

# Final Project: Apron Duffel



*-Ursula Uday*

# INITIAL CONCEPT

*My initial concept was to make a DIY portable tool box for a specific target user- designer. Here the target user had to be narrowed down to the type of a designer. Whether the designer worked in hands-on scenario or in a workshop or digitally, etc.*

*The types of tools differ from user to user.*

- *Person working in workshop(furniture, textile or otherwise) would find the bigger machinery as his or her relevant tools.*
- *For a beginner designer small tools like handsaw, hammer, cutters, T-scale, etc. maybe the tools he/she interacts with frequently.*
- *A designer working with digital tools may find electronic tools like Wacom tablets, mouse, earphones, etc. as tools.*

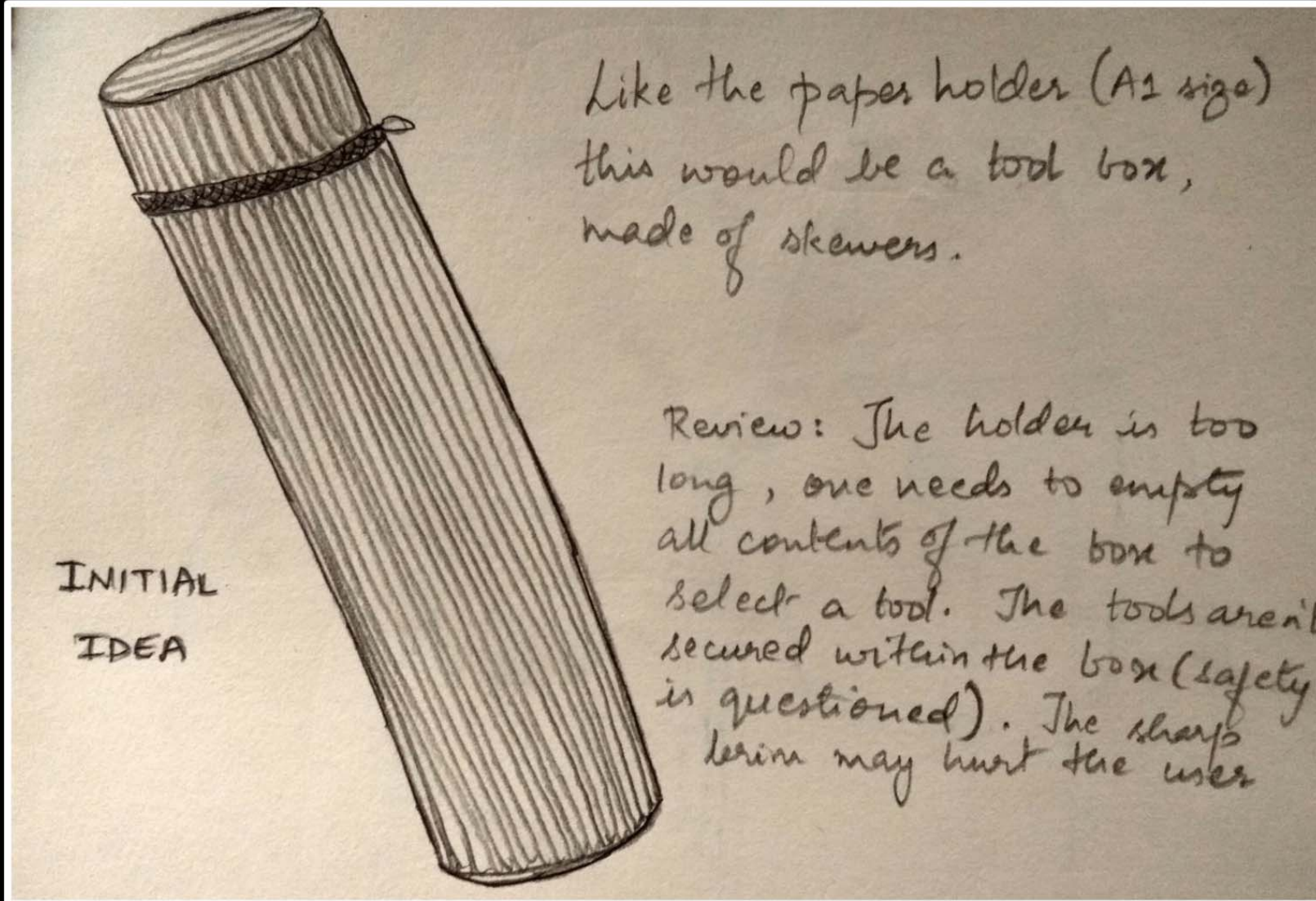
*So my target user needed to be specific.*

**Reference : google images**



The first thought that comes to mind when one thinks of making a toolbox is to ensure whether it provides safety handling between the user and the tools.

