

LANGENBECK

VETERINARY SURGICAL INSTRUMENTS

AN ILLUSTRATED GUIDE

CROSS ACTION

PARKER KERR

SPENCER STITCH

KOCHER ROCHESTER OSCHNER

ALLIS

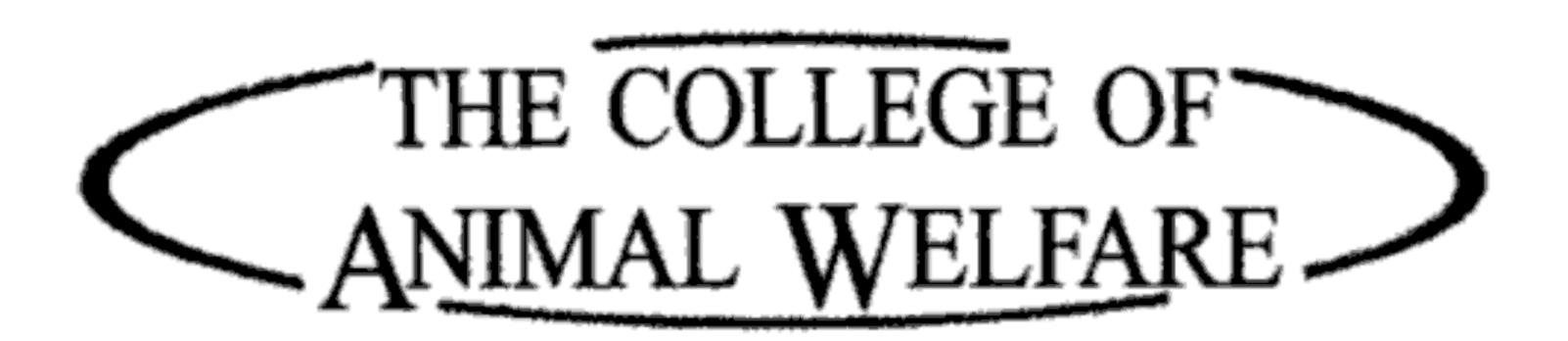
CZERNY

ADSONS

THE COLLEGE OF

ANIMAL WELFARE

Veterinary Surgical Instruments: An Illustrated Guide



P.O. Box 165, Huntingdon PE18 8ET

Veterinary Surgical Instruments: An Illustrated Guide

The College of Animal Welfare





BUTTERWORTH-HEINEMANN

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Contents

GENERAL INSTRUMENTS		1
Artery Fo	rtery Forceps	
	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 Fo	rceps	19
	Allis	20
	Babcock	20
	Duval	20
Visceral (lamps	23
	Doyen Mayo-Robson	24
	Parker-Kerr	24
Towel Clamps		27
	Cross Action	28
	Backhaus	28
Scalpel Ha	andles and Blades	31
-	Scalpel Handles	32
	Scalpel Blades	32
Retractors	s - Handheld	35
	Langenbeck	36
	Hohmann	36
	Volkmann	36
	Czerny	38

Retractors	- Self Retaining	41
	Gelpi	42
	Travers	42
	Cone	42
	Gosset	44
	Balfour	44
	Finochietto	44
Needle Hol	ders	47
	Gillies	48
	Mayo Hegar	48
	Bruce Clarke	48
	Olsen Hegar	50
	McPhail	50
Diathermy	Equipment	53
	Lead/Cable	54
	Quiver	54
	Beare Dissecting Forceps	56
	Robin Anchoring Clip	56
SPECIALI	ST EQUIPMENT	59
Orthopaed	ic Equipment	61
	Stille Chisel	62
	Stille Osteotome	62
	Stille Gouge	62
	Adson Periosteal Elevator	64
	Small Mallet	64
	Stille Luer Rongeurs	64
	Pennybacker Rongeurs	66
	Lempert Rongeurs	66
	Laminectomy Rongeurs	66
	Paton Bone Cutting Forceps	68
	Ruskin Liston Bone Cutting Forceps	68
	Fergusson Bone Cutting Forceps	68
	Hey Grove Bone Holding Forceps	70
	Kern Bone Holding Forceps and Cutters	70
	Jacobs Chuck for Intramedullary Pinning	70
	Wire Twisters	72
	Graft Passer Volkmann Curette	72 72
Implants		75
	Steinmann Pin	76
	Rush Pin	76
	Venables Plate	76

	Sherman Plate	78
	Dynamic Compression Plate	78
	Reconstruction Plate	78
	Cancellous Screw	80
	Cortical Screw	80
	Self Tapping Screw	80
ASIF Instruments		83
	Drill Bit	84
	Drill Guide	84
	Drill Sleeve	84
	Depth Gauge	86
	Tap	86
	Tap Handle	86
	Screwdriver	88
	Countersink	88
Ophthalm	ic Instruments	91
-	Iris Scissors	92
	Tenotomy (Stevens) Scissors	92
	Castroviejo Scissors	92
	Catford Forceps	94
	Chalazion Forceps	94
	Bennett Cilia Forceps	94
	Capsulorhexis Forceps	96
	Micro Corneal Tying Forceps	96
	Capsule Forceps	96
	Kirby Expressor Hook and Lens Loop	98
	Williams Speculum	98
	Barraquer Speculum	98
	Nettleship Dilator	100
	Castroviejo Needle Holders	100
Dental Instruments		103
	Extraction Forceps	104
	Dental Elevator	104
	Periosteal Elevator	104
	Subgingival Curette	106
	Supragingival Scaler	106
	Dental Explorer	108
	Peridontal Probe	108
	Sharpening Stone	108
Miscellaneous Instruments		111
	Cusco Vaginal Speculum	112
	Hartmann Crocodile Forceps	112
	Rampley Sponge Holding Forceps	112
	Cheatle Sterilising Forceps	114

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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

Copyrighted material

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

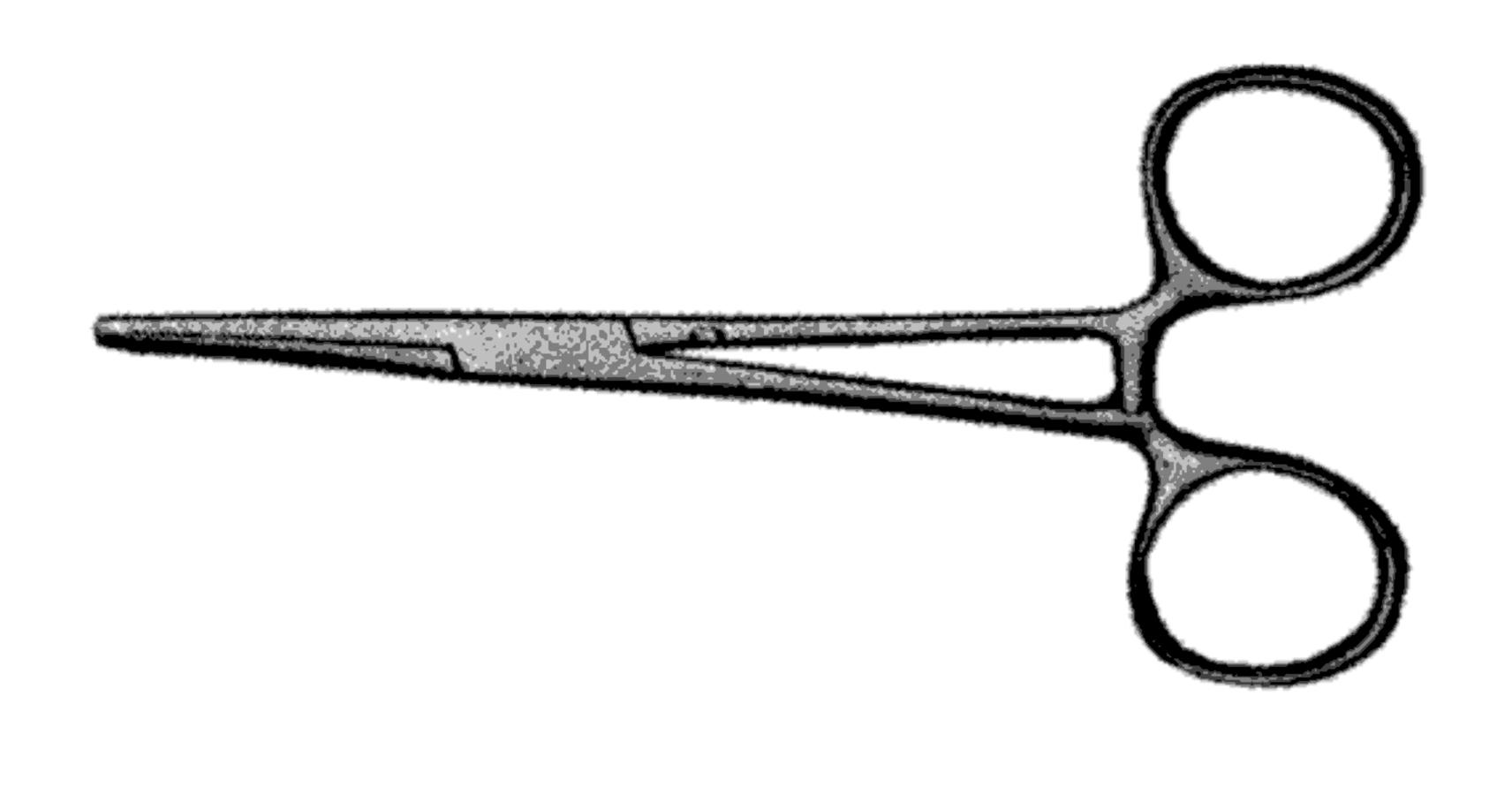
Name Halstead Mosquito (straight and curved)

