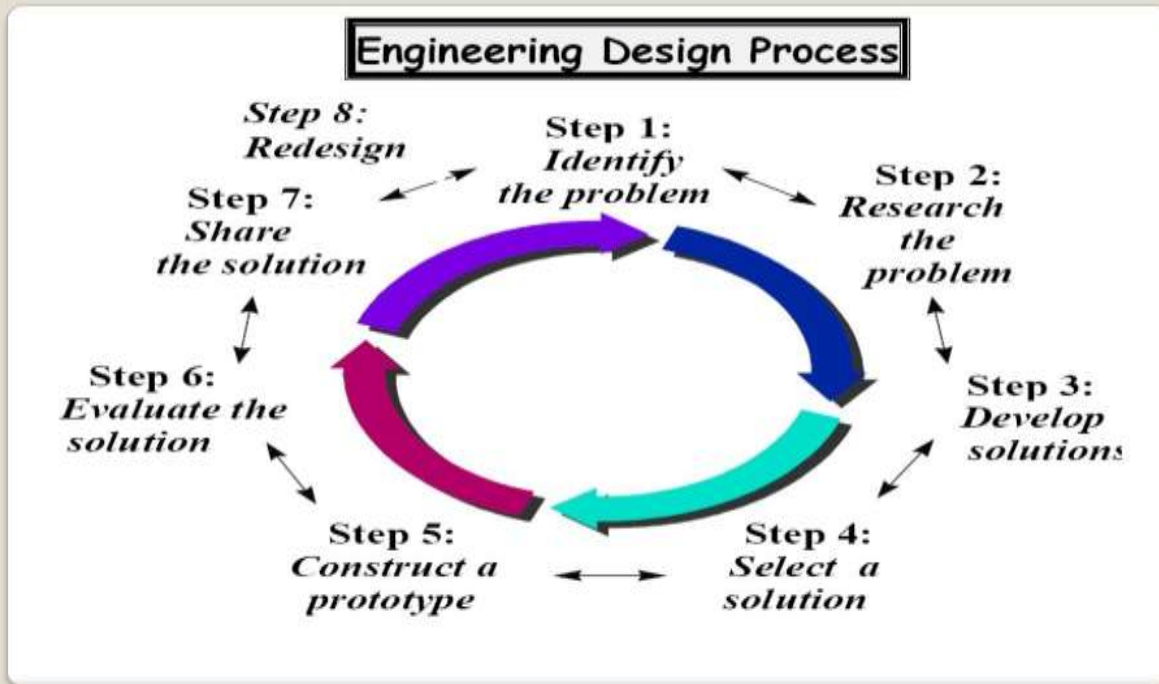


Innovations



The Central Workshop serves a dual role, extending beyond equipment repair and maintenance to actively contribute to the Institute's research endeavors. Its capabilities include the design and fabrication of customized items and gadgets that aren't readily available on the market. Moreover, the workshop specializes in modifying existing items to suit the precise needs of various departments within the Institute. This adaptability ensures that equipment is optimized for specific research objectives, enhancing the efficiency and effectiveness of ongoing projects.

In essence, the Central Workshop serves as a crucial facilitator of innovation within AIIMS, bridging the gap between research objectives and practical implementation through its expertise in design, fabrication, and modification.

Several examples illustrate the workshop's capacity to tailor solutions to meet the diverse demands of AIIMS departments. Some of the examples are given below:

Customized Acrylic Cage

It was fabricated for physiology department for recording sleep-wake electrophysiological (EEG, EMG and EOG) signals and live behavior in freely moving experimental rodents (Rat/Mice)



Customized Perspex L-shaped mould

These moulds were fabricated for Biophysics Department for some experimental use.