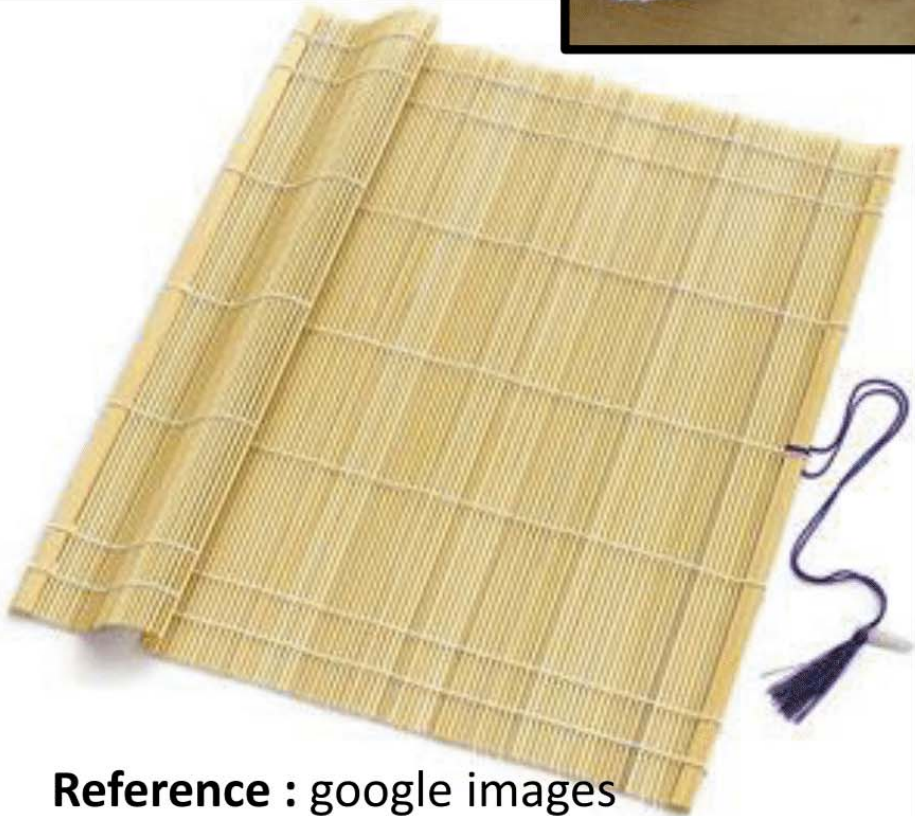
I derived a design taking inspiration from the A1 size paper tube holder.



Like the paper holder (A1 size) this would be a tool box, made of skewers.

Review: The holder is too long, one needs to empty all contents of the box to select a tool. The tools aren't secured within the box (safety is questioned). The sharp kerim may hurt the user.

*My friend Rhea Rajesh suggested that cloth brush holders are efficient satchels that have minimalistic light design and are portable.*



Reference : google images

# RESEARCH INFORMATION FROM ONLINE AND INTERVIEWS:

- *Workshop toolkit list:- try square 6", baby bench vice 2", wood chisel 1/4, draper drill bit set, jack planar wood, C-clamp, double screwdriver, taparia flat half round 6", etc.*
- *People don't buy large tools like hacksaw, wrenches, drill machines, etc. They borrow them from workshop. Tools that usually individually owned are hammers, pliers, handsaw, etc.*
- *People travelling from far to college everyday would rather borrow tools from classmates than carrying these heavy tools in bag from home.*
- *Instead of carrying tools in different pouches, they prefer to put all the everyday tools in one bag.*

# LIST OF TOOLS BROUGHT EVERYDAY TO CLASS AND THEIR DIMENSIONS:

- *Pencils- 19cm long x 1cm diameter*
- *Tape: masking tape- 2.4 cm width x 9.3 diameter; measuring tape- 5.6 cm width*
- *Cutter – 16 x 3x 0.8 cm*
- *Pens- 14.8 x 2 cm(diameter)*
- *Scale – 31cm long*
- *Scissors- 15cm long*
- *Marker- 14.5cm*
- *Fevicol - 17.4 x 4cm*
- *Colour pencils(box)- 14.6 width and each pencil- 20cm long x 1cm diameter*
- *Staplers- 9.6 x 2.5cm*
- *Plier- 15 x 9 x 1.6 cm*
- *Apron*

**Note:** I measured the dimensions of the tools myself.

**Reference:** <http://kidspicturedictionary.com/english-through-pictures/things-english-through-pictures/workshop/>

# SUSTAINABLE ASPECTS THAT I AIMED FOR IN THE DESIGN:

- *Product Design Strategies: Design for Disassembly and Reassembly, Durability, Portable and Minimalistic design, Design for Ease and Maintenance of Repair*
- *Materials: Recyclable, Rethink, Upcycle, Reduce, Reuse*
- *Sustainability: Informing the consumer behaviour through design, aesthetically driven design, design for longevity and disassembly*

# TRANSITION OF THE CONCEPT IDEA:

*Portable workshop tool box >> A1 size  
paper holder tube >> cloth brush holder >>  
apron holder >> apron duffel bag*



