

HOW TO MAKE GALILEO'S COMPASS

INTRODUCTION

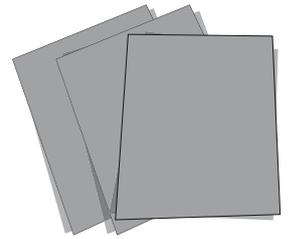
The geometric and military compass of Galileo is a very simple instrument to make, even using poor materials!

Anybody can do it, all you have to do is try!

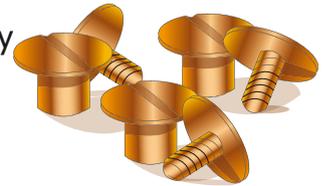
Follow these instructions step by step, and you will make a compass quickly and easily.

MATERIALS REQUIRED

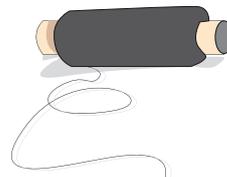
- 2-3 sheets (21 x 29.7 cm) of cardboard, approximately 1-1.5 mm thick, available at any stationery shop;



- 3 binding screws with male and female, available either at a stationery shop or a hardware shop;



- sturdy thread (of the buttonhole type);



- a sinker of the type used for fishing;



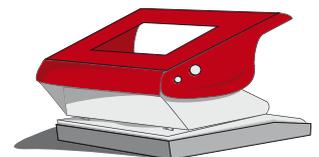
- a paper-cutter;



- a pair of scissors;

