

Concept Design

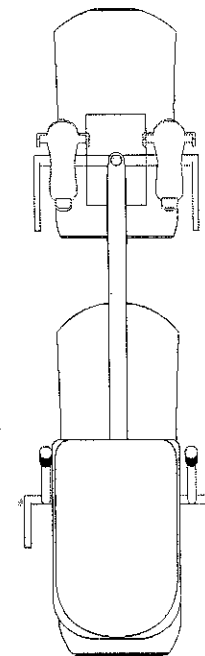
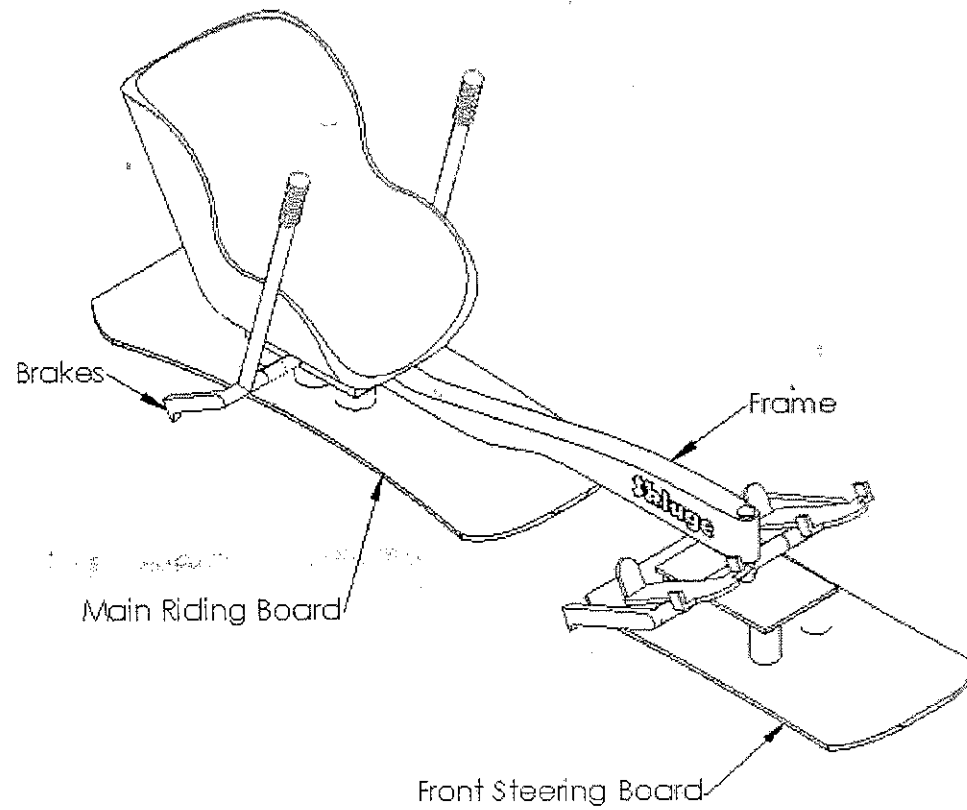
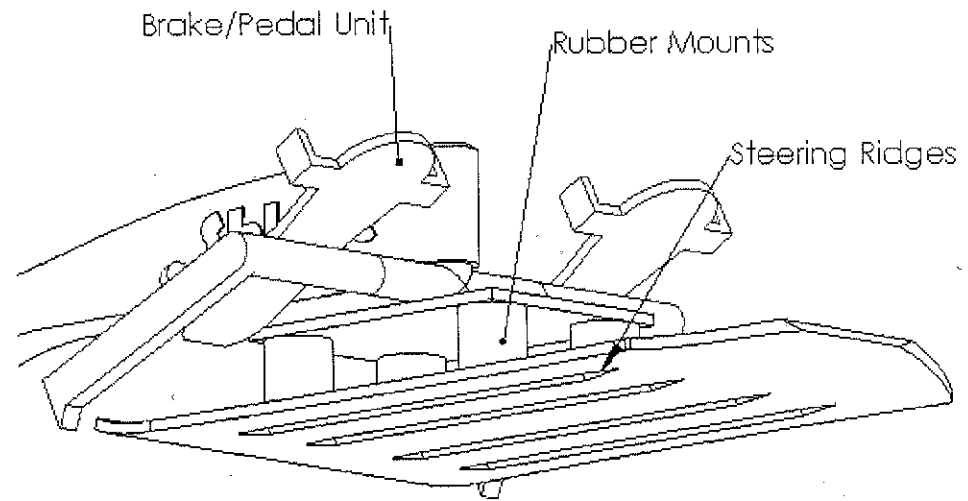
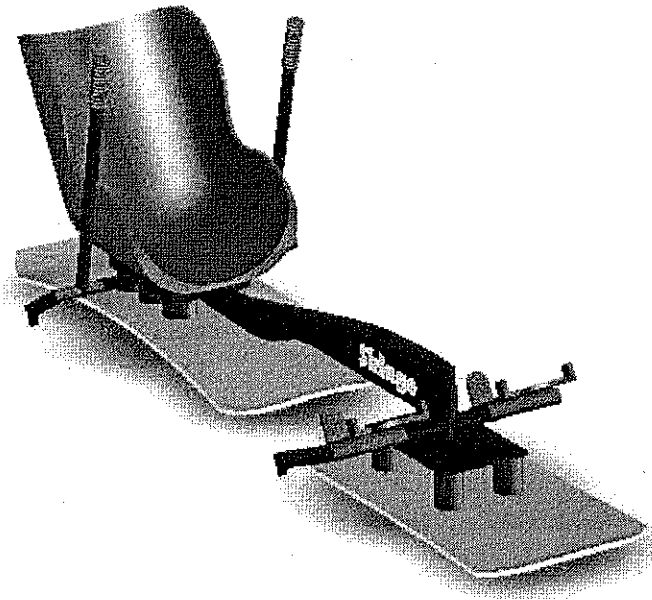
# Snow Toys

