

MM



INSTRUMENTS 1

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SCALPEL - SURGICAL KNIFE

THROUGH WHOLE STRUCTURE
BY ONE FINE MOTION



N.B. This oldest surgical instrument was present at the beginning of the written history of Sumerians in Mesopotamia, in ancient Egypt, Indus Valley and Norte Chico civilisations all around 3300 BCE.

TWEEZERS

ANATOMICAL
handle with tissue delicately

SURGICAL
firm grasping

VASCULAR
manipulation with vascular wall

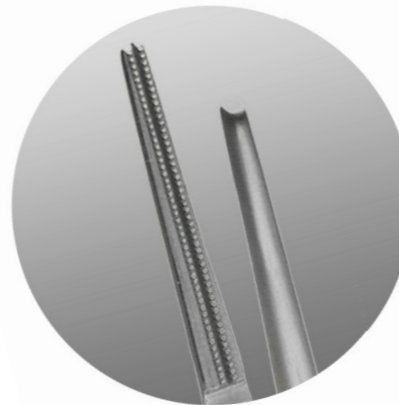
THE TISSUES SOUND HOLD ME REFINED

N.B. The surface of the jaws:

anatomical – transversely grooved; blunt tip
surgical – smooth; fit in small beak at the tip

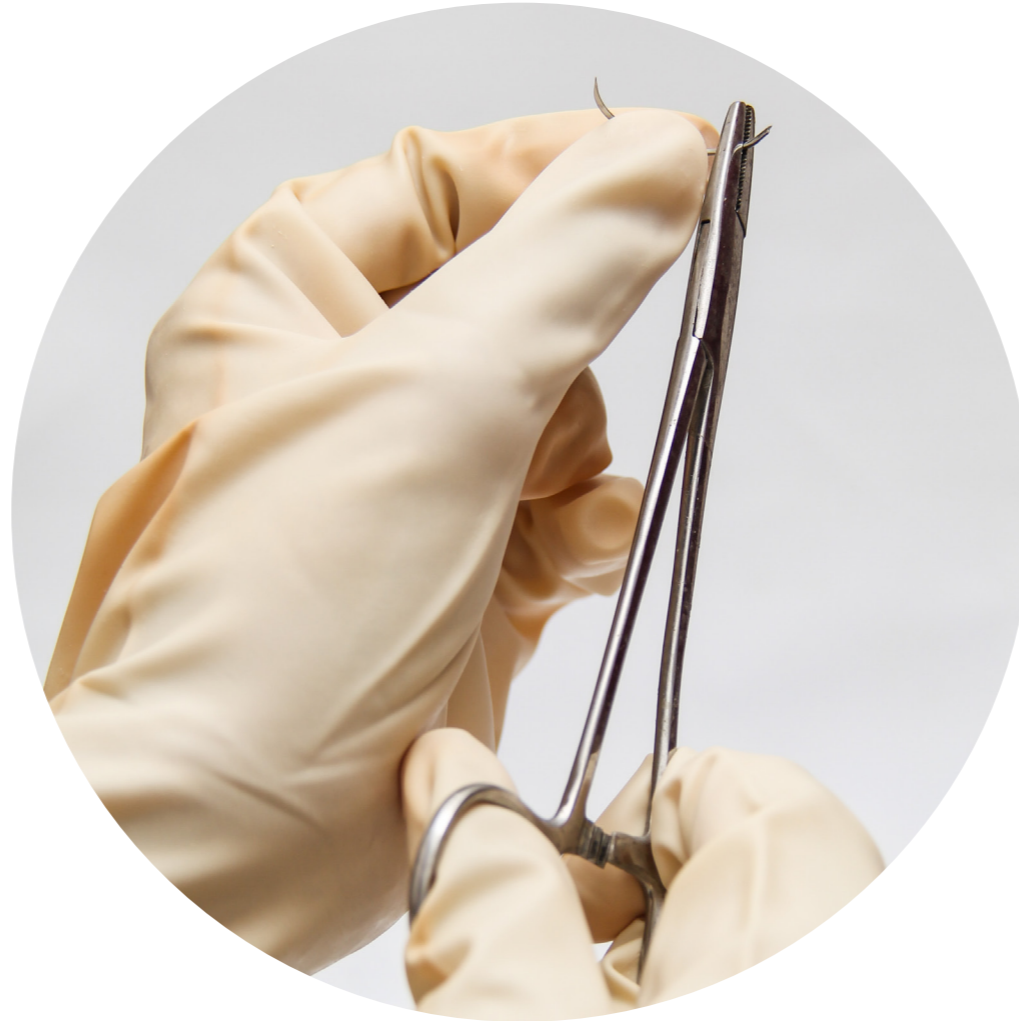
vascular – DeBakey profile: distinct coarsely ribbed grip panel opposed to the finer ribbing

