



## Gloster Sea Gladiator

or Portuguese Air force version

The Gloster Gladiator was designed by Gloster as an updated version of their Gauntlet Fighter. It featured an improved landing gear, a stronger engine and - as the first british fighter in history - an enclosed cockpit. It went on to become the last biplane fighter of the Royal air force. The Gladiator made its maiden flight in 1934 and was ready to enter service in 1937. At that time, the Gladiator was technically already inferior to the latest generation of monoplane fighters, like Spitfire and Hurricane or the german Me 109. The Sea Gladiator was the navy ver-

sion, which was equipped with arrestor hook, reinforced landing gear struts and naval emergency equipment.

The first Gladiators to be used in combat were those of the chinese nationalist air force, fighting against japanese Type 96 ("Claude") and Type 97 ("Nate") fighters after the japanese attack on china in 1937. Even tough the chinese pilots were trained much less, they fought well against the japanese, who were coming in superior numbers. The american born chinese John Huang and Arthur Chen became the first aces of World War 2, flying Gladiators. After the famous Type Zero Fighter was introduced, it became more and more difficult for them though.

The Gladiator played an important role in the finnish winter war against the

Soviet Union. Both finnish squadrons, as well as swedish volunteers were flying it. Two finnish pilots, Oiva Tuominen and Paavo Berg, became aces, flying the Gladiator. The swedish volunteers were equipped with swedish owned gladiators, that were repainted in a winter camouflage with finnish roundels and were refitted with ski landing gears. The swedes scored eight aerial victories. In the continuation war new soviet fighters became available and the Gladiators were outclassed.

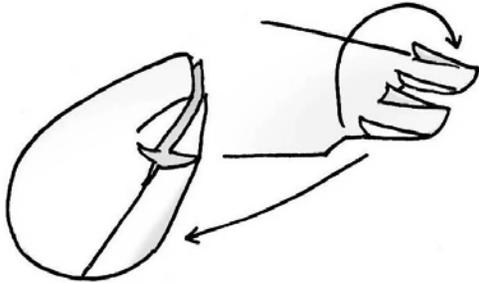
After the german attack on Poland, Gladiators in the front service of the Royal air force were replaced by monoplane fighters, but saw extensive use in the less important theaters of the war, used by both british forces as well as

allied forces. Royal air force Gladiators helped out in Norway after the seven operational Gladiators of the norwegian air force had to yield against the tide of german aircraft, and were also used in Greece and Iraq. The opposite side in Iraq, the Royal Iraqi air force, was equipped with Gladiators as well. The only Gladiator vs. Gladiator battle ever was won by the british craft.

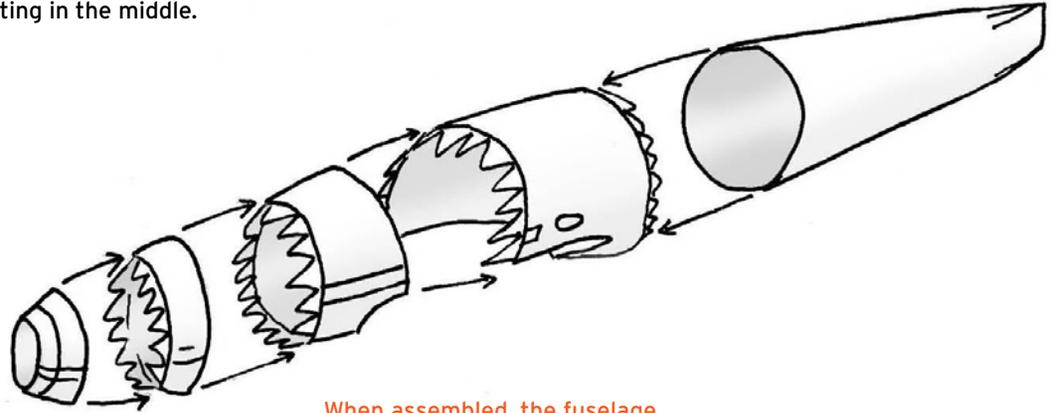
The most famous british Gladiators however, were Sea Gladiators that had coincidentally been left behind by the aircraft carrier HMS Glorious on Malta. When the Italians attacked Malta in 1940, there were said to be only 3 of the 18 Gladiators airworthy. They were kept operational, using the other ones as spare parts and were equipped with three bladed propellers cannibalized from Bristol Beauforts. The Royal air force had deemed at least 4 Squadrons would be required to defend the island, but those had never arrived. The three Gladiators, which were later named "Faith", "Hope" and "Charity" managed to hold the Italian Airforce at bay, which was flying the comparably more modern Savoia-Marchetti 79 and Macchi Castoldi 200. The Gladiators offered such fierce resistance, that the Italians estimated the number of fighters stationed at Malta to 25 aircraft. After ten days, the fascist propaganda declared the british base on Malta "utterly destroyed". The reconnaissance plane sent to prove this, however, never returned, since it was also shot down by the Gladiators. The Gladiators struggled for almost one month until they were relieved by Hurricanes and Bombers.

The Gladiator also served with a number of other Airforces including Lithuania, Latvia, Portugal, Ireland, Belgium and Greece.

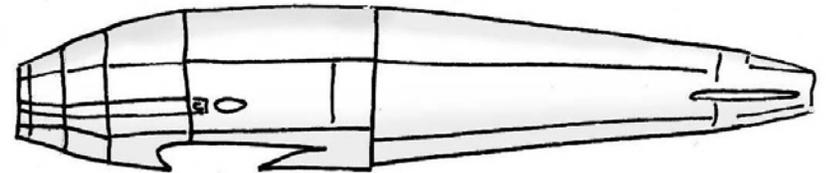
1. Cut out the rear fuselage part and shape its back as shown. Then glue it together



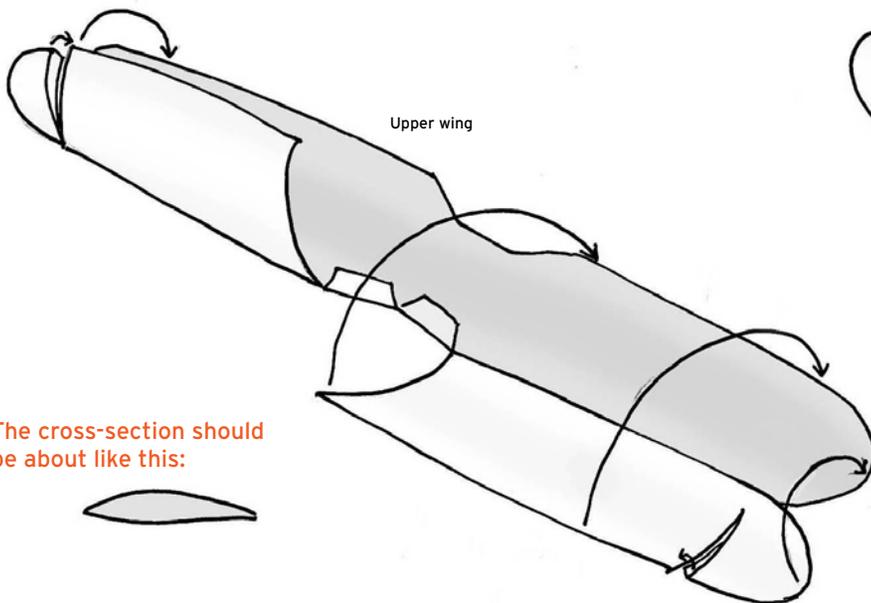
2. Glue together the fuselage parts, starting in the middle.