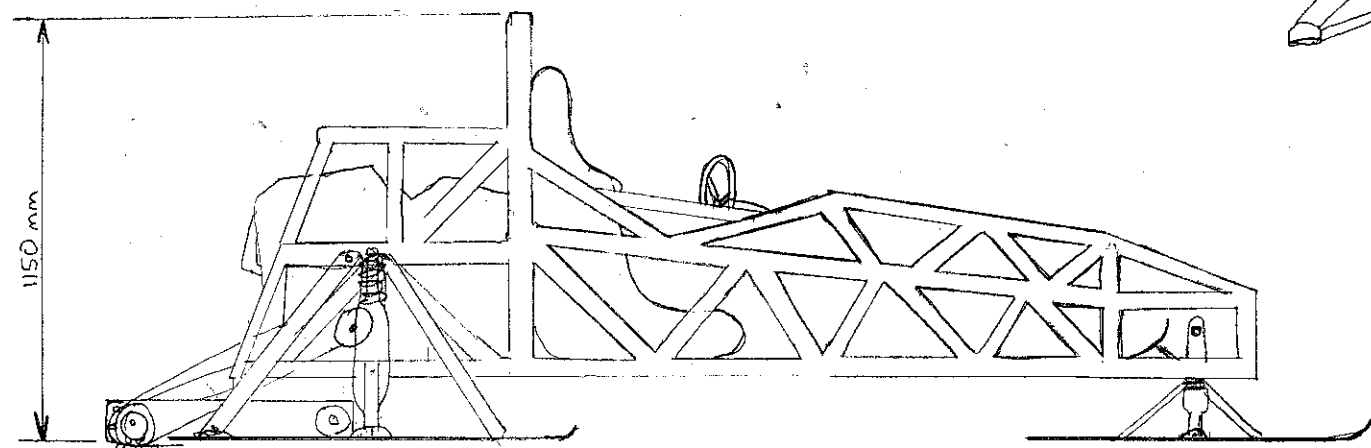
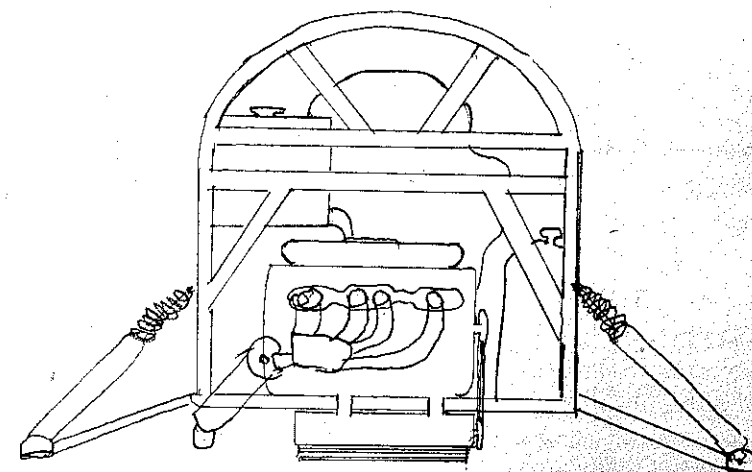