Michael DeBakey (1908-2008) Alma mater Tulane Uni, New Orleans. Pioneer vascular and cardiac surgeon in Houston, TX.



NEEDLE HOLDER

with finely cross-serrated jaws



WRIST MOTION MODELS ONESELF AFTER THE CURVATURE OF THE NEEDLE

N.B. The index finger rests slightly on the trunk of the instrument and the needle is introduced into the tissue vertically.

SCISSORS



EXCELLENT FOR FINE COMBINED PREPARATION

N.B. Quick alternate sharp and blunt preparation by the opening, shutting, and partially rotating both blunt tips of slightly bent instrument.

PEAN

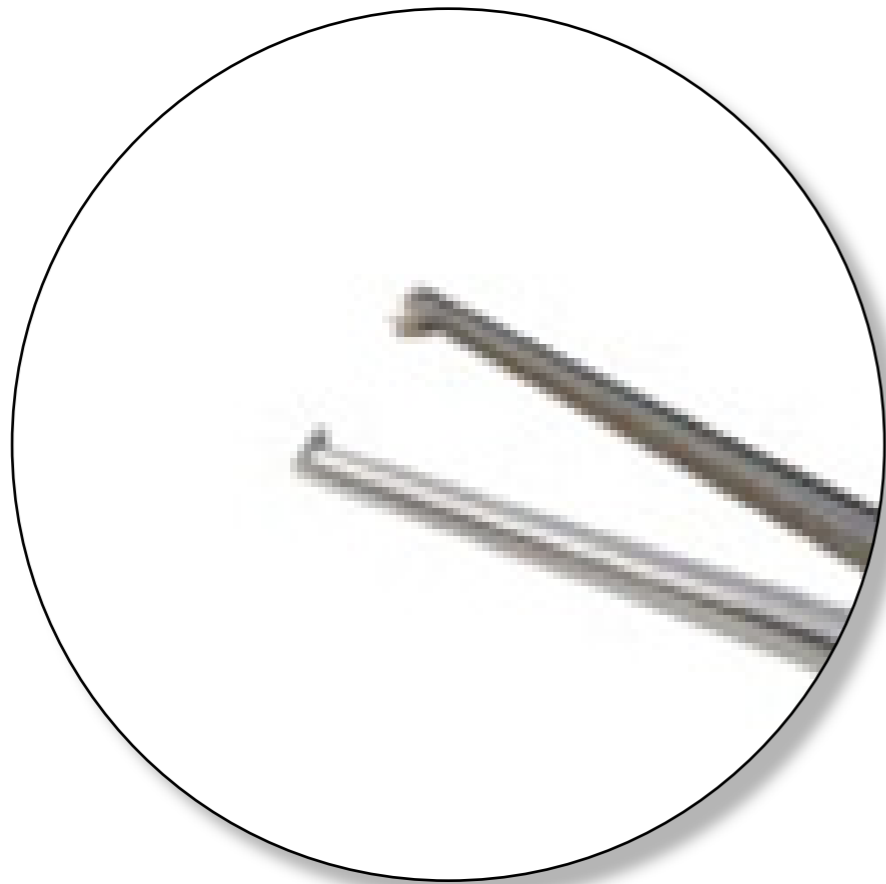


HEMOSTATIC FORCEPS - TARGETED ONTO VESSEL

with grooved jaws of various sizes up to its very fine modification „mosquito péan“ invented by Halsted, Father of Modern Surgery.