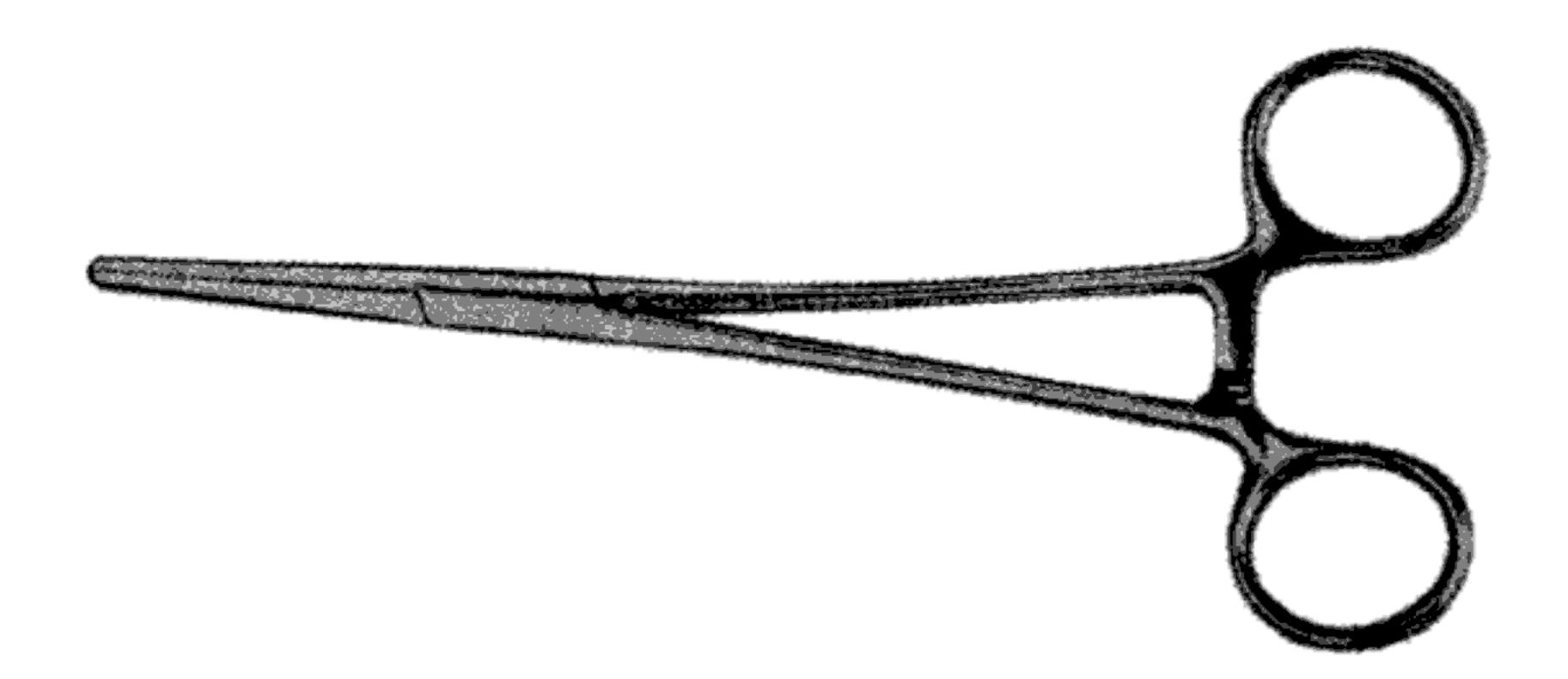
Purpose Clamping small blood vessels

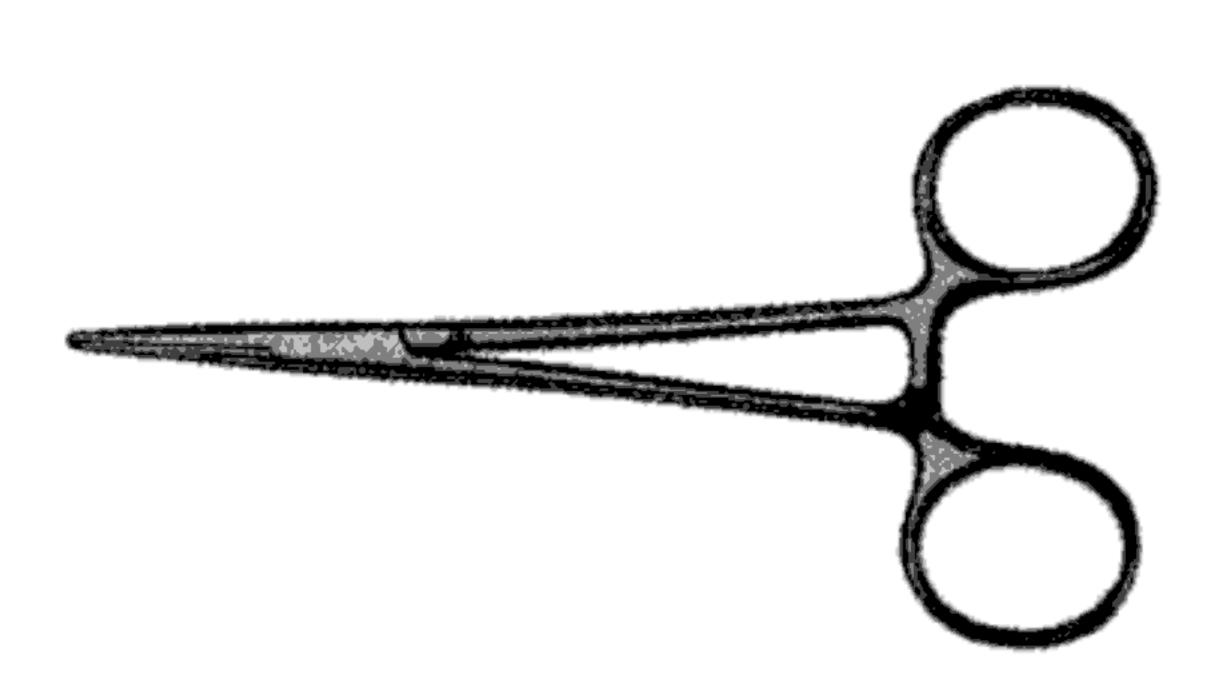
Size 12.5 cm

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

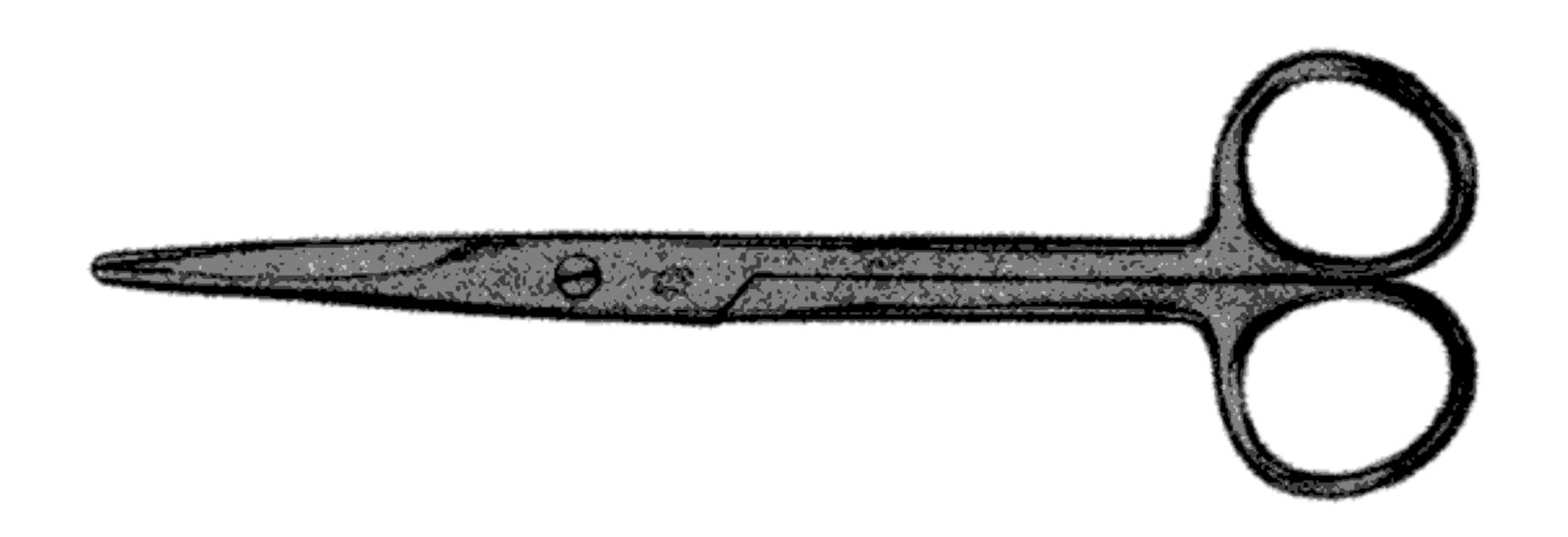
Name Spencer Stitch

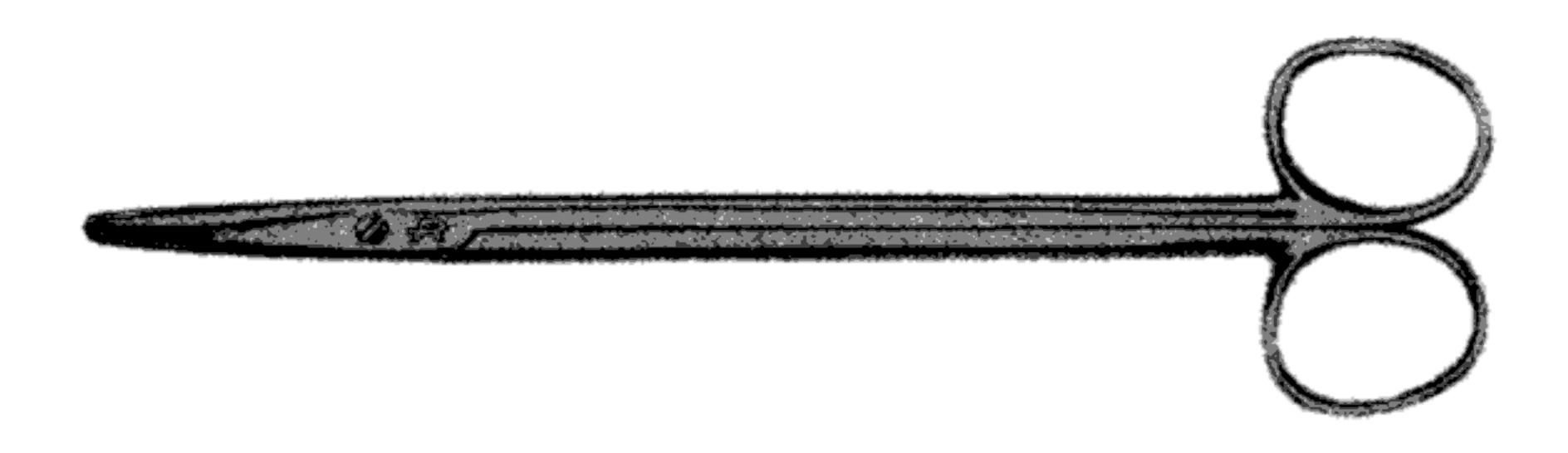
Purpose Suture removal

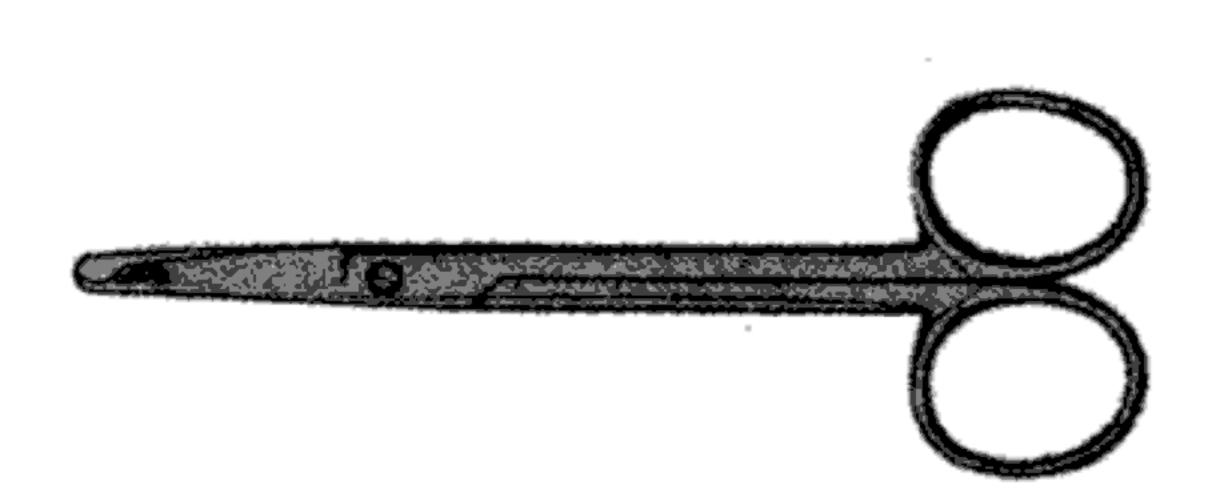
Size 9 - 13 cm

Distinguishing Features Shape of tip specifically for suture removal

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

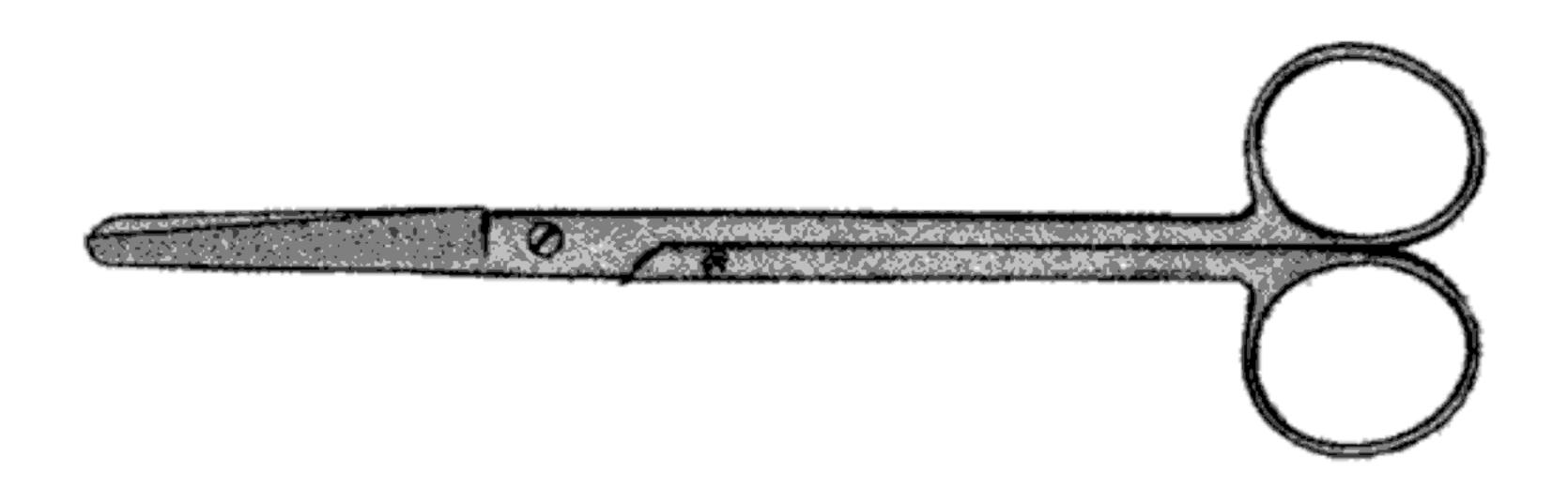
Name Lister

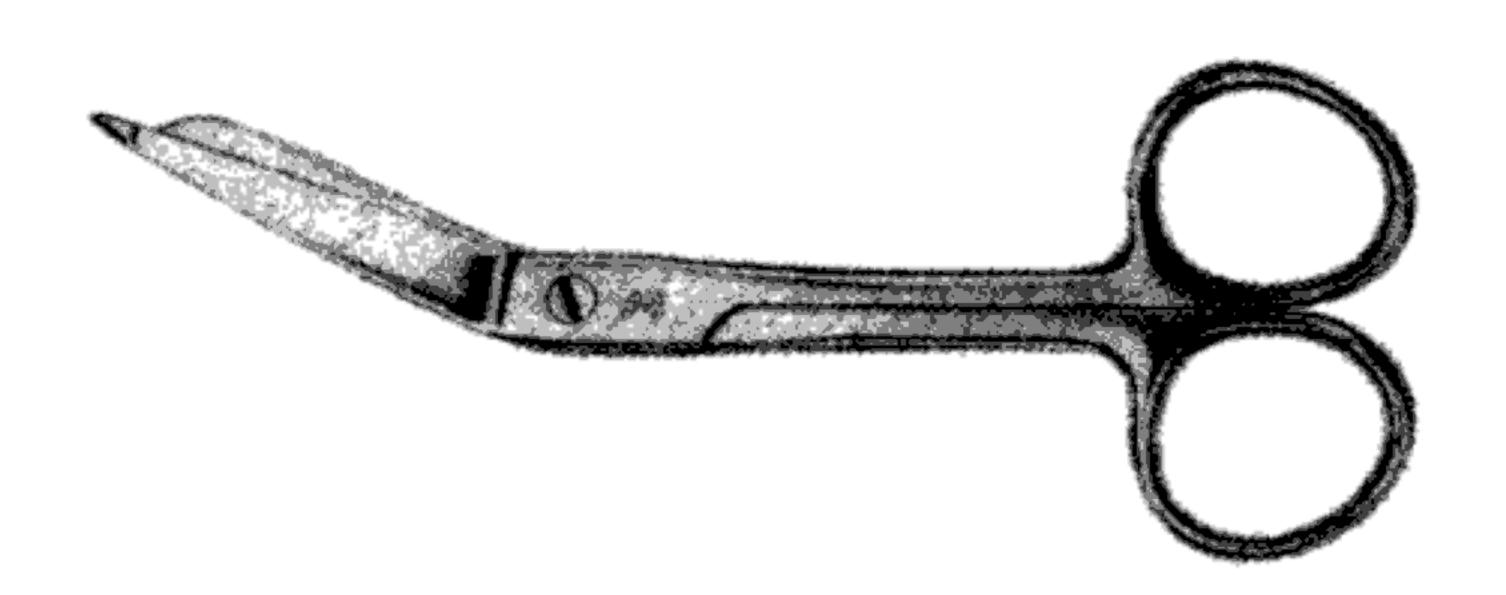
Purpose Bandage cutting/removal

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)

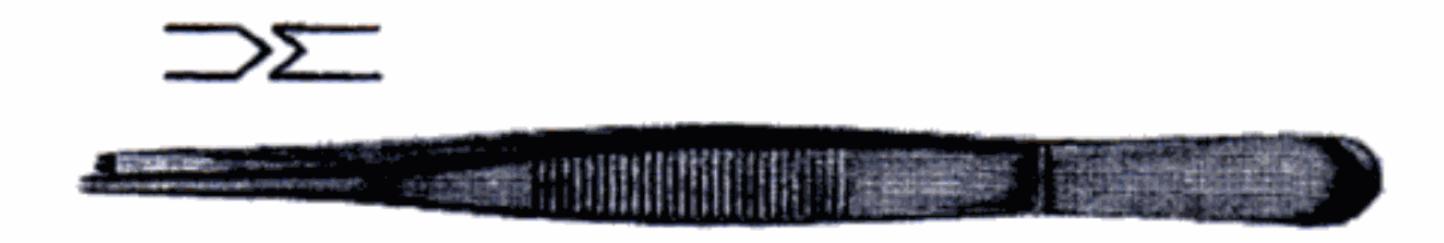
Purpose Fine handling of soft tissue

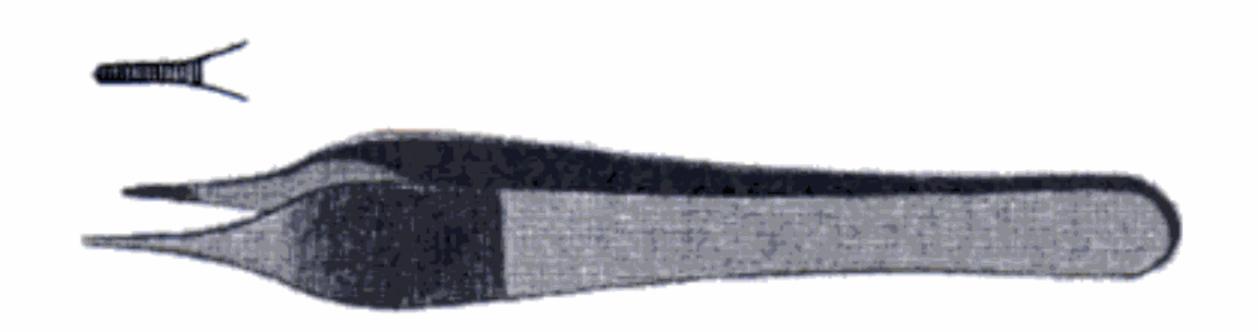
Size 13 - 18 cm

Distinguishing Features Widened area proximal to the tips

Similar Instruments Gillies, McIndoe







Emmett

Name Emmett

Handling deep, soft tissue (e.g., uterus) Purpose

Size 20 cm

Long, thin tips with a broad proximal portion Distinguishing Features

Similar Instrument None

Debakey

Name Debakey

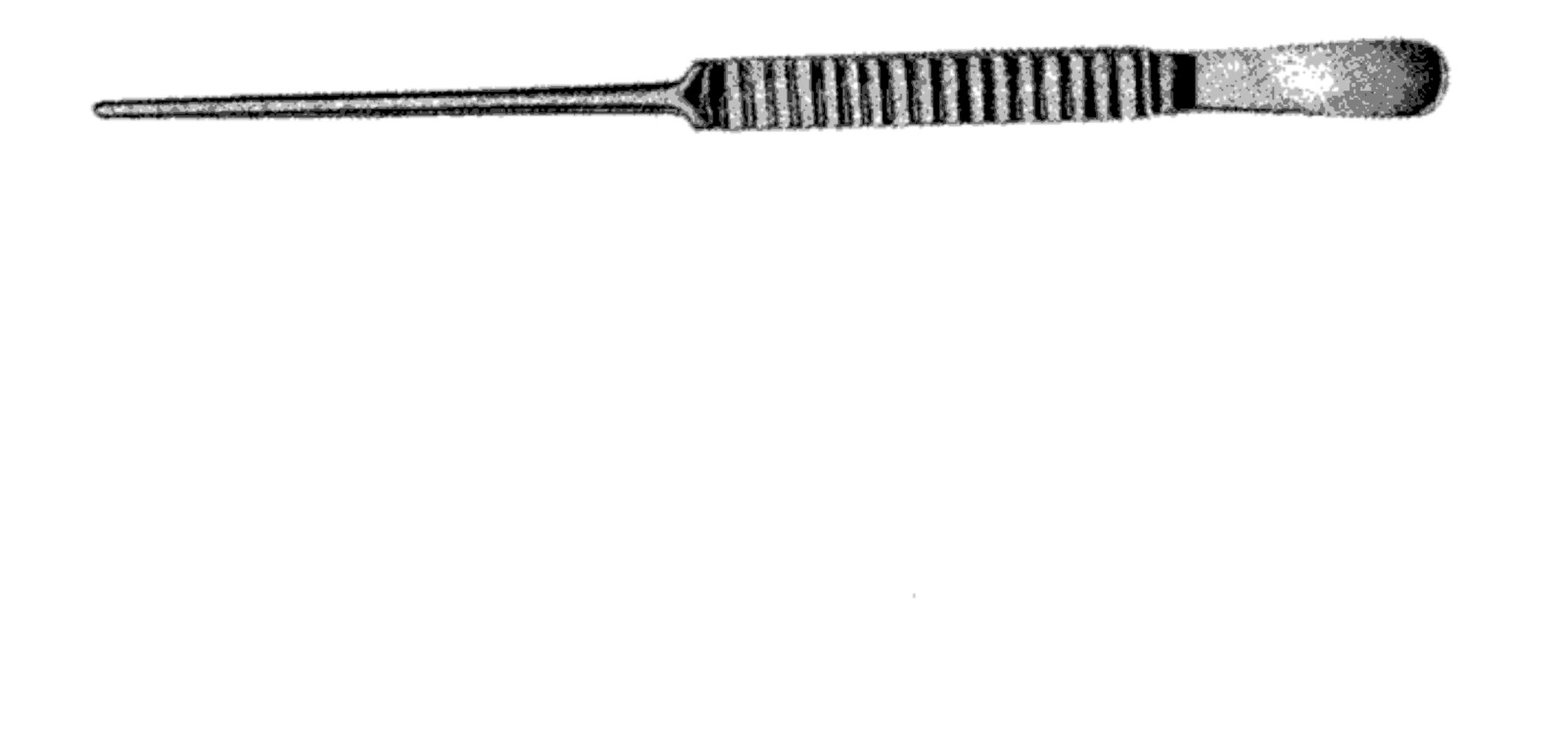
Purpose

Atraumatic handling of viscera Useful for abdominal and thoracic surgery

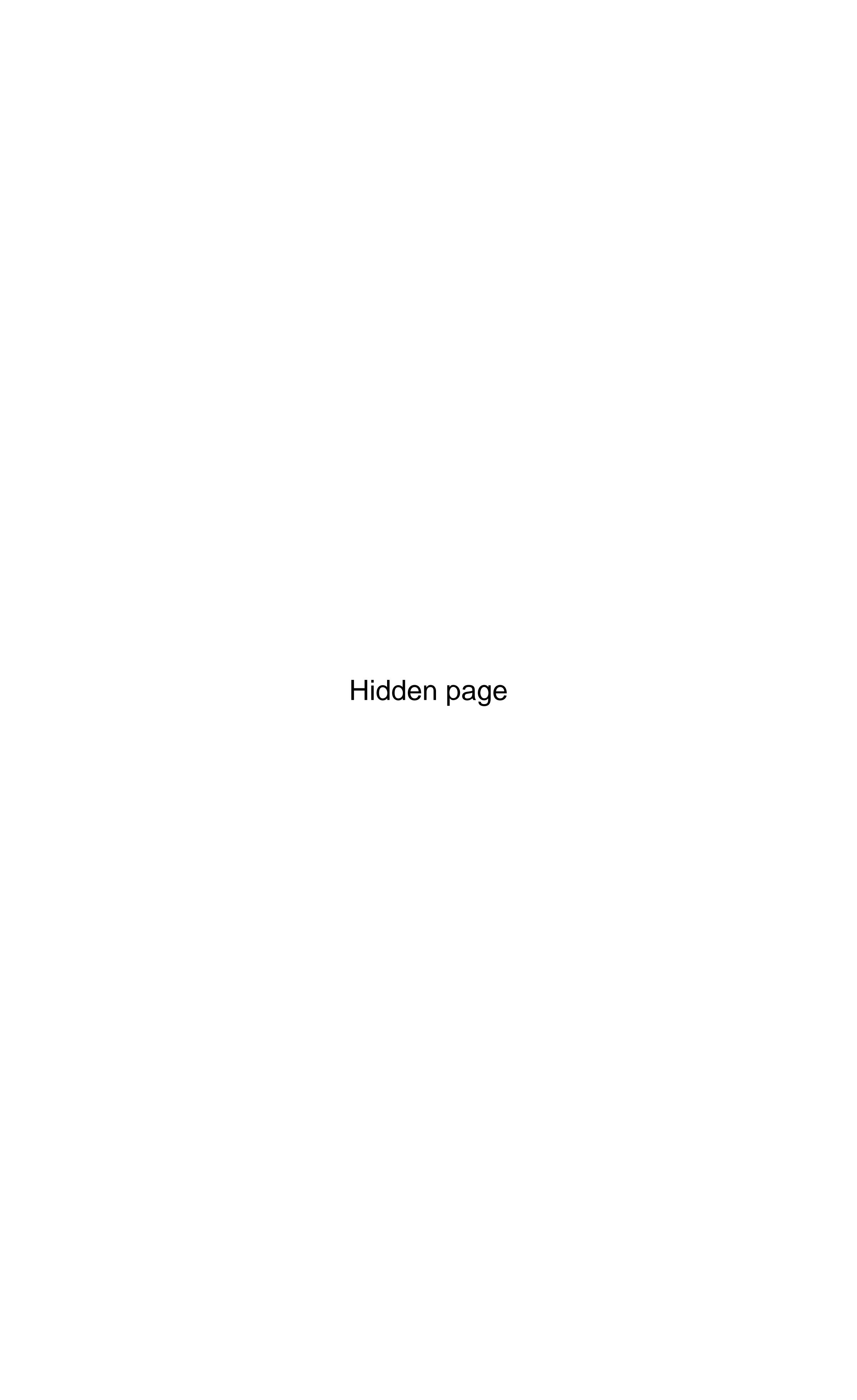
15 cm, 18 cm, 19.5 cm Size

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

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

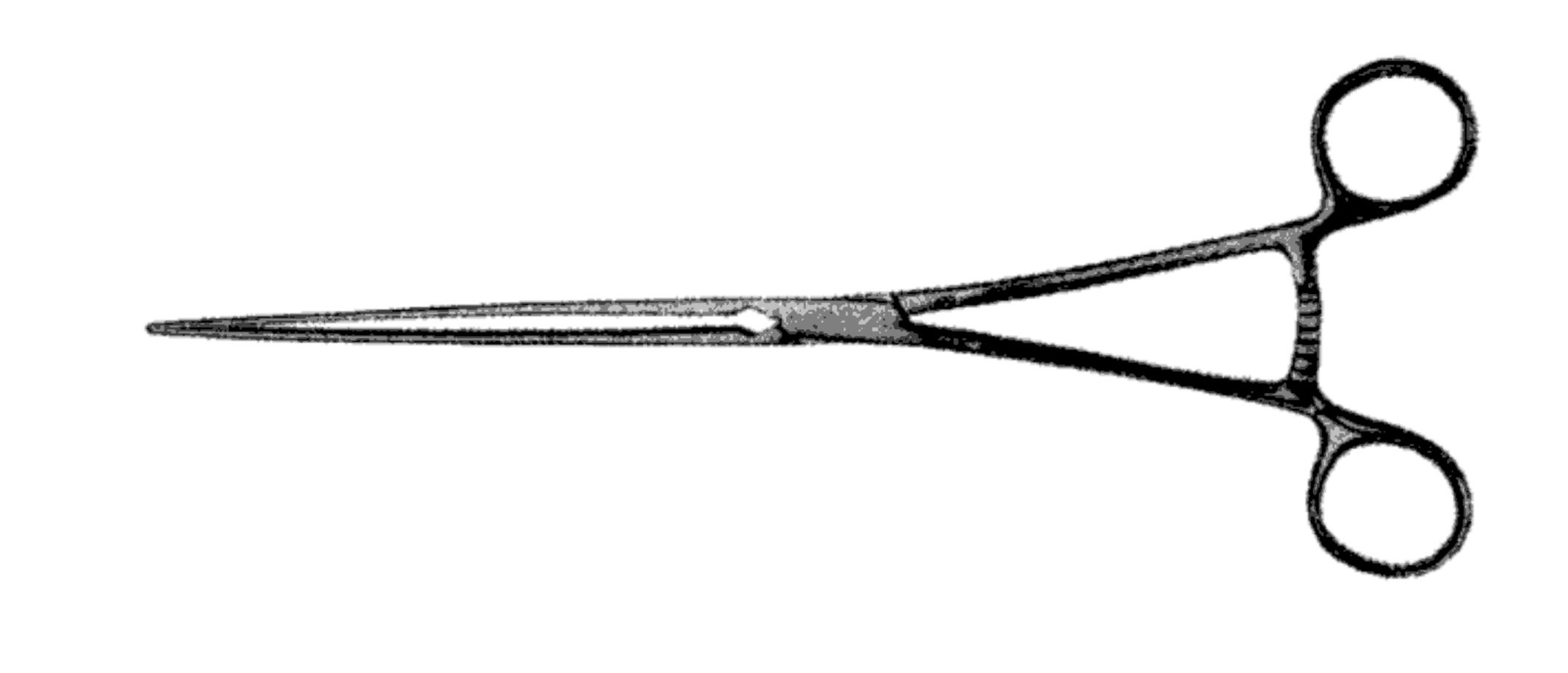
Purpose Occlusion of viscera, e.g., cervix

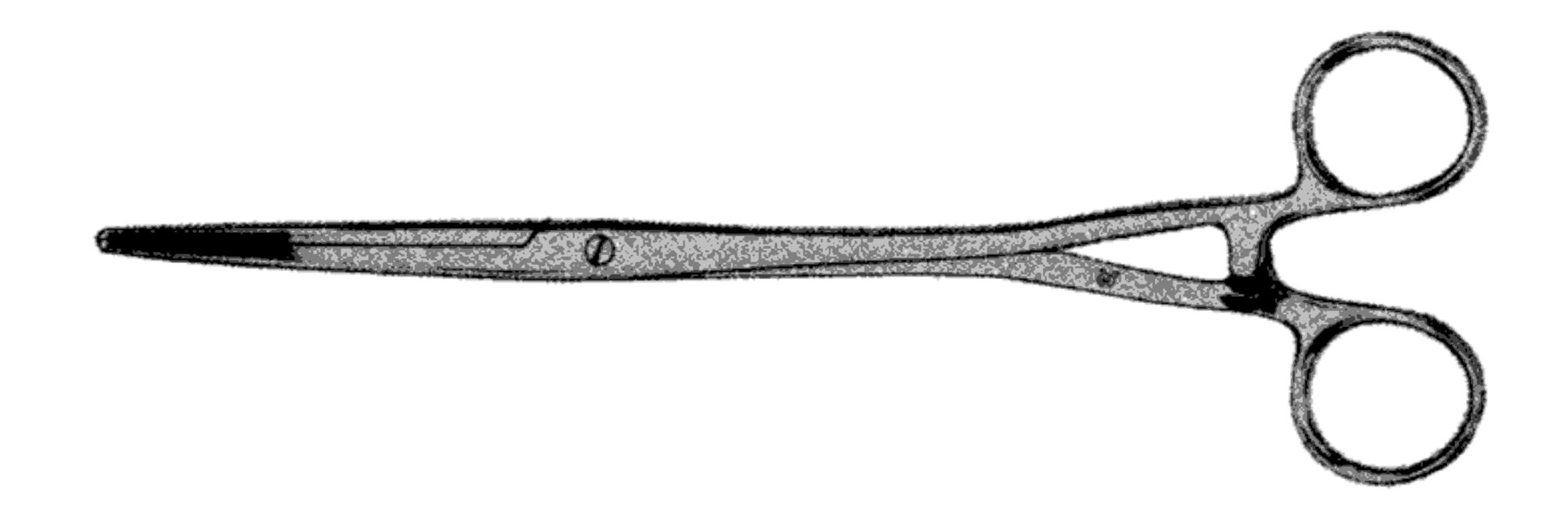
Size 25 cm

Distinguishing Features Heavy forceps with curved tips and screw joint

No gap between the grasping surfaces

Similar Instruments Geary Grant Cholecystectomy Forceps





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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

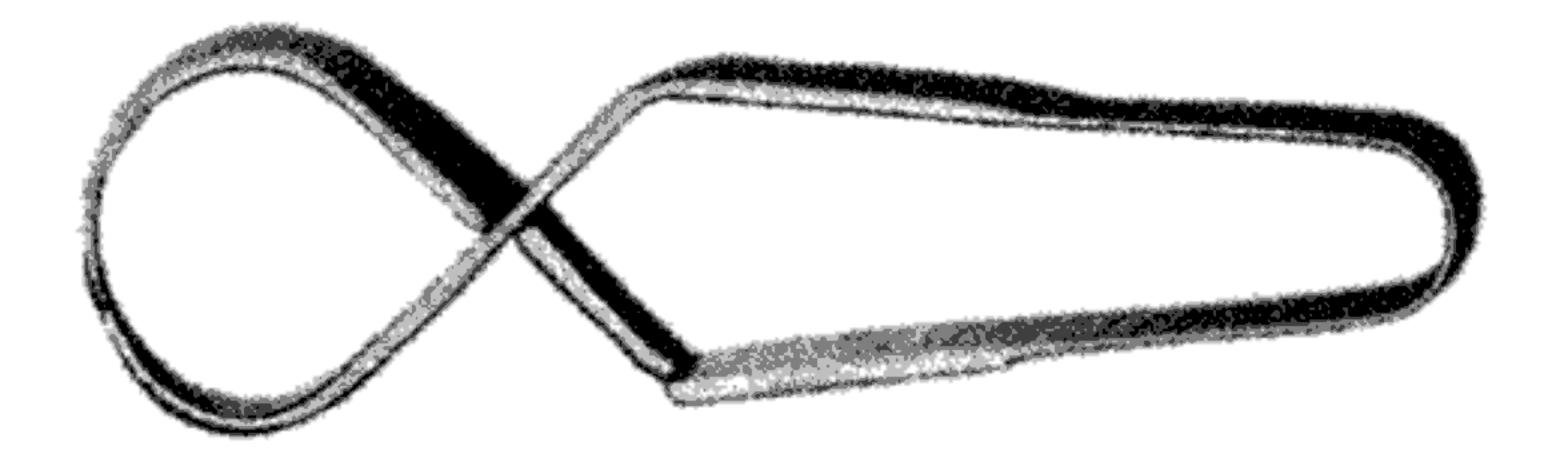
Name Backhaus

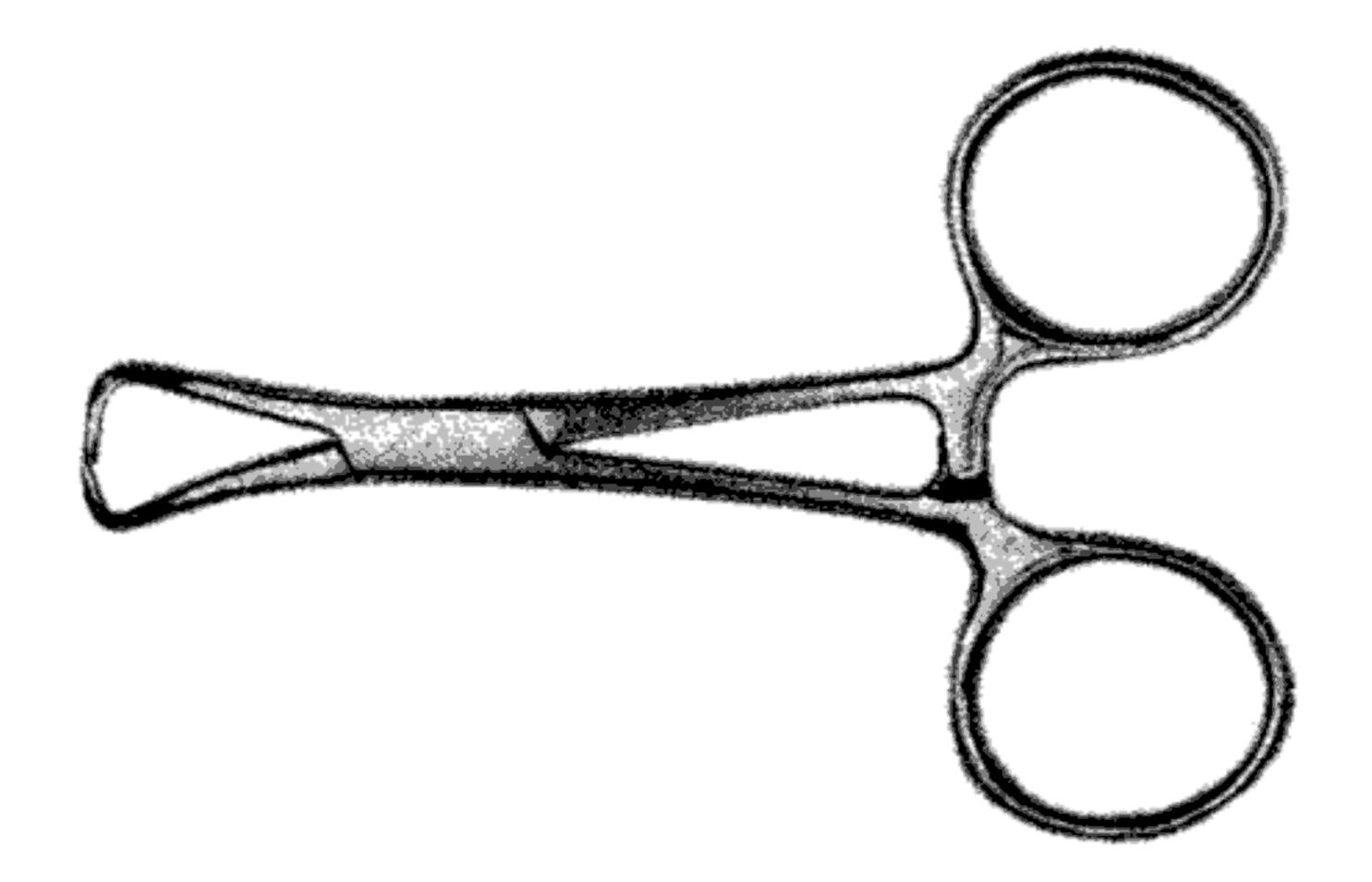
Purpose Anchoring drapes to the surgical field