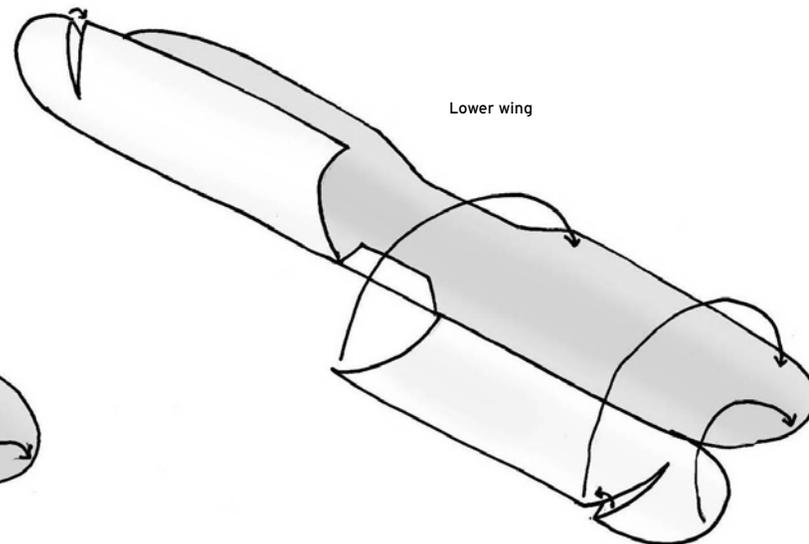
When assembled, the fuselage should look like this:



3. Roll the wings slightly to make an Airfoil, then glue them together



Upper wing

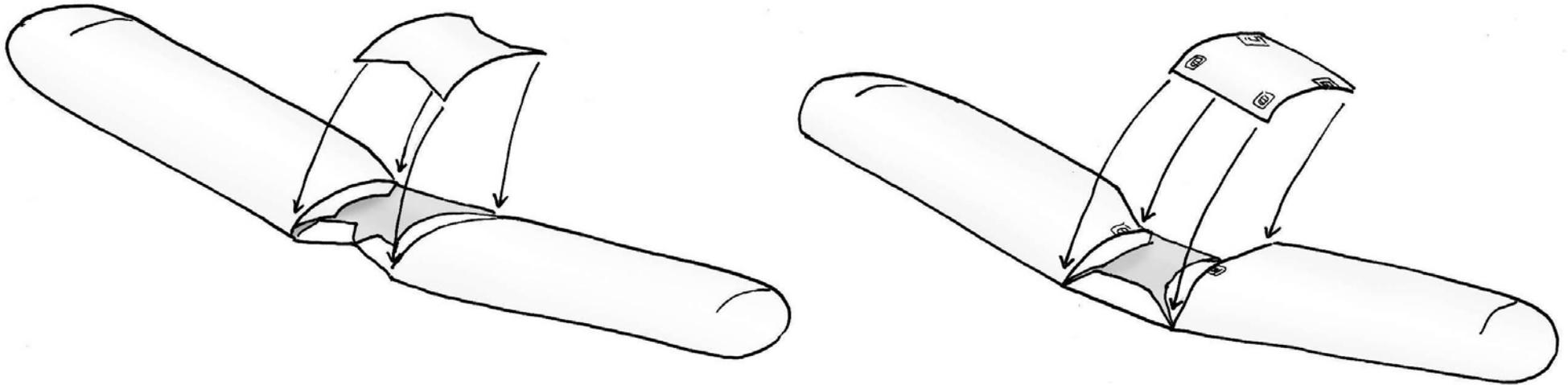


Lower wing

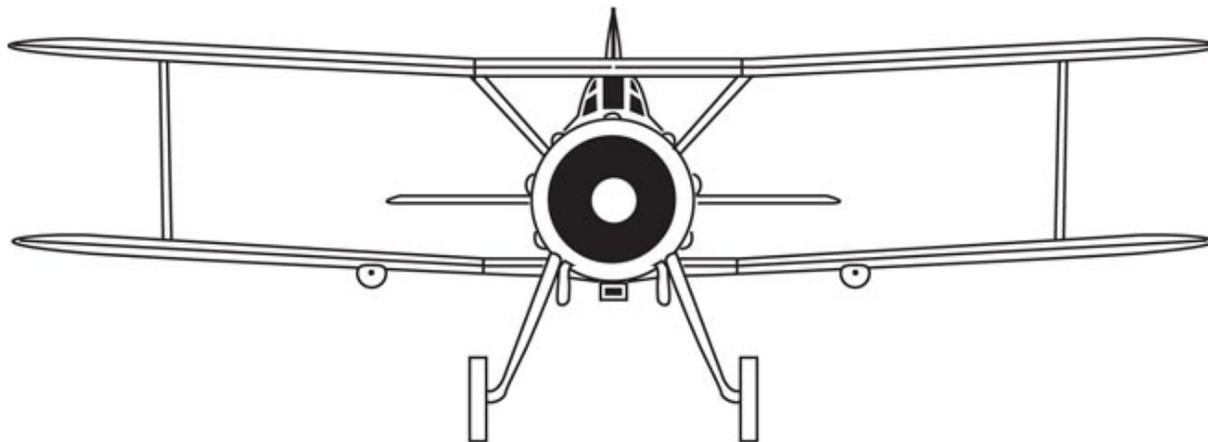
The cross-section should be about like this:



4. Bend up the wings slightly, then glue the center section on the middle to create a dihedral.

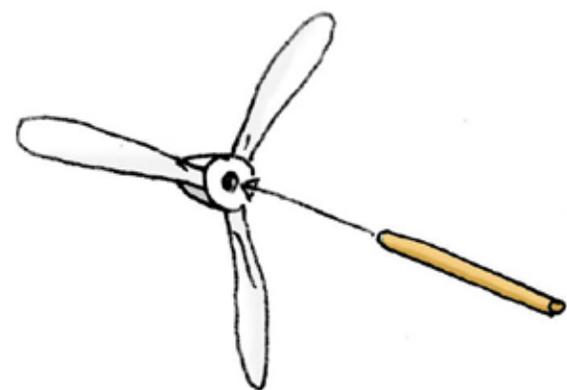
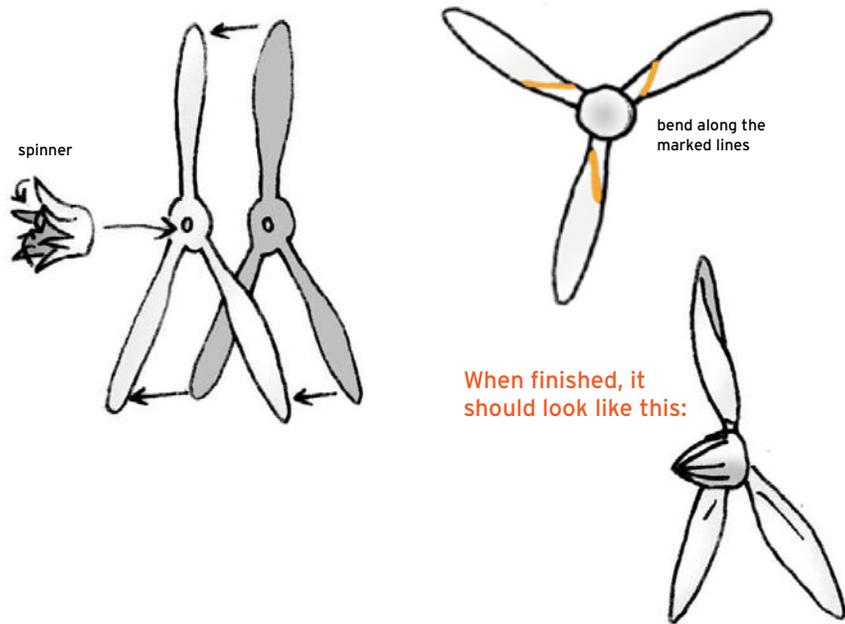


Dihedral means the wings have a slight upward angle.  
You can use this front view as a reference:



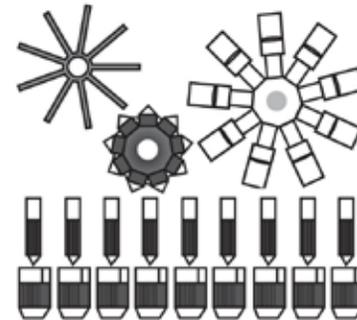
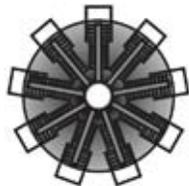
5. For the Propeller glue together the two propeller sides - the upper one on the page is the front one. Glue spinner in the front. Then bend the blades to make a propeller shape

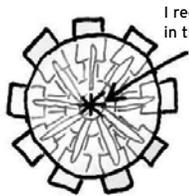
6. Glue the middle part of a toothpick in the hole. Then put the propeller to dry...



If you want to build the simplified Engine, continue with 7.

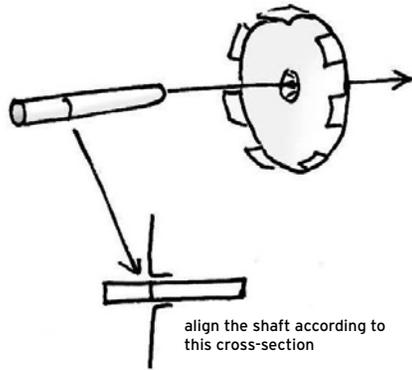
If you want to build the detailed Engine, jump to 12.





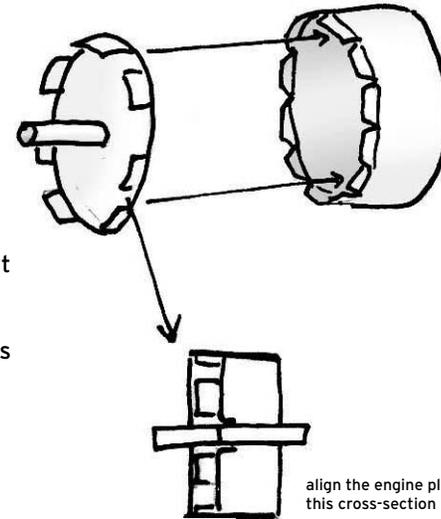
I recommend to cut in the hole in this fashion with a cutter.

7. For the simplified engine, cut out the engine plate and make a hole in the middle. Roll the engine shaft around a toothpick, that the toothpick can comfortably rotate inside of it. Then glue the shaft into the hole, and align it from the line on it.



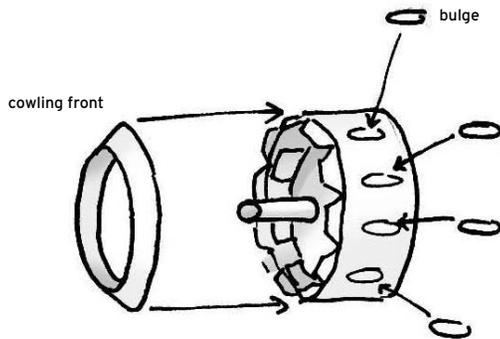
align the shaft according to this cross-section

8. Build the main cowling part and glue the engine plate on the front end. Align the front end of the engine plate's flaps with the front of the cowling part.

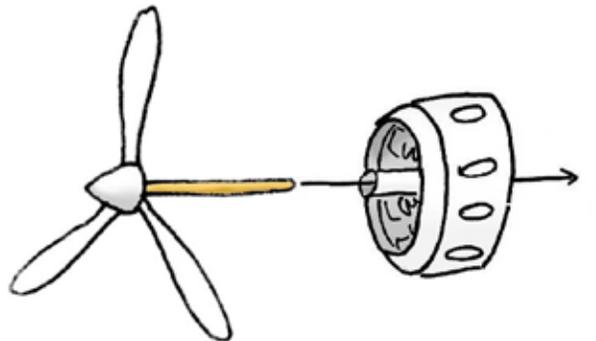


align the engine plate according to this cross-section

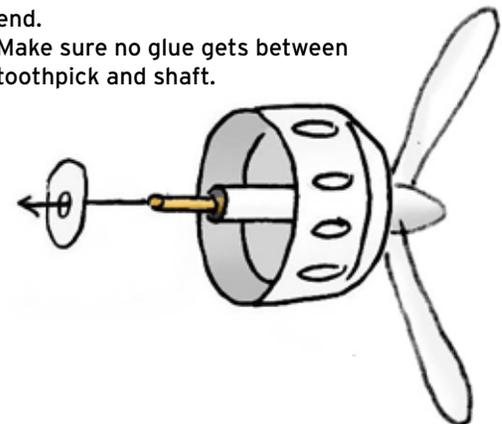
9. Attach the cowling's front part and the 9 bulges (optional)