# FINAL CONCEPT FOR SUSTAINABLE PRODUCT

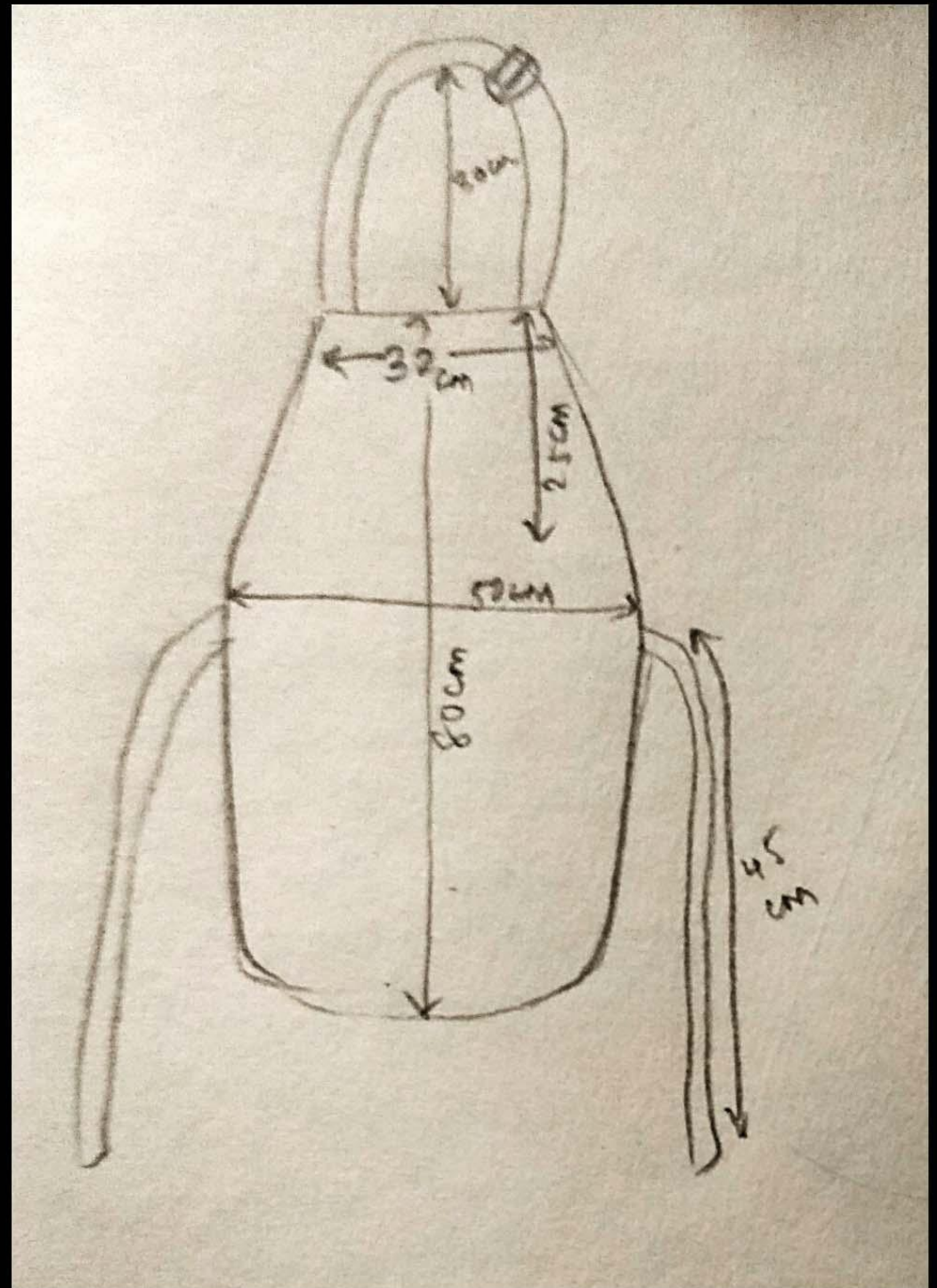


*Derived from the idea of brush holder and apron design, the **apron duffle bag** has compartments to hold every day design tools brought to a craft class.*

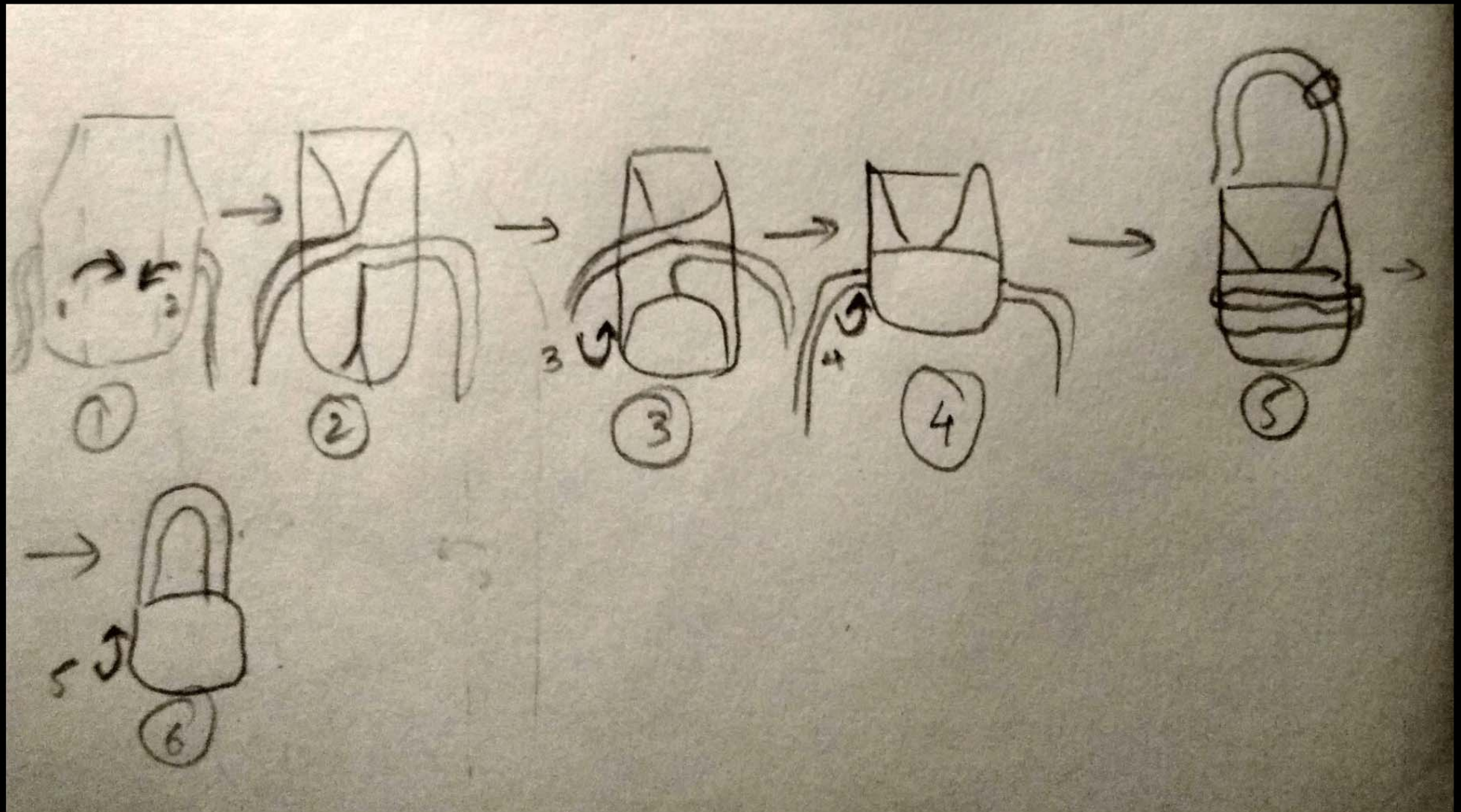
*The apron folds in to form a bag. This reduce the usage of material required for storing tools and apparatus required for a class. Target user: 17-19 years.*