Size 9.5 cm

Distinguishing Features Box joint and ratchet

Similar Instruments Duff (has teeth at tip and screw joint)





Scalpel Handles and Blades

Common Features

Diagonal ledge near tip

Central raised area on tip

Use

Holding scalpels

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

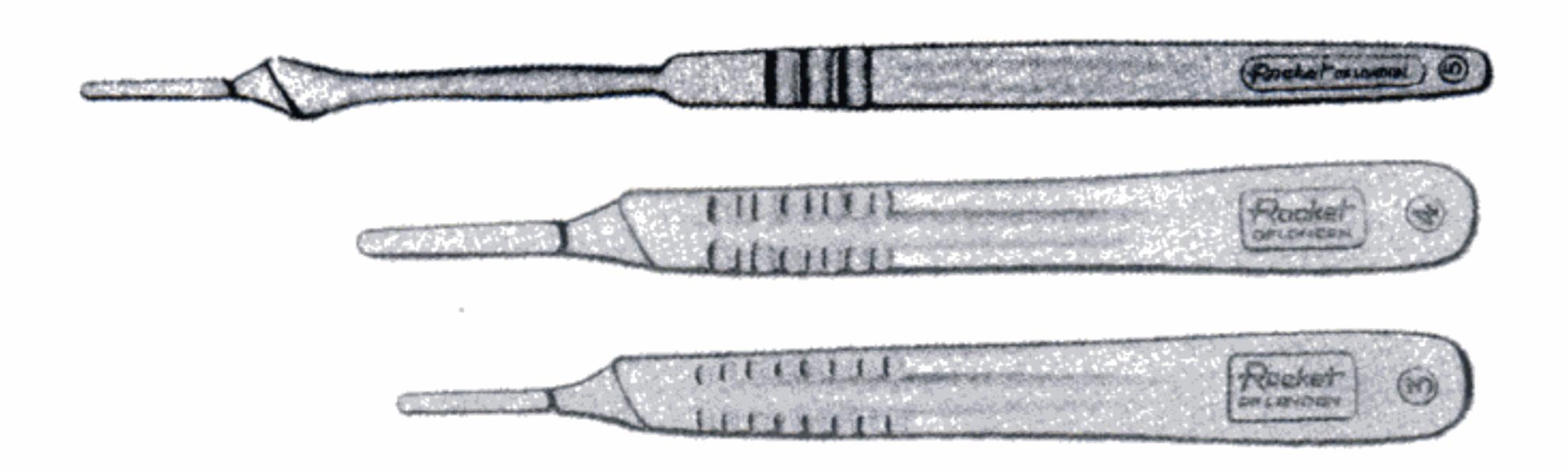
Scalpel Blades

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



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

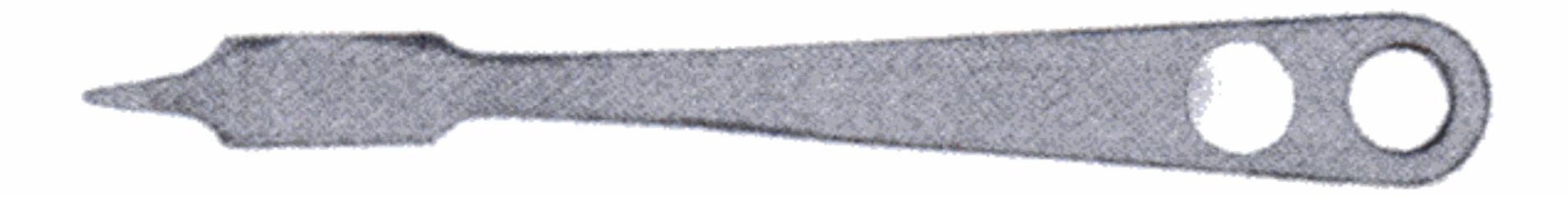
Purpose Retraction of tendon and muscle to expose other structures

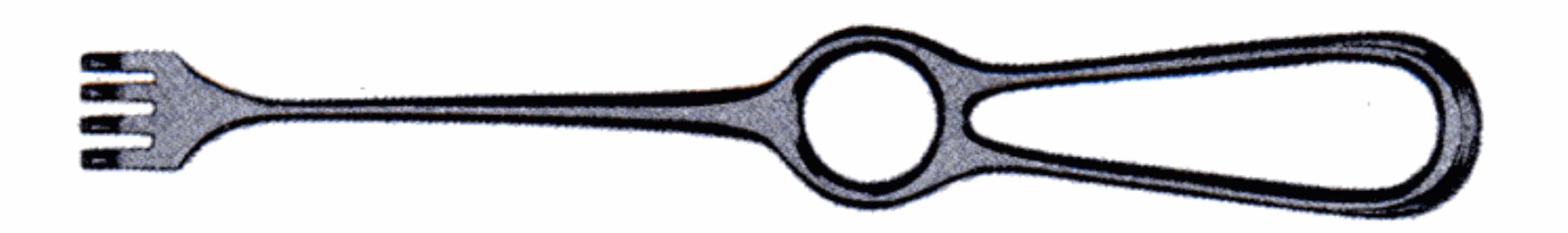
Size 21.5 cm

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

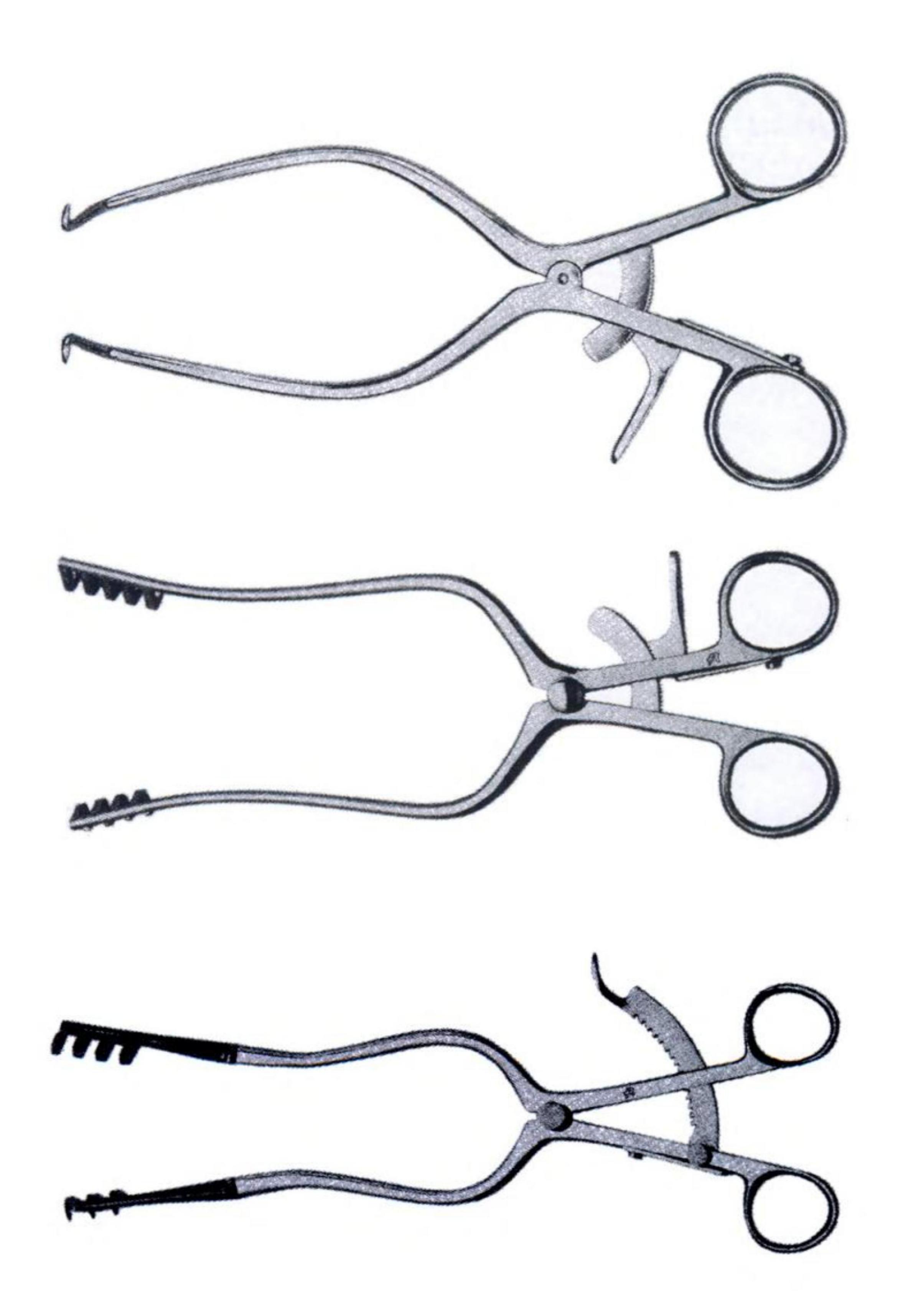
Size 25 cm

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

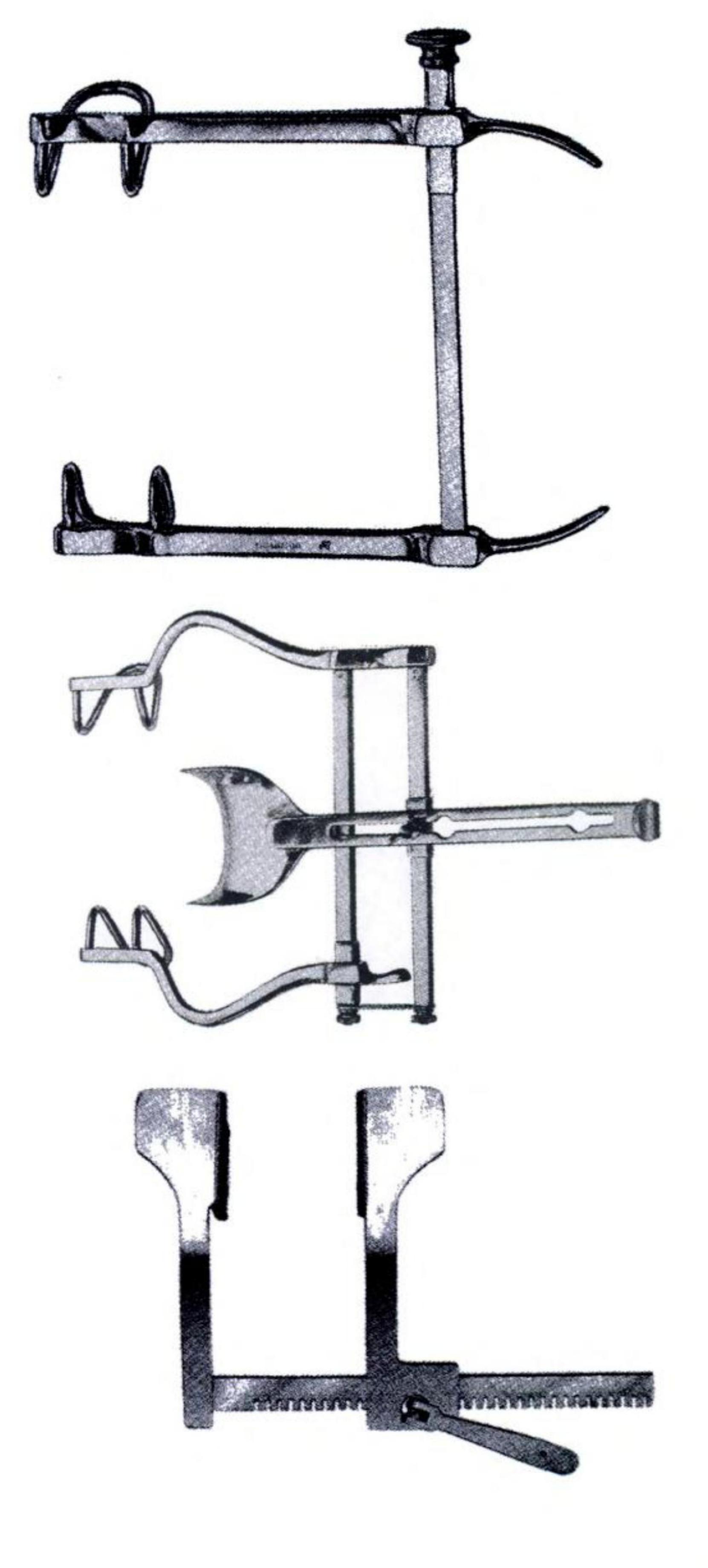
Purpose Rib spreaders

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 Hegar

Name Mayo Hegar (self retaining)

(gold handles indicateTungsten 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

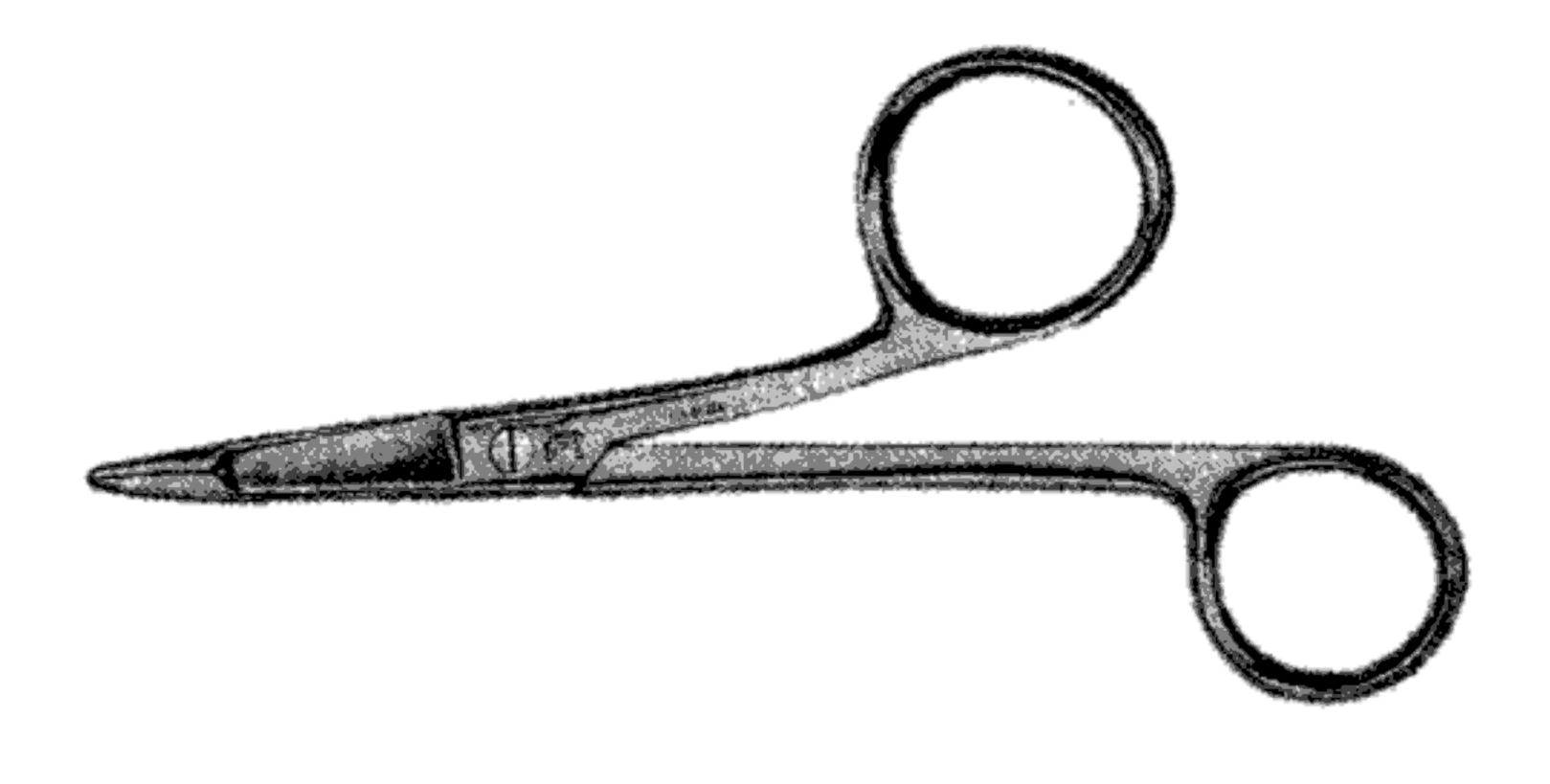
Name Bruce Clarke (self retaining)