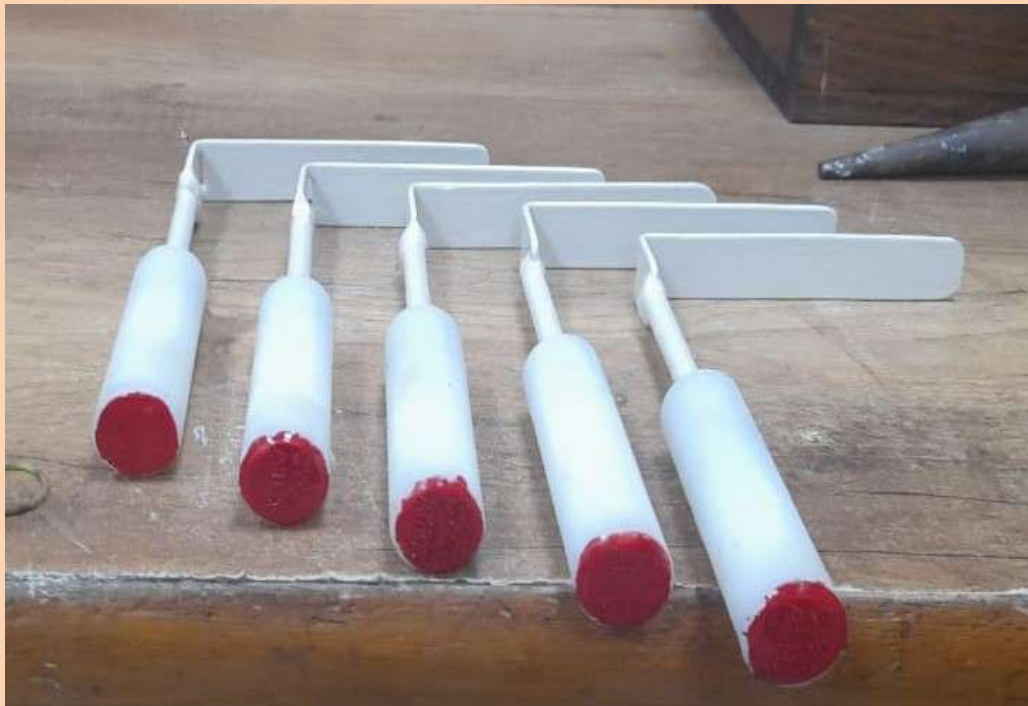
Customized Metallic L shape circuit holder

These L shape circuit holders were fabricated for Burn & Plastic Surgery OT.



Customized Right angle Retractor

These retractors were fabricated for ENT Department for performing some surgical course in a live surgical workshop on robotic.



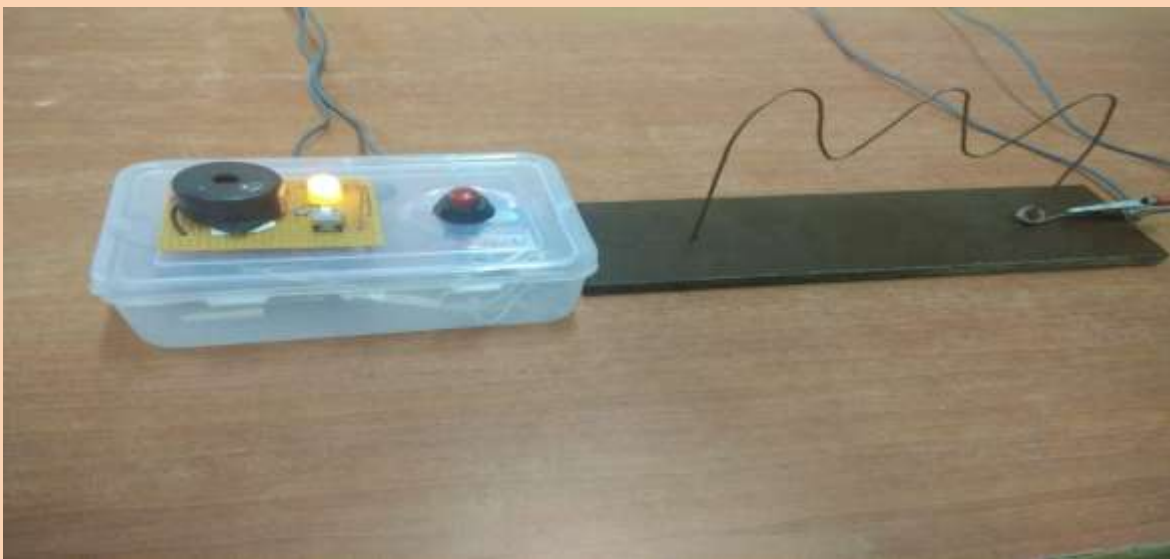
Instrument for Isometric Elbow Contraction at Different Joint Angles

The Instrument was fabricated for Department of Physiology. It is meant for performing Isometric elbow flexion and extension of both sides of the body at different elbow joint angles.