10. Push the Propeller through the shaft. **Don't glue!**

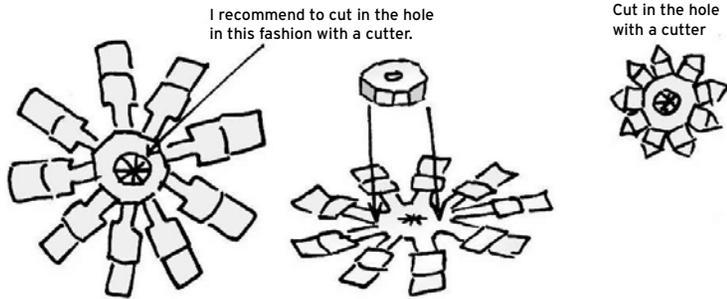


11. Glue the second shaft hub to the end. Make sure no glue gets between toothpick and shaft.

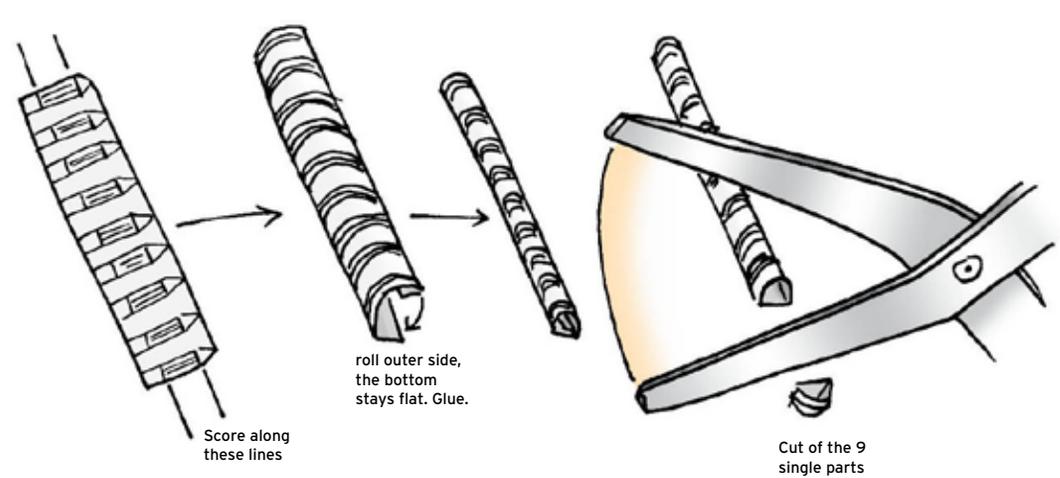


Jump to 23. (Page 7)

12. For the detailed engine. First cut out the base plate and the middle nonagon. Cut in both their holes. Glue the nonagon to the center. (fiddly)



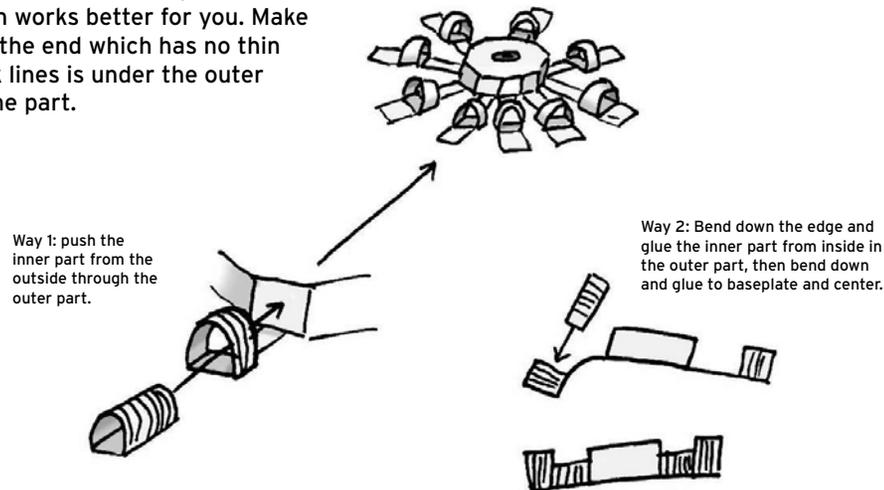
13. Cut out the 9 small engine parts in one piece. Score as shown, then roll and glue to make a long piece. Use scissors to cut each small part off. Repeat this for the second set of small pieces.



14. The part on the left side on the page appears smaller, but has the wider diameter. Glue these on the outer ring of the baseplate first.



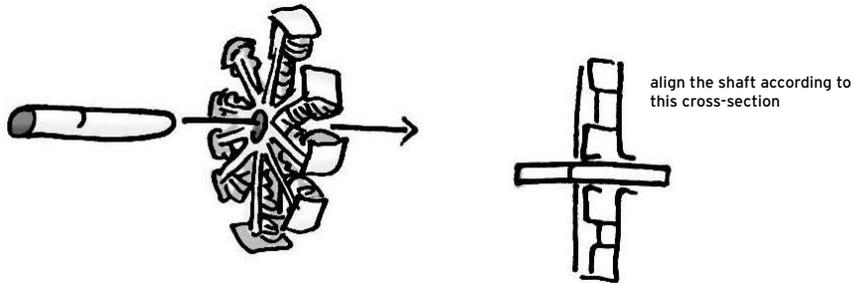
15. There are two ways to install the smaller diameter parts, see which works better for you. Make sure the end which has no thin black lines is under the outer engine part.



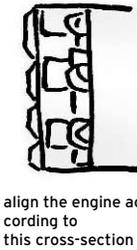
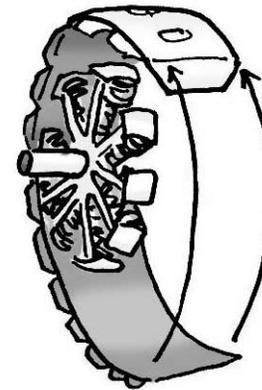
16. Cut out the star shape and glue it on the top, each star arm on one of the cylinders.



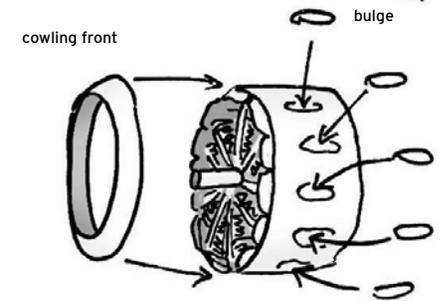
17. Roll and glue the propeller shaft around a toothpick so the toothpick can comfortably rotate inside. Then glue the shaft into the engine, aligning the line on it with the top of the engine.