N.B. Jules-Émile Péan (1830-1898) Paris, F. Alma mater Sorbonne. William Stewart Halsted (1852-1922) Alma mater Columbia Uni NY. Halsted is one of four physicians founding John Hopkins Hospital in Baltimore, ML.

KOCHER



HEMOSTATIC FORCEPS – FOR BLIND HEMOSTASIS IN AN UNCLEAR AREA

with grooved jaws and the spike at the top is designed to catch securely the bleeder deep within tissue
N.B. Theodor Kocher (1841-1917) Bern, CH. Alma mater Uni Bern. First surgeon received the Nobel Prize (1909) for his research on goiter.

MIKULICZ



PERITONEAL CLAMP

developed for grasping the peritoneum to prevent its retraction. Slightly curved mikulicz is widely used similarly to Kocher.

N.B. Johann von Mikulicz-Radecki (1850-1905) Breslau/Wrocław, EU. Alma mater Uni Vienna. When asked him the nationalists: Are you German speaking Pole or Polish speaking German? I'm Surgeon, answered.

RETRACTOR

called simply hook is of different size and shape:
small, medium, big, window, sharp, blunt... self retaining.
The hooks serve for uncovering of the operating field.



DEVOTED ASSISTANT – TREASURE OF THE TEAM

N.B. The assistants observe the operating area doing their best to create space for the operator.

BOWEL CLAMP



NON-CRUSHING INTESTINAL FORCEPS for temporary occlusion of the bowel.

N.B. They have longitudinally serrated jaws, soft fine ratchet and are available as straight and curved.

BAKEŠ GALLSTONE PROBE

informally calls „bakeshka“ has oliveshaped head 1-13 mm in diameter onto malleable wire with firm hand grip.



CAUTIOUS DILATATION OF PAPILLA PRECEDING GENTLE EXTRACTION OF COMMON BILLIARY DUCT STONES

N.B. Jaroslav Bakeš (1871-1930), inventor of gall stone probe, scholar of Eduard Albert at Vienna Uni, was Moravian pioneer of billiary tract surgery and leading person of oncological care in Brno.

KIRSCHNER - STEINMANN - KÜNTSCHER

eponyms diameters

kirschner wire: 0,9 -1,5 mm



steinmann pin: 3-5mm



küntcher (IM) nail: 4-5mm humeral / 5-6mm tibial
and femoral (IM =intramedullary)