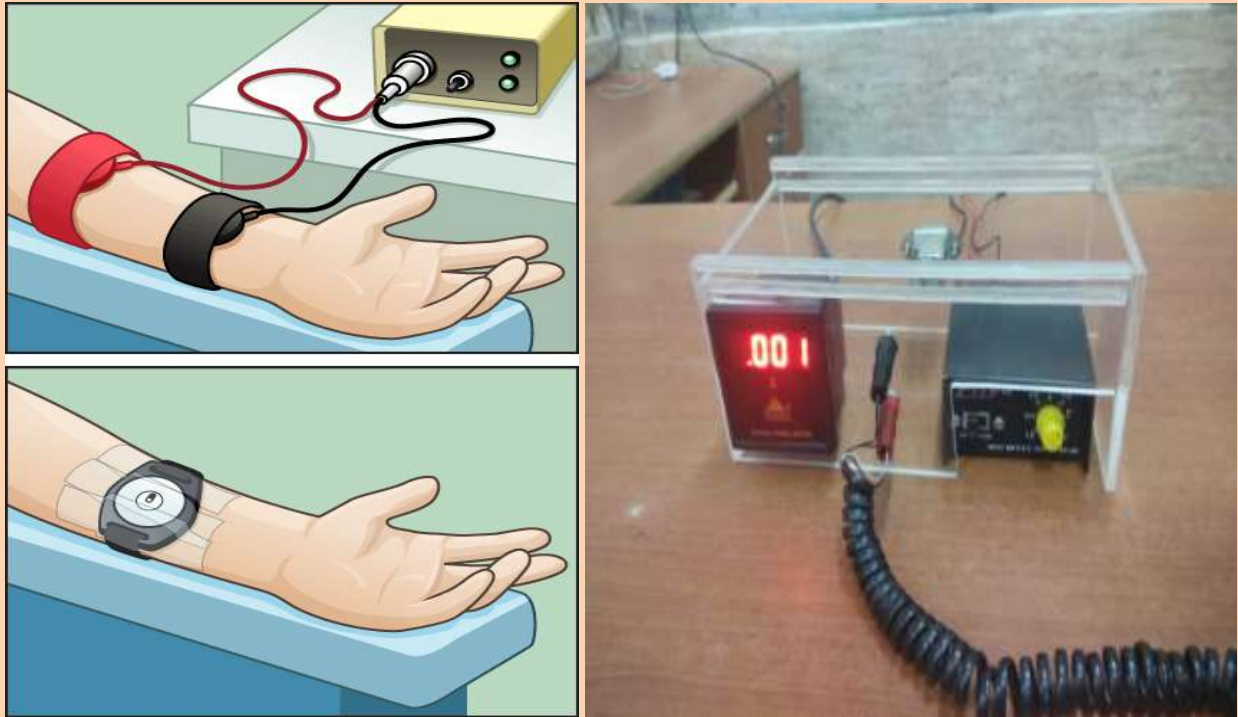
Laparoscopic Precision Training Module

This module was fabricated on the request of Department of Surgery to train the students for Laparoscopic surgery. Different types of surfaces as well as shapes were provided to the department which are placed inside a closed box (endo- trainer) having two holes, one for camera and other for laparoscopic instrument. The student performs the given task on the training modules while monitoring on screen and for each mistake committed by him, alarm sounds and light glows.



Sweat Testing Apparatus

This apparatus was fabricated for Pediatric surgery department to perform Chloride sweat test. A chloride sweat test helps diagnose [cystic fibrosis \(CF\)](#), an inherited disorder that makes kids sick by disrupting the normal function of epithelial cells. The sweat test measures the amount of chloride in sweat.



An area of skin on the arm is washed and dried. Next, two electrodes are attached with straps. One of these contains a disc with pilocarpine gel, a medicine that makes the sweat glands produce sweat. A weak electric current produced through the Sweat testing apparatus pushes the medicine through the skin. After this is done, the electrodes are removed and the sweat is collected for further analysis