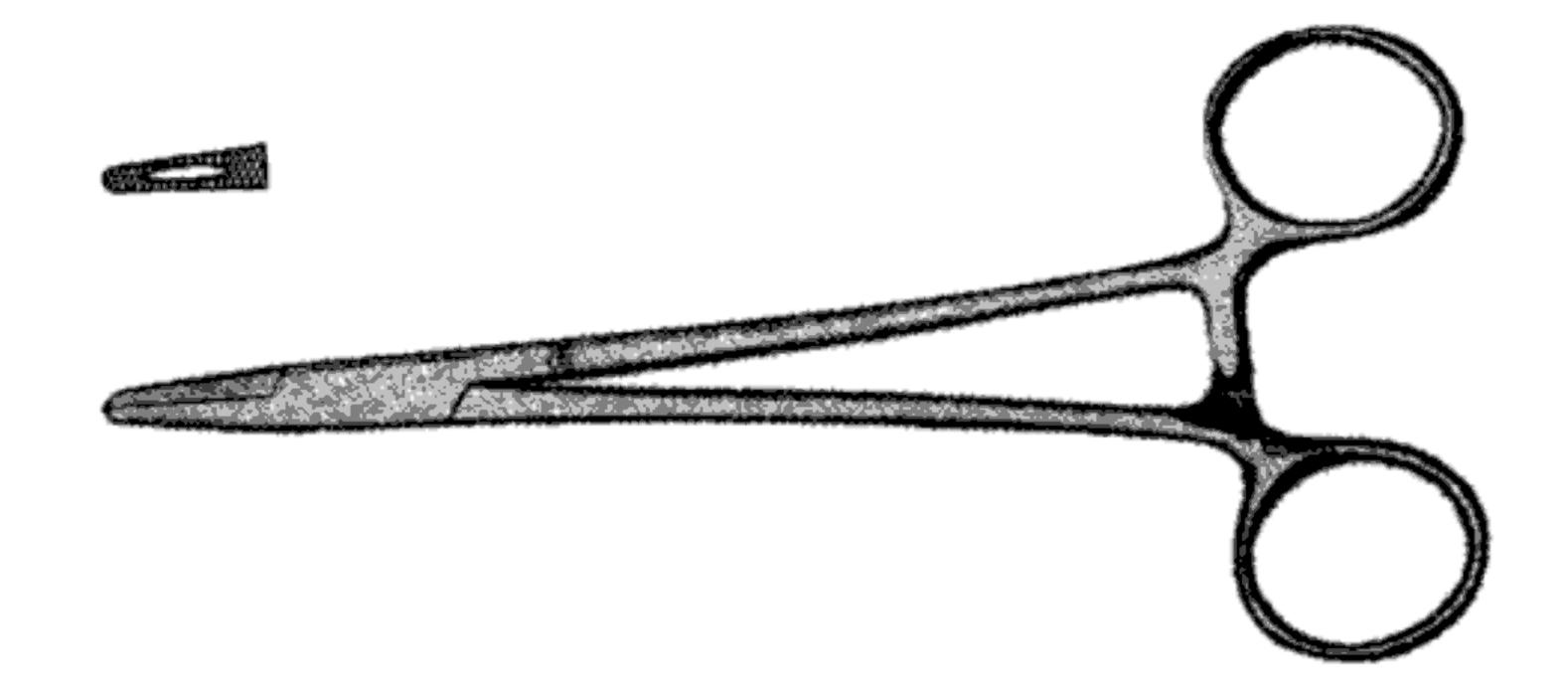
Purpose Holding needles

Size 13 cm

Distinguishing Features When closed, small circular holes are apparent along

the length of the grasping surface







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

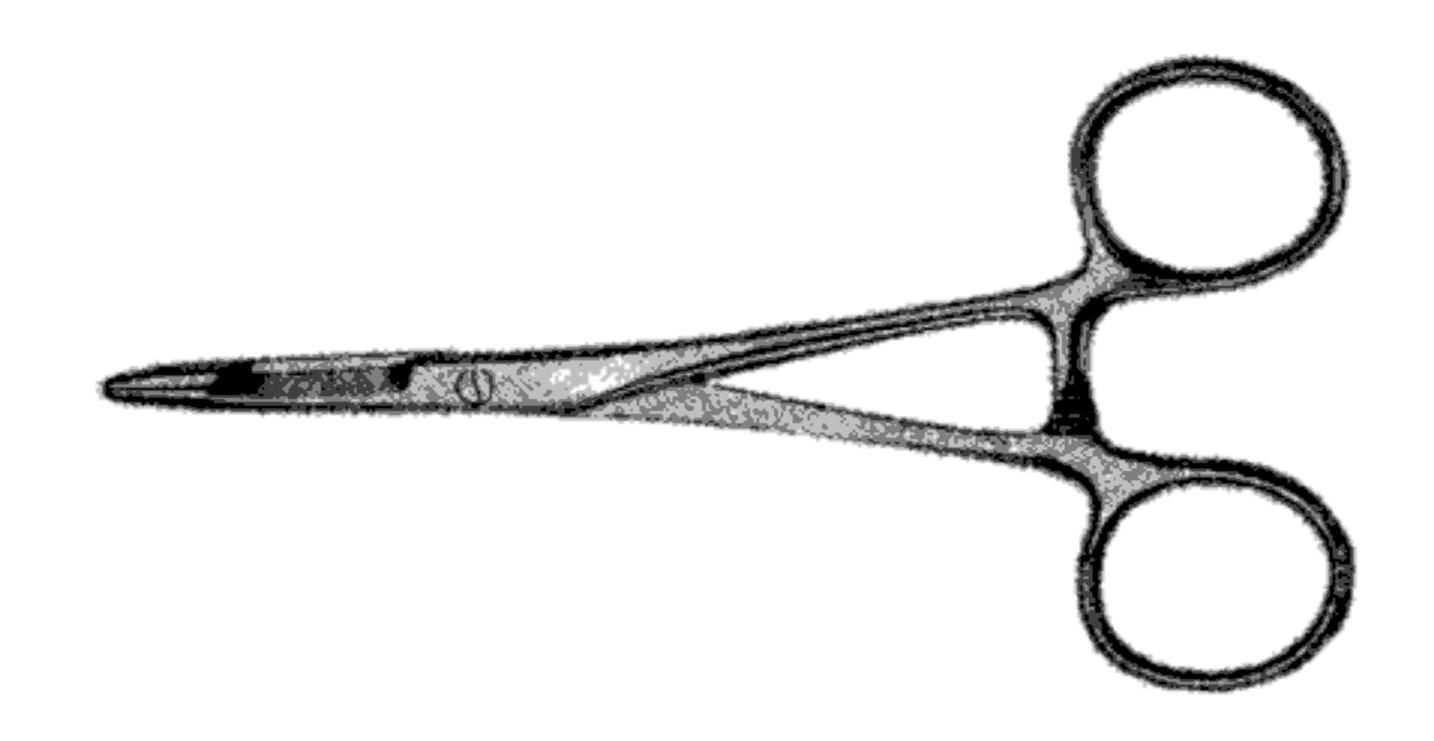
McPhail

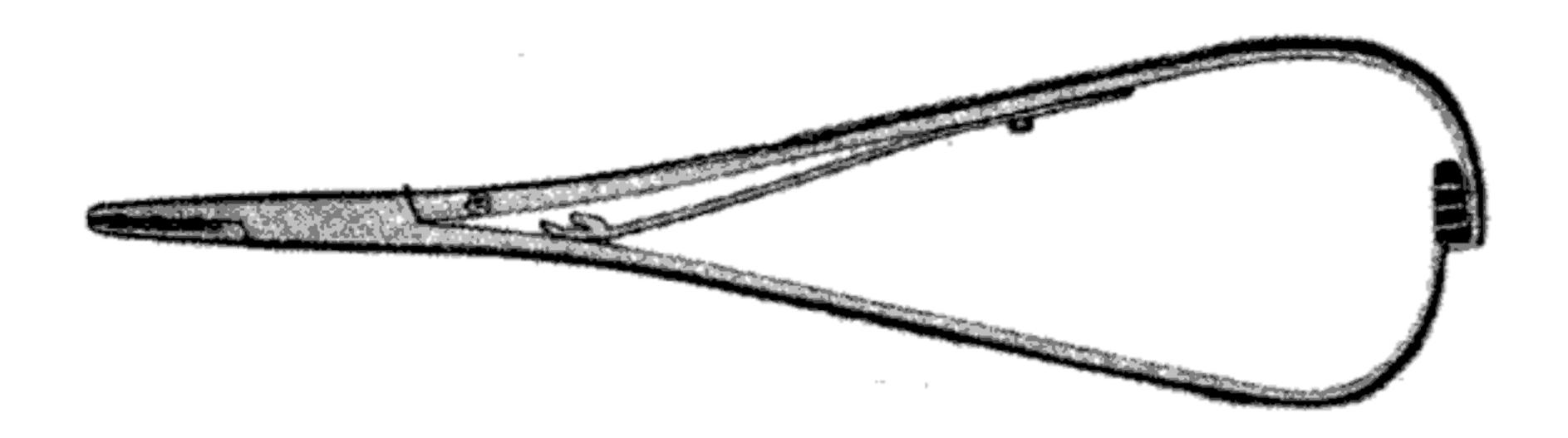
Name McPhail (self retaining with copper lined jaw)

Purpose Holding needles

Size 18 cm

Distinguishing Features Copper lined jaws and pear shaped handles





Diathermy Equipment

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





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

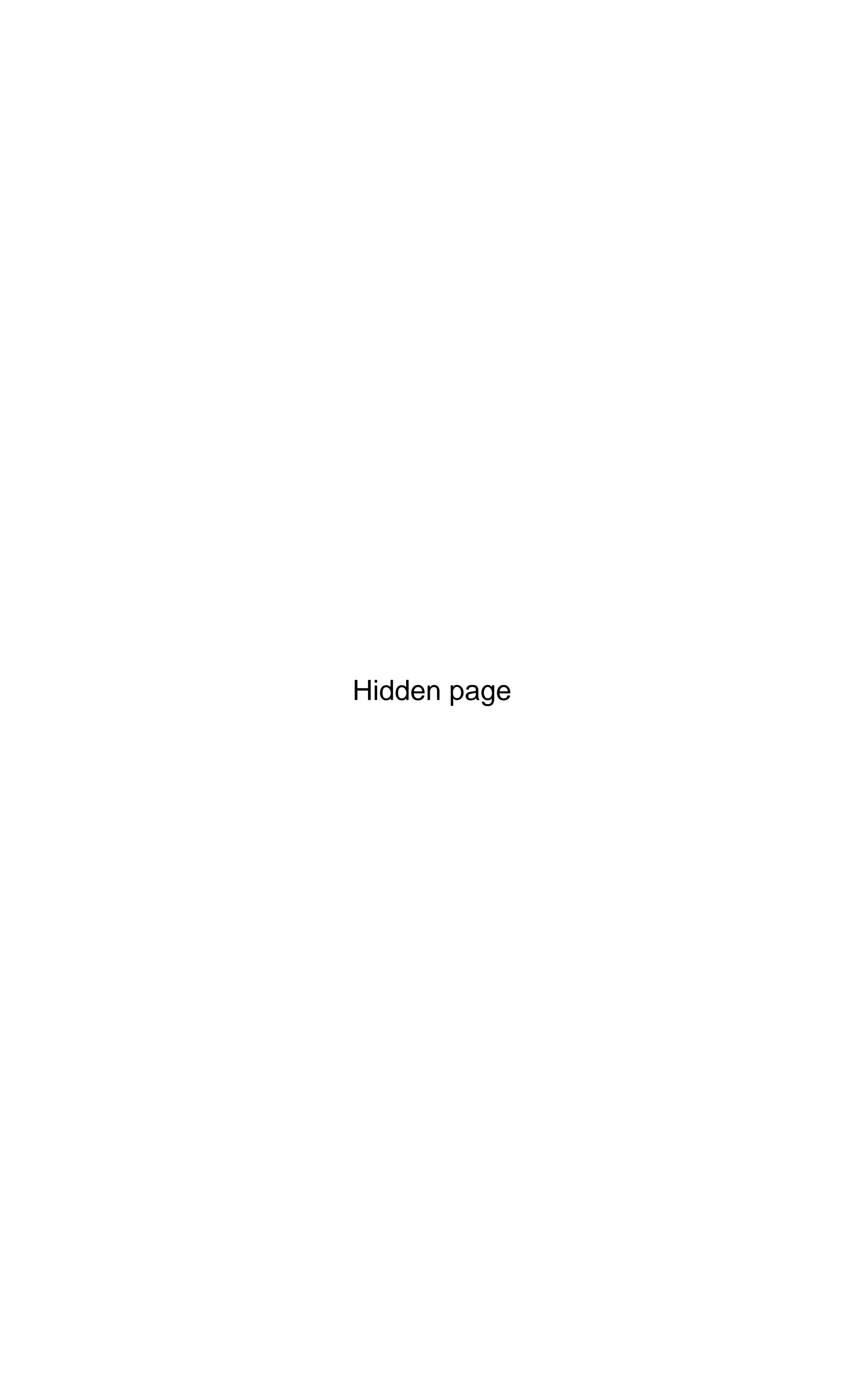
Name Robin Anchoring Clip

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 one 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 both sides

Similar Instruments

Chisel

Gouge

Name

Stille Gouge

Purpose

To shave bone where bone contouring is needed

Size

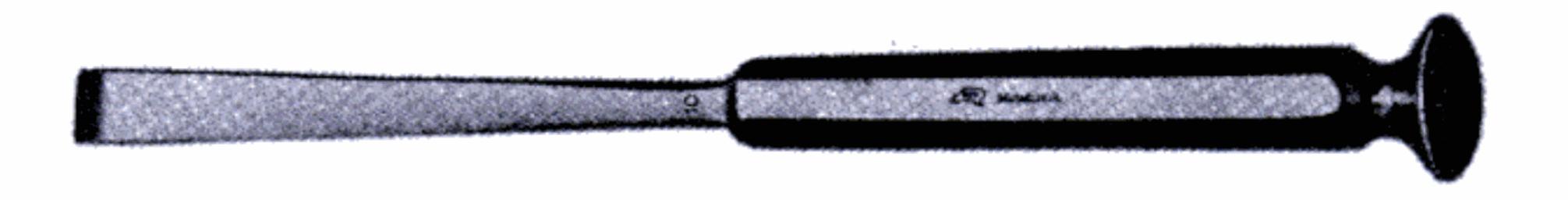
20 cm

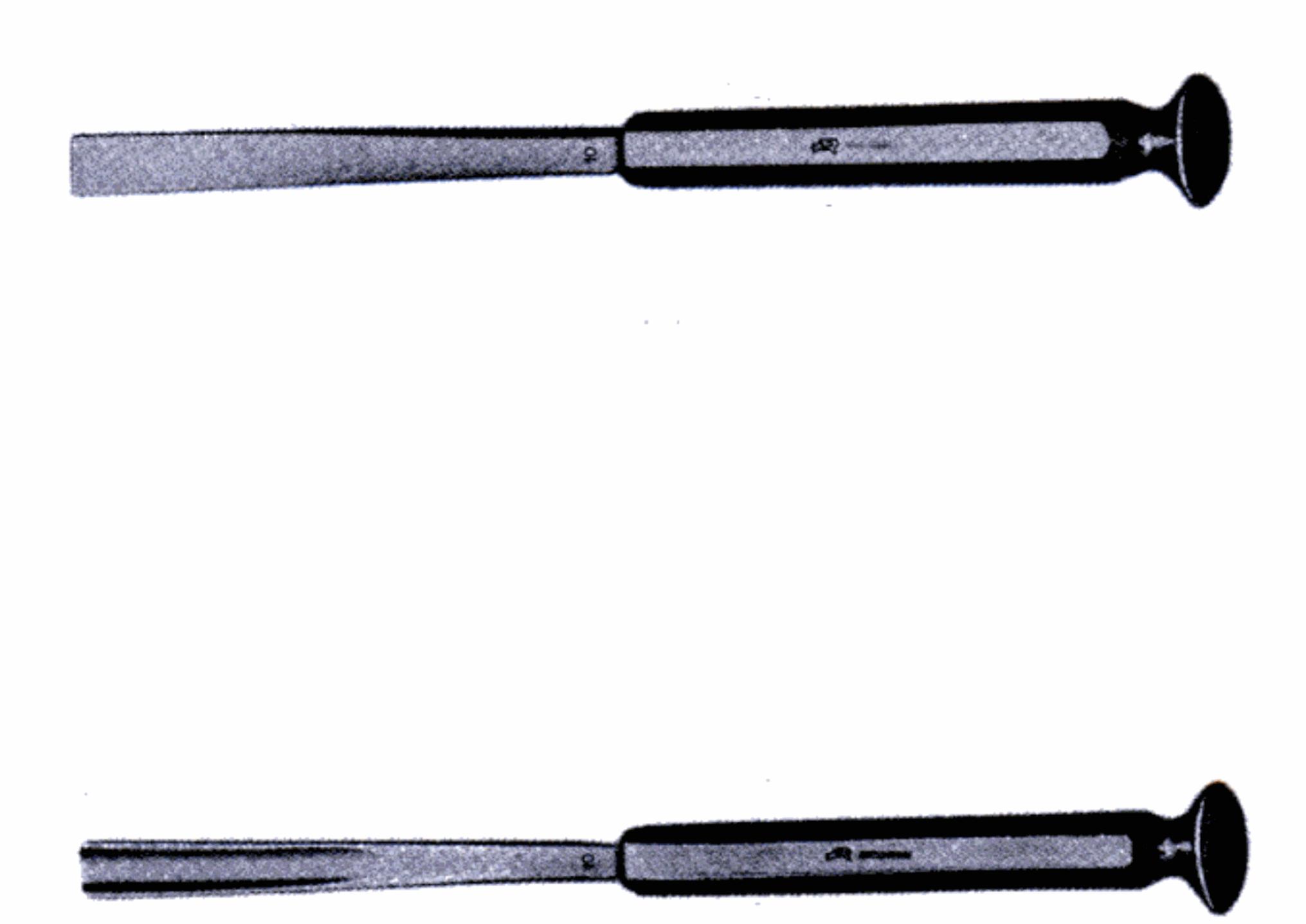
Distinguishing Features

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

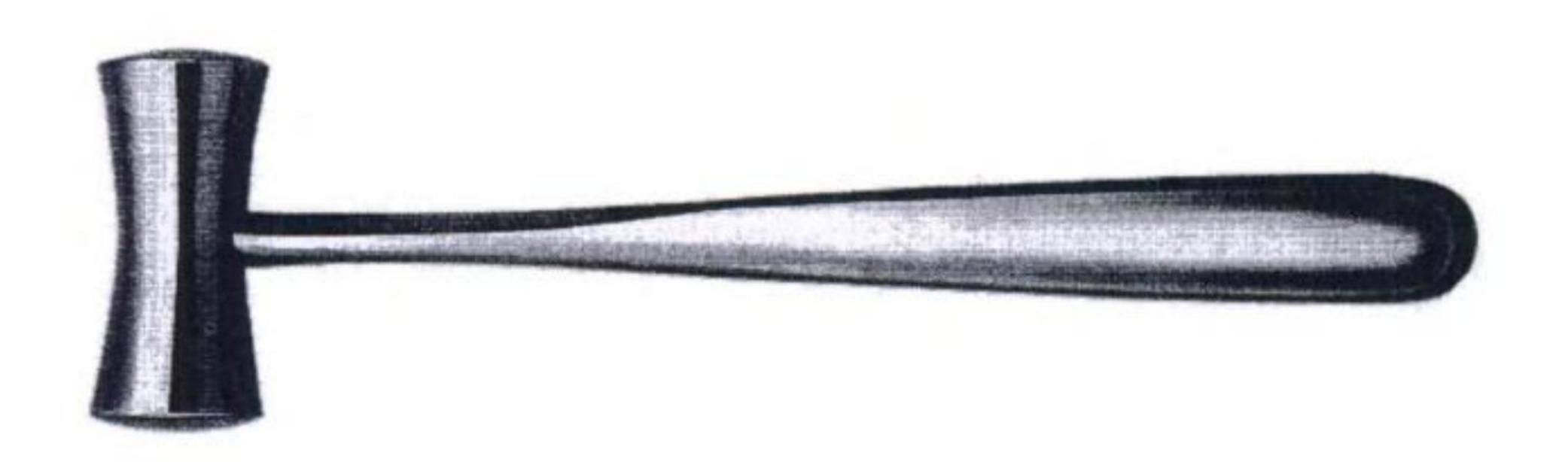
Distinguishing Features Double action joint, small projections on handles

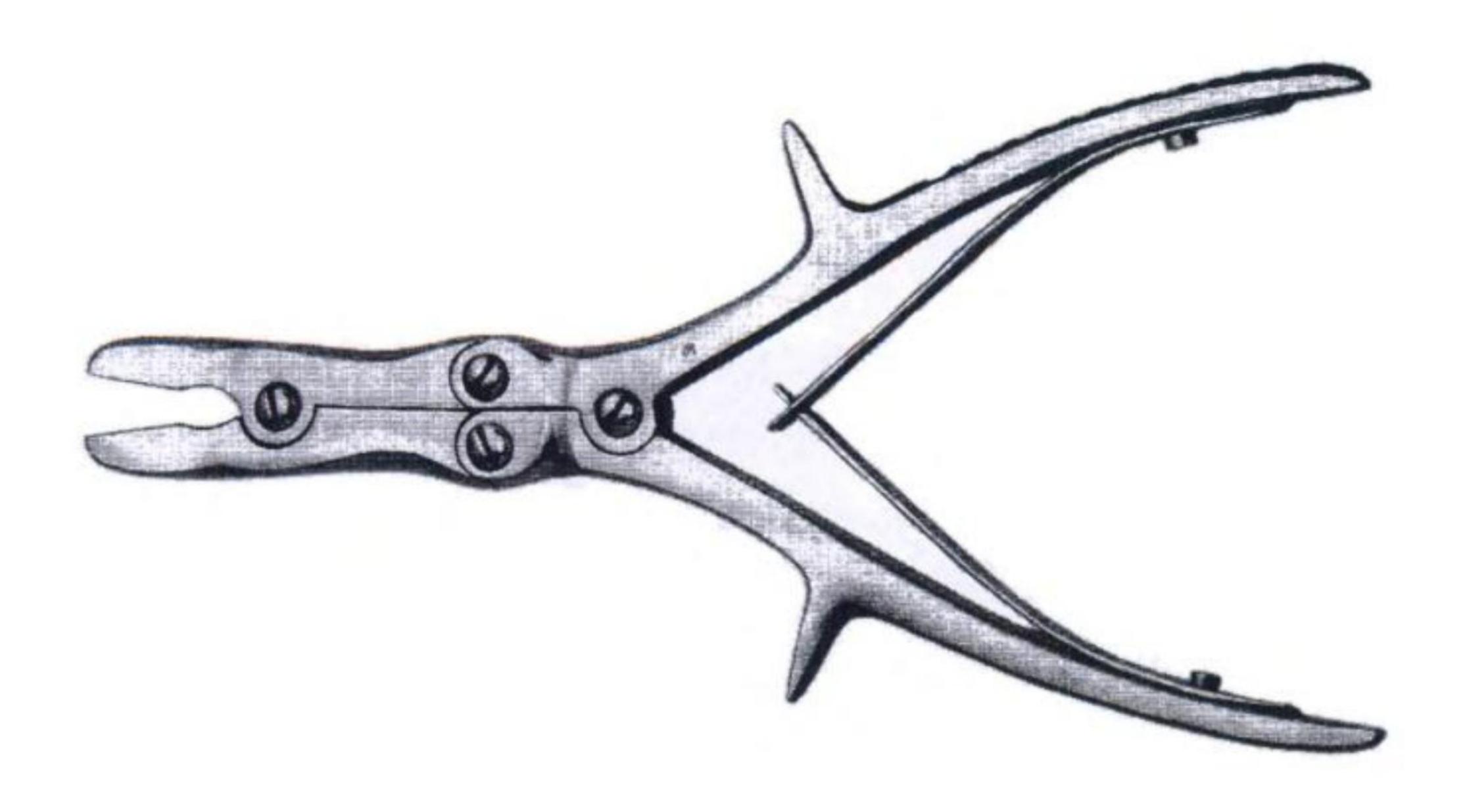
Lever action to spring back into open position

Cup like cutting tips

Similar Instruments Jansen Middleton







Rongeurs

Name Pennybacker Rongeurs

Purpose Nibbling pieces of bone

Size 20 cm

Distinguishing Features Spring action handles

Cup like cutting tips

Similar Instruments Northfield

Rongeurs

Name Lempert Rongeurs

Purpose Removal (fine) of bone and soft tissue in neurosurgery

Size 19 cm

Distinguishing Features Fine tips

Similar Instruments Cicherelli

Rongeurs

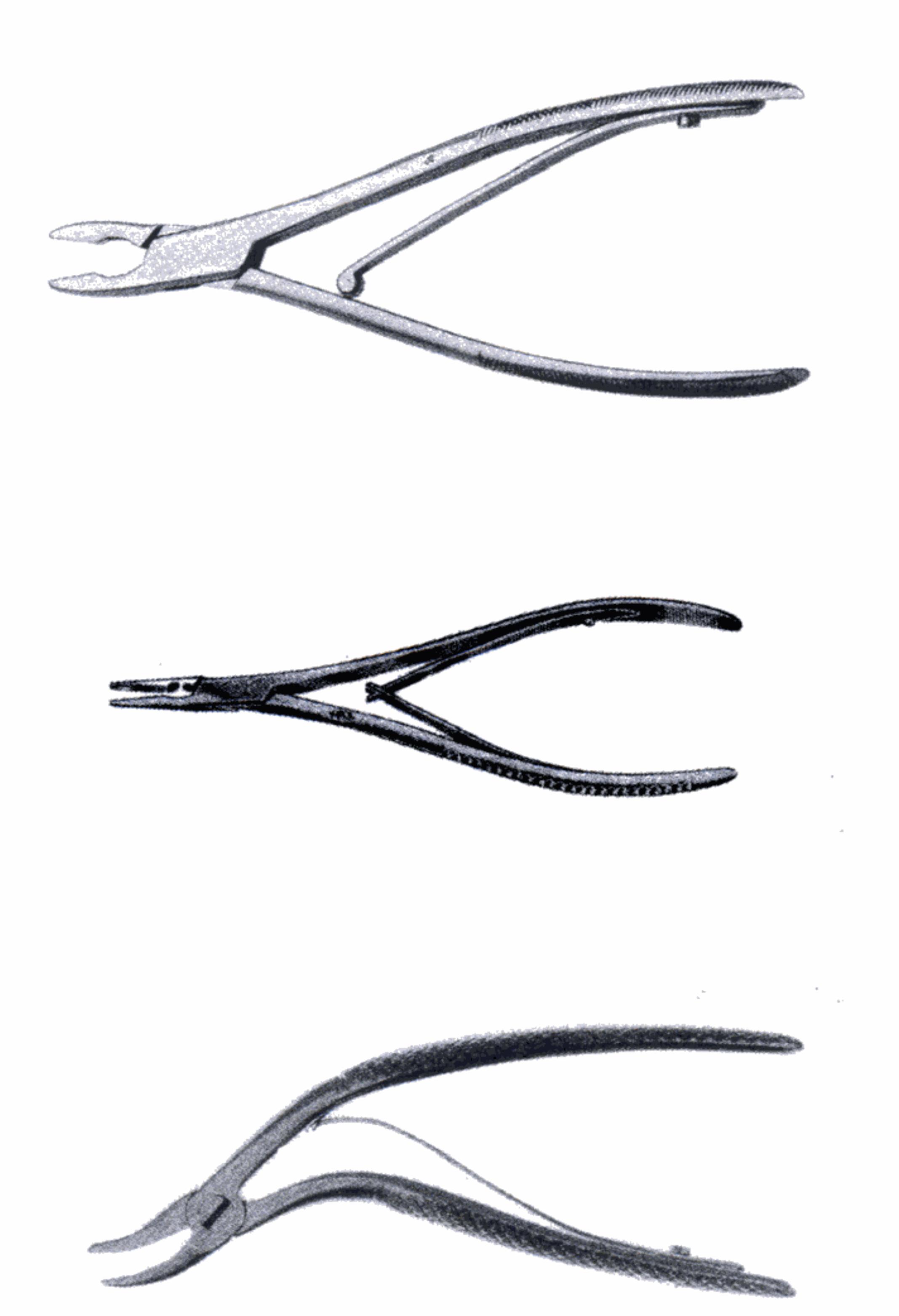
Name Laminectomy Rongeurs

Purpose Removal of cortical bone during certain spinal surgery

Size Jaw widths 2, 3 and 4 mm

Distinguishing Features Handles angled to allow good vision of surgical site

Slim lower jaw



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



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

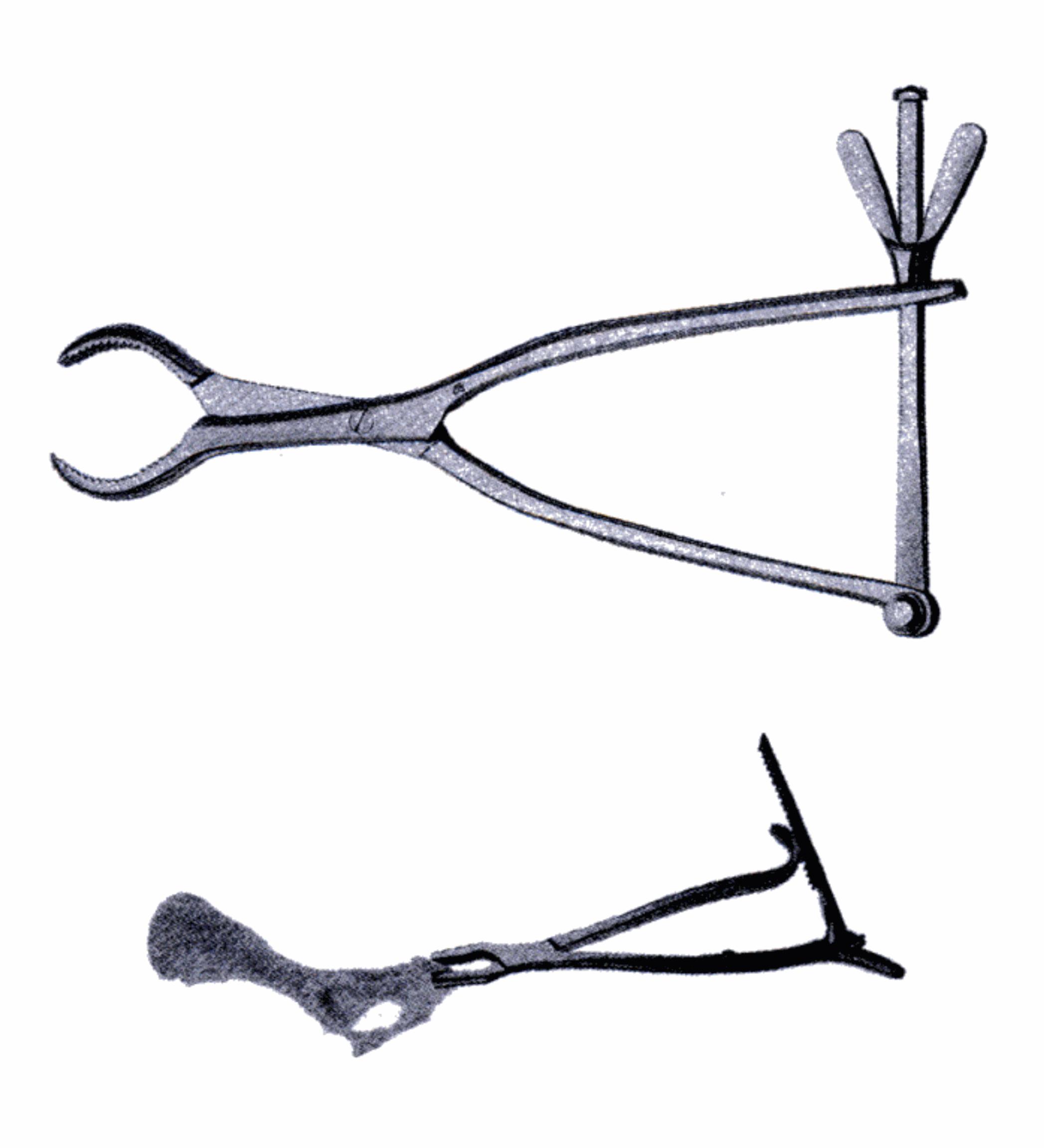
Size Small (4 mm capacity)