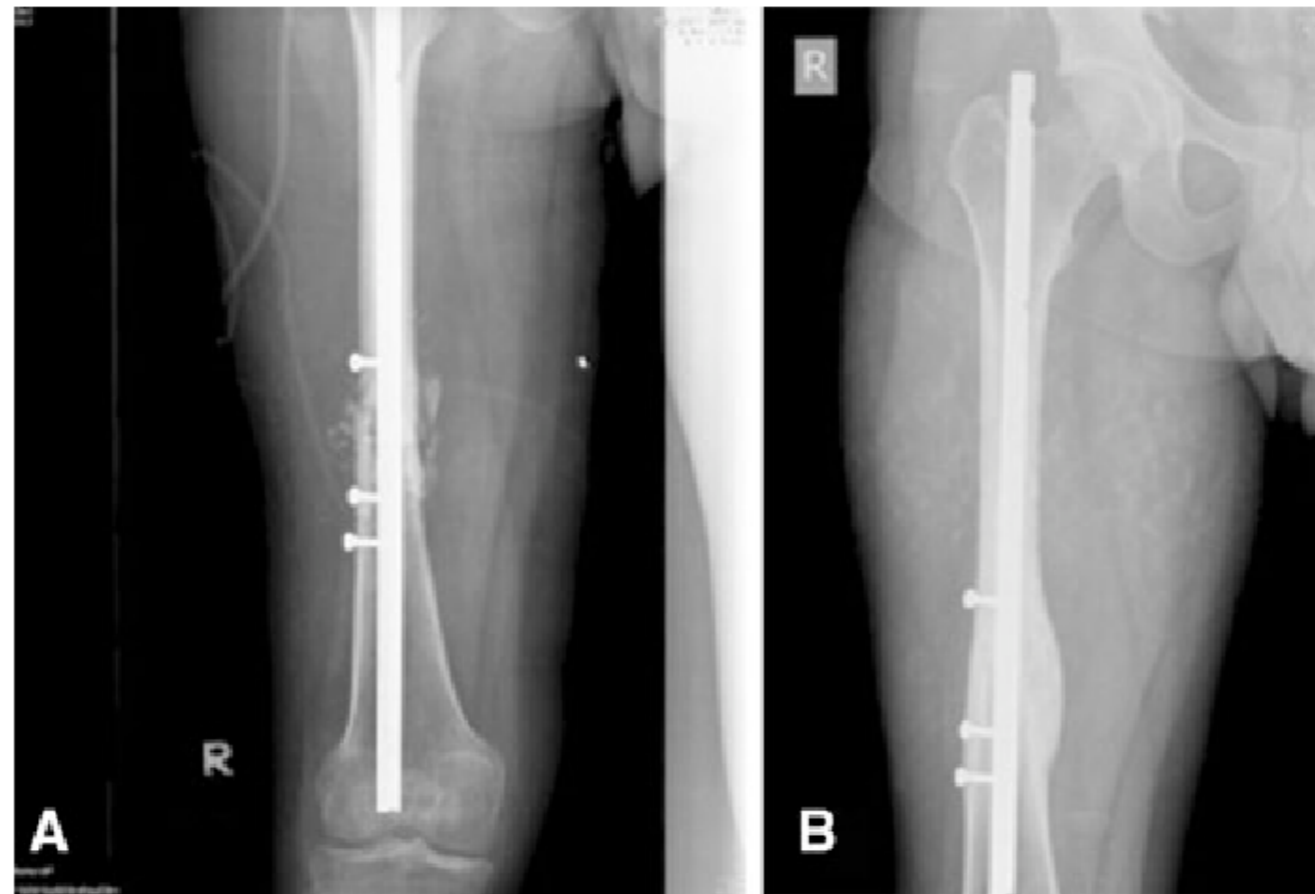
ASEPTIC APPROACH - PERCUTANEOUS INSERTION

N.B. K-wire and S-pin should be inserted slowly with frequent stops of the drill to prevent thermal damage of the tissues.

K-wire / S-pin / IM-nail

CONTINUATION

KÜNTSCHER OF TITANIUM ALLOY HAS ELASTIC PROPERTIES.



N.B. Gerhard Küntscher (1900-1972), Alma mater Uni Jena, inaugurated intramedullary nailing of long bones in 1939 in Hamburg (D). Initial disagreement of the authorities enforced break-through of the method in Lapland (FIN). Martin Kirschner (1879-1942), Alma mater Albert Ludwig Uni Freiburg (its especially wonderful motto sounds: The truth will set you free), invented his wire in 1909. He performed, besides other things, first successful pulmonary artery embolectomy („Trendelenburgs operation“). Fritz Steinmann (1872-1932) Alma mater Bern, committed student of Theodor Kocher, first described skeletal traction by his pin in 1908.