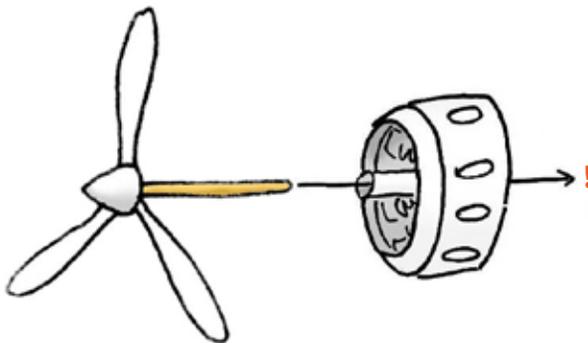
18. Roll and glue the cowling around the engine. Make sure to align the front edge of the engine's glueing flaps with the front end of the cowling.



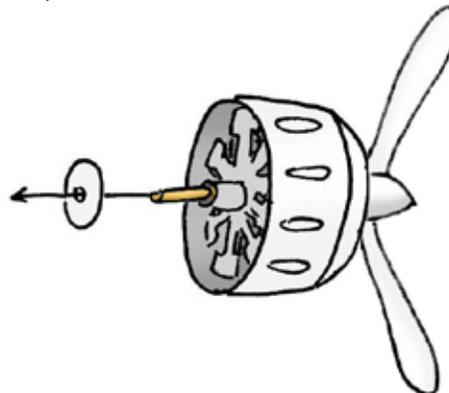
19. Attach the cowling's front part and the 9 bulges (optional)



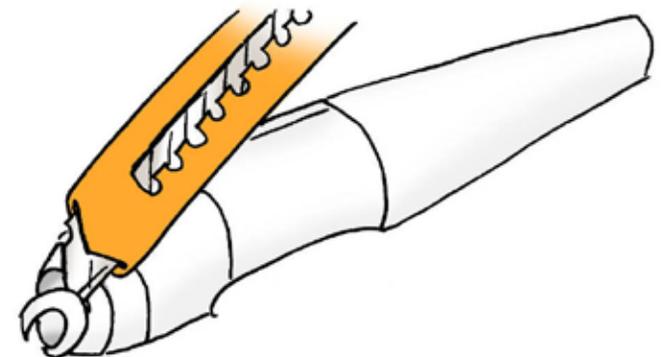
20. Push the Propeller through the shaft. **Don't glue!**