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





Wire Twisters and Cutters

Name Wire Twisters and Cutters

Purpose Securing cerclage and tension band wires after placement

Size 16 cm

Distinguishing Features Serrated jaws

Look like pliers

Similar Instruments ASIF wire twisters

Graft Passer

Name Graft Passer

Purpose Surgery for cruciate deficient stifle joints

Size Head size 2 cm, 3 cm, 4.5 cm and 6 cm

Distinguishing Features Curved head with a hole at the tip, like a giant sewing

needle with a handl.

Similar Instruments Wire passer - this has a curved head with a hole

running through the centre of it

Curette

Name Volkmann Curette

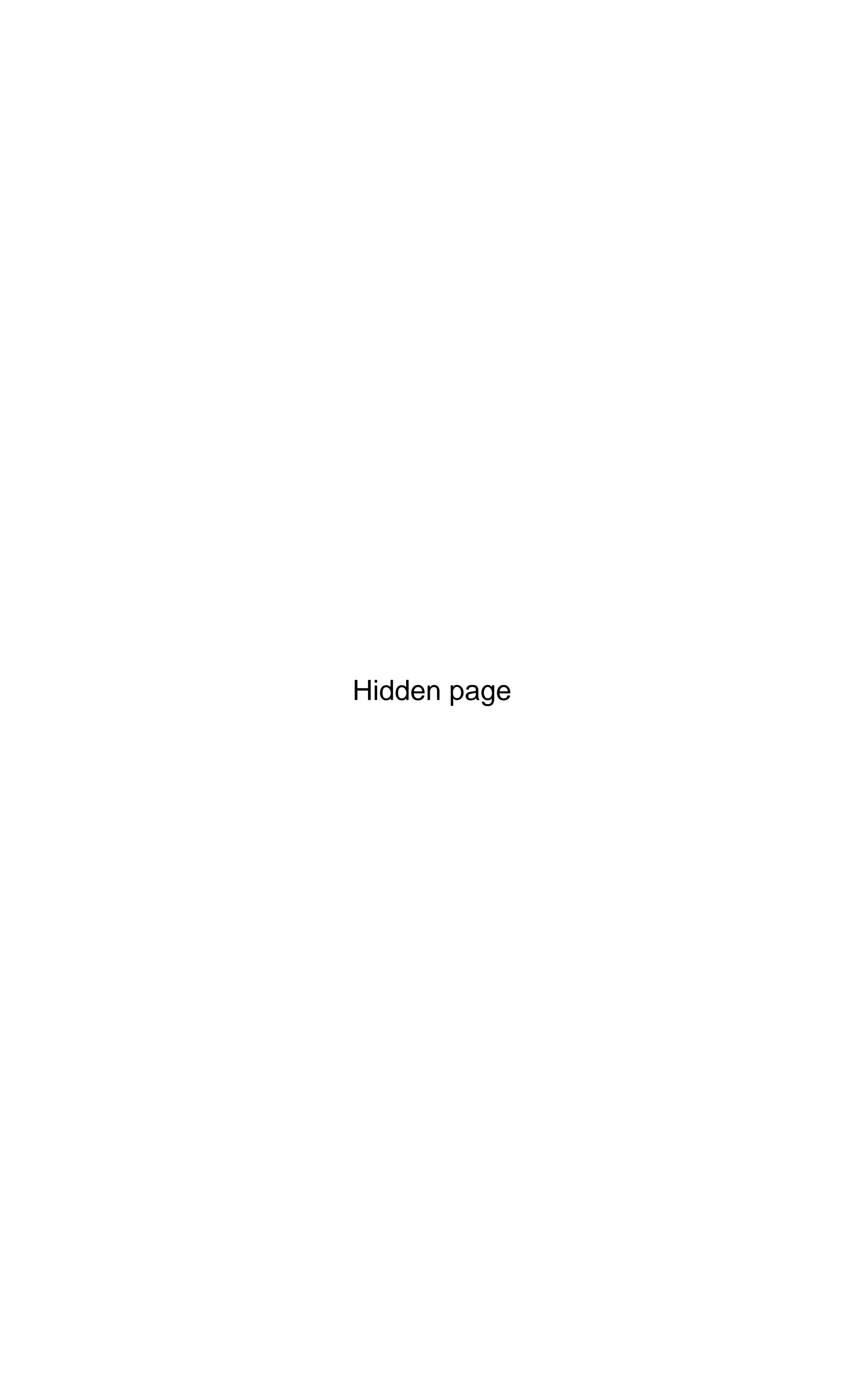
Purpose Scraping cavities, eg, bone grafts and debridement

Size 16 cm

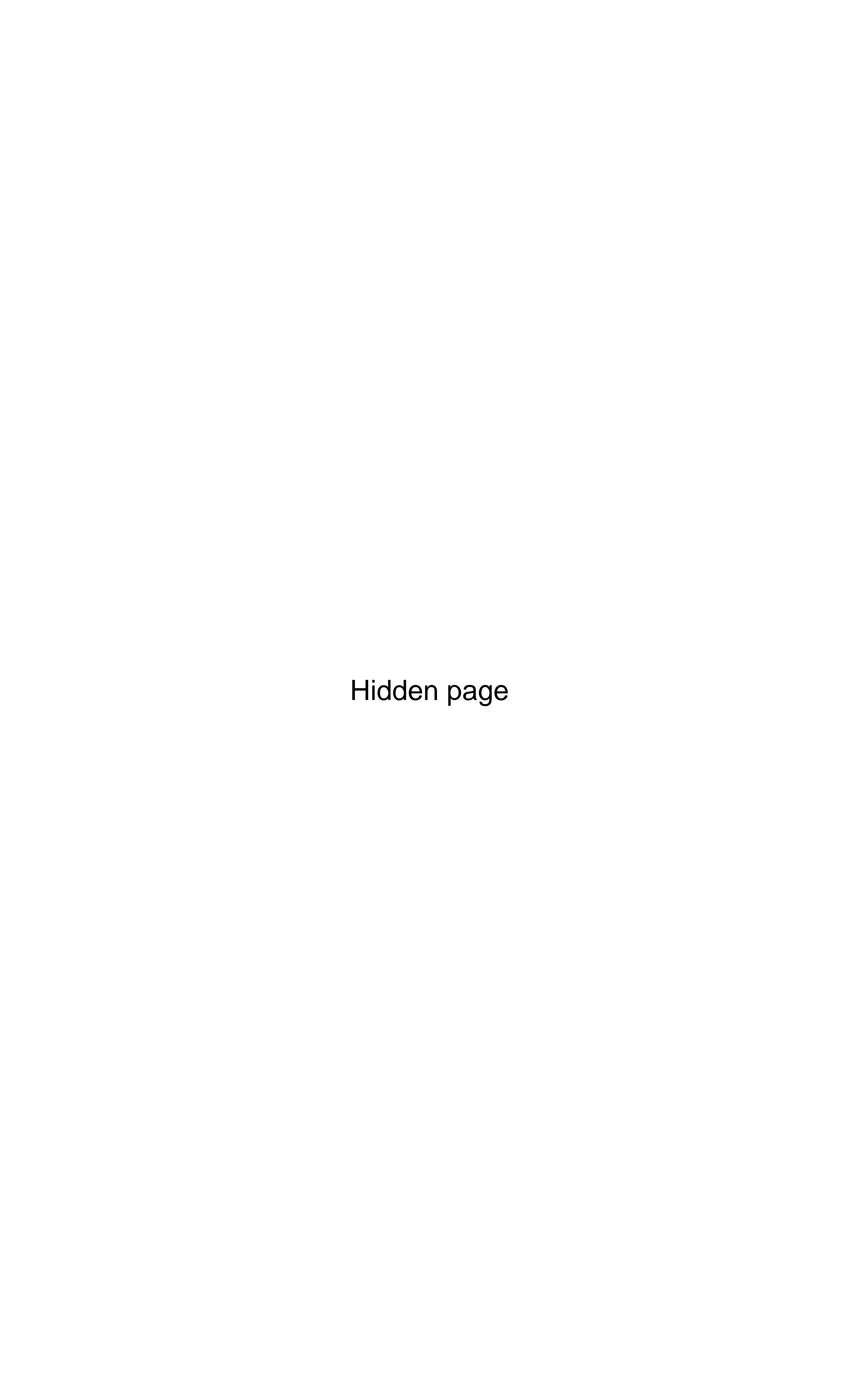
Distinguishing Features Double ended

One end has a round cup and the other has an oval cup

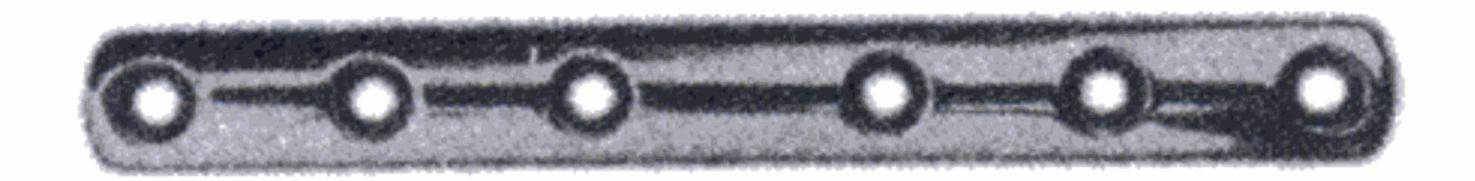
Similar Instruments House Curette, Spratt Curette



Implants







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 oval 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 oval holes and bites taken out

of each side







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

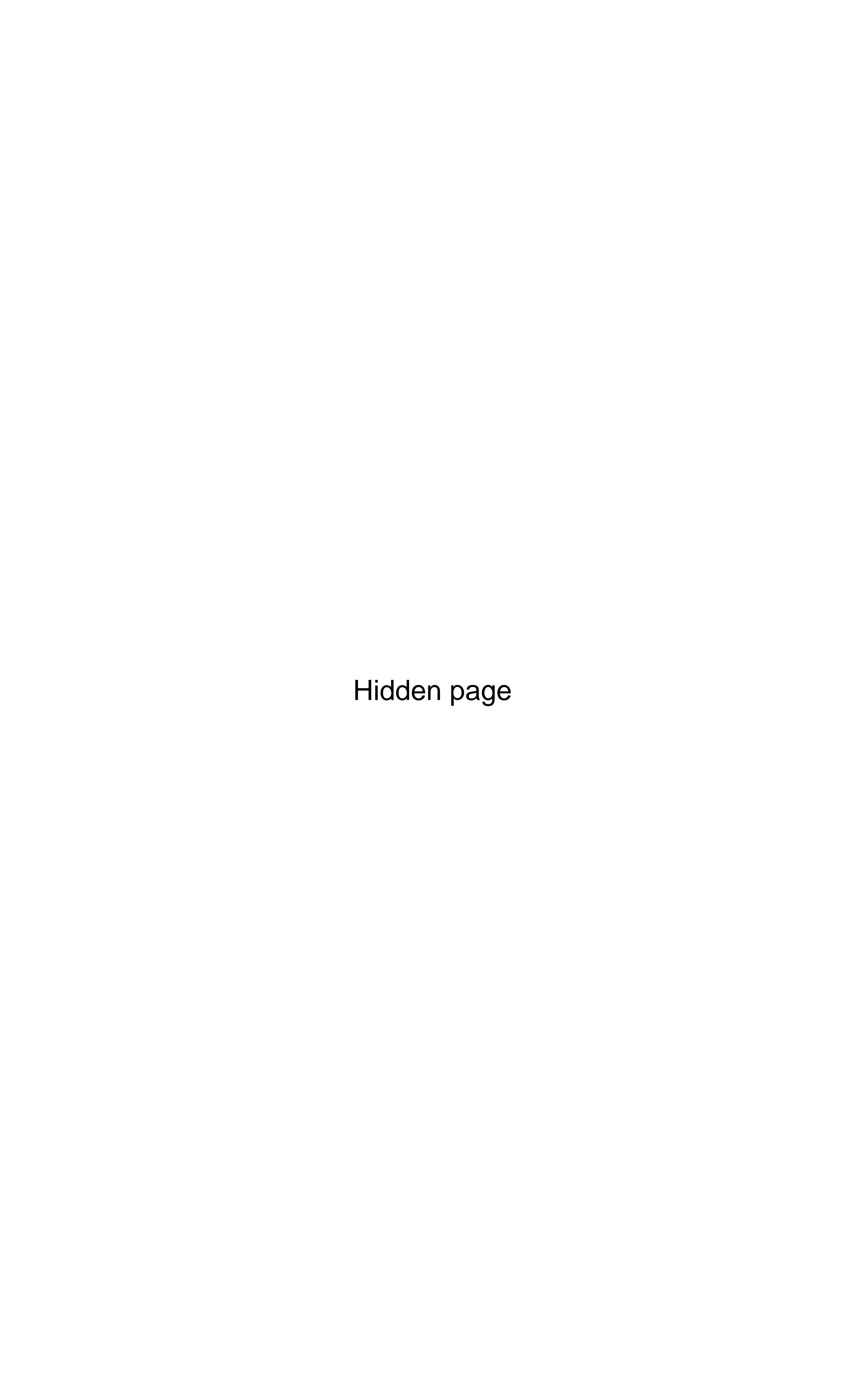
Name Self tapping Screw

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



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ASIF Equipment Association for the Study of Internal Fixation

Drill Bit

Name Drill Bit (quick coupling)

To drill a hole into bone Purpose

1.1 - 4.5 mm diameter Size

Distinguishing Features Distal end tapered for quick coupling (as with tap)

Similar Instruments Drill bit for other drills and Jacob Chuck

Drill Guide

Drill Guide Name

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

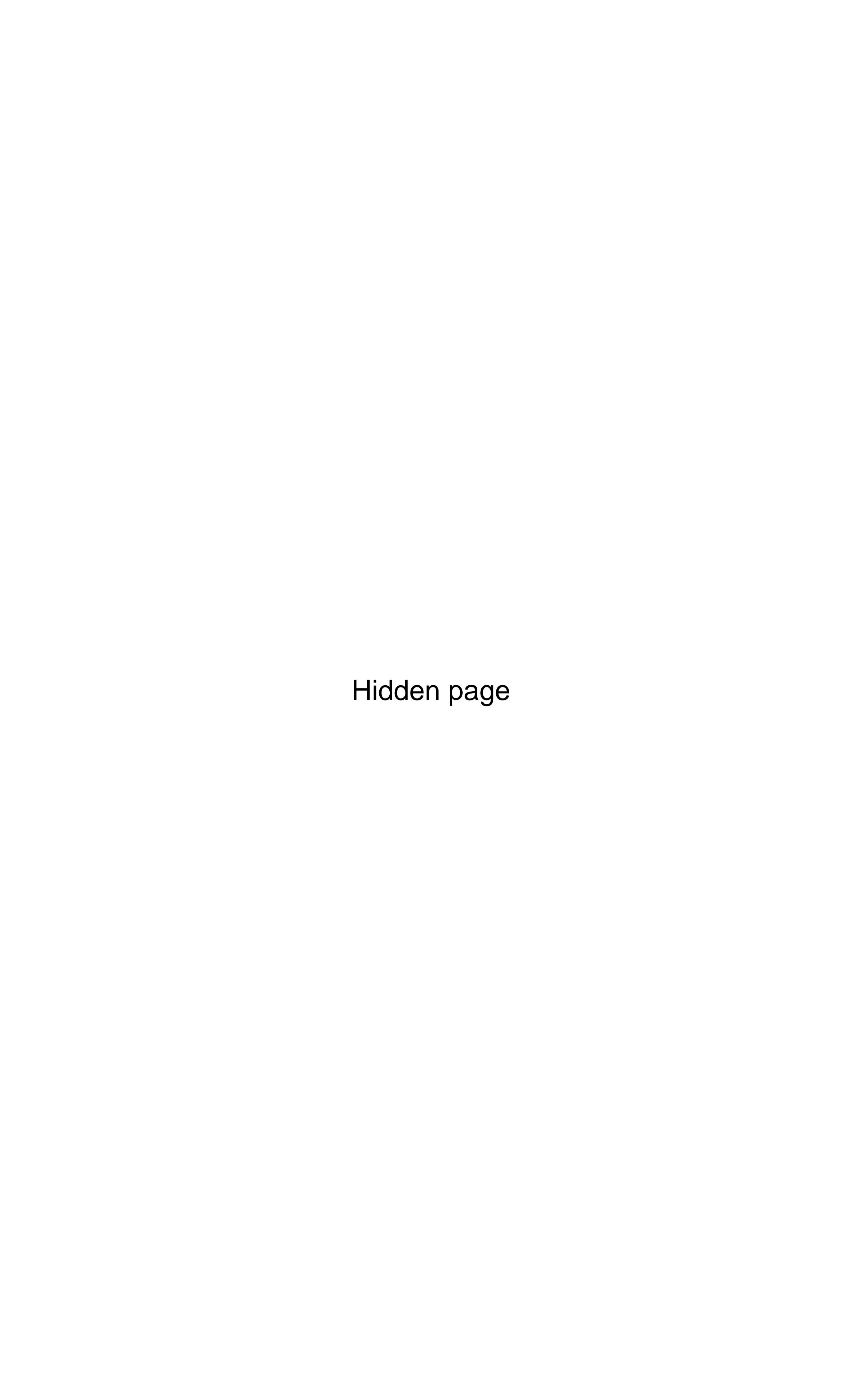
Name Drill Sleeve

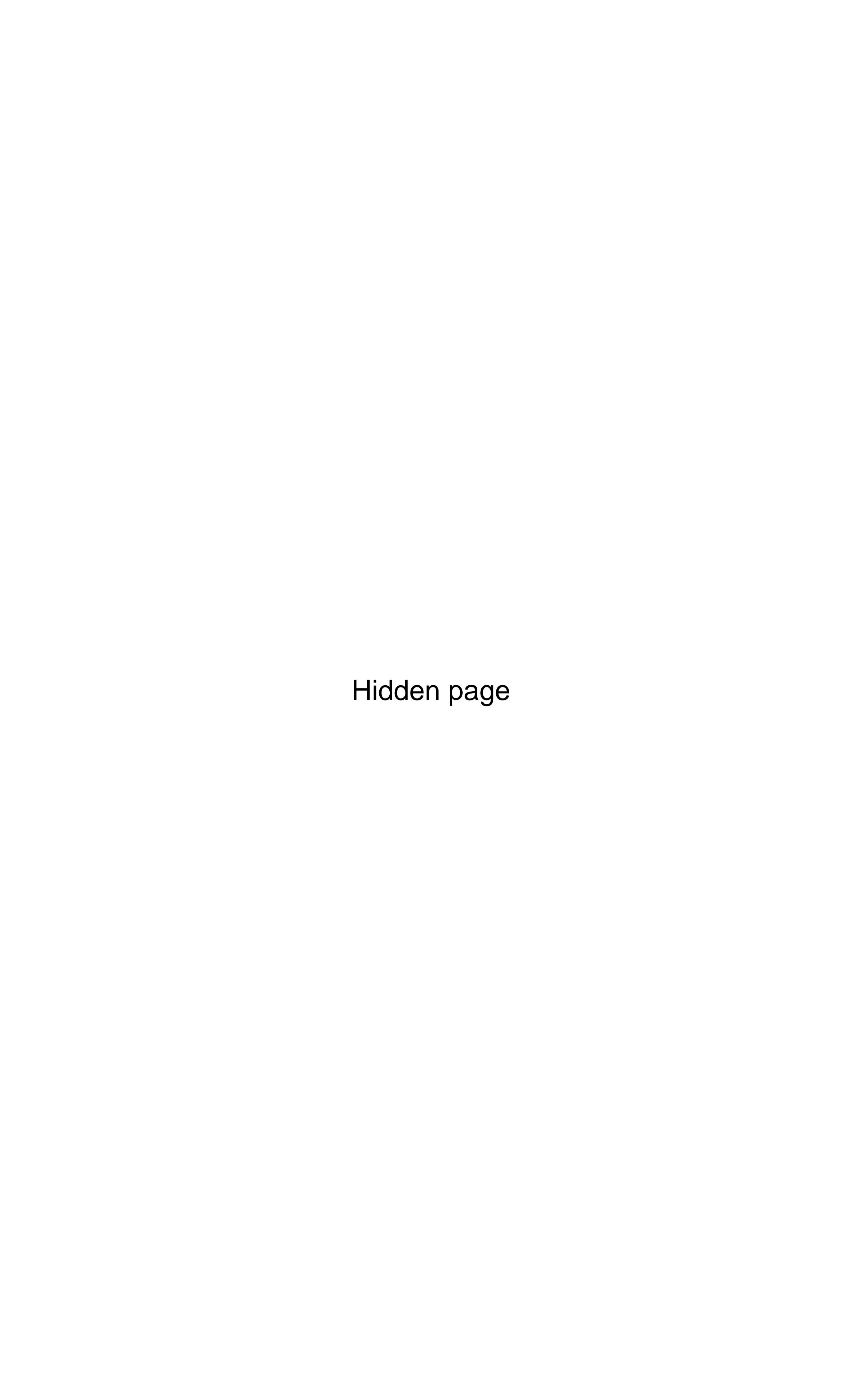
To protect tissue from drill bits and taps Purpose