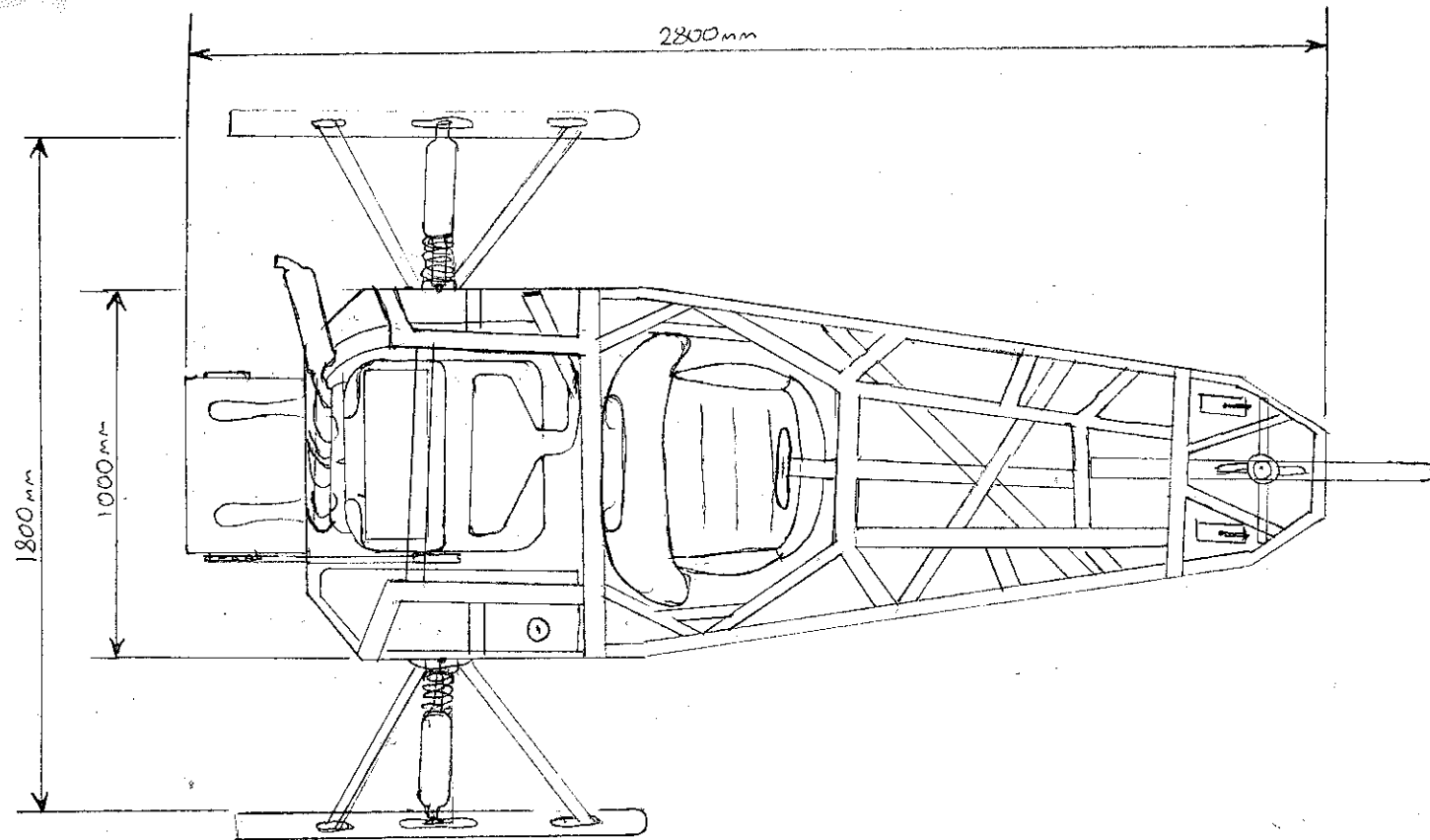
Diversification for a  
Mountain Bike Manufacturer