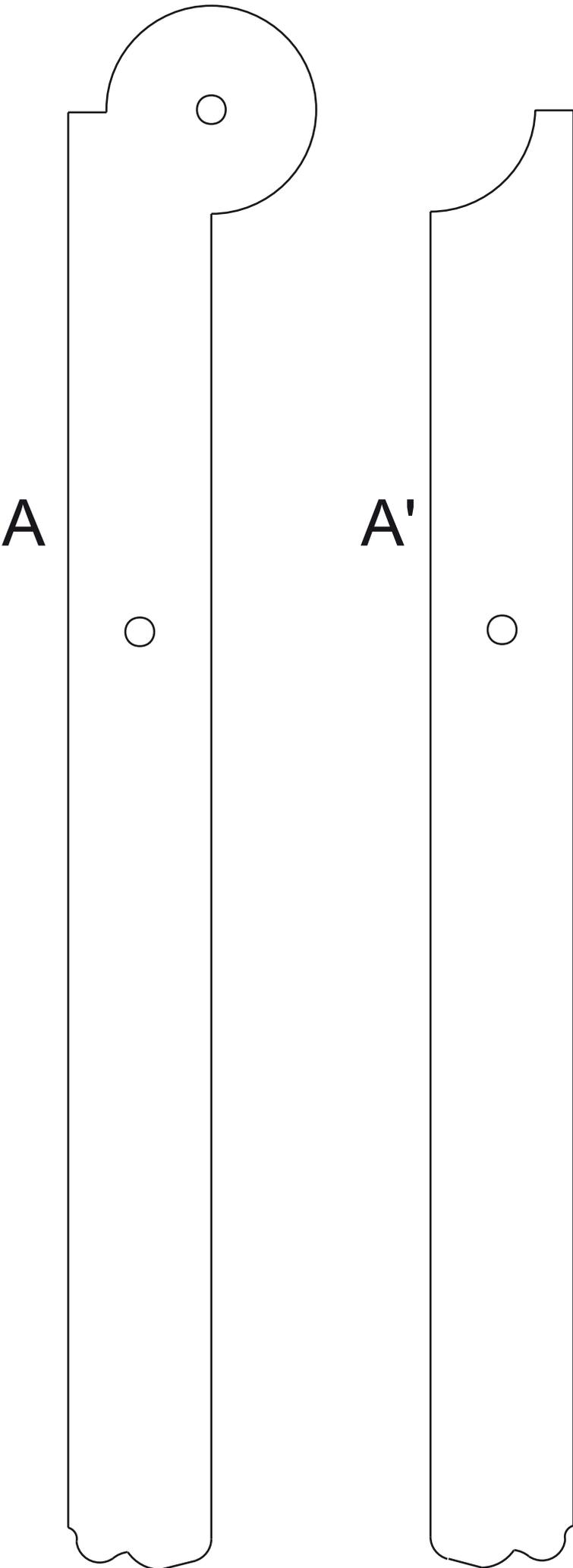


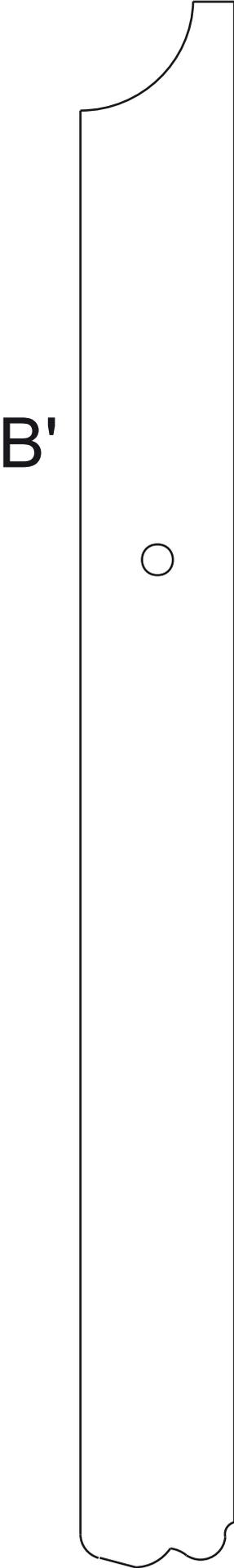
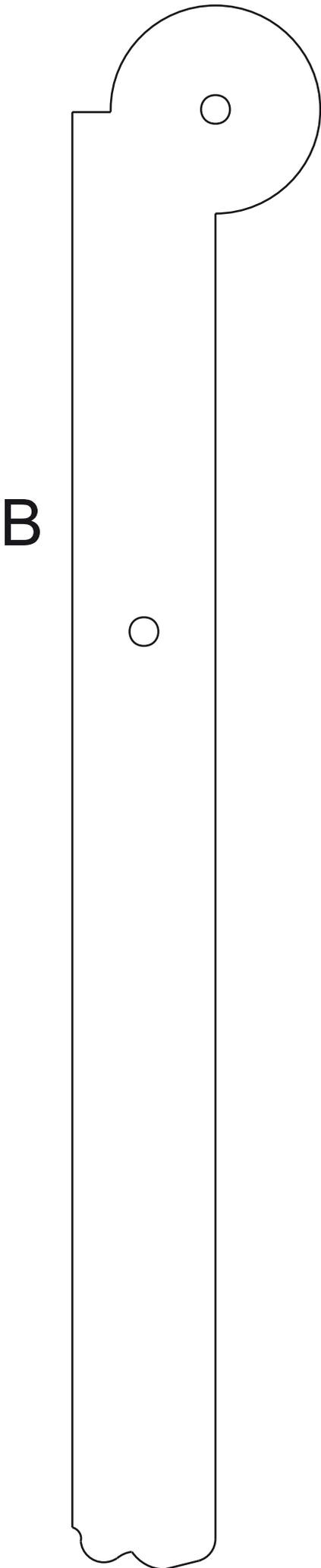
- something to make holes in the cardboard (a hole-puncher, for instance);