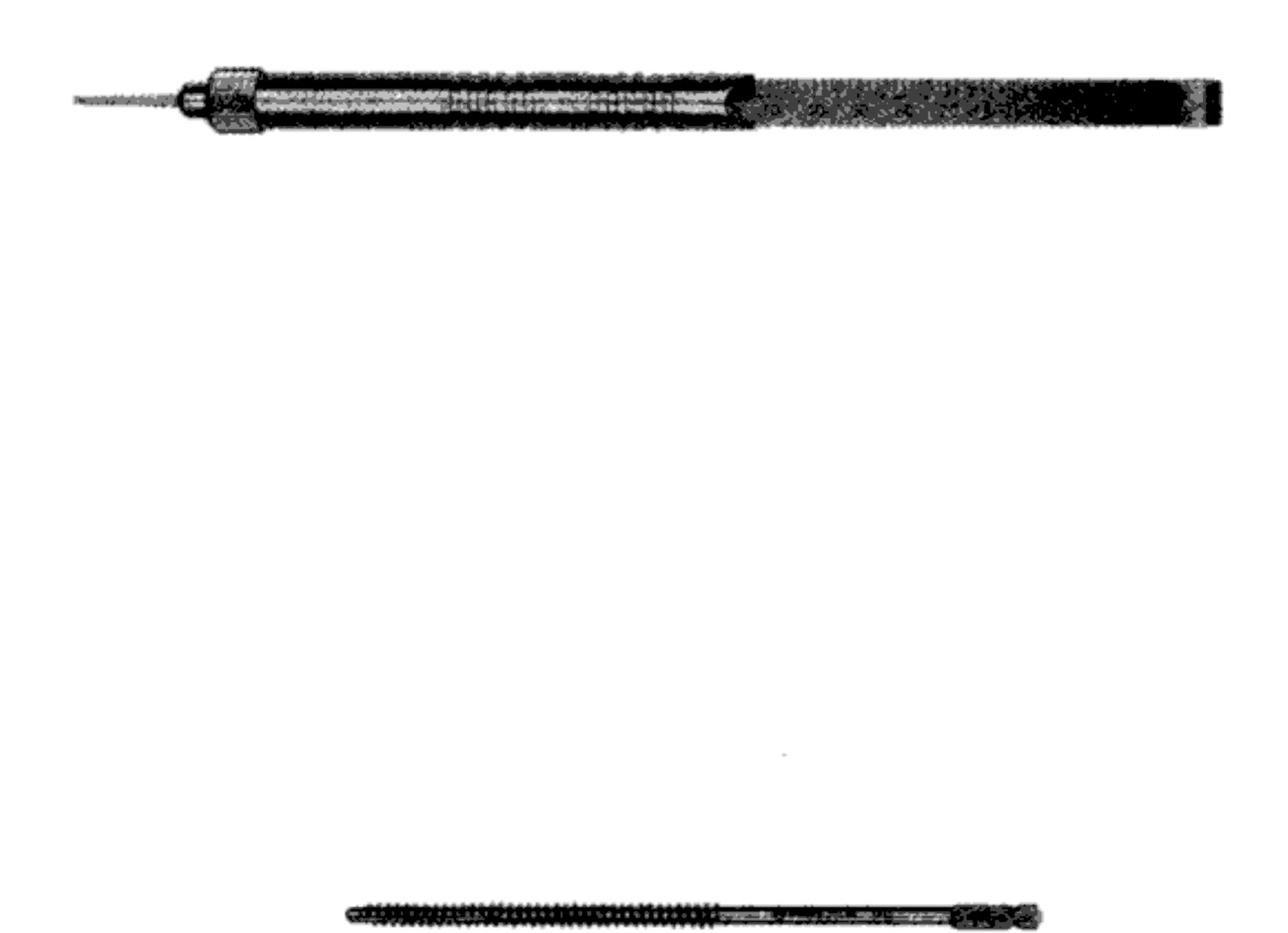
Size Must correspond with the drill bit

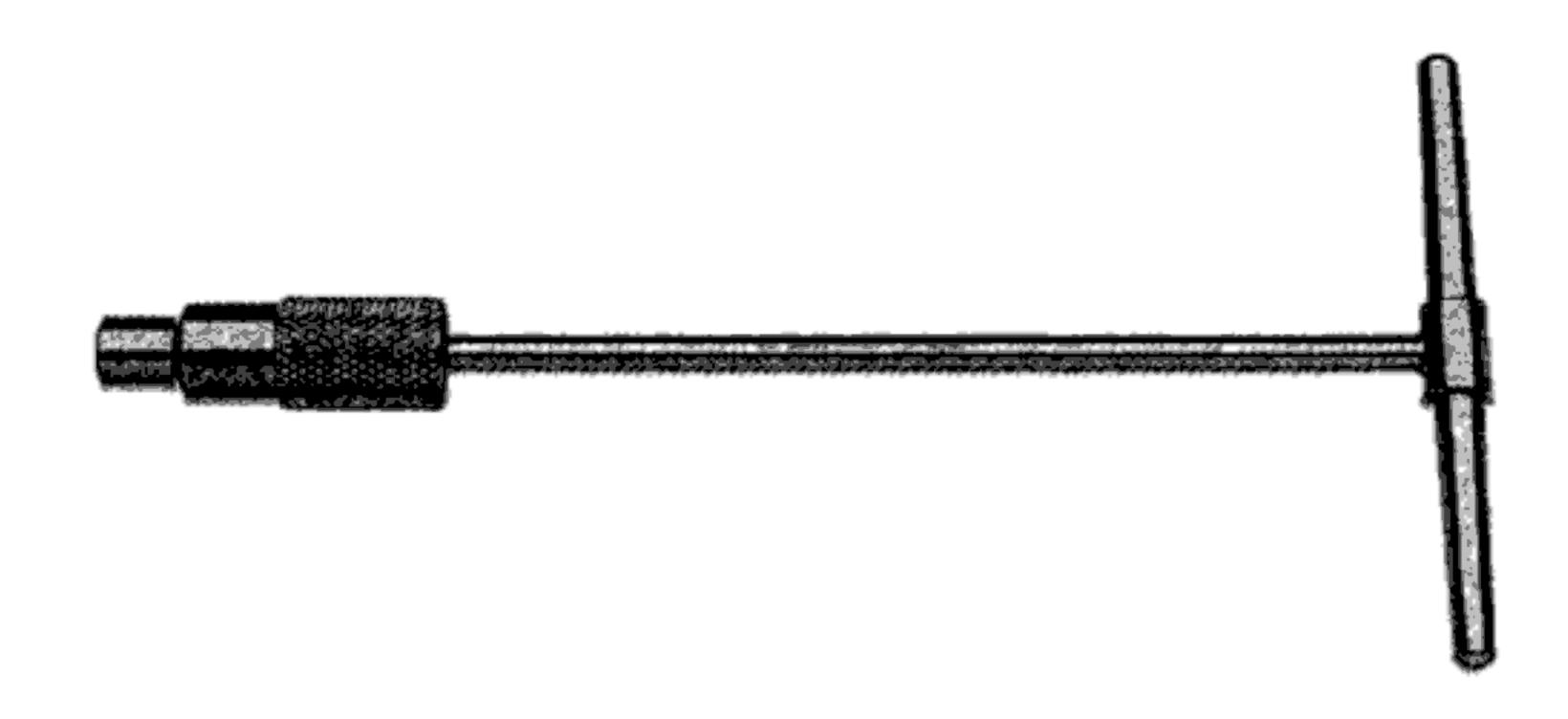
Distinguishing Features Long body with angled tips of uniform shape

Similar Instruments Universal drill guide









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)

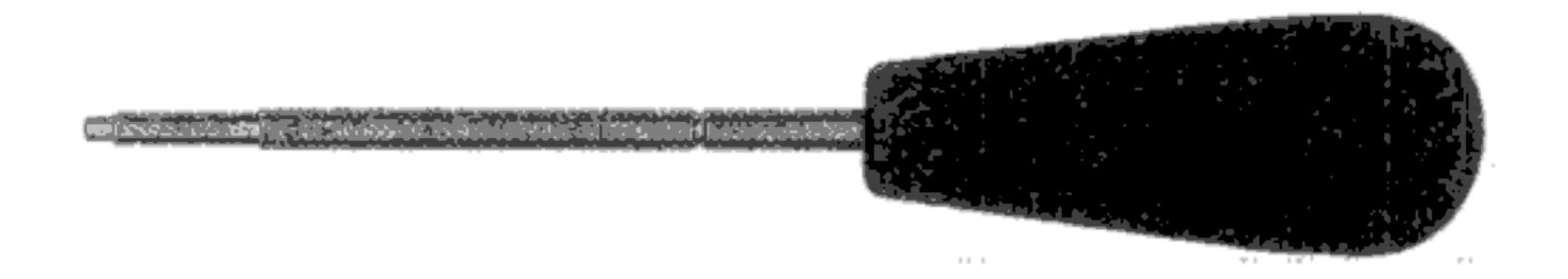
Purpose To allow screws to sit flush with bone when a plate is

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





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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

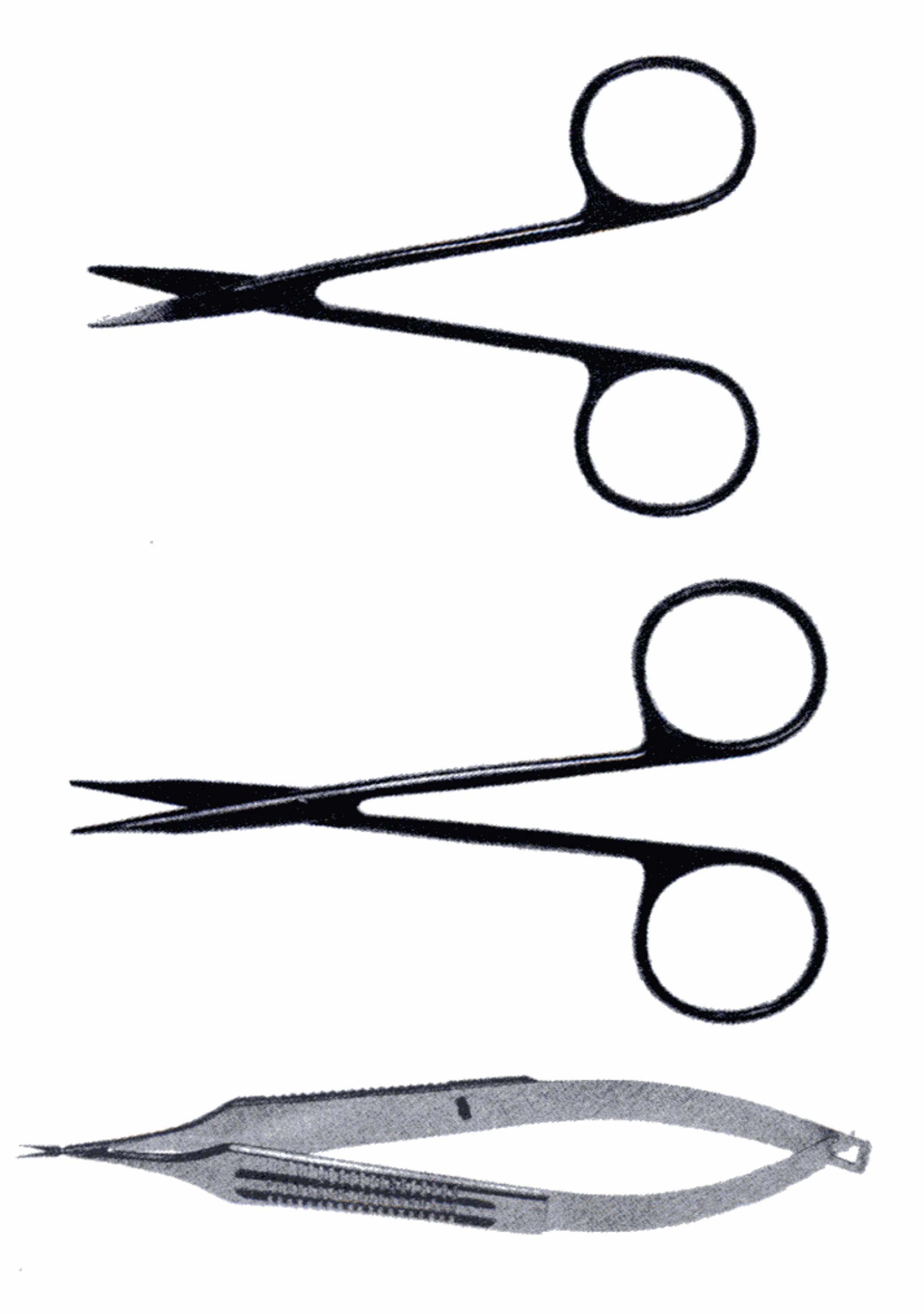
Scissors

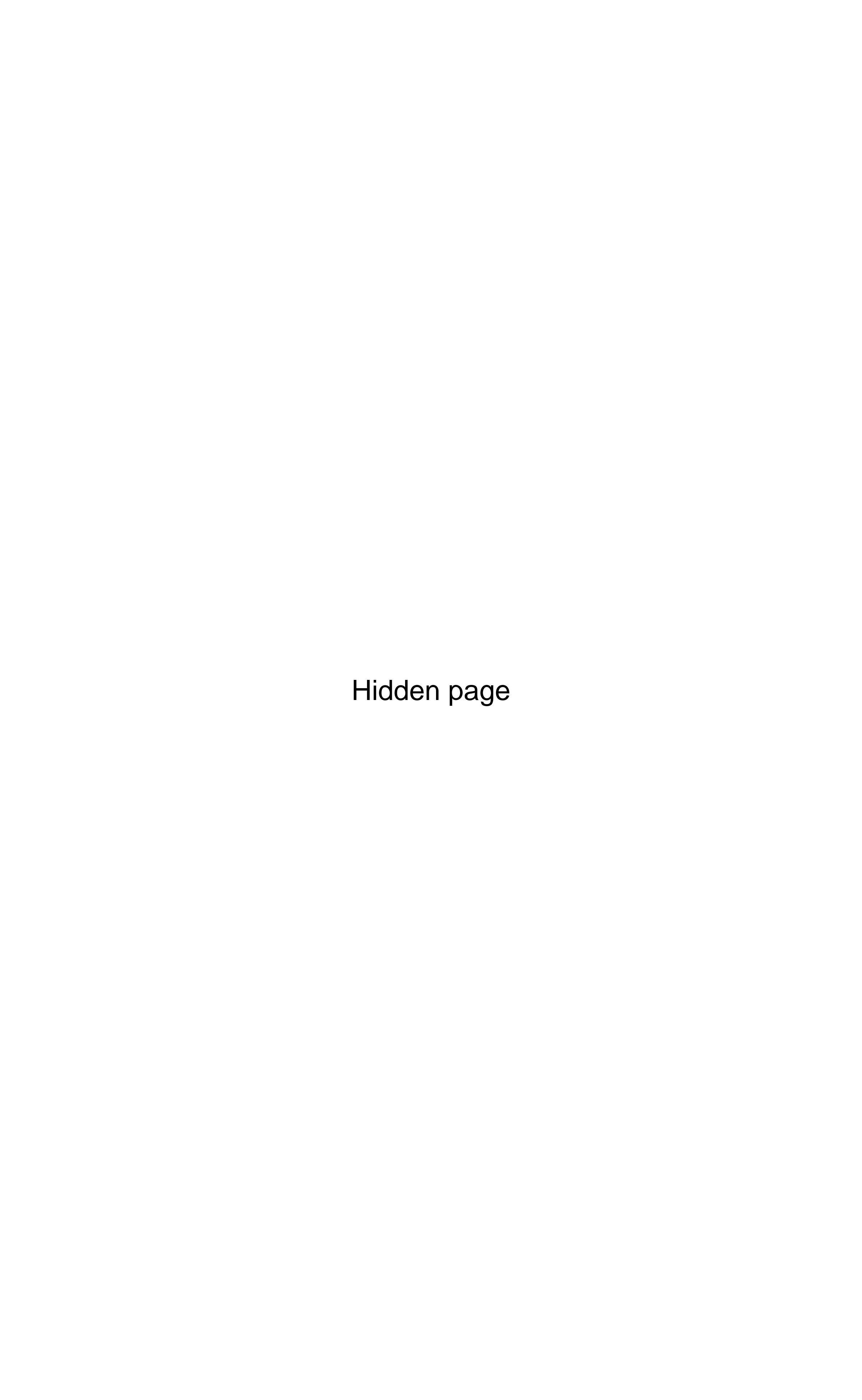
Name Castroviejo - Vannus Capsulotomy (straight and curved)

Purpose To cut away the anterior lens capsule during cataract surgery

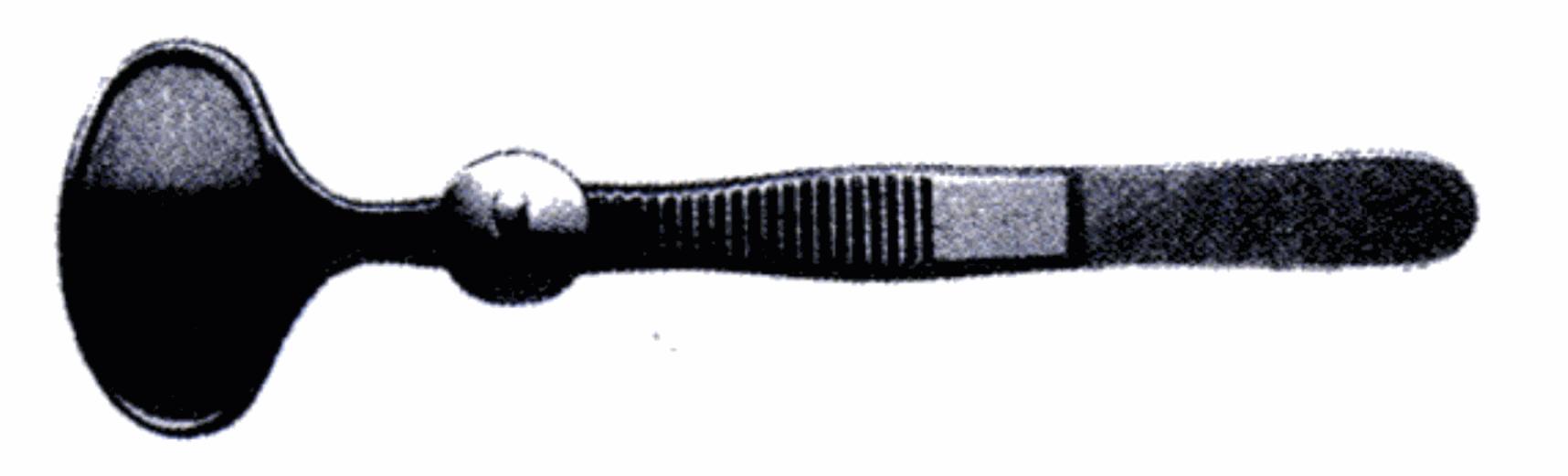
Size 6 mm cutting length

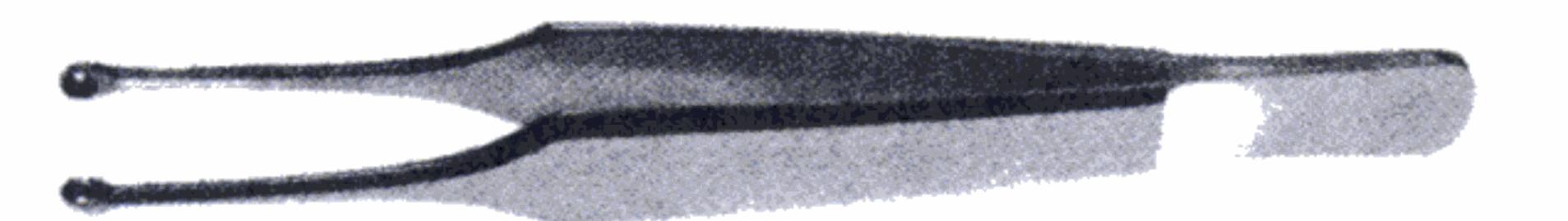
Distinguishing Features Spring action pear shaped handle and tiny blades











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



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

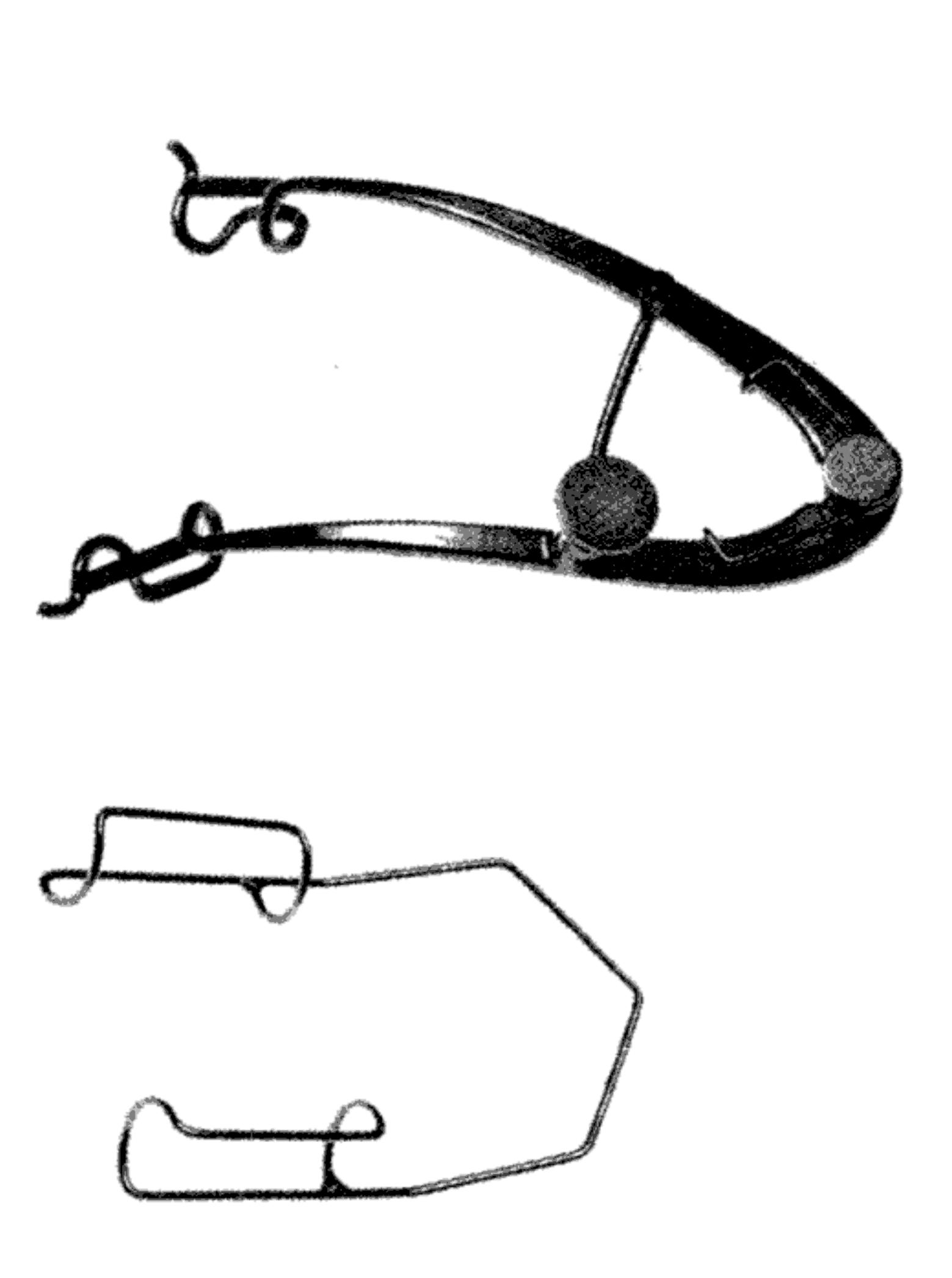
Purpose To retract eye lids to allow access to the eye ball