Examples from previous years

Please return to Dr Alexander E523

0328339

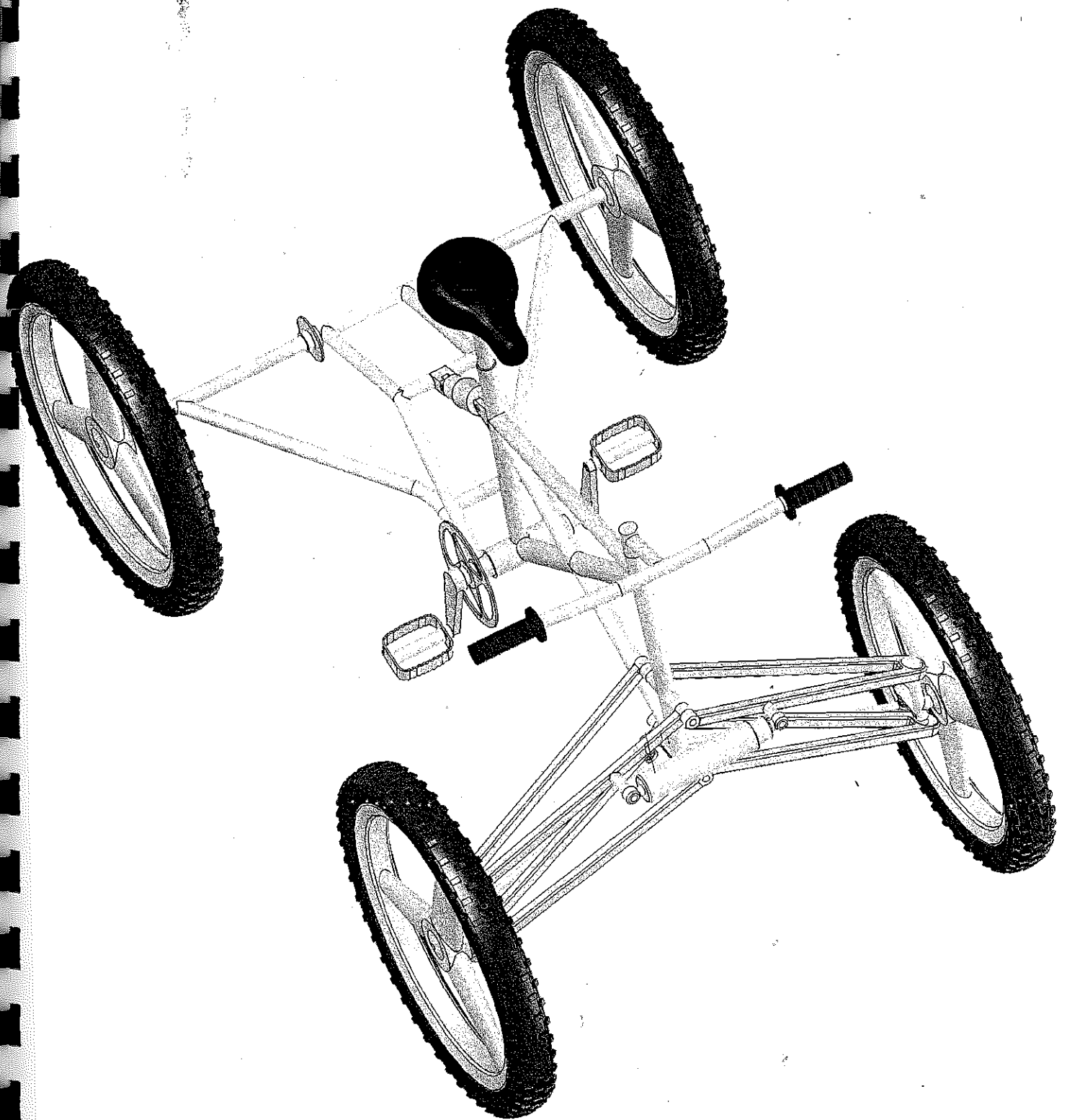