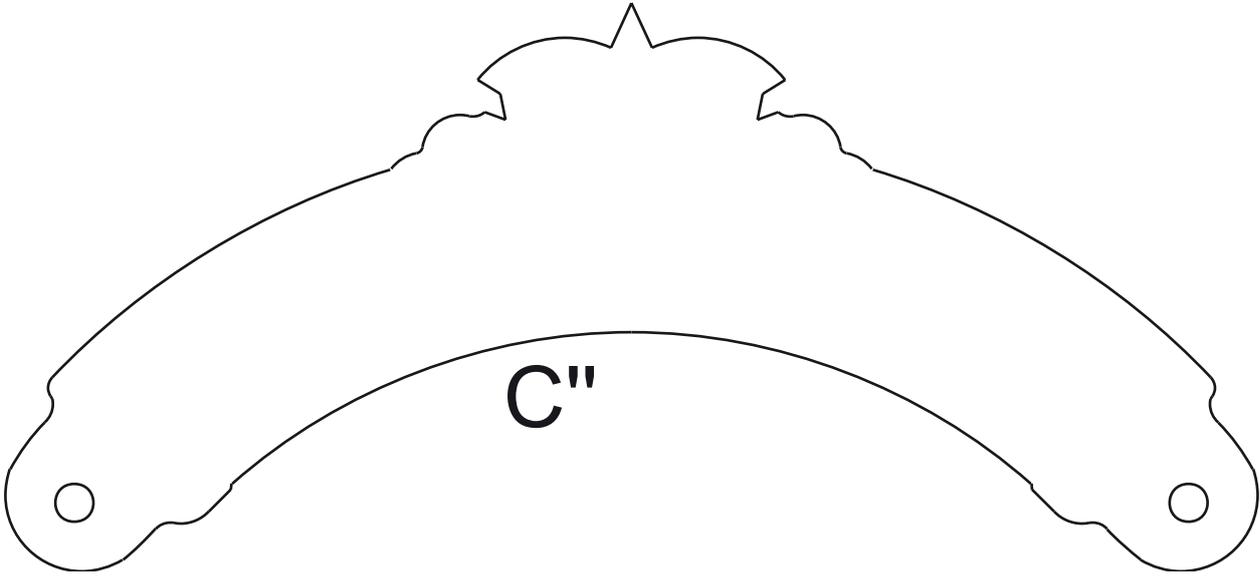
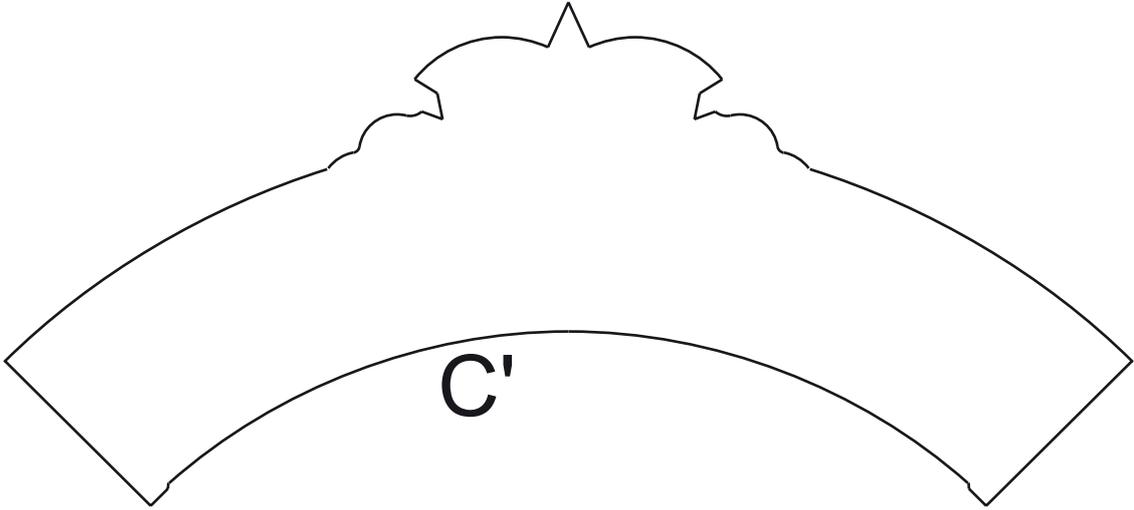