21. Glue the second shaft hub to the end. Make sure no glue get's between toothpick and shaft.

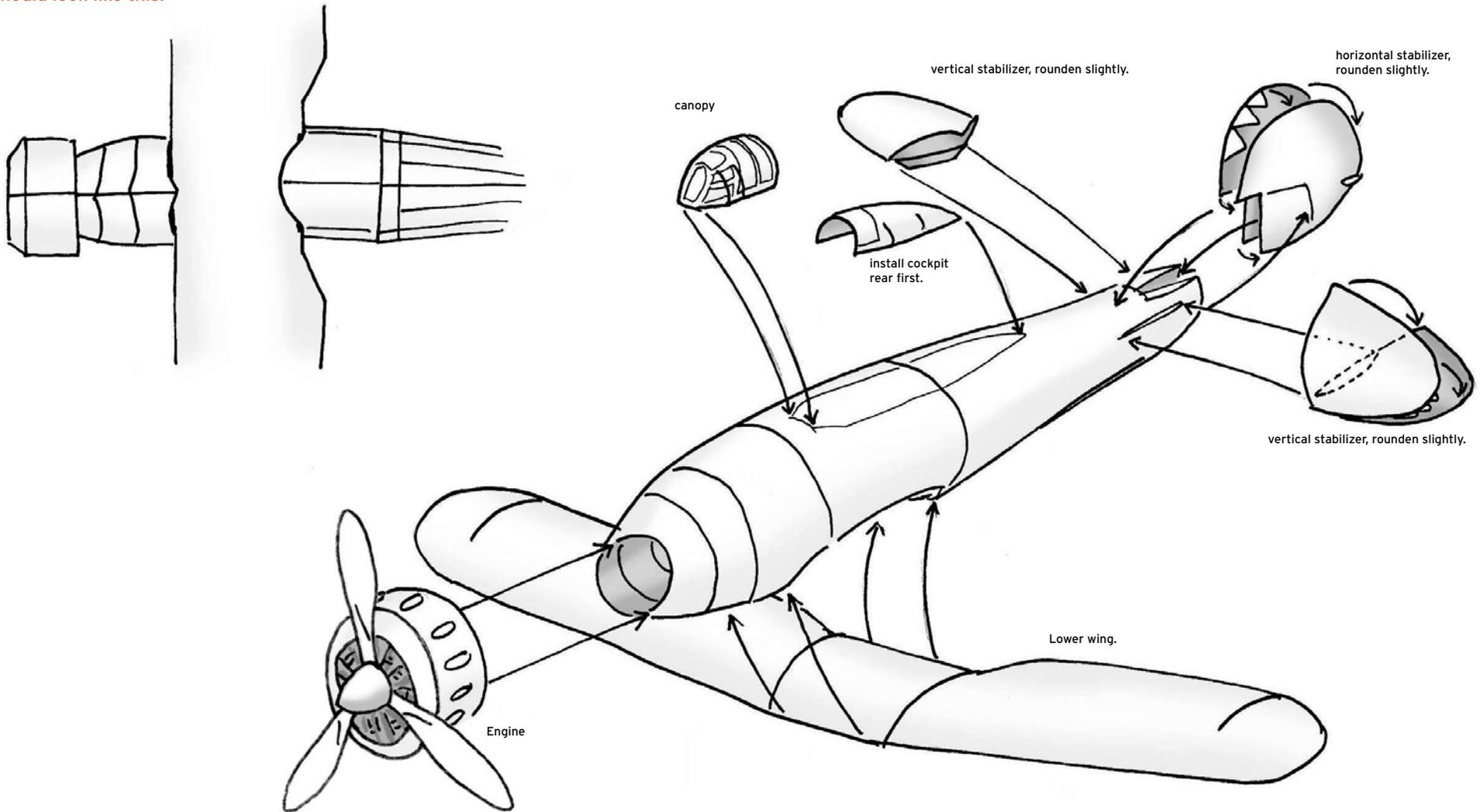


22. Cut of the forward part of the first fuselage section along the line.



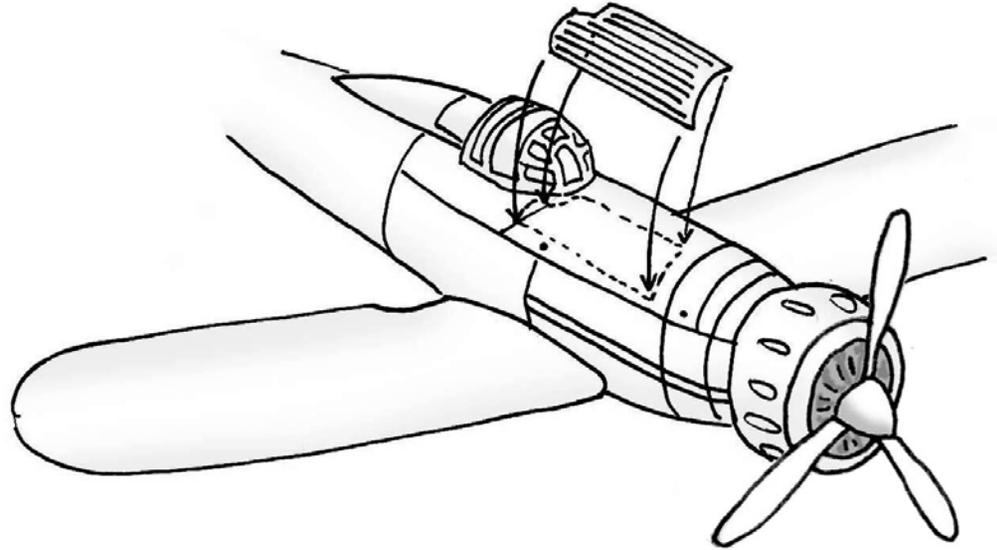
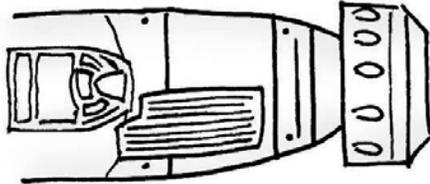
23. Glue the cockpit parts, the horizontal and vertical tails, the engine and the lower wing to the fuselage. The wing has to be pushed under the bend areas in the front and in the back.

When attached, the wing should look like this:

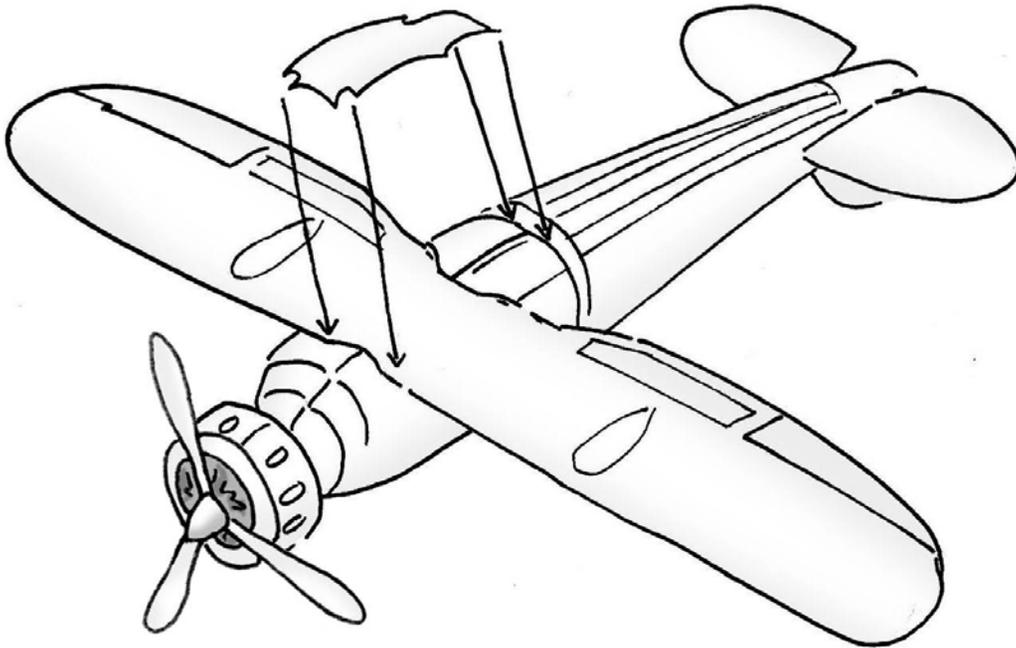


24. Attach the cooler grill to the forward part of the fuselage.

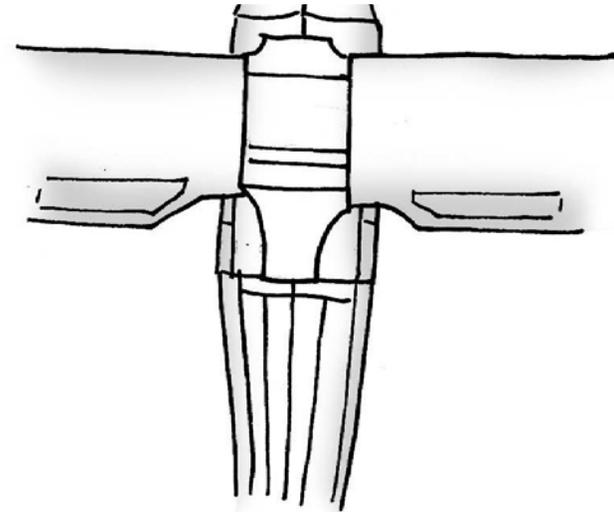
When attached, it should look like this:



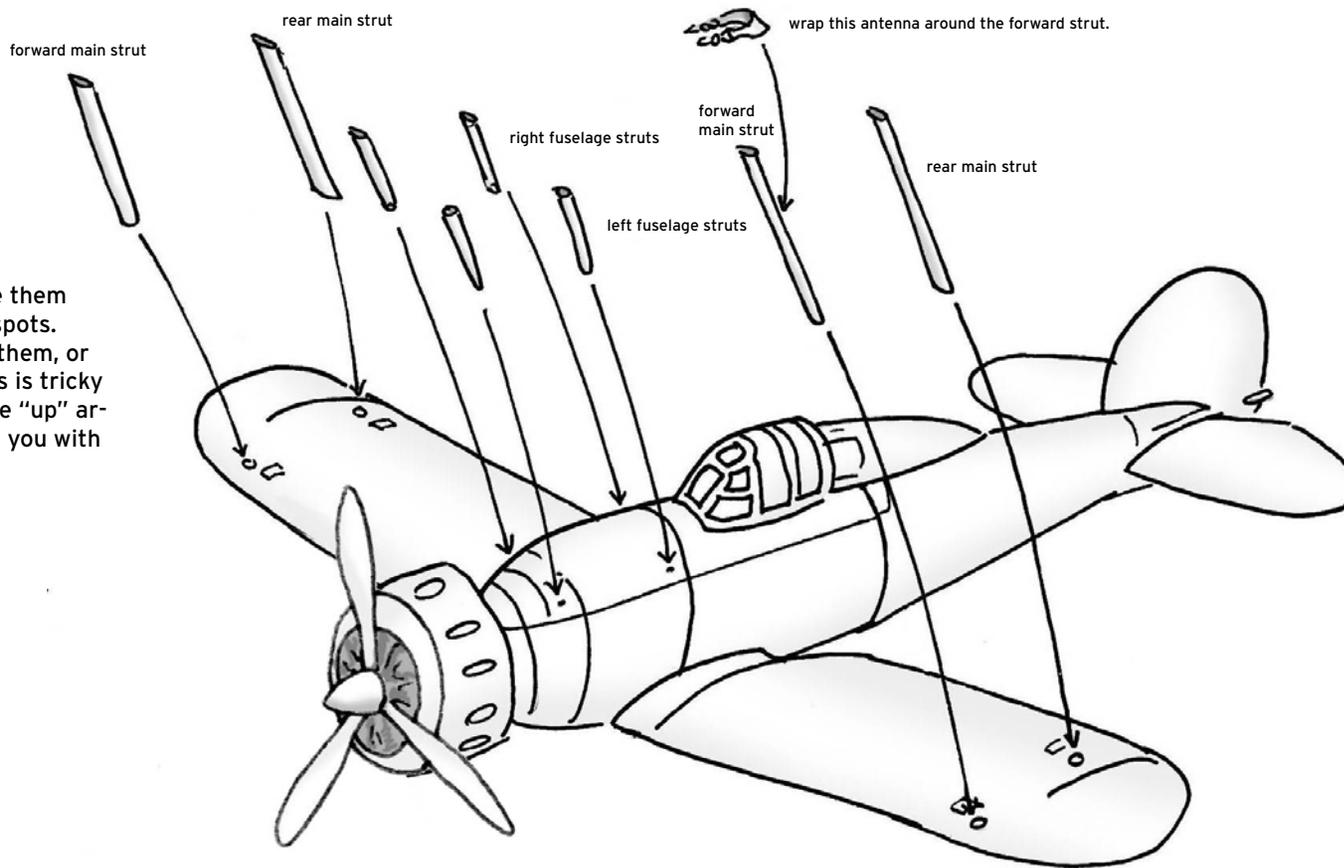
25. Bend down the front part of the fuselage bottom, then glue it across wings and fuselage



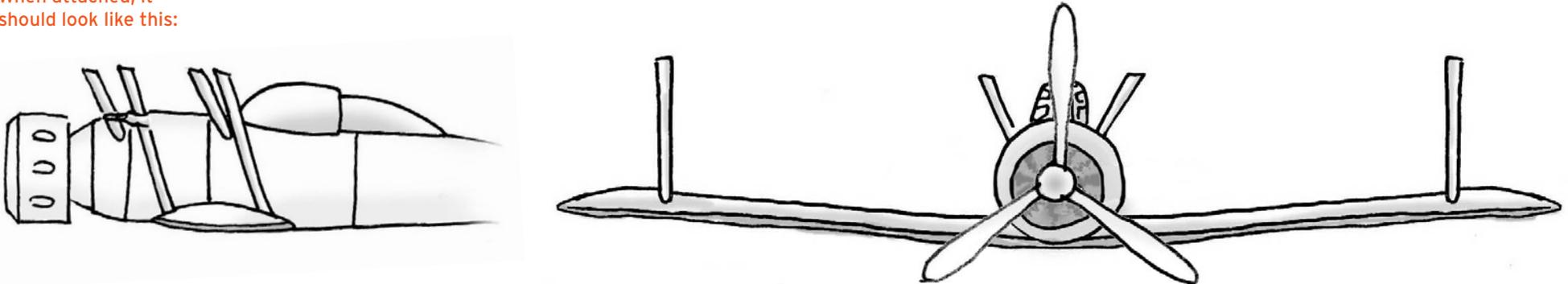
When attached, it should look like this:



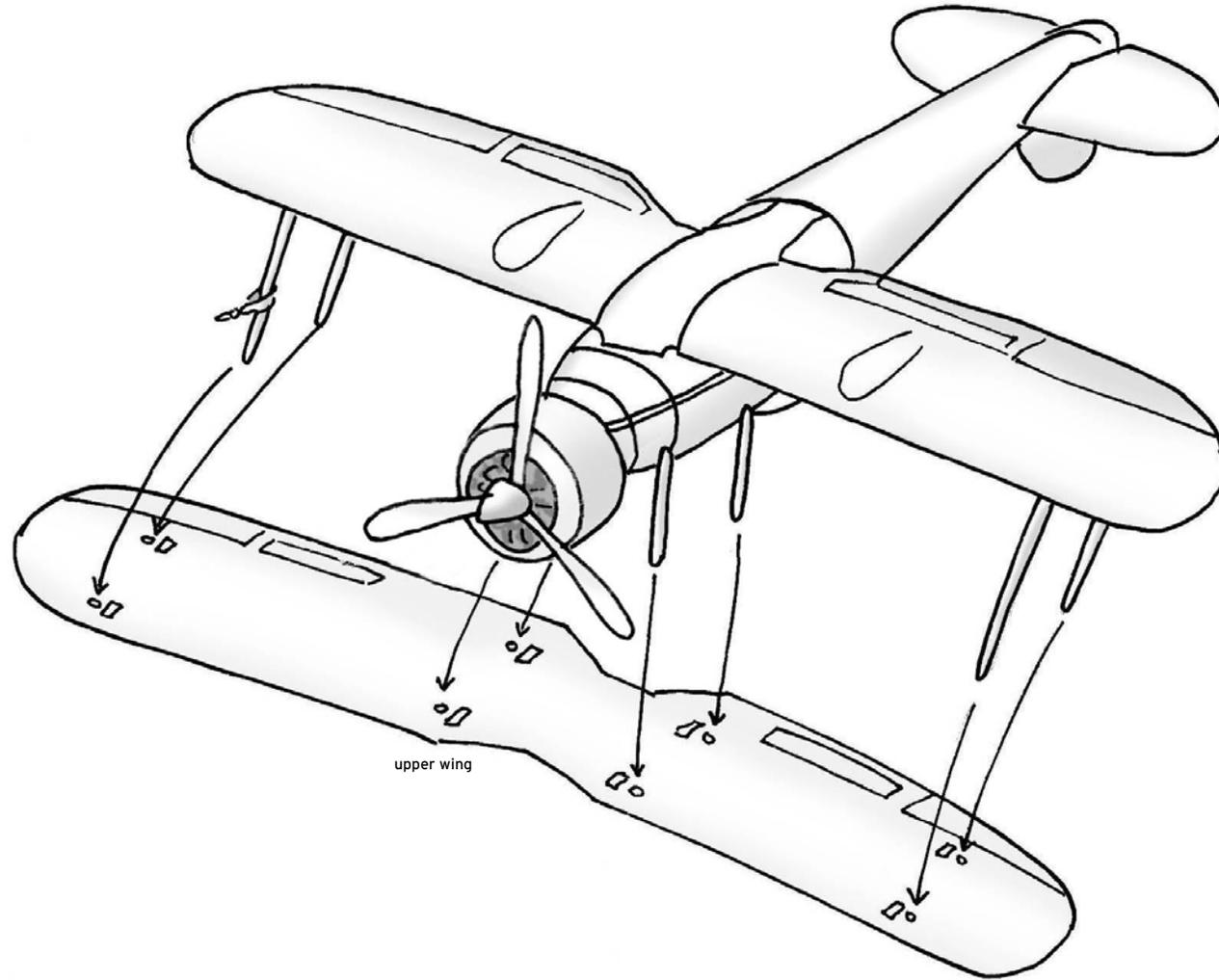
26. Roll and glue the wing struts. Then glue them to the marked round spots. Make sure not to mix them, or their direction up. This is tricky but essential. The little "up" arrow on the page helps you with that.