All Dimensions in mm  
Approx. Scale 1:20

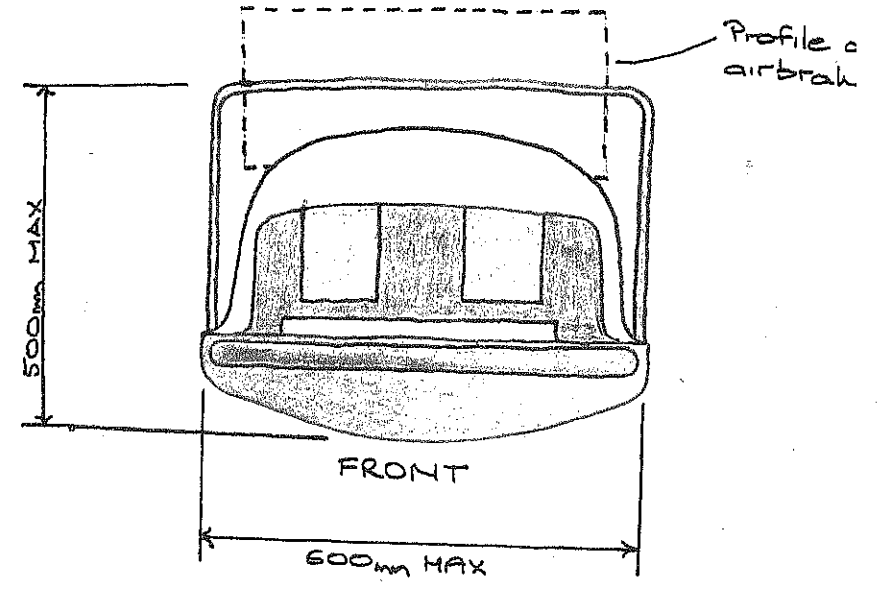
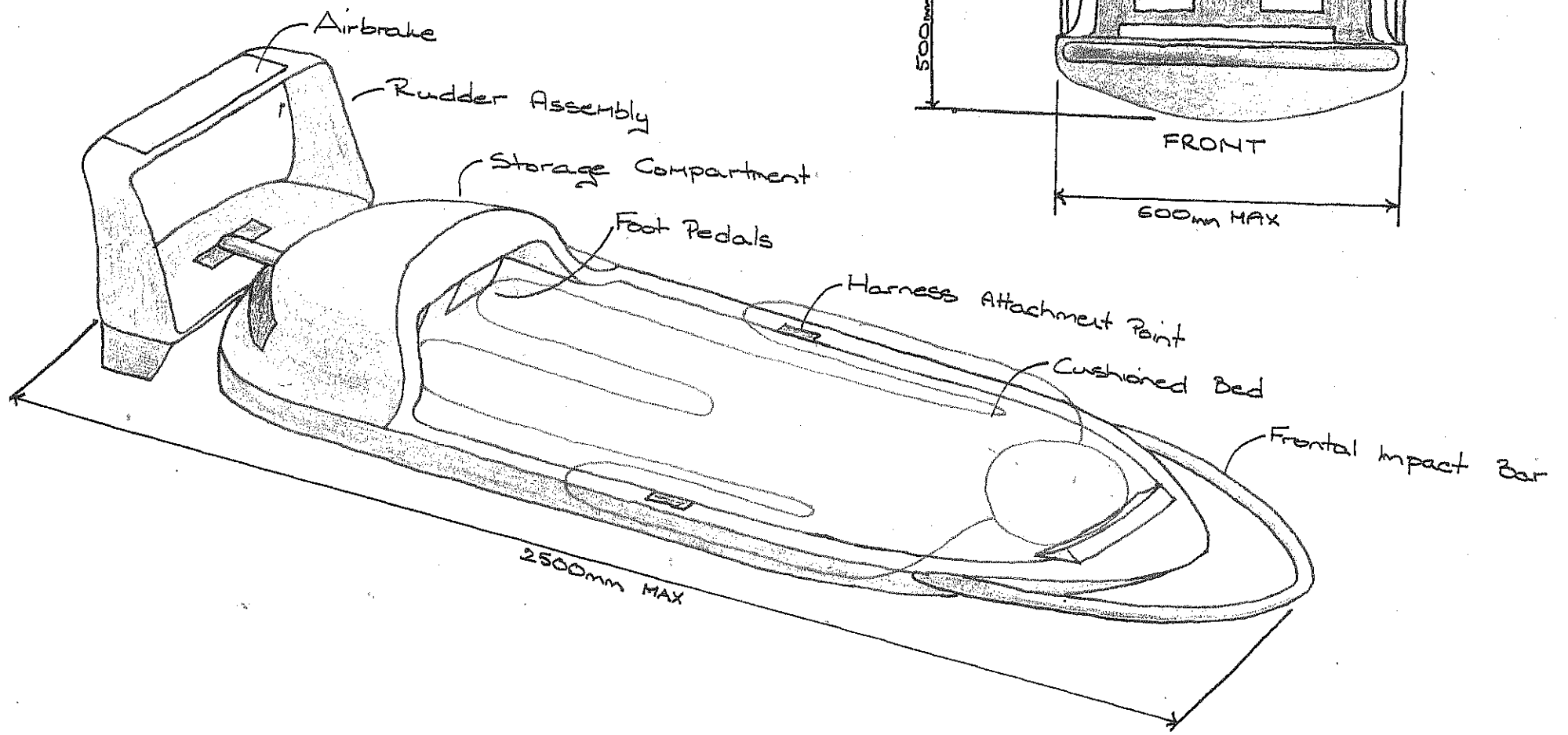
0309679