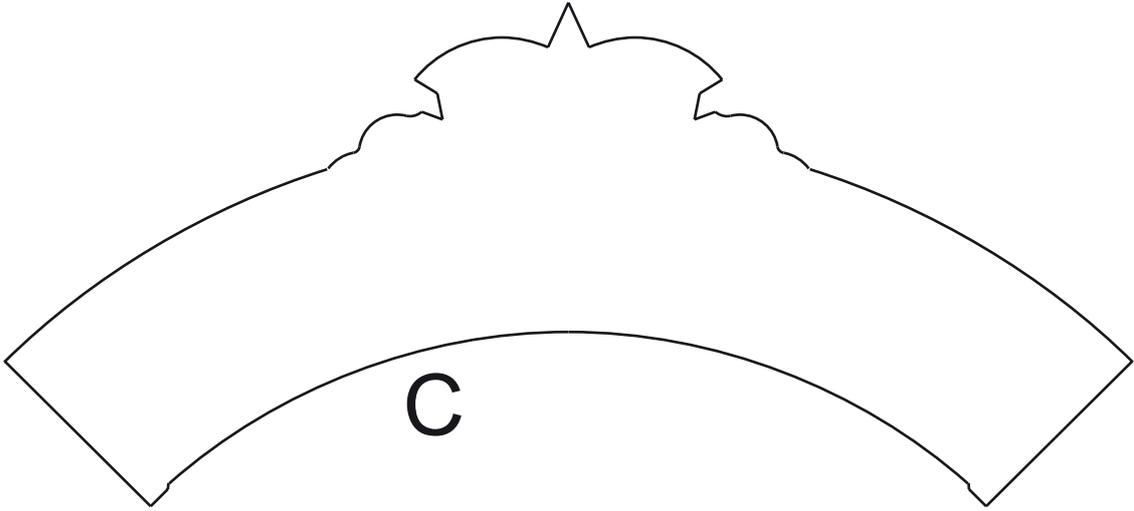