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

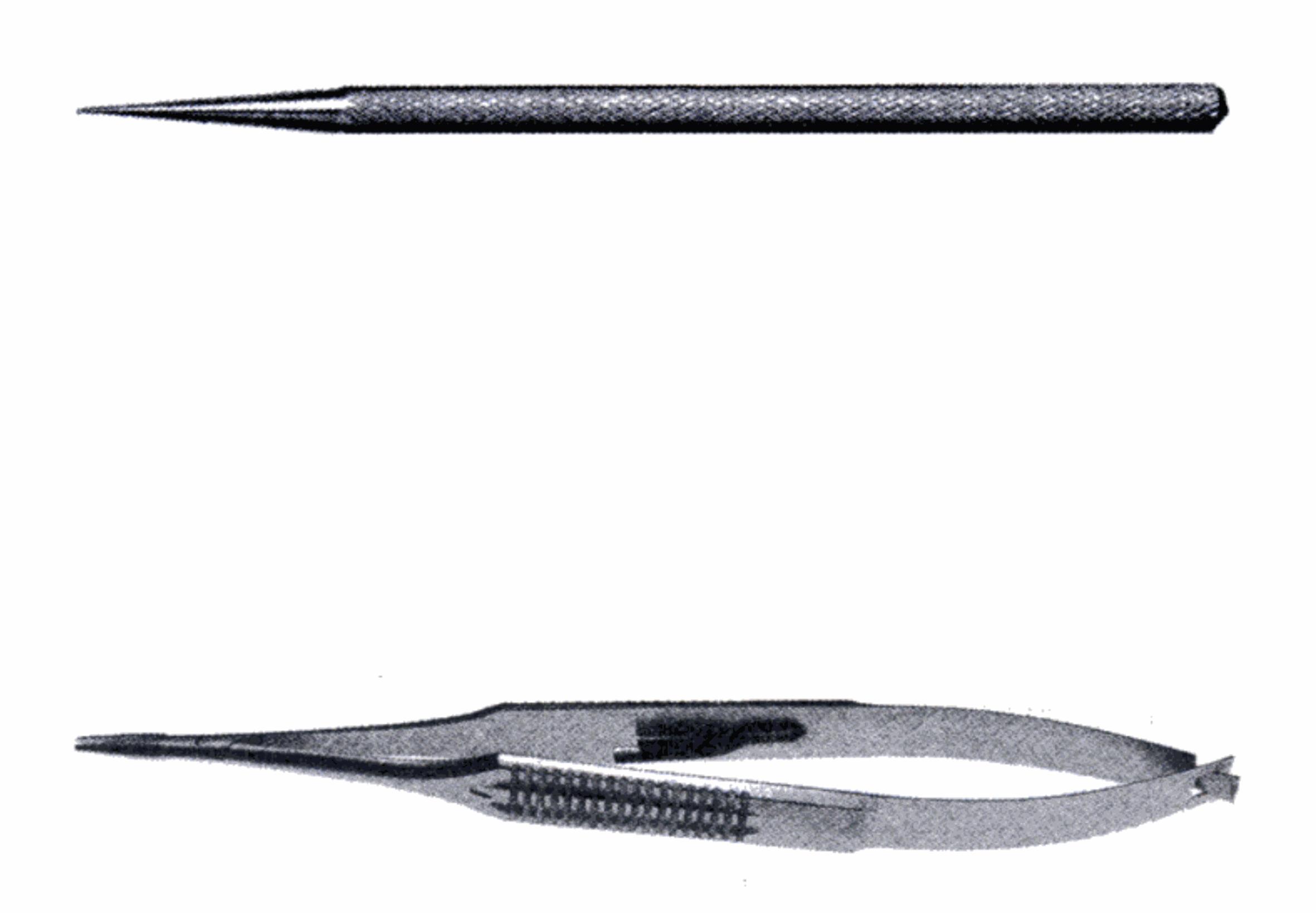
Name Castroviejo (Micro) Needle Holders

Purpose Holding needles for suturing

Size 13 cm (length)

Distinguishing Features Flat handles with no finger rings

Similar Instruments Weiss, Troutman and Catford



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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

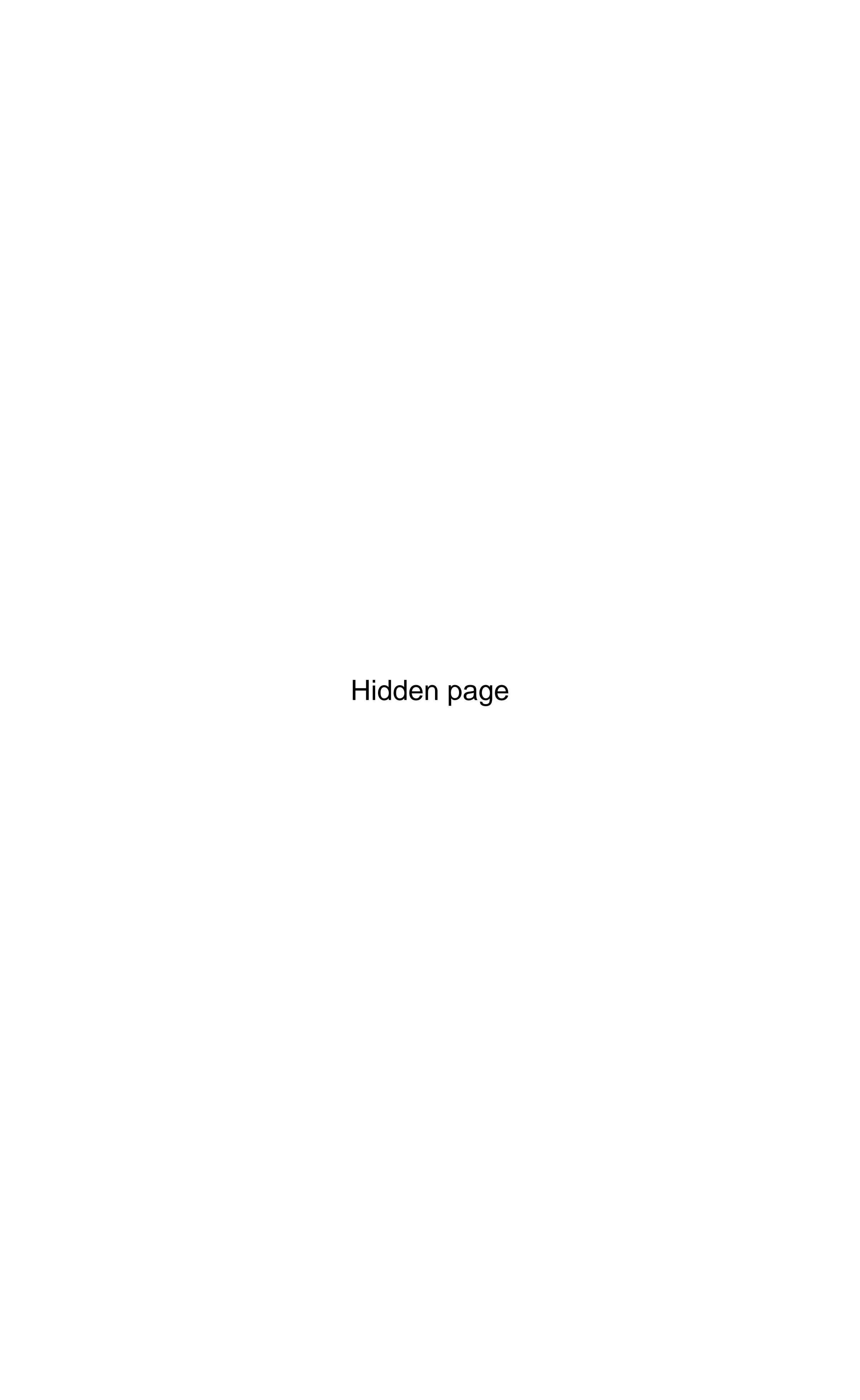
extractions and oral surgery

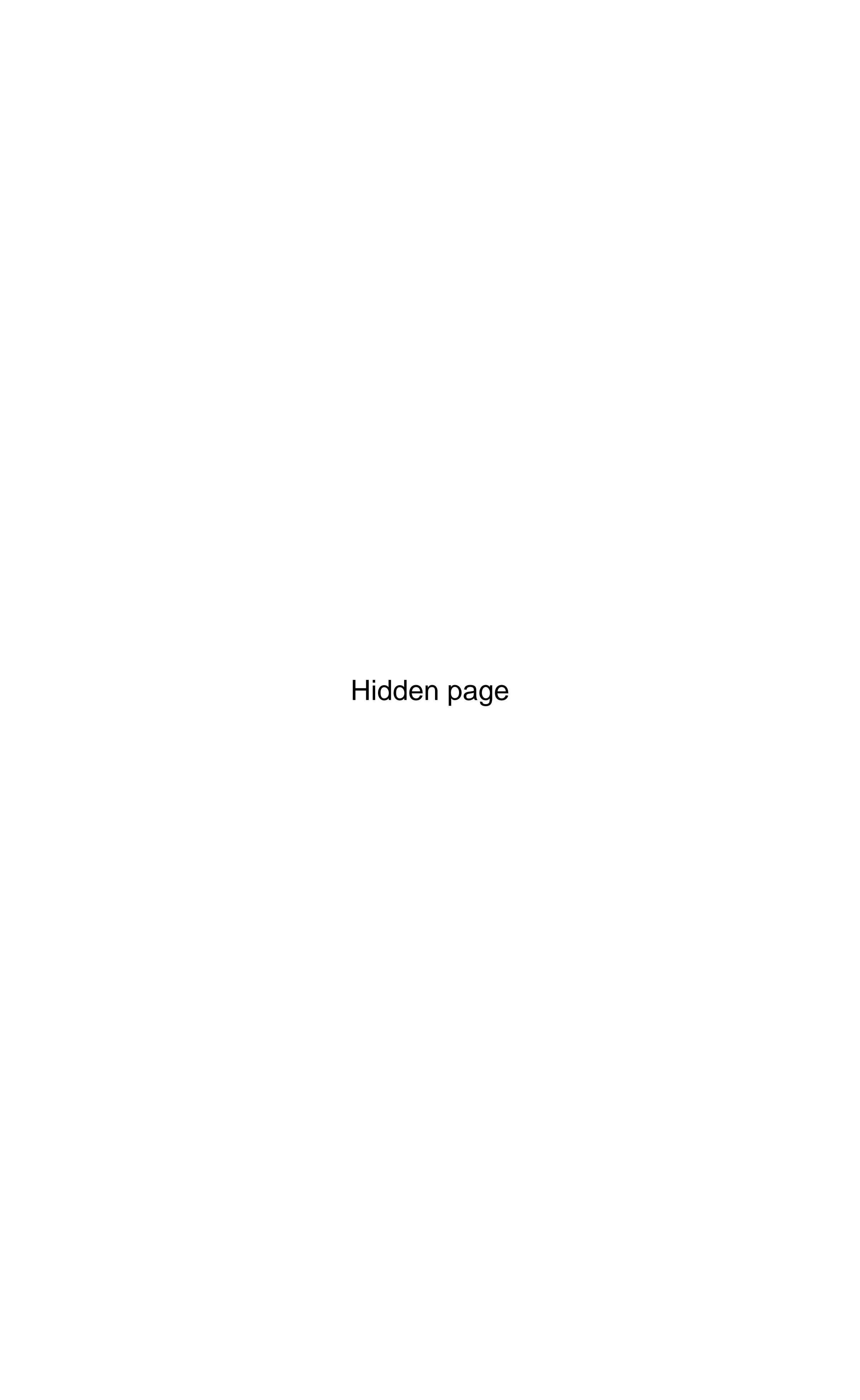
Size 16 cm long

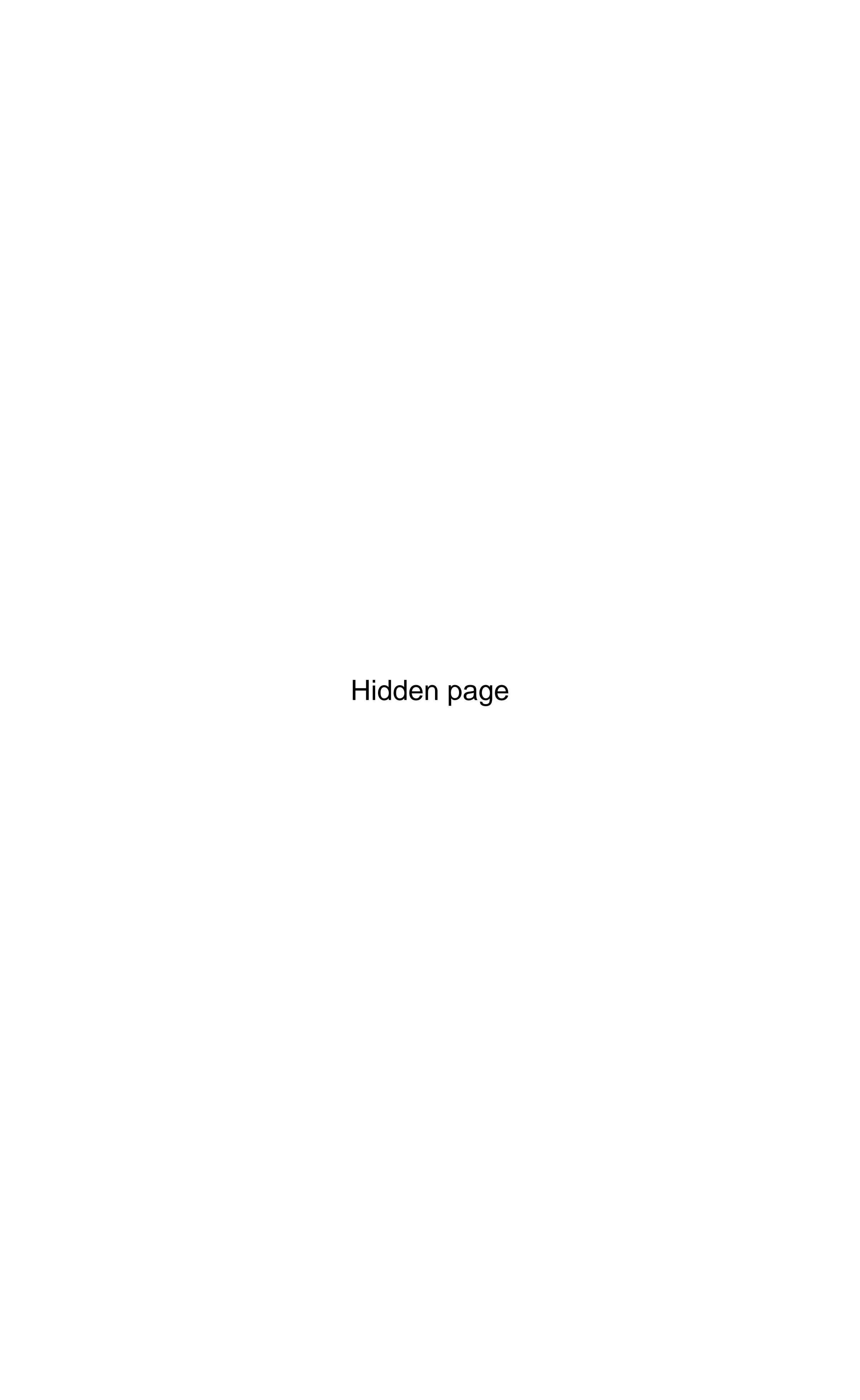
Distinguishing Features Angled, rounded tip

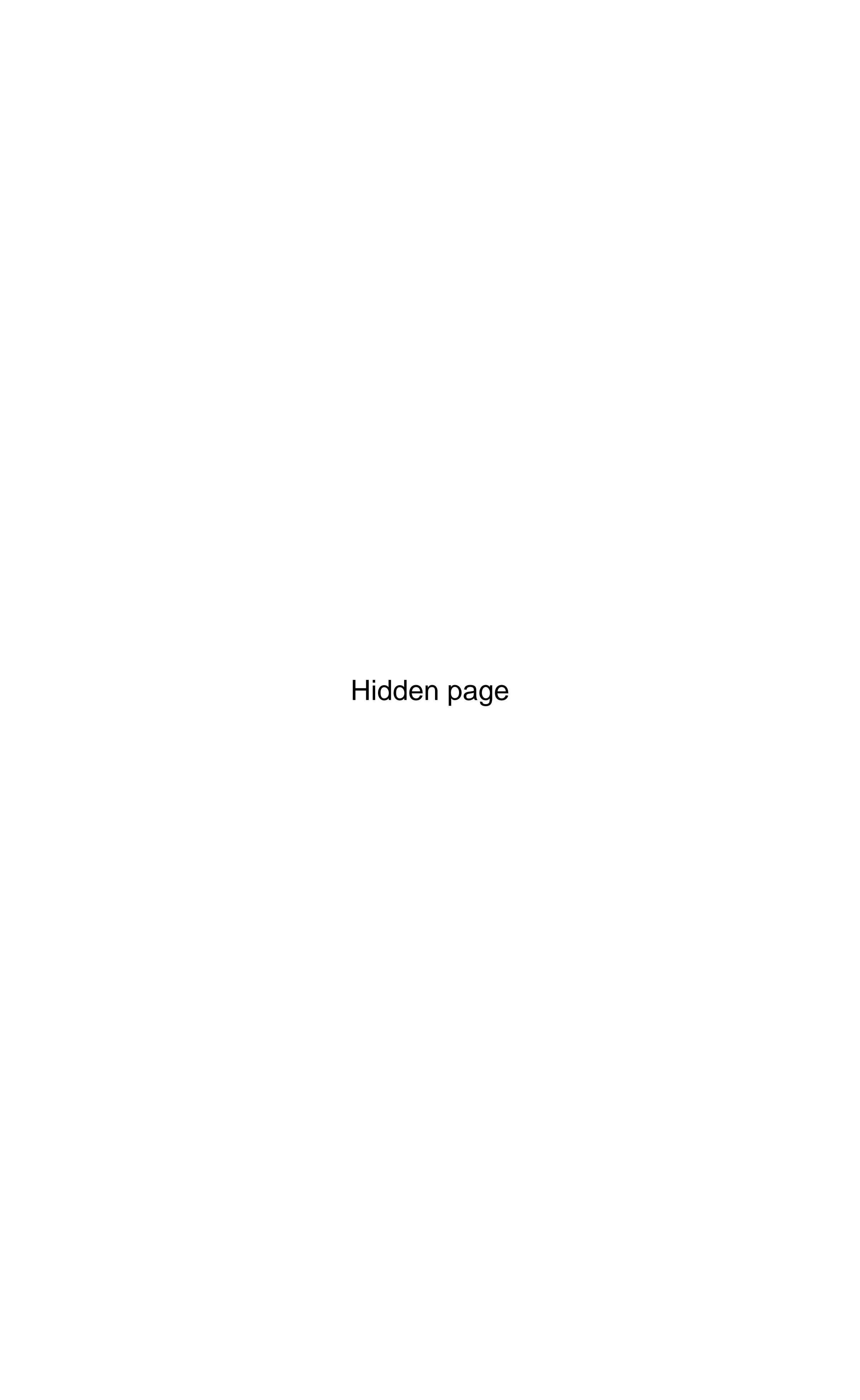
Similar Instruments Dental Mixing Spatula, Dental Luxator