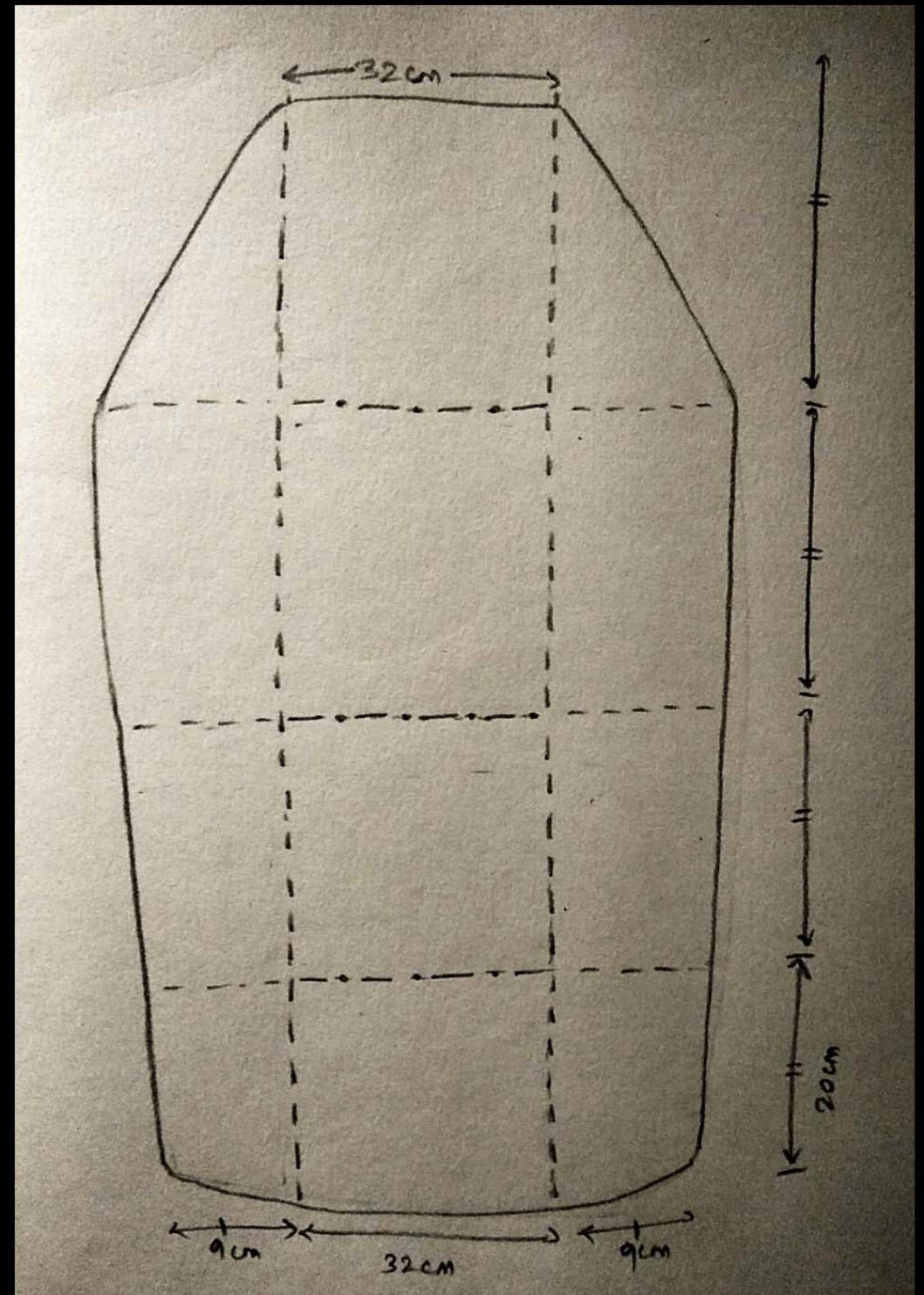
# DIMENSIONS OF A REGULAR APRON:



# MECHANISM OF FOLDING THE APRON:



DIMENSION  
OF THE BODY  
OF THE  
APRON  
DUFFEL BAG:



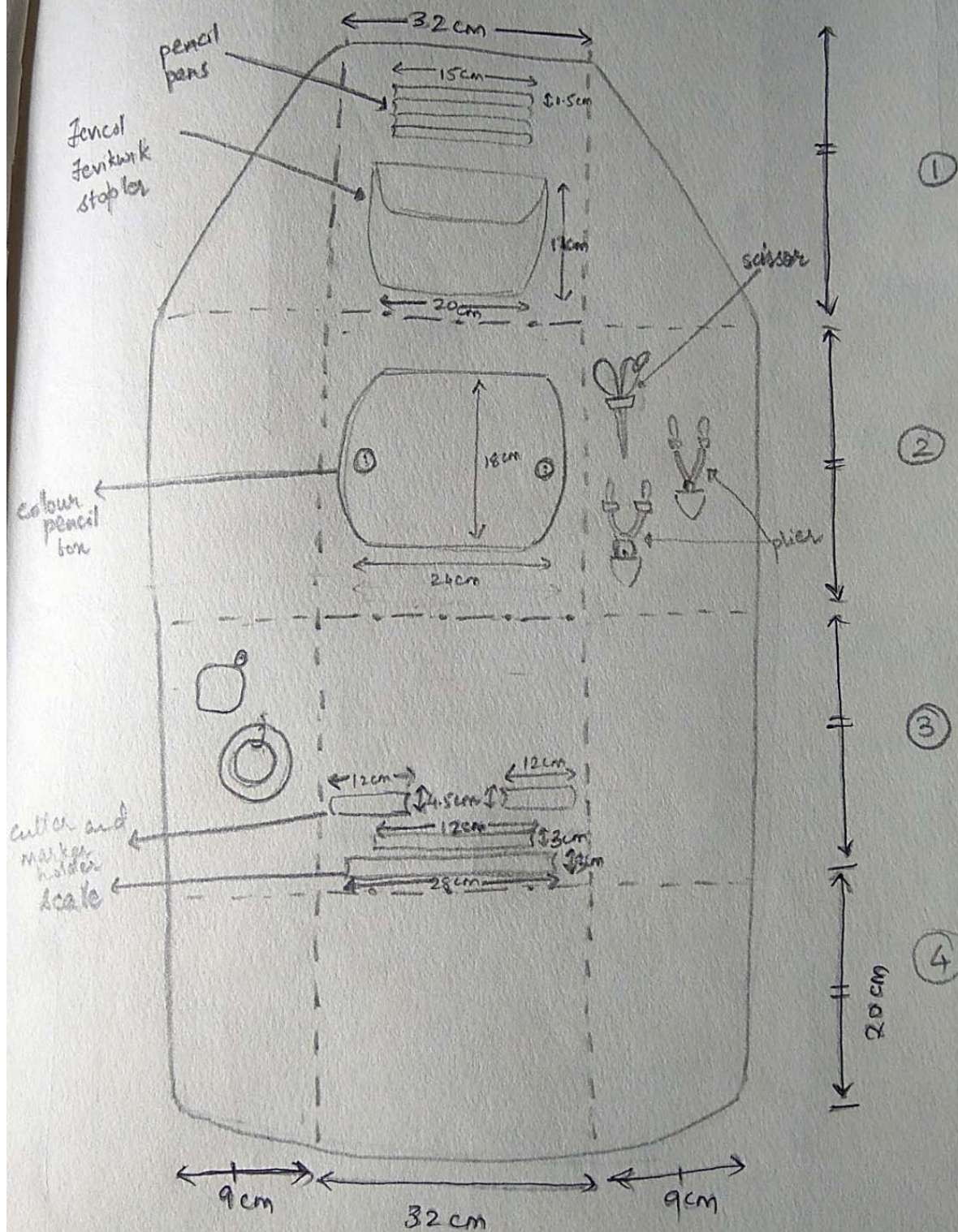
# MATERIALS USED:

*Poplin purple cloth (fabric used for stitching petticoat), tic tac buttons, velcro, buckle for the sling strap,, black buttons, stitching hooks, thread and cotton stuffing from a pillow cushion.*

*Note: I had these materials from my previous courses i.e. I used scrap materials that I already had.*

*This apron duffel bag has an DIY making process and purpose, its easy to repair or mend the stitches.*





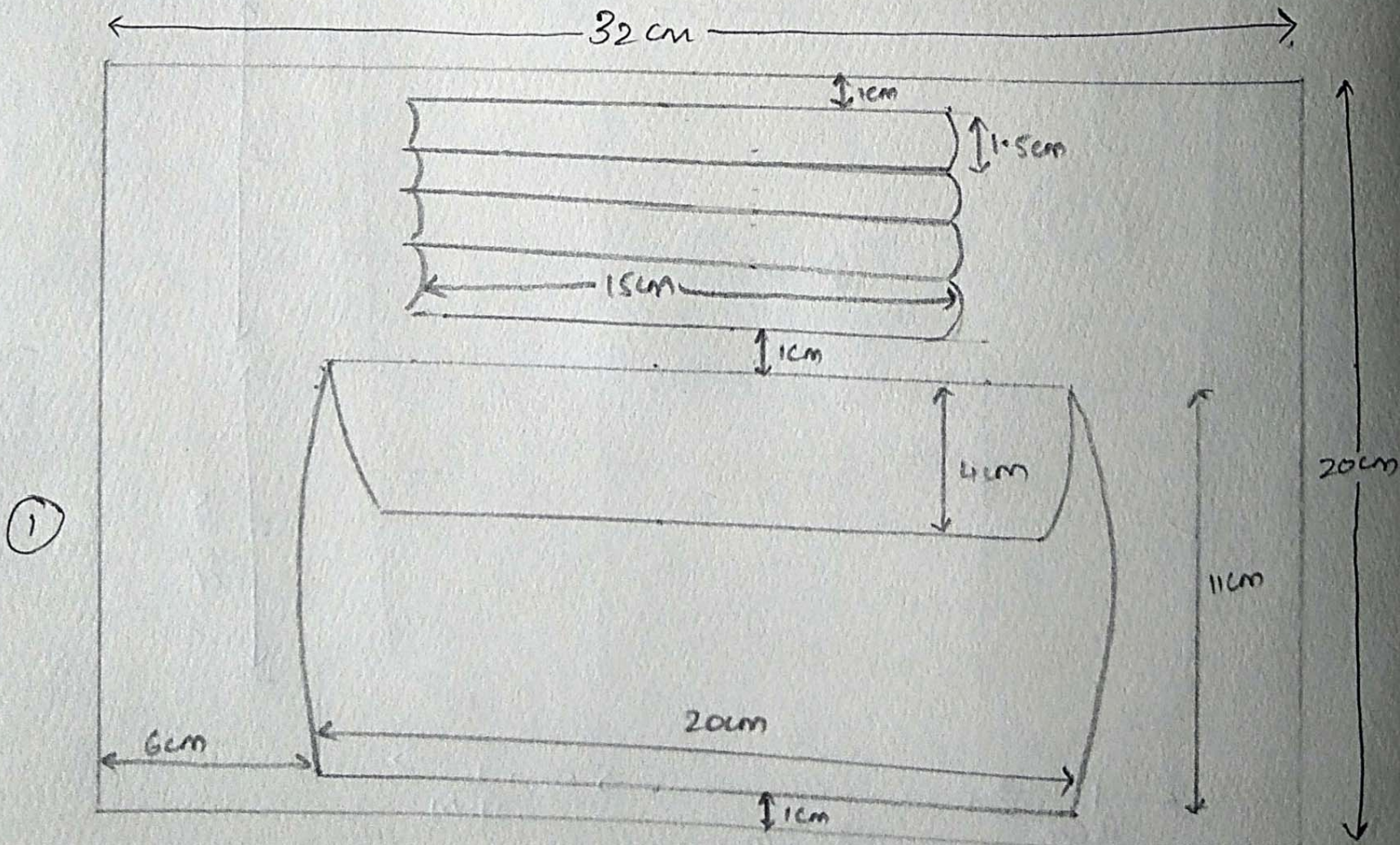
FINAL (OVERALL)  
 CLOTH- APRON DUFFEL  
 BAG DIMENSIONS:  
 WHEN APRON IS  
 OPENED UP