2



3D VIEW.

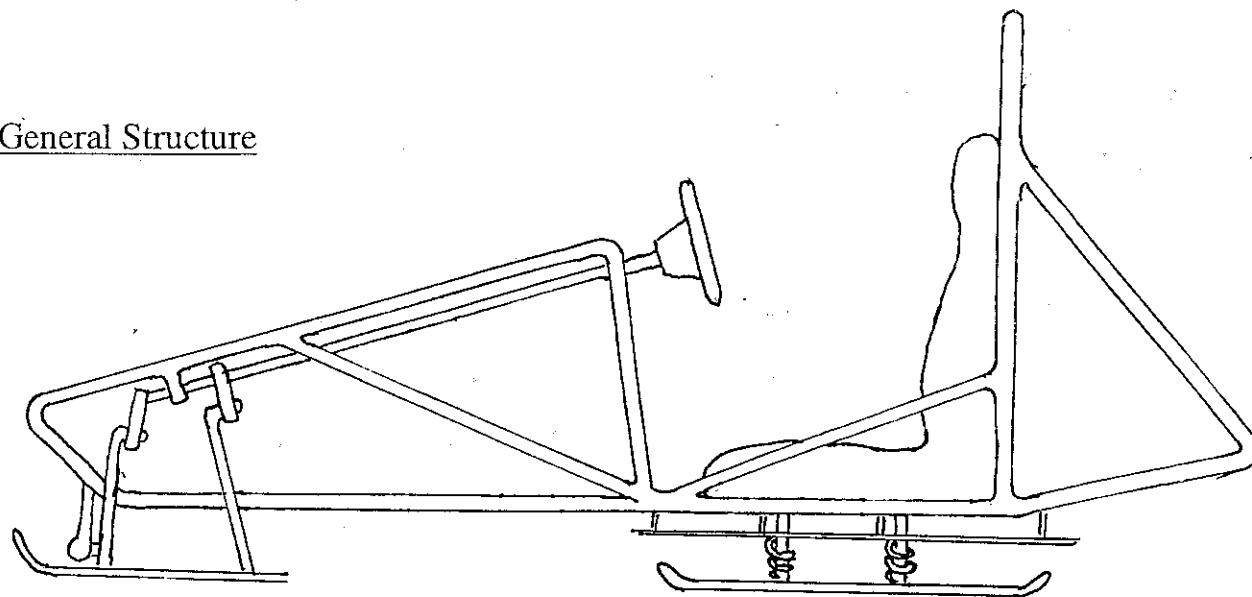
0307312



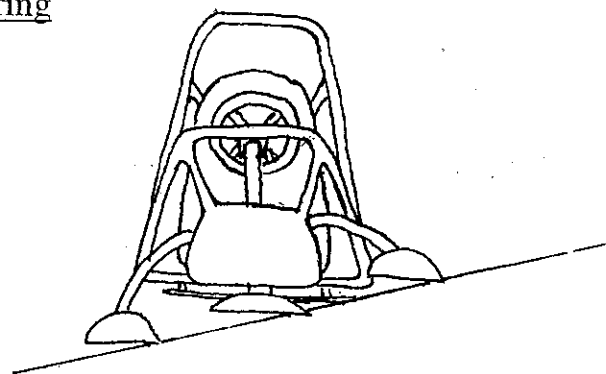
# The Sno-mobizle

0125763

General Structure



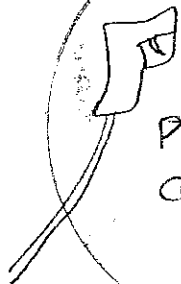
Traversing / cornering



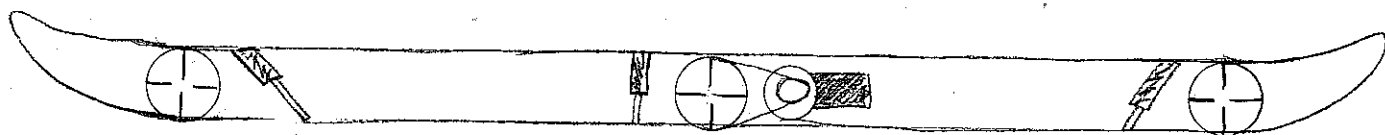
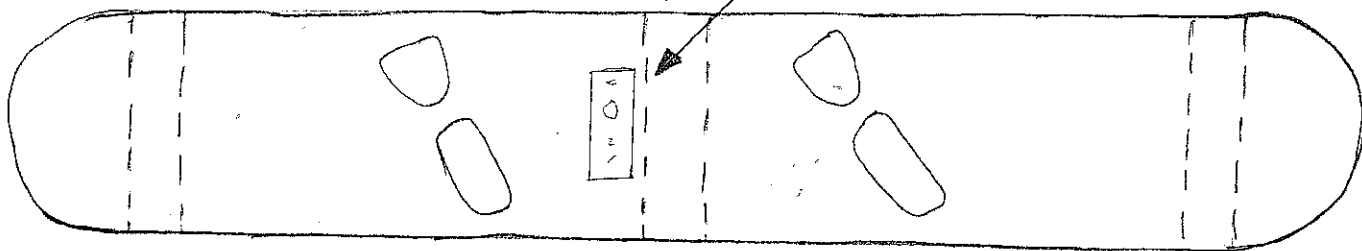
LEPT -

# POWERBOARD

COMFORTABLE  
TRIGGER  
THROTTLE FOR  
PRECISE SPEED  
CONTROL



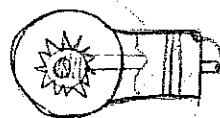
ENGINE CONTROL  
PANEL FEATURES  
STARTER HANDLE, FUEL  
MIXTURE AND FUEL TAP



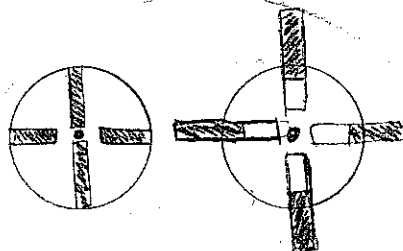
ADJUSTABLE  
SUSPENSION  
ALLOWS BOARD  
RESPONSE TO BE  
ALTERED FOR NEW  
SURFACES