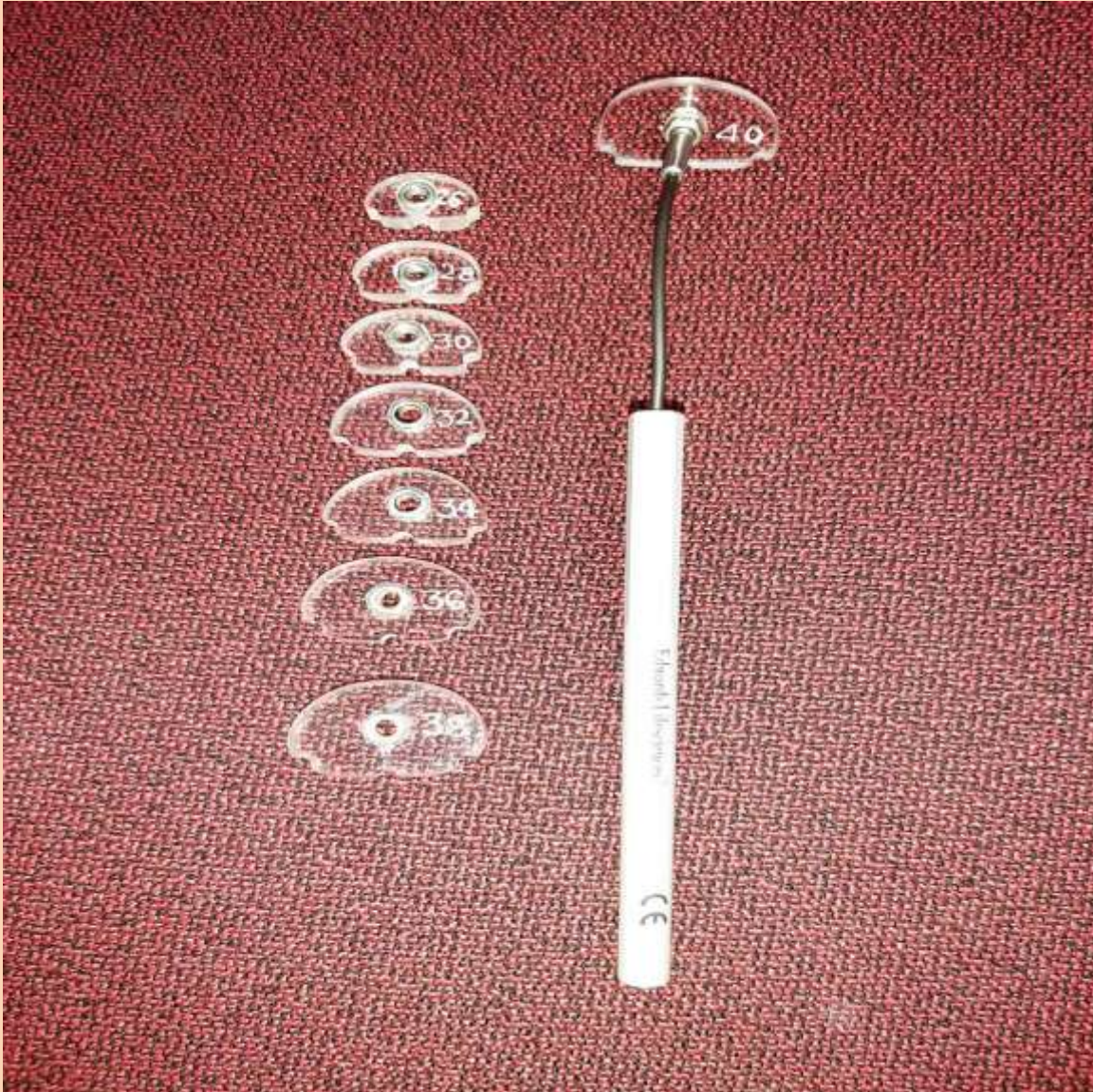
Imaging Stand

This item was specifically manufactured at the request of Dr. Sudhir Kumar Arva, Additional Professor in the Department of Pathology, for utilization within the laboratory.



Mitral Valve Ring Sizer

The set of Mitral Valve Ring of different sizes was fabricated on demand of Dr. Shiv Kumar Choudhary, Prof & Head, Deptt Of CTVS.



Rat Restrainer

This Rat Strainer was fabricated on demand of Dr. Suman Jain, Professor Dept. of Physiology, for conducting behavioral studies of the Rats.



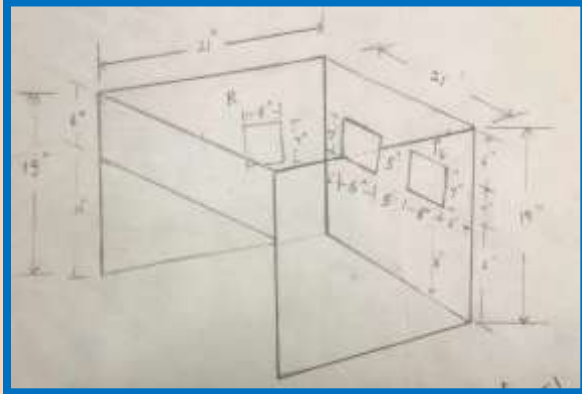
Sample collection Windows for Covid19

Sample collection windows were installed at Corona Testing Counters for safe isolation of the Lab staff from the Covid patients.



Intubation Box

Intubation Box was fabricated for Department of Anaesthesiology, JPNATC for COVID-19 patients. The box helps in decreasing Aerosol spread in the atmosphere during Intubation of patients. It protects doctors and Other staff from exposure to covid-19 virus.



Phone/Tablet Stand

The Phone/Tablet stand having 360° angular movement facility was fabricated and attached with the IV stands on demand of Prof A.Shariff to use in Covid wards.



Mesh Stand & Acrylic Animal Enclosures

This item was fabricated on demand of Dr Tony George Jacob, Associate Professor, Department of Anatomy to conduct behavioral studies of Rat & Mouse.