- strong glue (Vinavil).

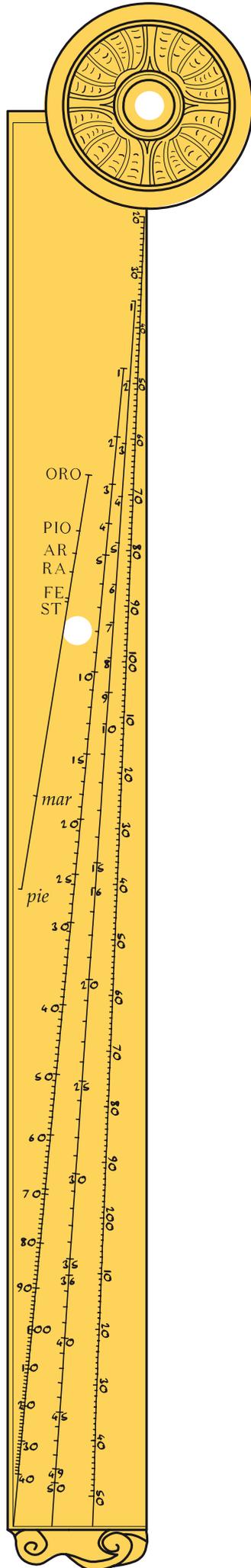




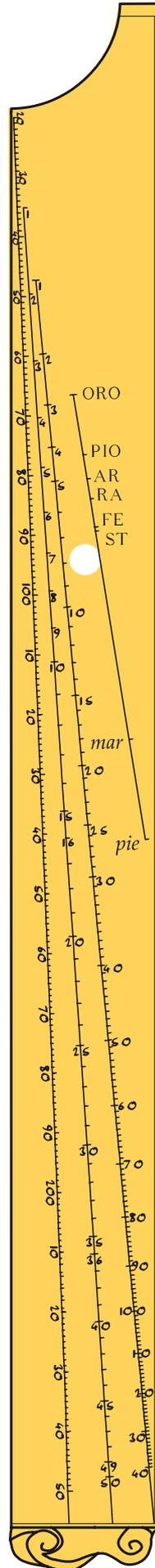


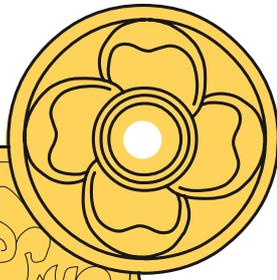


Recto sx

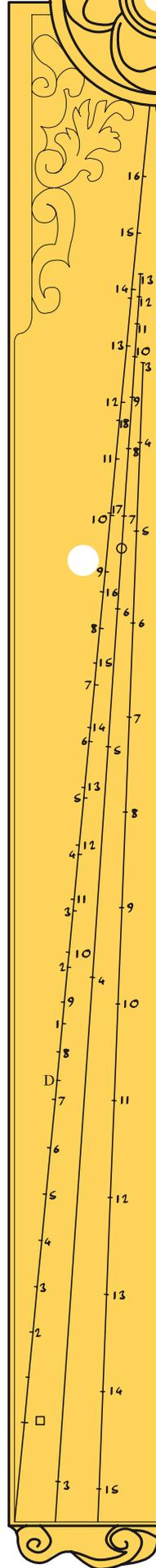