HIGH TORQUE  
LOW WEIGHT  
SMOOTH RUNNING  
PISTON ENGINE

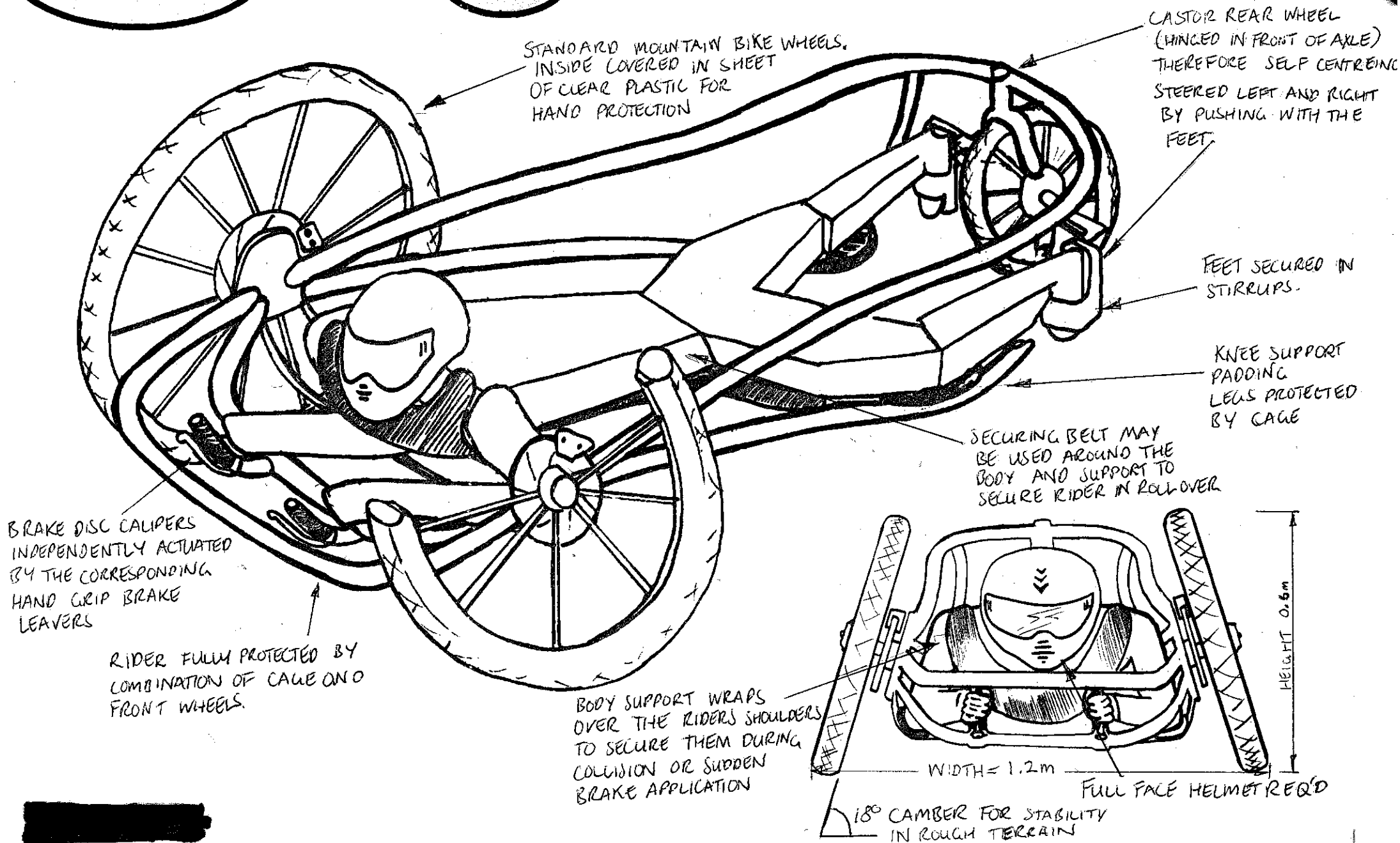


DRIVE DRUMS ACTIVATE DUE  
TO CENTRIPETAL ACCELERATION  
WHEN THROTTLE APPLIED AND  
SPRUNG SHUT WHEN  
THROTTLE CLOSED



# SKELECAGE

OVERALL LENGTH 1.5 m to 2 m DEPENDING ON RIDER.  
CAGE MATERIAL = STEEL, FOR MIN WEIGHT COULD USE ALUMINIUM/REINFORCED PLASTIC





## The Boardshoe

### **The Concept:**

The 'boardshoe' is designed to significantly enhance the ability of snowboarders to traverse uphill through snow. The 'boardshoe' encompasses the main technical properties of both the snowshoe and the snowboard, into the one device. It has been designed to operate like a snowboard on downhill slopes. On uphill climbs the 'boardshoe' is easily transformed into a pair of snowshoes.

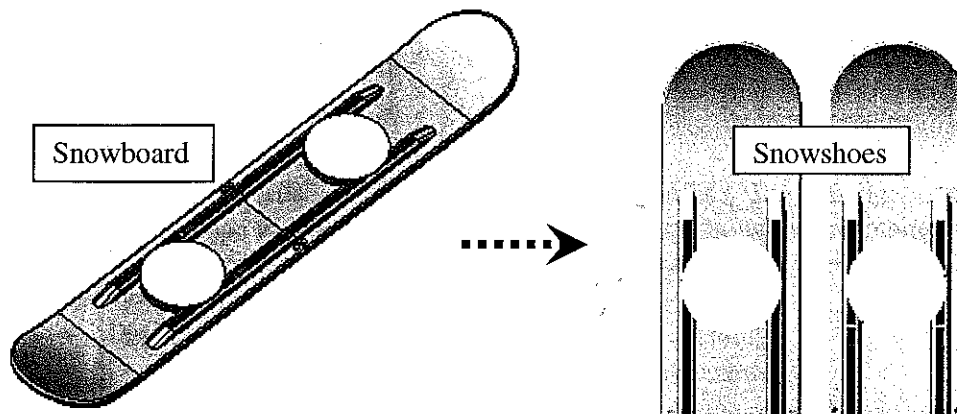


Figure 1: Showing the transformation from snowboard to snowshoes

### **How it works:**

Four easy to follow steps are required to transform the 'boardshoe' from its snowboard state into a pair of snowshoes. Firstly, in order to detach the titanium bars which hold the two sections of board together, the two connecting/detaching buttons are pressed down (Figure 2). The two sections are then pulled apart and the titanium rods are pushed into their stored position (Figure 3).