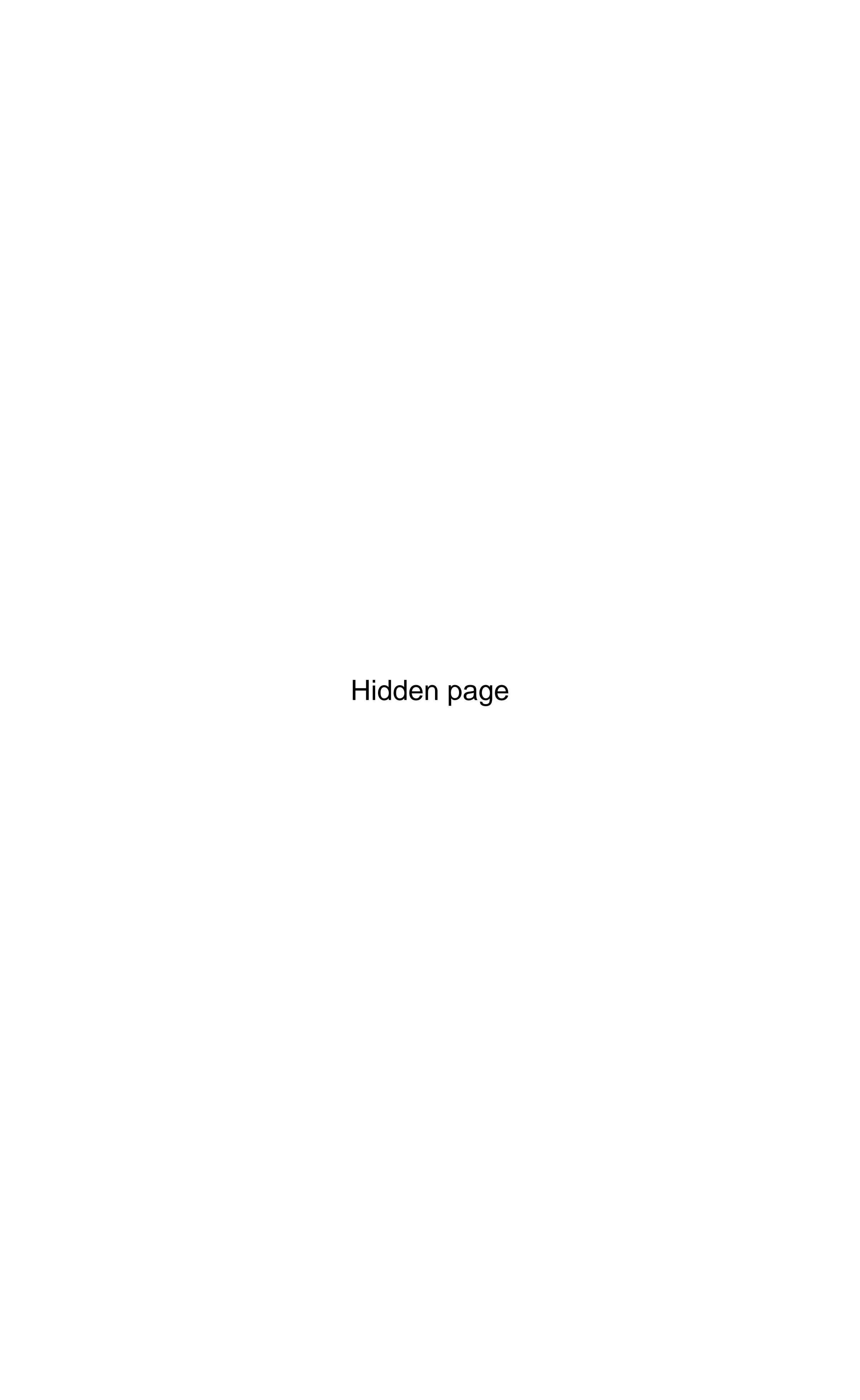




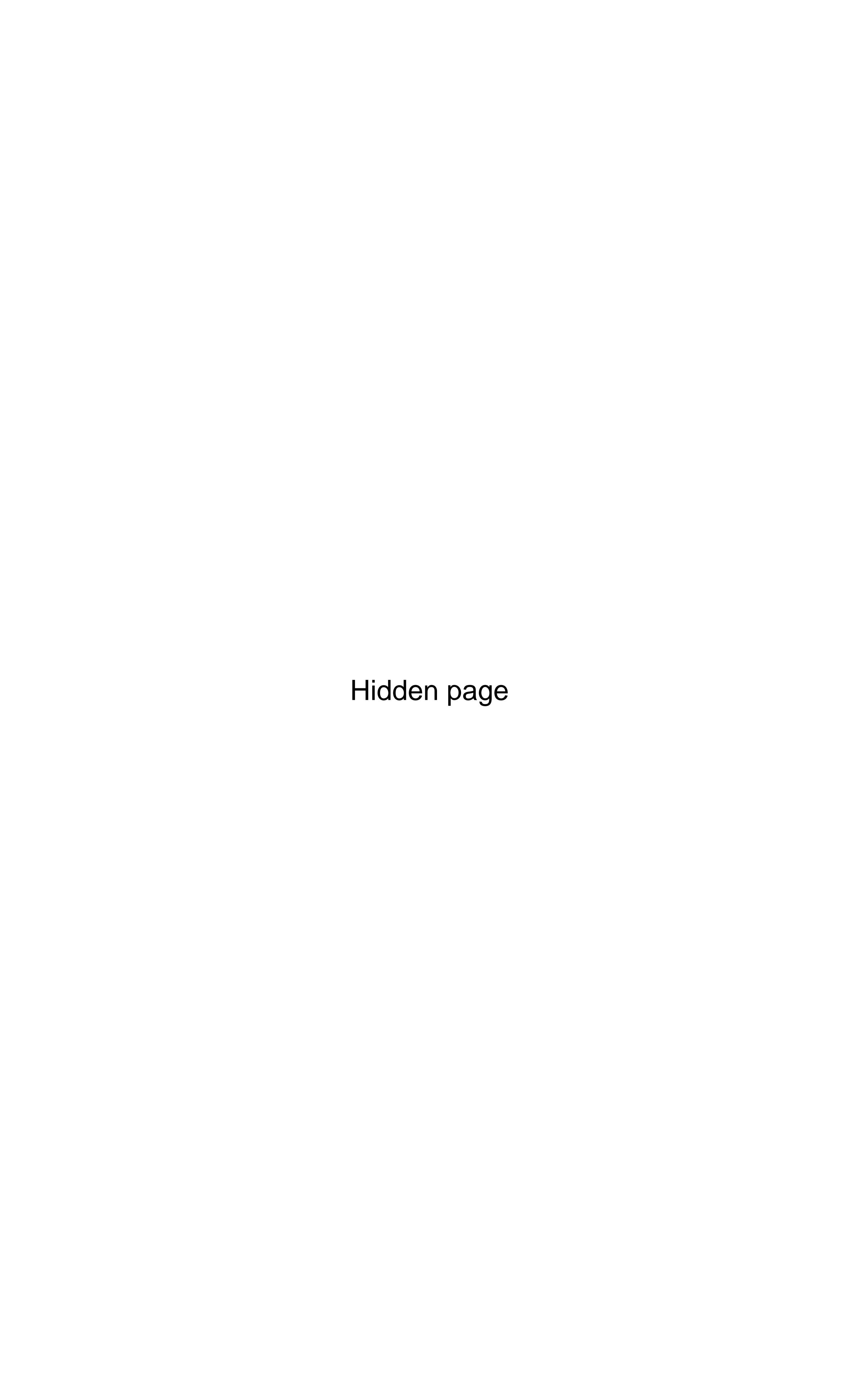


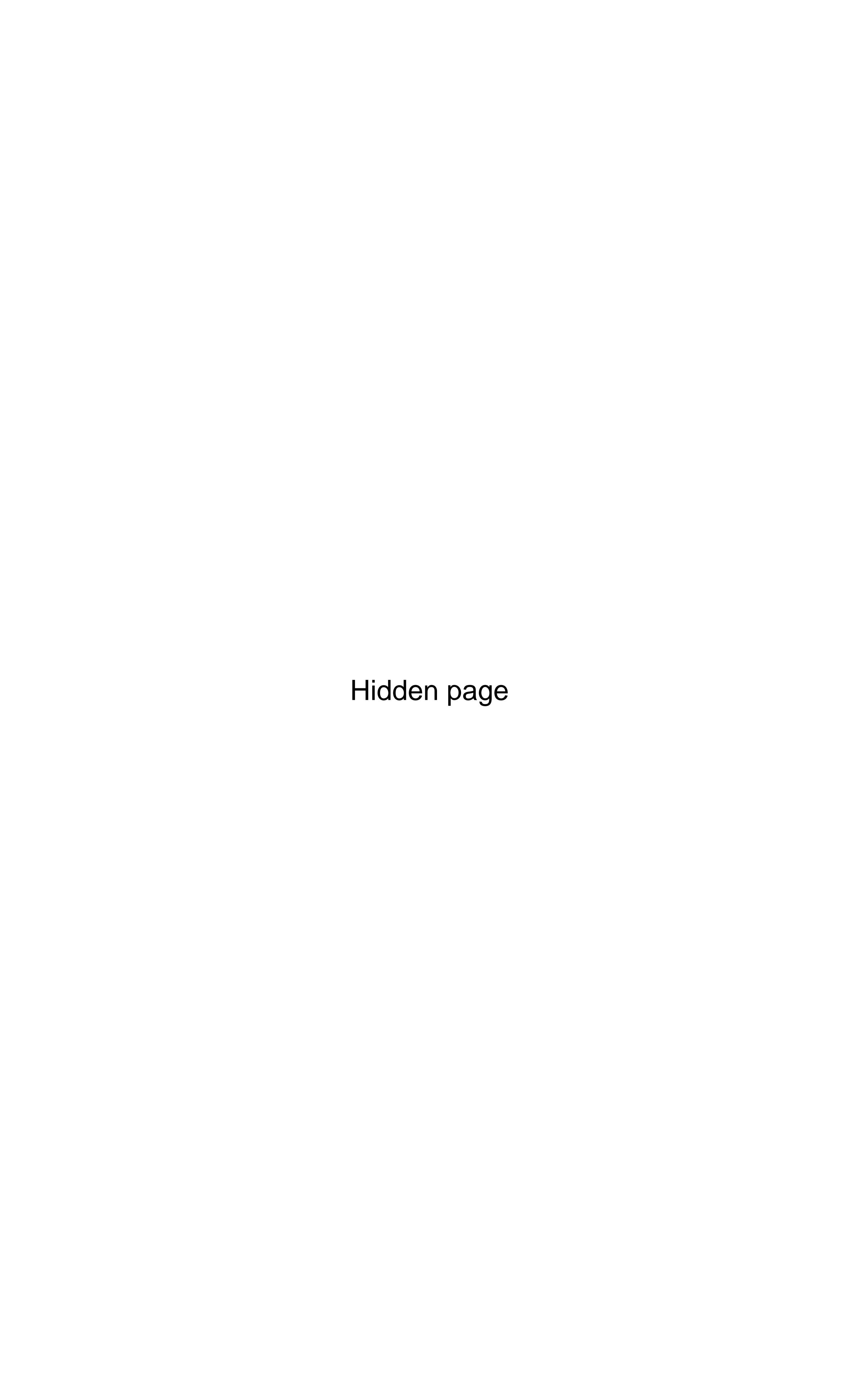


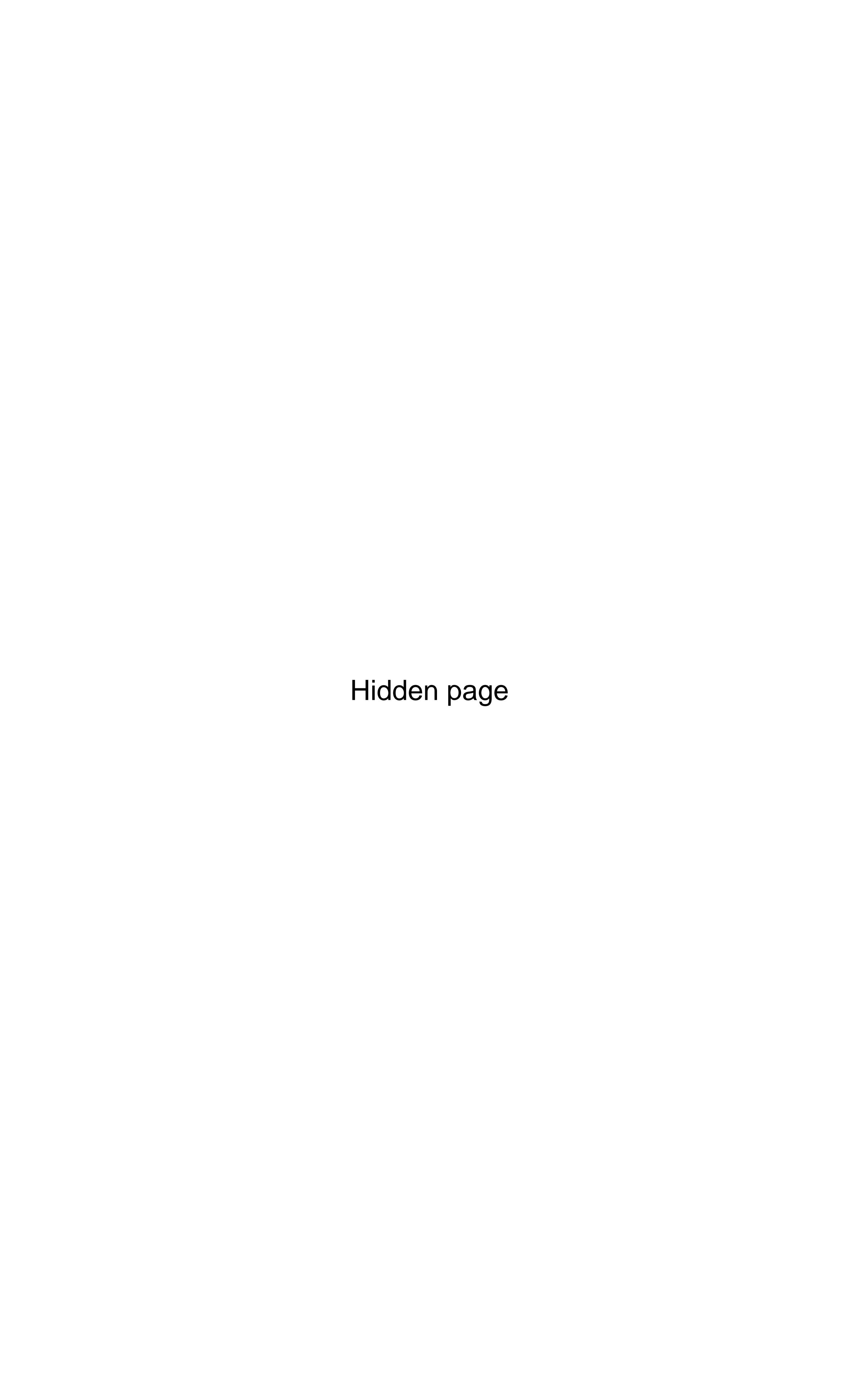


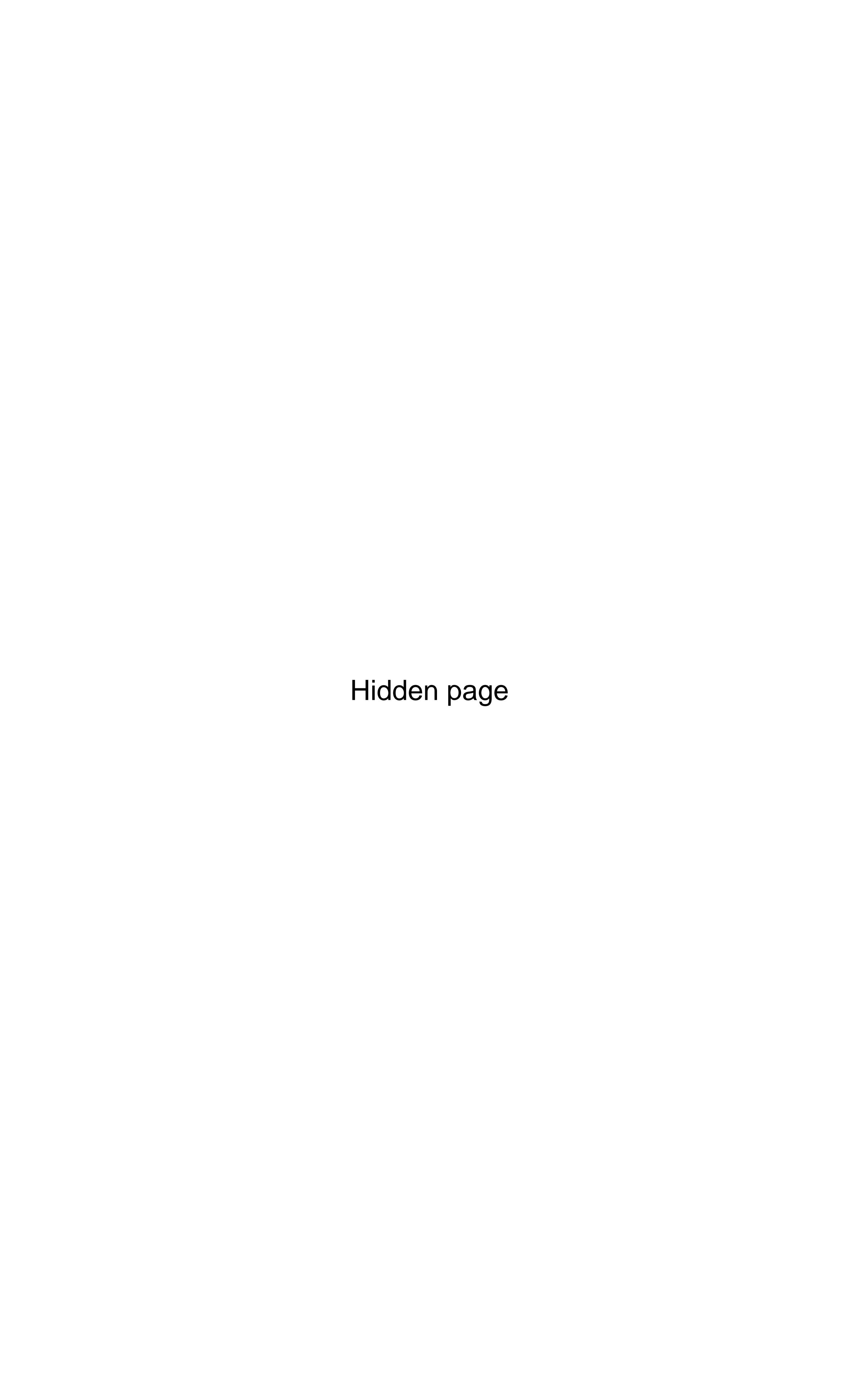


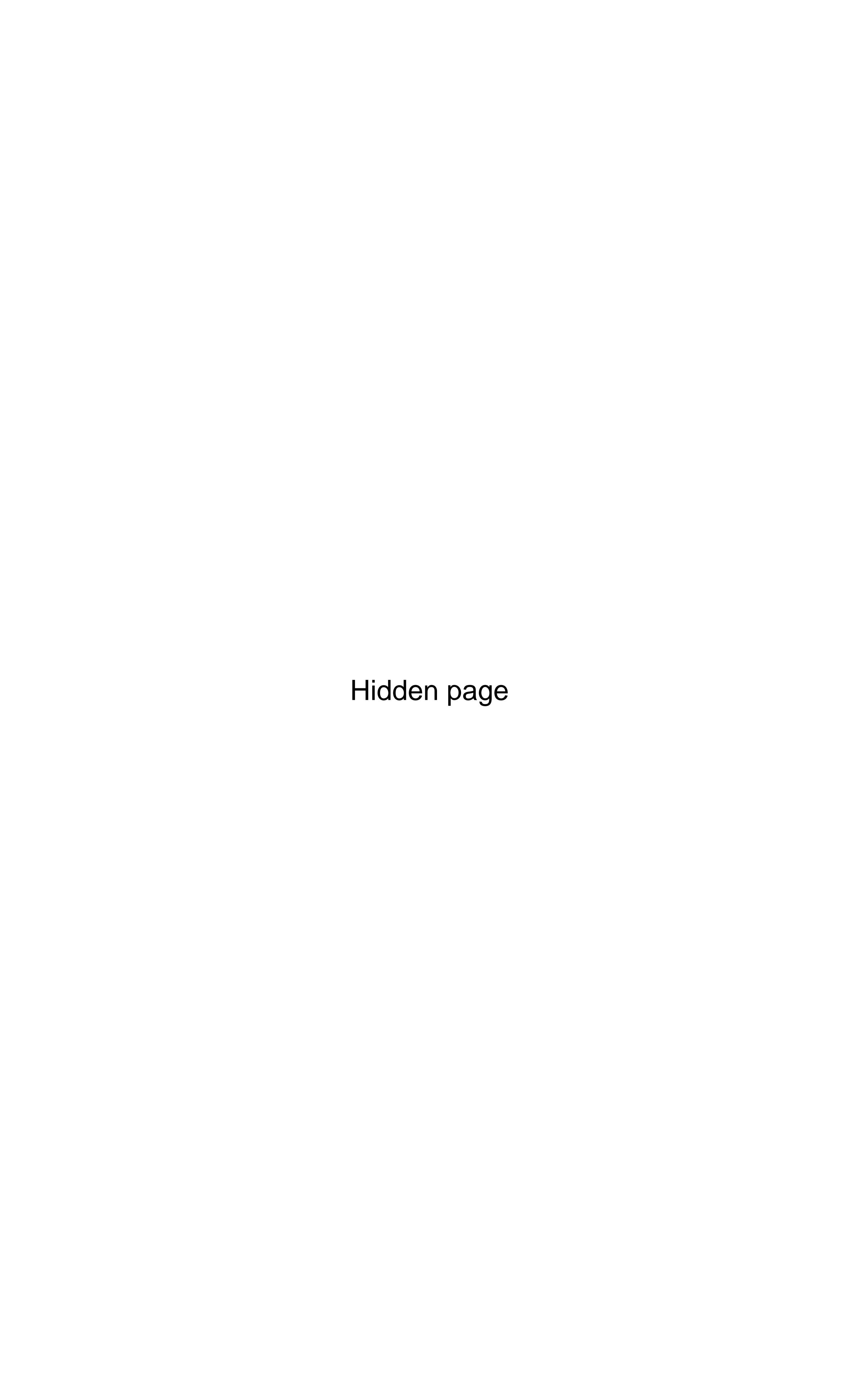
Miscellaneous Instruments

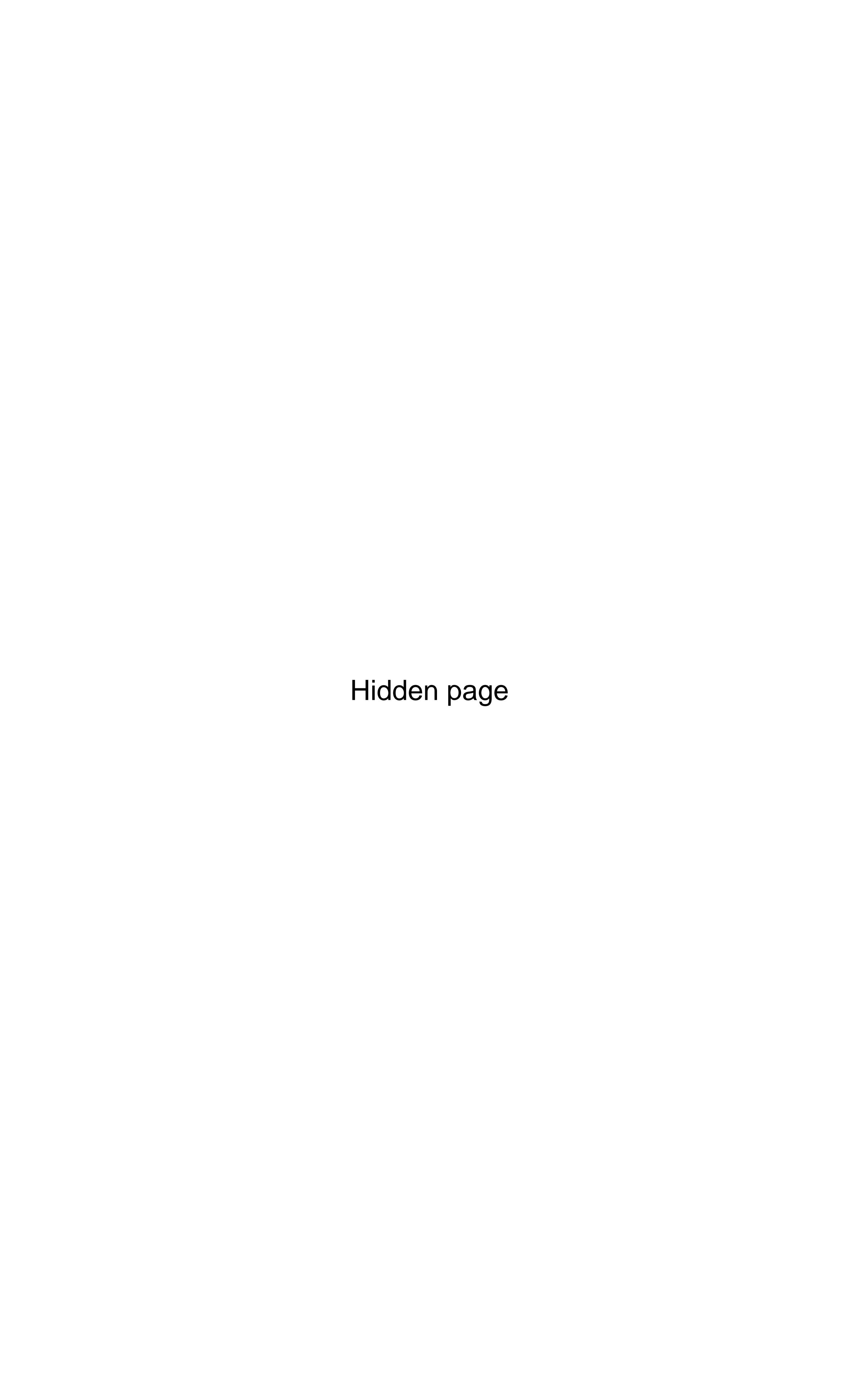




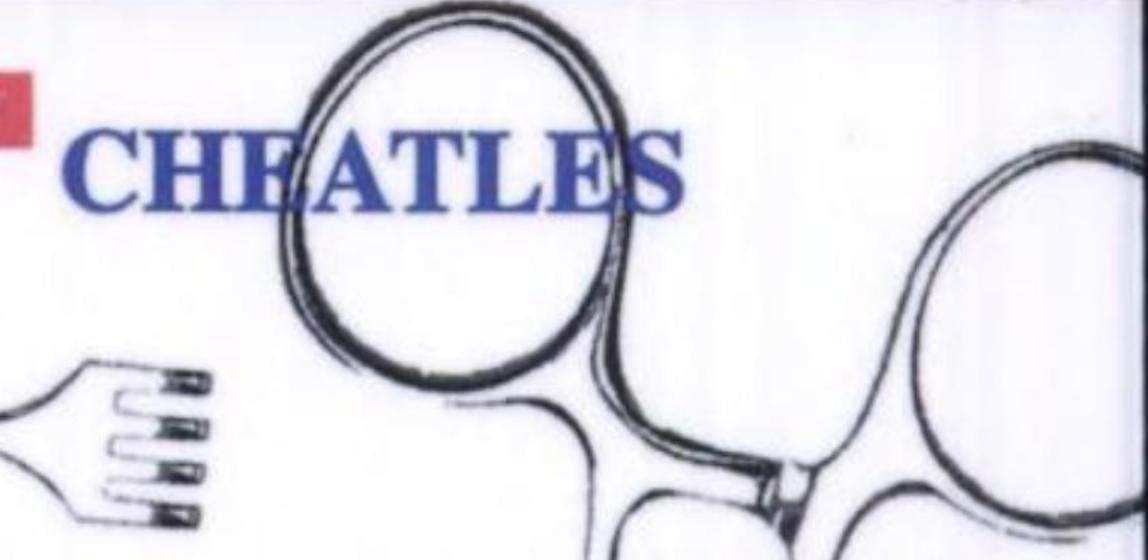












The current failure rate for students of Veterinary Nursing is high, due in part to the fact that there is a shortage of suitable texts available.

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. Additional coverage is provided on related physiology, management, hygiene and feeding, first aid, basic hospital practice, and the theory and practice of nursing.

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