LISTON and LUER („rongeur“)



BONE FORCEPS FOR ASSORTED CUTTING AND HANDLING WITH BONE

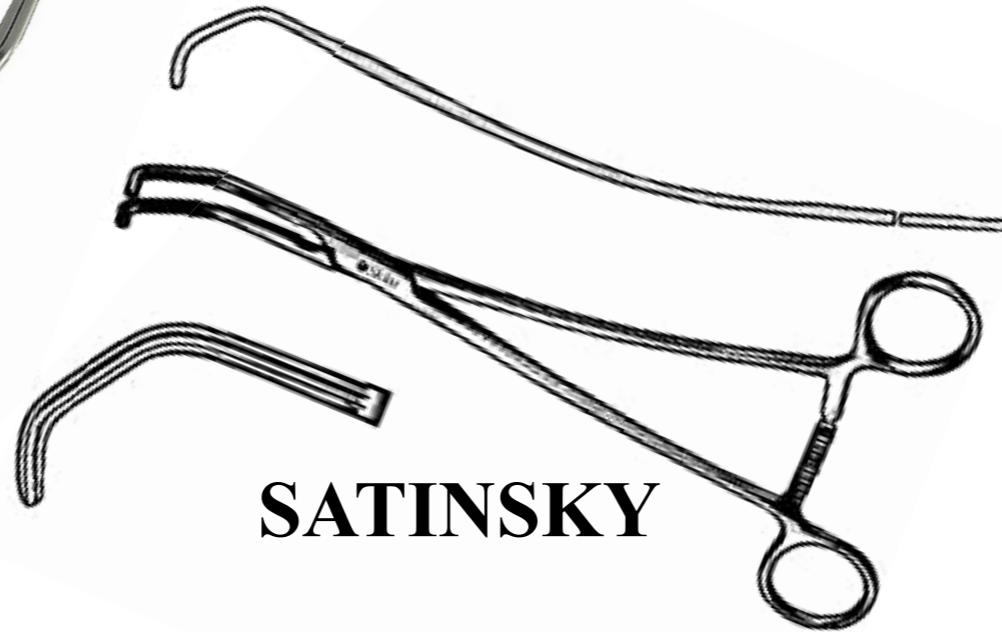
N.B.

Eponyme liston characterizes sharp bone forceps for cutting and handling of bone, a little resembling „bone scissors“ introduced by author of another surgical instrument - amputation knife.

Robert Liston (1794 – 1847), Alma mater Uni of Edinburgh, pioneering Scottish surgeon before the era of asepsis.

Rongeur (= rodent) eponymed luer after French colleague Luer who modified the forceps originally invented by Robert Masters Kerrison (1776 – 1847), Alma mater Uni of Edinburgh. Bone forceps luer with sharp-edged scoop-shaped jaws are used to cut traumatic amputated bone allow skin to be closed over the defect or to open window in the injured skull, or removal the bony fragments from the wound.

DEBAKEY



SATINSKY



Eponymous debakey VASCULAR CLAMPS DIVERSELY SHAPED - straight, curved, angled, atraumatic, aorta - have distinct coarsely ribbed grip panel opposed to the finer ribbing - specific debakey relief.

CLAMPING OF THE VESSEL NEEDS FEELING

N.B. Michael DeBakey, born Michel Dabaghi, implemented first successful carotid endarterectomy in 1953 and first successful patch-graft angioplasty. He was among the earliest performing coronary bypass surgery (CABG) in early sixties.

PATROL PROBE

Malleable soft wire 1,5 mm in diameter and 15 or 20 cm in length on both ends equipped by cosh-like smooth widening 2,5 mm in diameter to elucidate the course of fistulas or arteficial channels.



THE SUCCESS COMES ONLY THROUGH FINEST DEALING

N.B. Gently pushing the probe touch the bendings of the fistula in the fingers.

CLOSING REMARK

Individual components of the surgical kit
can be compared with instruments
of a symphonic orchestra
flawlessly engaged into their roles

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