*Concerns while designing the apron:*

- *Should the pouches/compartments side be worn (as in this side should be touching the body)?*
- *If not, then should it have a covering layer over it for the tools to not be completely open?*

# DIMENSION OF THE FIRST COMPARTMENT SECTION IN THE MID-ROW:





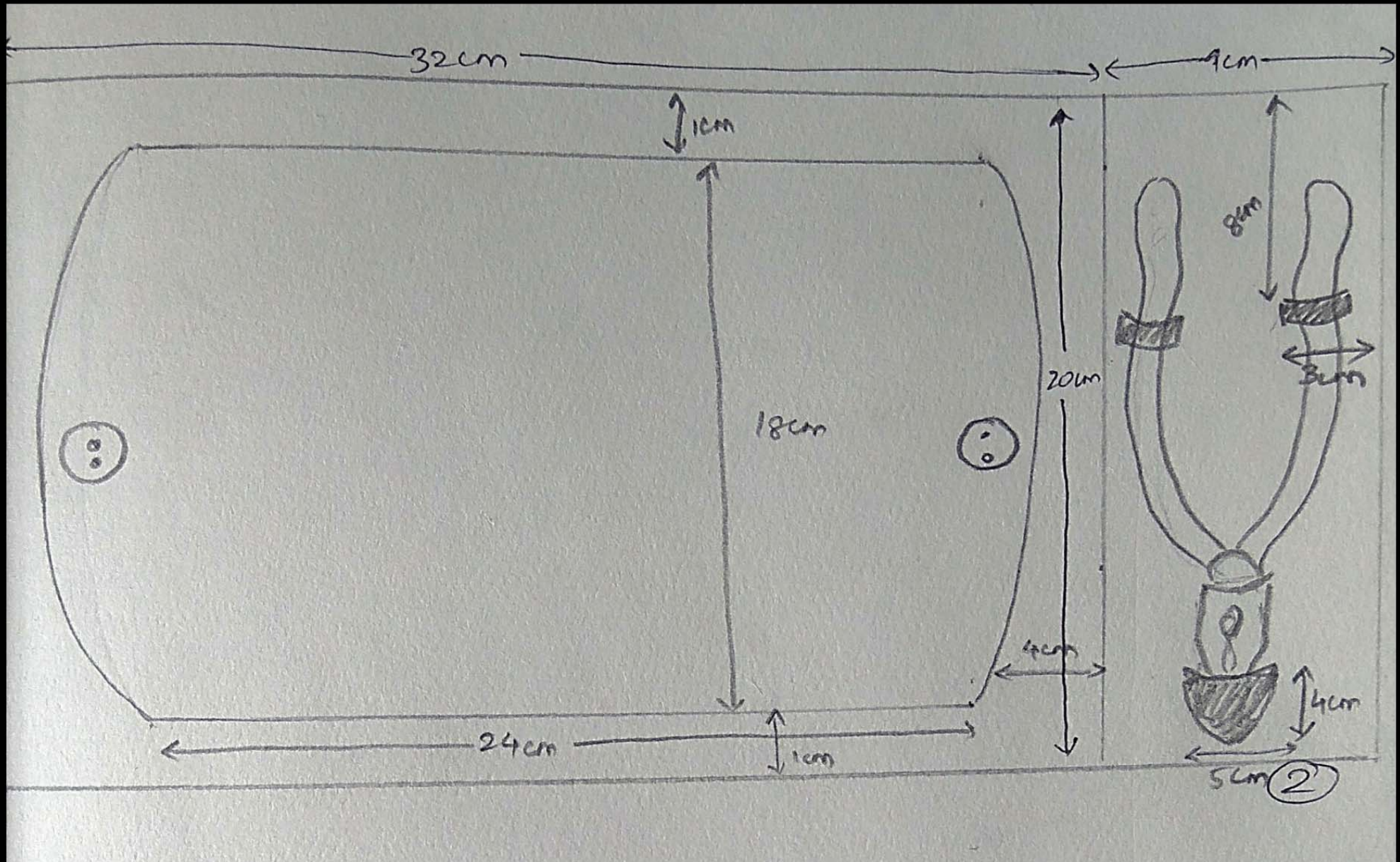


TOOLS THE  
FIRST  
COMPARTMENT  
CAN HOLD:



*Pencils, pens, Fevicol  
(small bottle),  
Fevikwik, Stapler,  
markers and phones.*

