be used
	Dedicated: one cutting surface allowing one side only to be used
Purpose	To remove deposits of food, plaque and calculus from the <u>supragingival</u> portion of the tooth surface
Size	16 cm long
Distinguishing Features	The blade is pointed and triangular in section
Similar Instruments	Subgingival curette



Dental Explorer

Name	Dental Explorer
Purpose	To explore the hard surface of teeth
Size	16 cm long
Distinguishing Features	Shepherd's hook type sharp tip for use on tooth surface only
Similar Instruments	Probe



Periodontal Probe

Name	Periodontal Probe
Purpose	To be inserted into the gingival sulcus next to a tooth to measure its depth or that of any periodontal pocket that is present
Size	16 cm long
Distinguishing Features	Blunt, rounded tip graduated to assist measurement of pocket depth
Similar Instruments	Explorer



Sharpening Stone

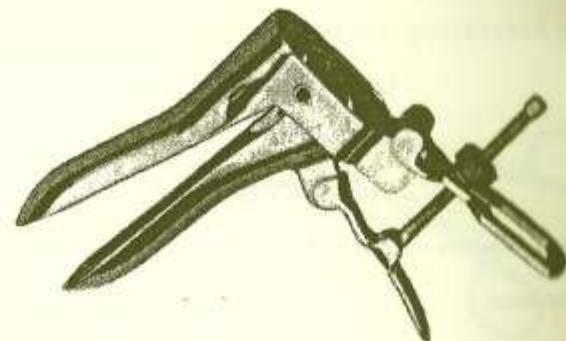
Name	Sharpening Stone
Purpose	Fine stone for sharpening periodontal instruments
Size	Various
Distinguishing Features	Made of stone
Similar Instruments	None



Miscellaneous Instruments

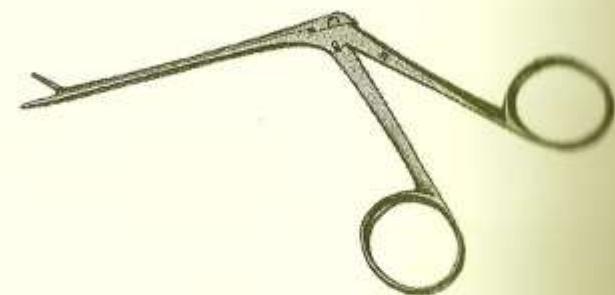
Cusco Vaginal Speculum

Name	Cusco Vaginal Speculum
Purpose	To retract tissue to expose other tissue
Size	Small, medium and large
Distinguishing Features	Duck bill shaped blades
Similar Instruments	Kilian (nasal speculum) for small/young animals



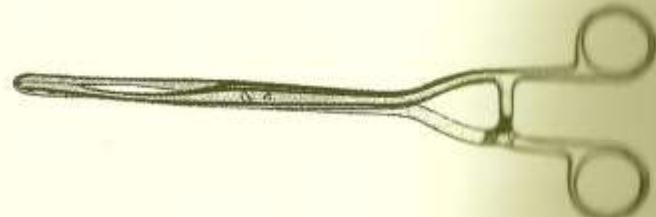
Hartmann Crocodile Forceps

Name	Hartmann Crocodile Forceps (plain)
Purpose	For aural and nasal use
Size	7 cm
Distinguishing Features	Crocodile type jaws at tips
Similar Instruments	Mattieus, swiss pattern



Rampley sponge holding forceps

Name	Rampley Sponge Holding Forceps
Purpose	Holding sponges or swabs for skin preparation prior to surgery
Size	18 cm, 24 cm
Distinguishing Features	Flattened pear shaped ends
Similar Instruments	Foerster



Cheatle Sterilising Forceps

Name	Cheatle Sterilising Forceps
Purpose	Sterile opening of packs by unscrubbed personnel
Size	27 cm and 29 cm
Distinguishing Features	Angled beak shaped tips
Similar Instrument	None