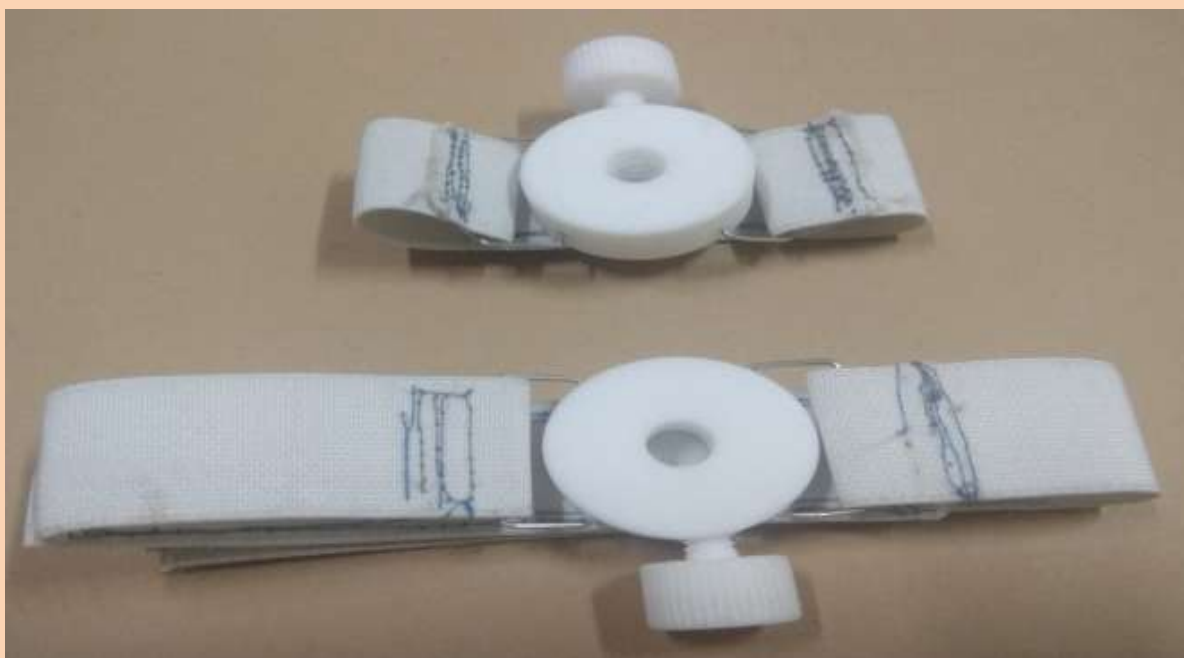
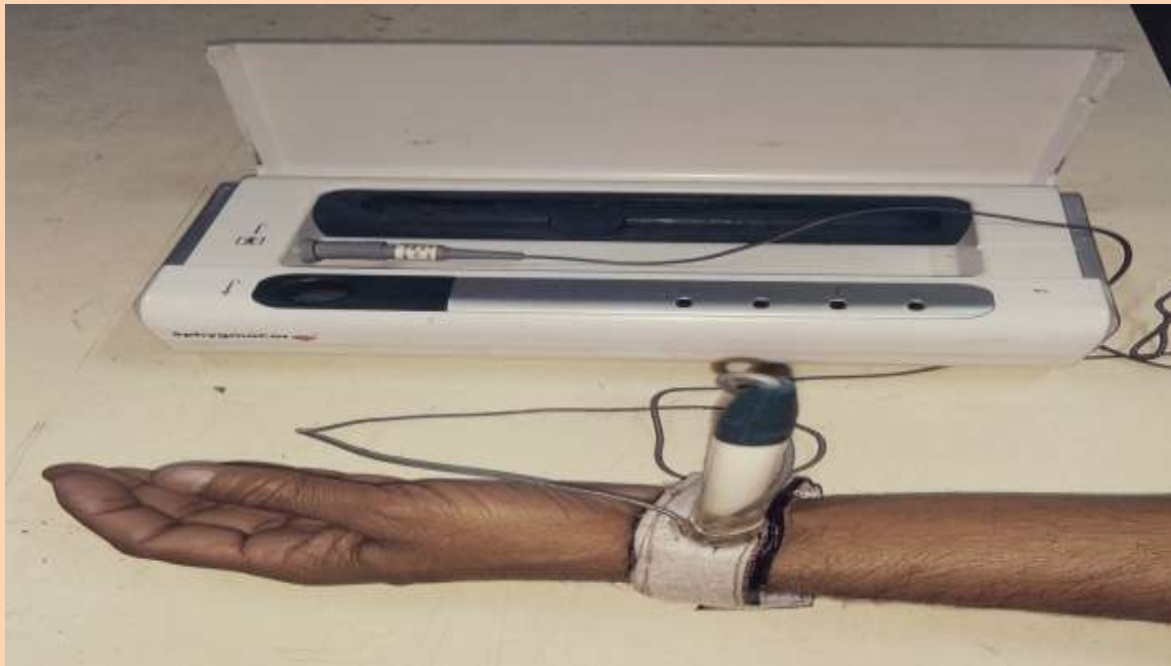
Robotic Medicine Trolley

Computer facility had developed a Remote controlled robot which was enclosed in a protective cover and was equipped with Mobile/Tablet holder, Medicine Tray & Garbage buckets by the Central Workshop.