# DIMENSION OF THE SECOND COMPARTMENT SECTION IN THE MID-ROW:

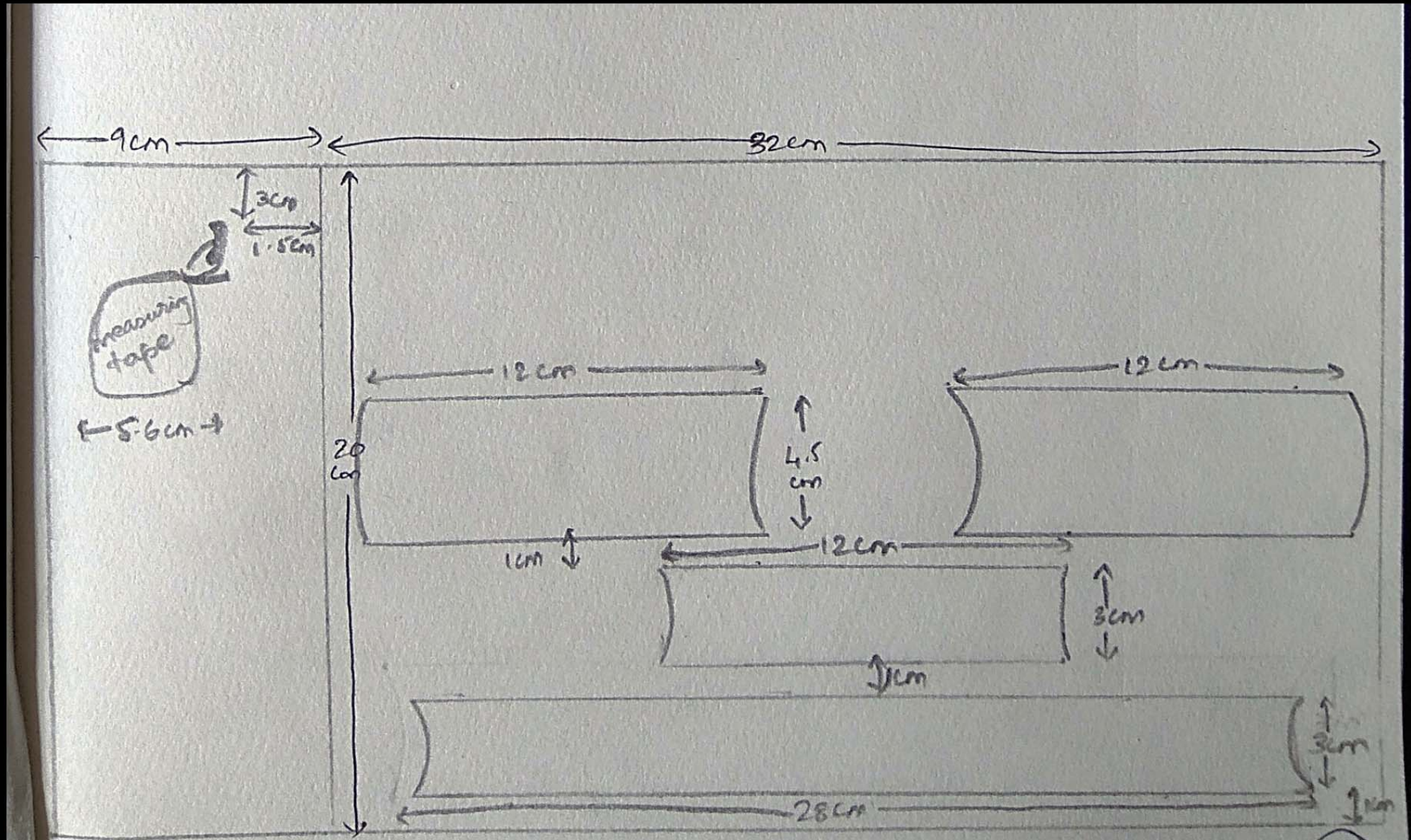


TOOLS THE  
SECOND  
COMPARTMENT  
CAN HOLD:



*Colour pencil  
box, Nose plier  
or large  
scissors,  
fevical(big  
bottle), etc.*

# DIMENSION OF THE THIRD COMPARTMENT SECTION IN THE MID-ROW:



# TOOLS THE THIRD COMPARTMENT CAN HOLD:

*Colour pencil box, Noose plier or large scissors, fevicol (big bottle), etc.*



*Velcro stitched at the hack of the apron for the straps that will secure the folding of the apron. >>>>>*

*This backside of the apron forms the outer surface of the bag. The compartments on the apron are then folded within the bag, securing the tools inside.*



ADJUSTMENT STRAPS FOR THE  
WAIST- *45cm long and 3cm breadth*  
*the straps are to be tied at the back*



*Adjustable neck strap for the apron or  
shoulder strap while using it as a bag:  
100 cm long x 3cm width*





*Cushioning the insides between the two layers of cloth (for safety purpose- so that pointed edges of the scissors or pencils don't hurt the user.*

**Observation and critique:** the cushioning caused the apron to bulk up, which made it difficult to fold, the scale length which is 30cm that is close to the 32 cm length of the compartment had to be removed for the apron to fold.



# STRAP TO HOLD ON THE SHAPE OF THE BAG:



Critique: the straps can be doubled layer to increase the friction so that the straps don't slide off.