Recto dx

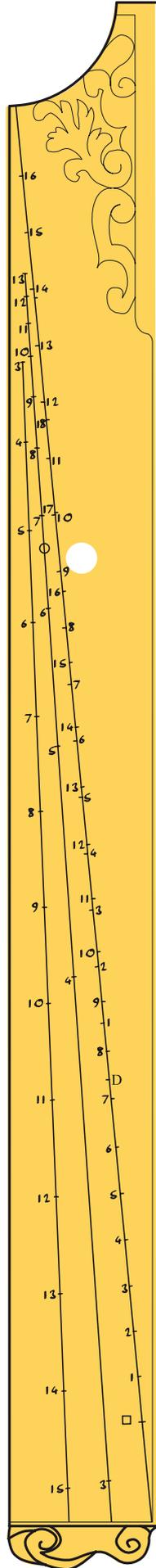




Verso sx



Verso dx





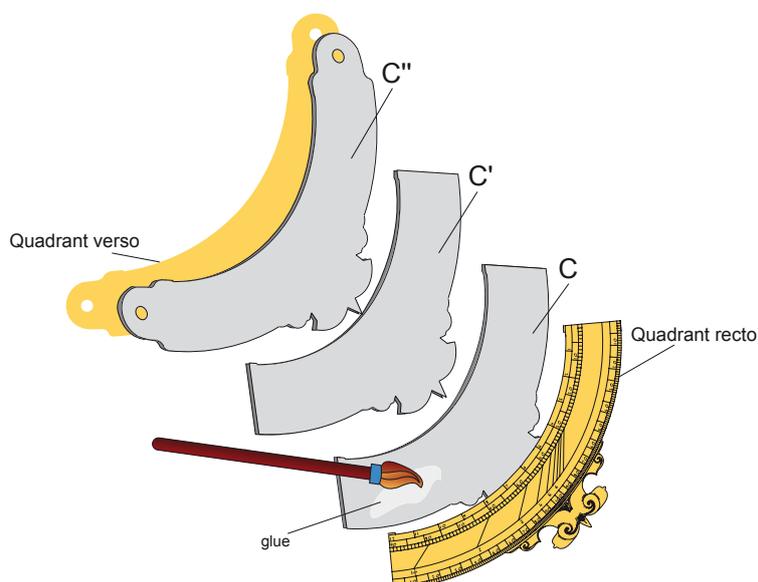
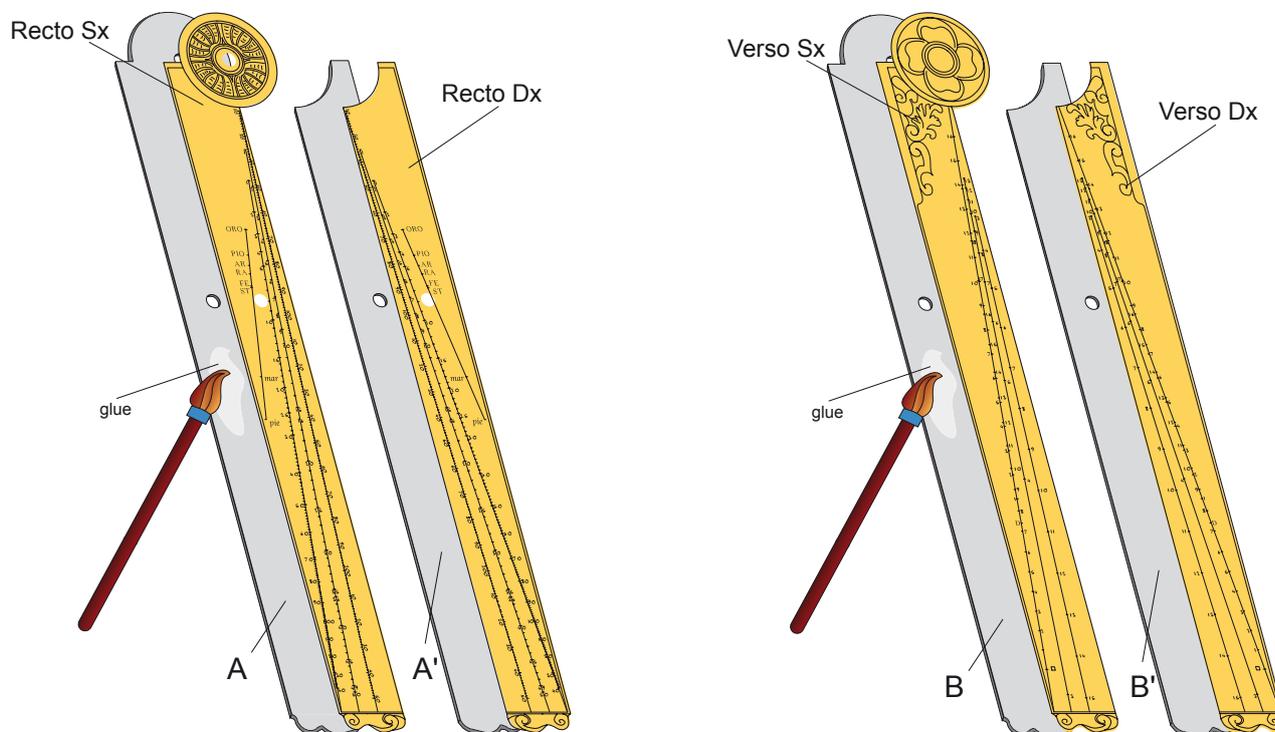
Quadrant recto