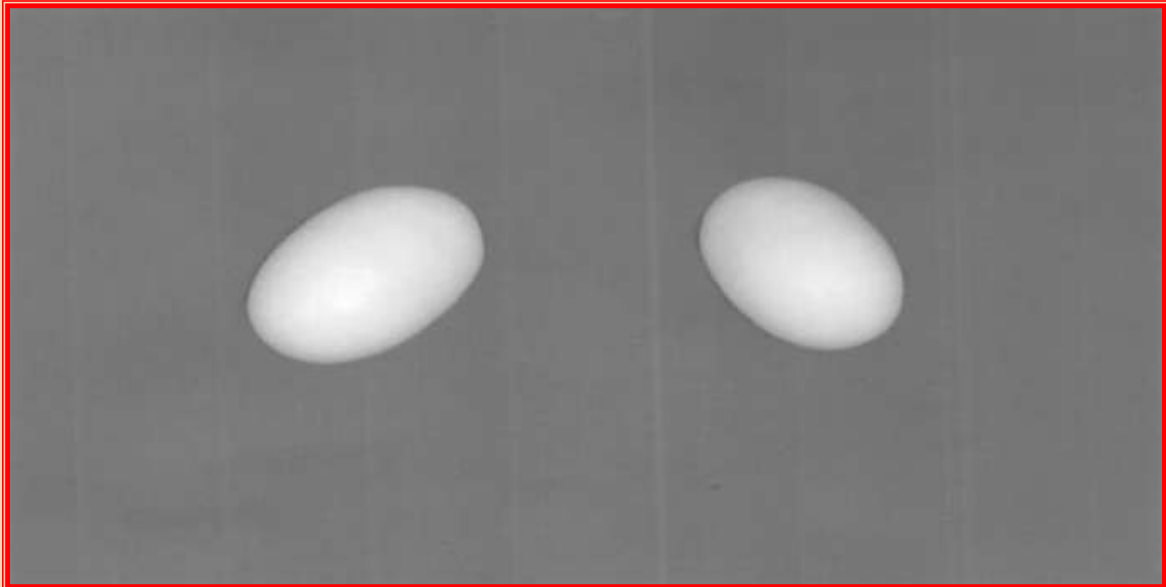
Probe Holder

This probe holder was fabricated on request of Department of Physiology for holding Tonometer probe in such a way that only tip of the probe touches vertically to the Carotid Artery while girded on the neck of a person with the help of an adjustable velcro strap.



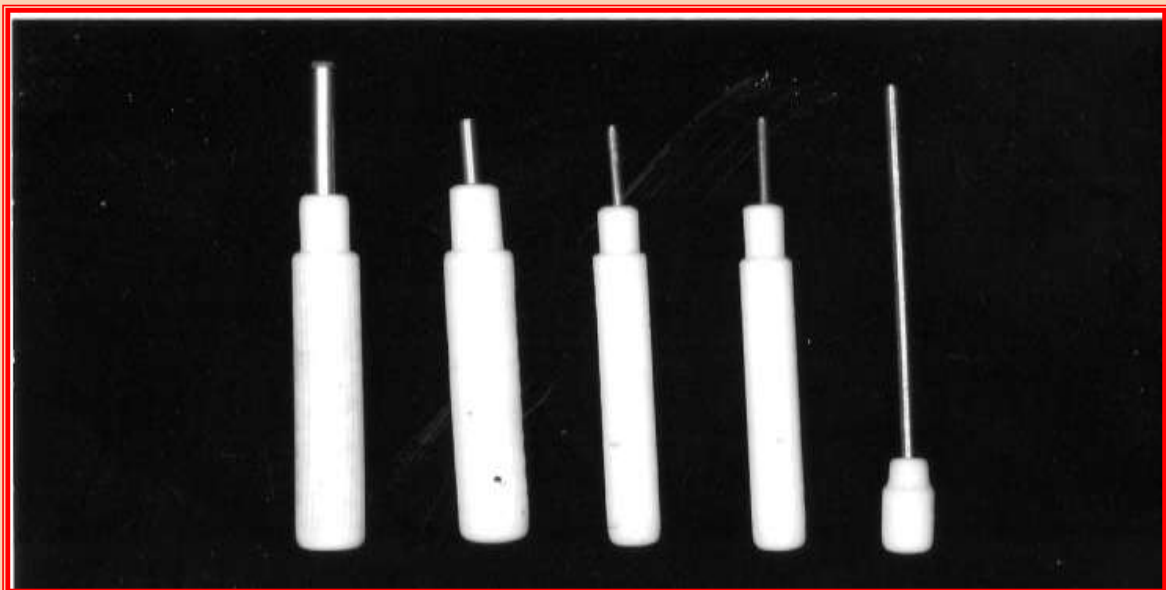
Testicle Balls

Testicle balls are fabricated on demand of Department of Pediatric Surgery. These are implanted into the babies with only one testicle ball.