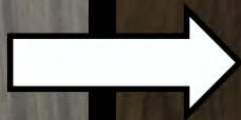
TOOLS  
ARRANGED IN  
THE APRON



FINAL LOOK

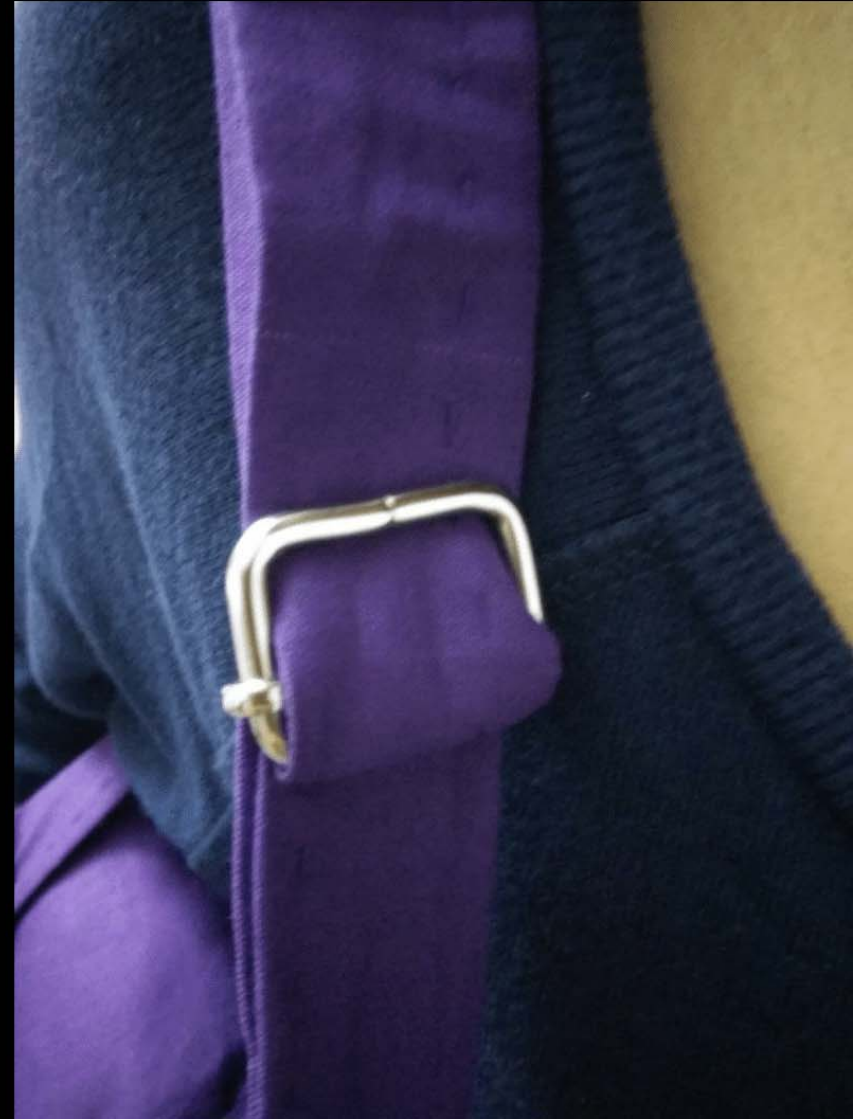
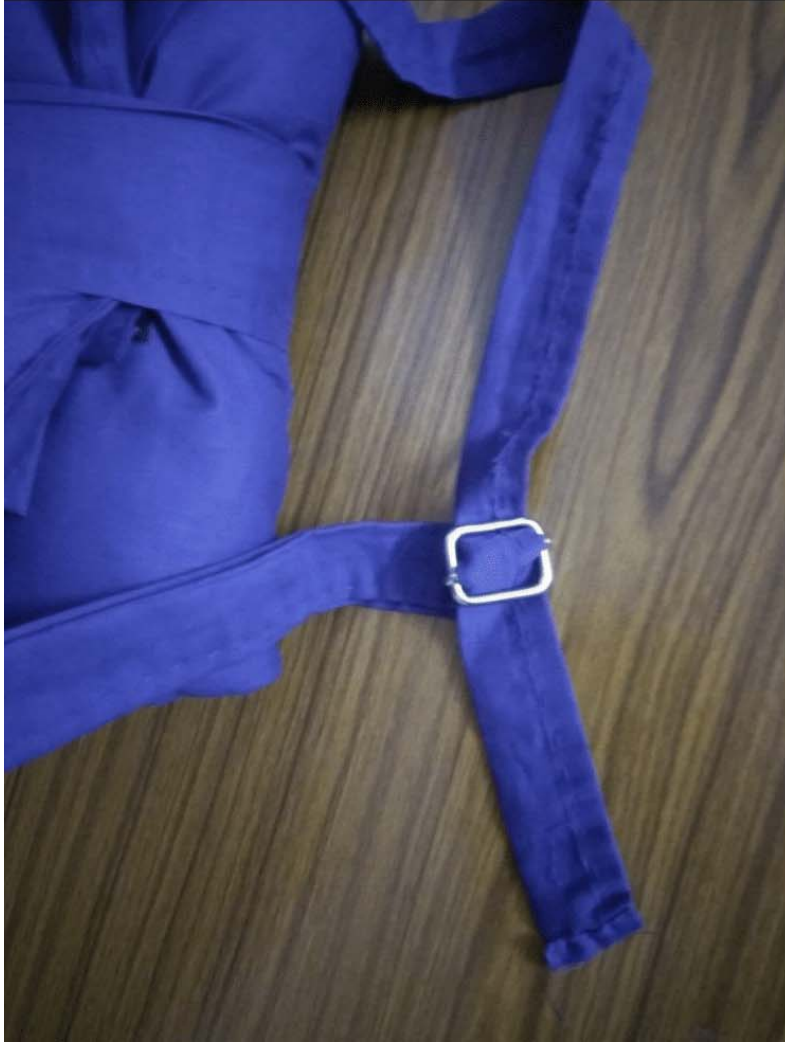


# FOLDING MECHANISM





*The long left over strap needs to be folded back into the buckle so that it gets secured and doesn't slide over*





# THE APRON DUFFEL BAG