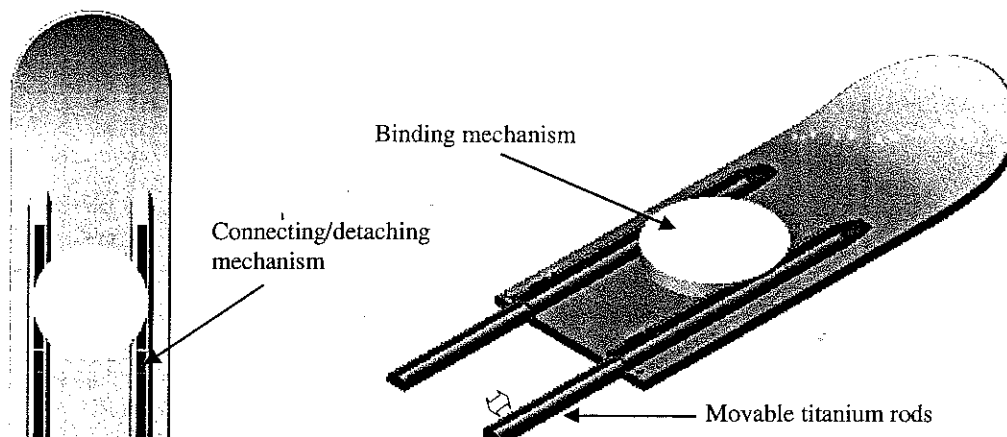
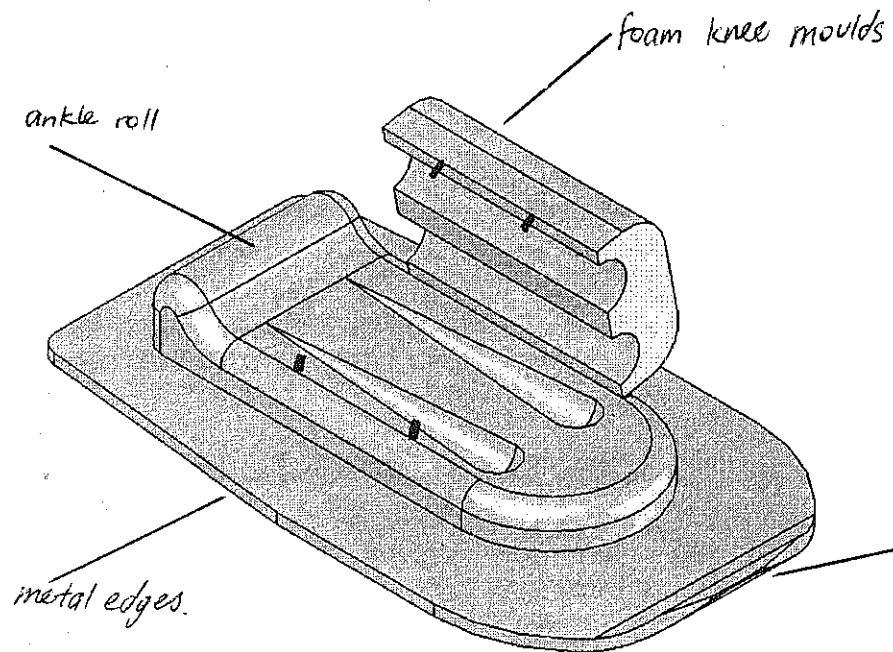
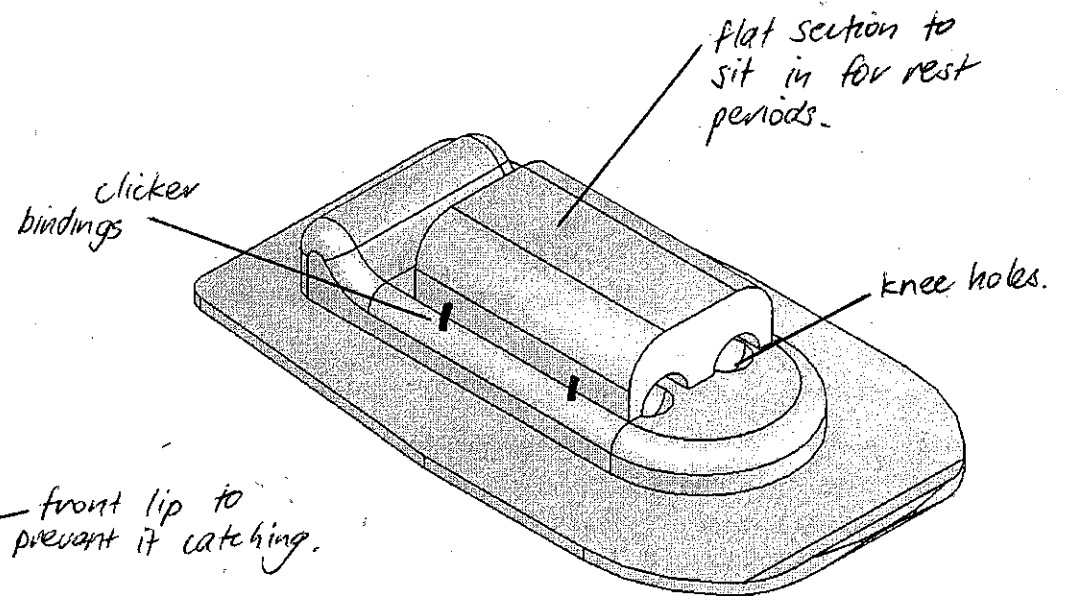


Figure 2&3: Show connecting/detaching mechanism of the 'boardshoe'.

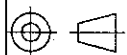
The bindings are rotated 90° so they are facing forward for snowshoeing (Figure 4). A locking mechanism at the back of the binding is opened to allow the users heel to lift off the snowshoe (Figure 5). Skins are attached to the bottom of the shoes via hooks to enable traction on uphill slopes.



- place lower legs in mould  
in kneeling position



- fold down top half and  
tighten bindings to clamp  
legs in.



SCALE :

# DOWN HILL KNEE BOARDING CONCEPT

ALL DIMENSIONS IN mm

UNIVERSITY OF CANTERBURY  
MECHANICAL ENGINEERING DEPT CH.CH.

CAD Model:

0322568