Biopsy Punches

Biopsy Punches of various diameters were fabricated for the Department of Pathology. These are used for tissue microarray procedure.



Radiation Rat Chamber

This Rat Chamber was fabricated on demand of Department of Physiology. It is used to study and count the effect of radiation on the body of a Rat.



Stylet

Stylets are made of copper wire of 2mm thickness in different sizes. These are used by the Anesthetist for difficult intubation.



Vaginal Plastic Mould

These Vaginal Plastic moulds are fabricated on the demand of Department of Obstetrics & Gynecology. These are used for vaginal reconstruction surgery.



Postal & Mortar

This Postal & Mortar was fabricated on demand of Department of Nuclear Medicine. It is made of Teflon rod for avoiding any chemical reaction with the content mixing.



'T' Connectors

This 'T' type connector was fabricated on demand of BRAIRCH. It was made of Nylon rod and is used to connect the tubes during the surgery.



Mallet with Nylon Head

This Mallet was fabricated on demand of Department of Orthopedics for surgical use. It was made of Stainless Steel with Nylon heads.



Fixture for MRI Machine

This fixture was made on demand of Department of NMR/MRI for fixing the attachments with the MRI machine. Being made of Teflon material it has no effect inside the magnetic region.



Gel casting Tray

This Tray was fabricated on demand of BRAIRCH to be used in the lab. Gel is kept inside the tray and this comb move over the gel.



Viscera Box

This Viscera Box was fabricated on demand of Department of Forensic Medicine. It is made of acrylic sheet and is used to keep the sample.



Bakelite Board

This Bakelite board was fabricated in different sizes on demand of Cath Lab (CNC). It is used to keep patient stable during angiography.



Moisture Chamber

The moisture chamber was fabricated on demand of Department of Pathology. It provides high humidity to fungi to sporulate.



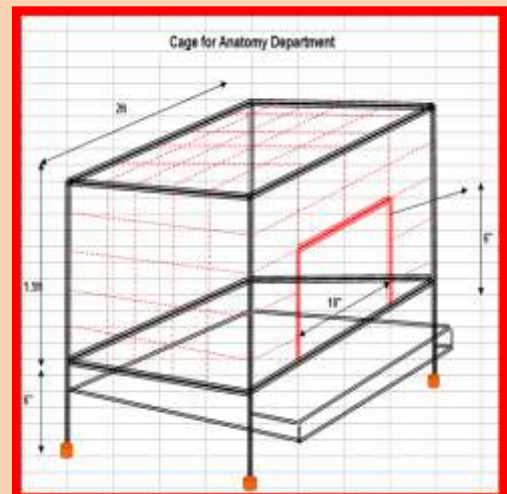
S.S.Container

This container of stainless steel (EN302) was fabricated on demand of Department of Surgery. It is used to keep CIDEX Activated Dialdehyde Solution for efficient, high level disinfection of endoscopes and Catheters.



Chicks Cage

This cage was fabricated on demand of the Department of Anatomy to keep the chicks for the research on their eye (retina).