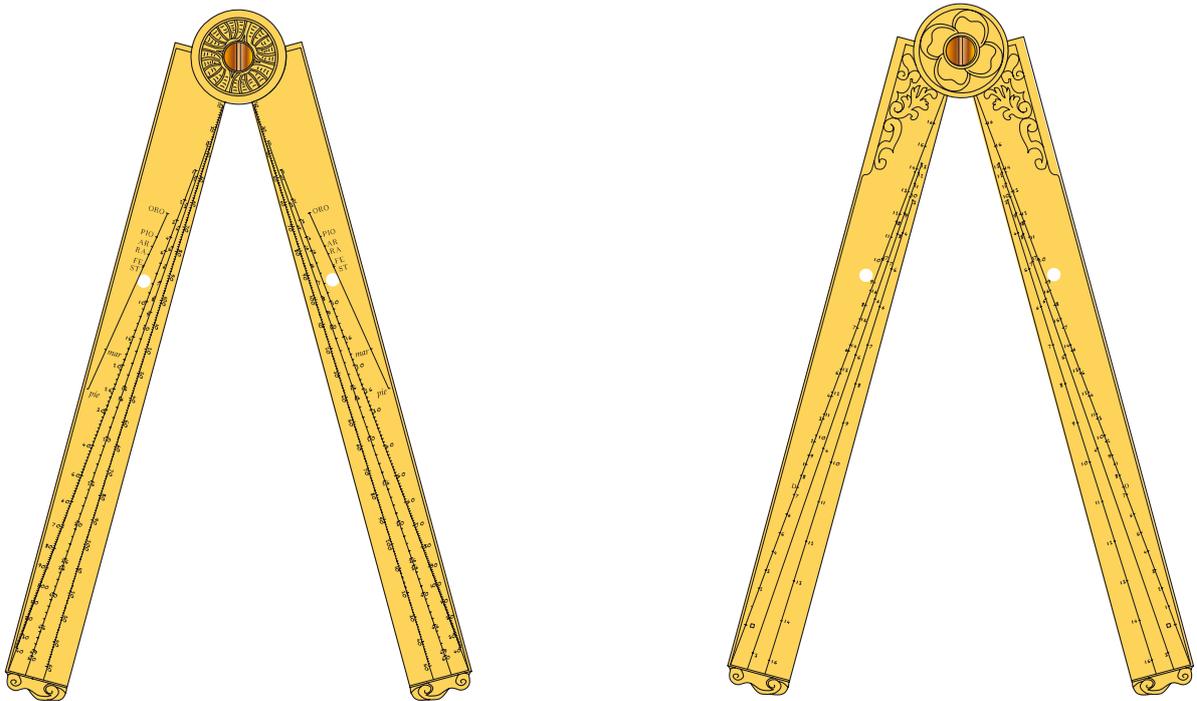
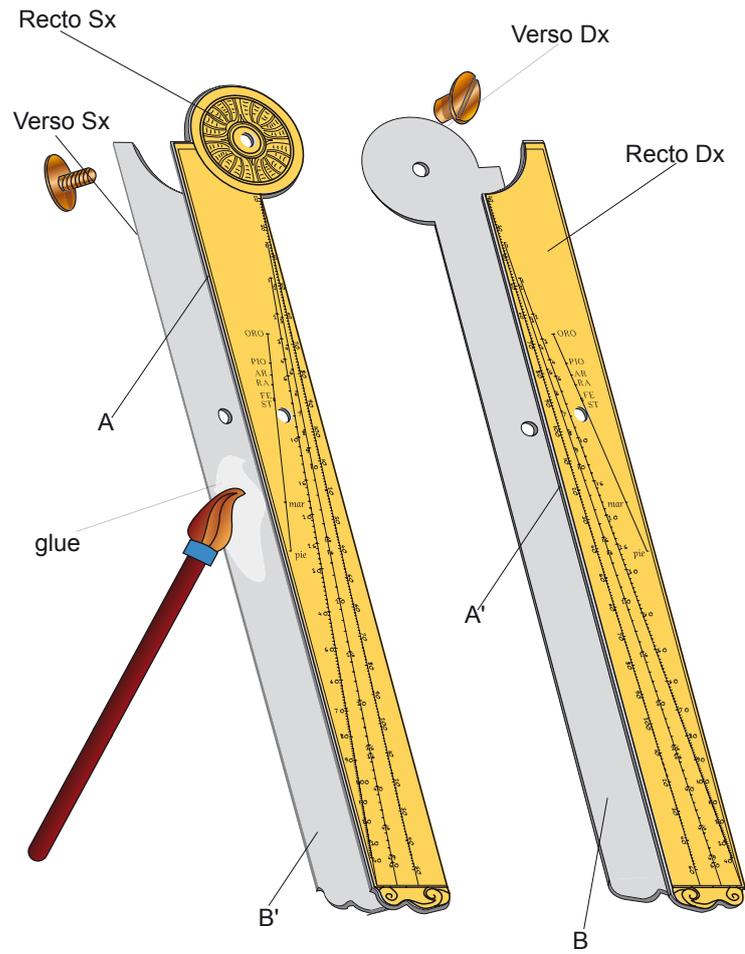
Quadrant verso