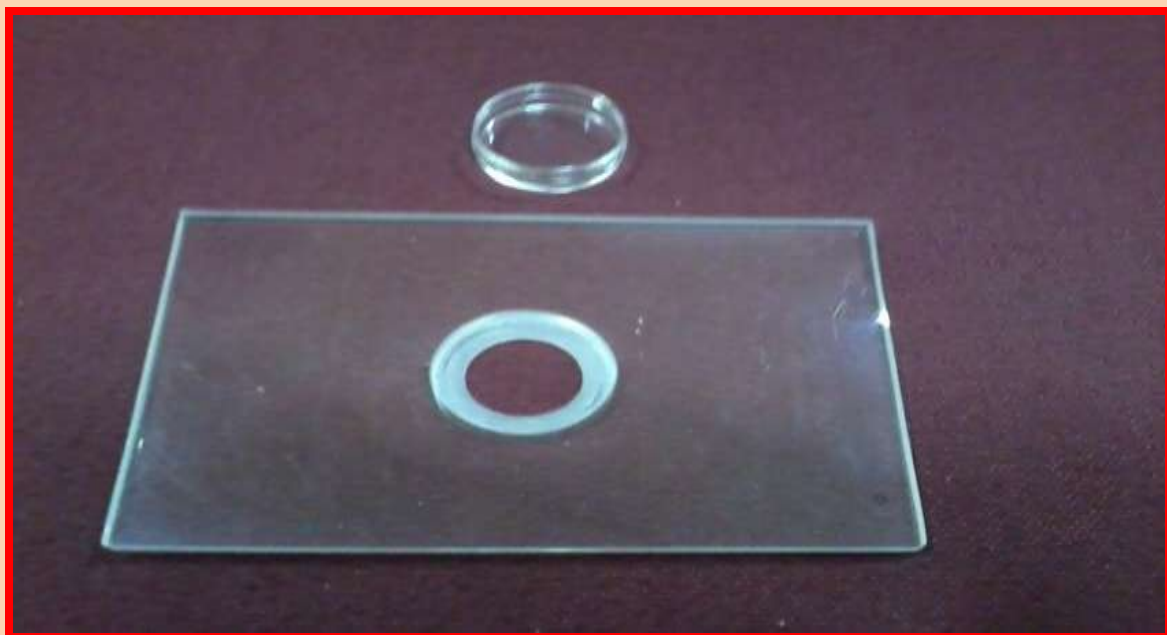
Side Support Adjustment

This adjustable side support attachments were fabricated on demand of Department of Orthopedics. It is made of stainless steel and is used for patient support during the surgery.



Acrylic Plate for Microscope

This acrylic plate was fabricated on demand of Department of Neurosurgery. It is used with the Microscope to keep sample on the small disk shown in picture.



Arm & Head Protector

This Arm & Head Protector was fabricated on demand of Department of Pediatric Surgery. It is used for protecting baby after surgery.



Stunner

This stunner was made on demand of Department of Neurosurgery. It is made of stainless steel and is used in surgery.



Oxygen Hyperbaric Chamber

It was fabricated on demand of the Department of Surgical Disciplines for the experimental work. This chamber consists of the following main parts:

Rubber gloves

B.P Gauge

Rubber (gaskets)

Release Valve

Oxygen Regulator (Two
Stage)

Rubber pipe $\frac{1}{2}$ "
diameter (with clamps)

Trolley with wheels



Perspex Sheet Chamber

This chamber having dimensions 6' x 4' x 3' with aluminum frame and multiple access windows was fabricated in 2002 for the Department of Pharmacology. It is used to protect the Isolated Heart Apparatus used in the laboratory.



Messy table

This messy Table with Rat Chamber was fabricated on demand of Department of Anatomy for study and research purpose.



Adjustable side support

This adjustable side support system was fabricated on the request of Department of Orthopedics to be used in OT during surgery.



Rat Chamber

This Rat Chamber was fabricated on request of Dept. of Physiology & Anatomy. This is used to study the effect of radiation on rats.

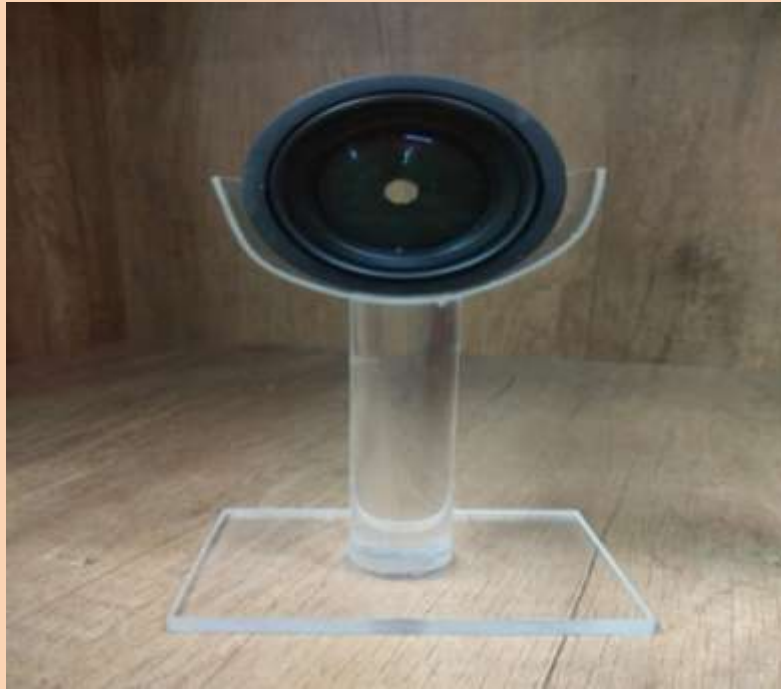


Uro bag Connector

This connector was fabricated for Department of Anesthesiology.



Camera Stand



Hospital Bed Patient Chart Holder