MAKING THE PIECES AND ASSEMBLING THEM

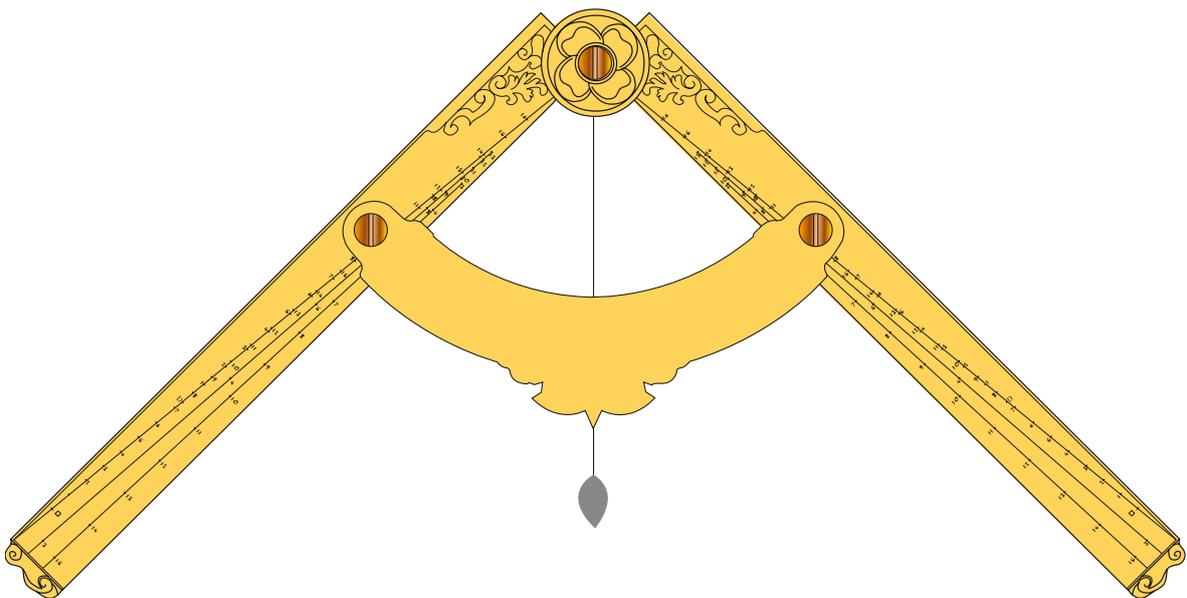
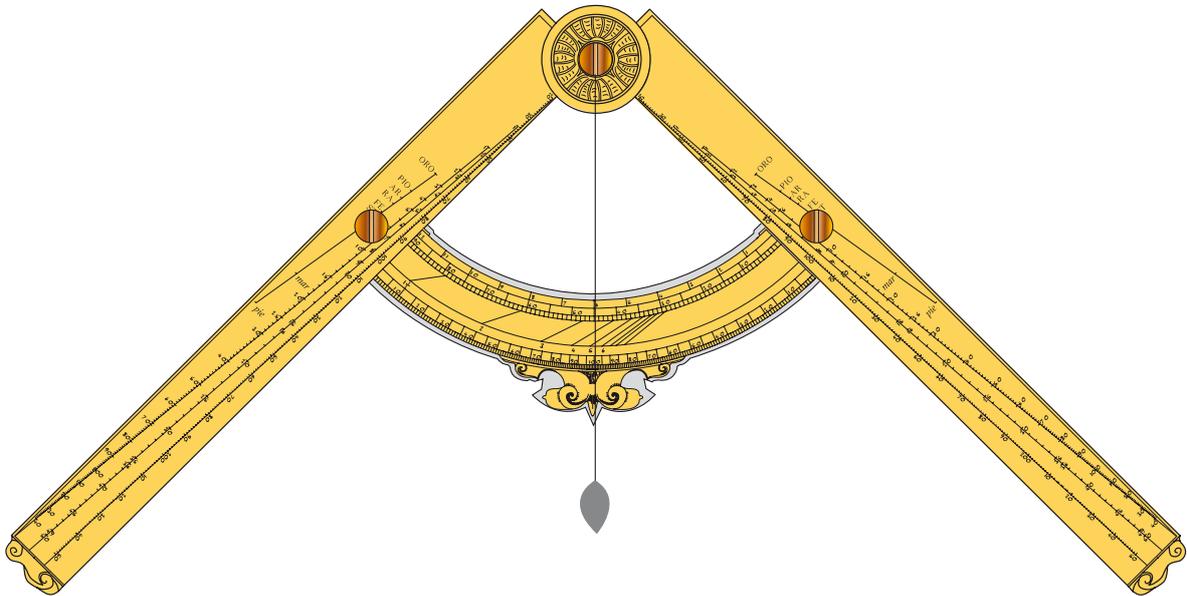
1. Print the entire document with an ordinary printer (preferably in color);
2. with the scissors, cut out the shapes (**A, A', B, B', C, C', C'', RectoSx, RectoDx, VersoSx, VersoDx, Quadrant recto, Quadrant verso**) drawn from Sheet 1 to Sheet 3 of the document, remembering to make holes in the circles;
3. place the paper shapes (**A, A', B, B', C, C', C''**) on the sheets of cardboard; be sure you have enough cardboard for all 7 of them; then carefully and precisely cut the shapes out of the cardboard;
4. now you can discard the paper shapes (**A, A', B, B', C, C', C''**) and glue the cardboard ones that you have cut out (**RectoSx, RectoDx, VersoSx, VersoDx, Quadrant recto, Quadrant verso**), arranging the pieces as follows:



5. when the glue has dried, join the two arms, matching the holes on the pivot, and fasten them with one of the three screws. At this point, the compass is ready!



- When you want to use the instrument as a quadrant, all you have to do is mount the graduated arc with the other two screws (with the drawing to the front of the instrument) and tie the sinker to the upper screw.



- To use the instrument, consult the website [\[http://brunelleschi.imss.fi.it/Esplora/compasso/index.html\]](http://brunelleschi.imss.fi.it/Esplora/compasso/index.html) or download all of the texts on its application.

HAVE FUN!