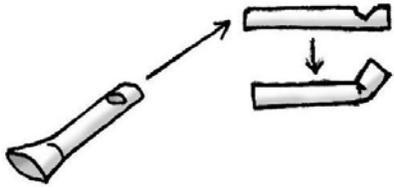
When attached, it should look like this:



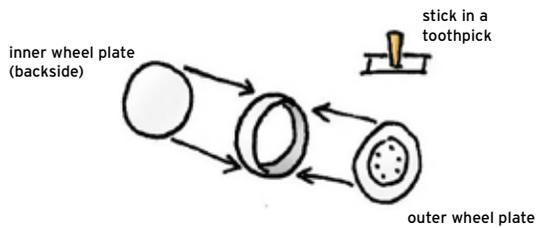
27. Glue the upper wing on the wing struts. Make sure to align the struts to sit on the round markings.



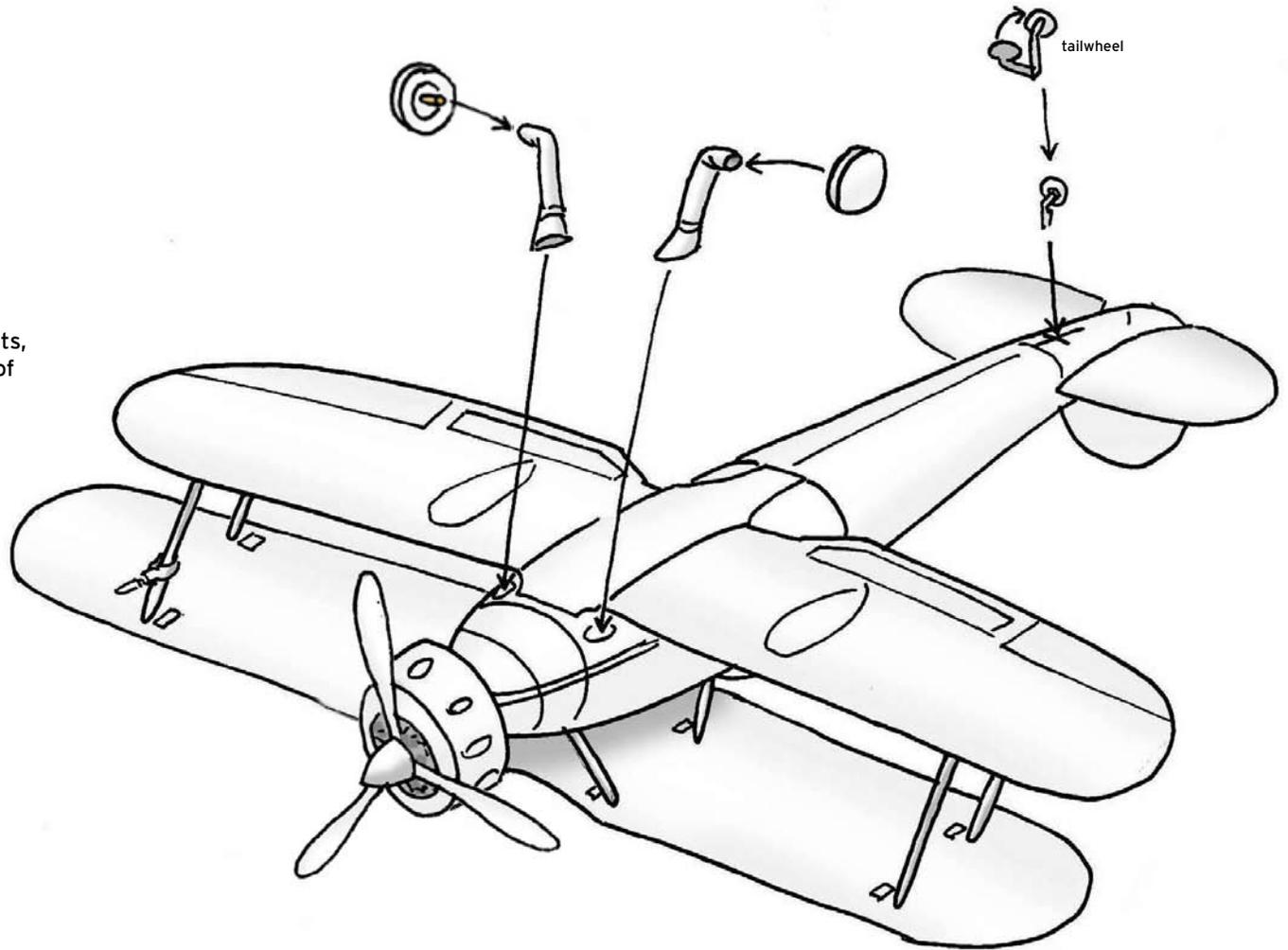
28. roll and glue the gear struts.  
Cut away the marked hole, then bend and glue.



29. Glue the wheels to the wheel tread.  
To ease the attachment to the landing gear struts, stick and glue a piece of toothpick in the middle of the backside.



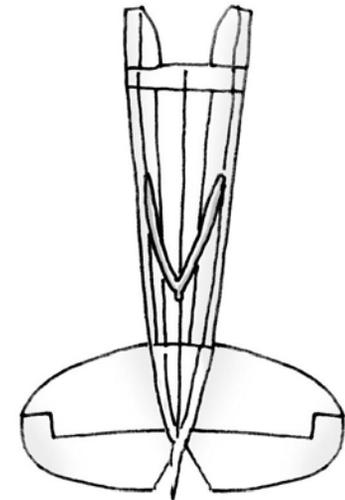
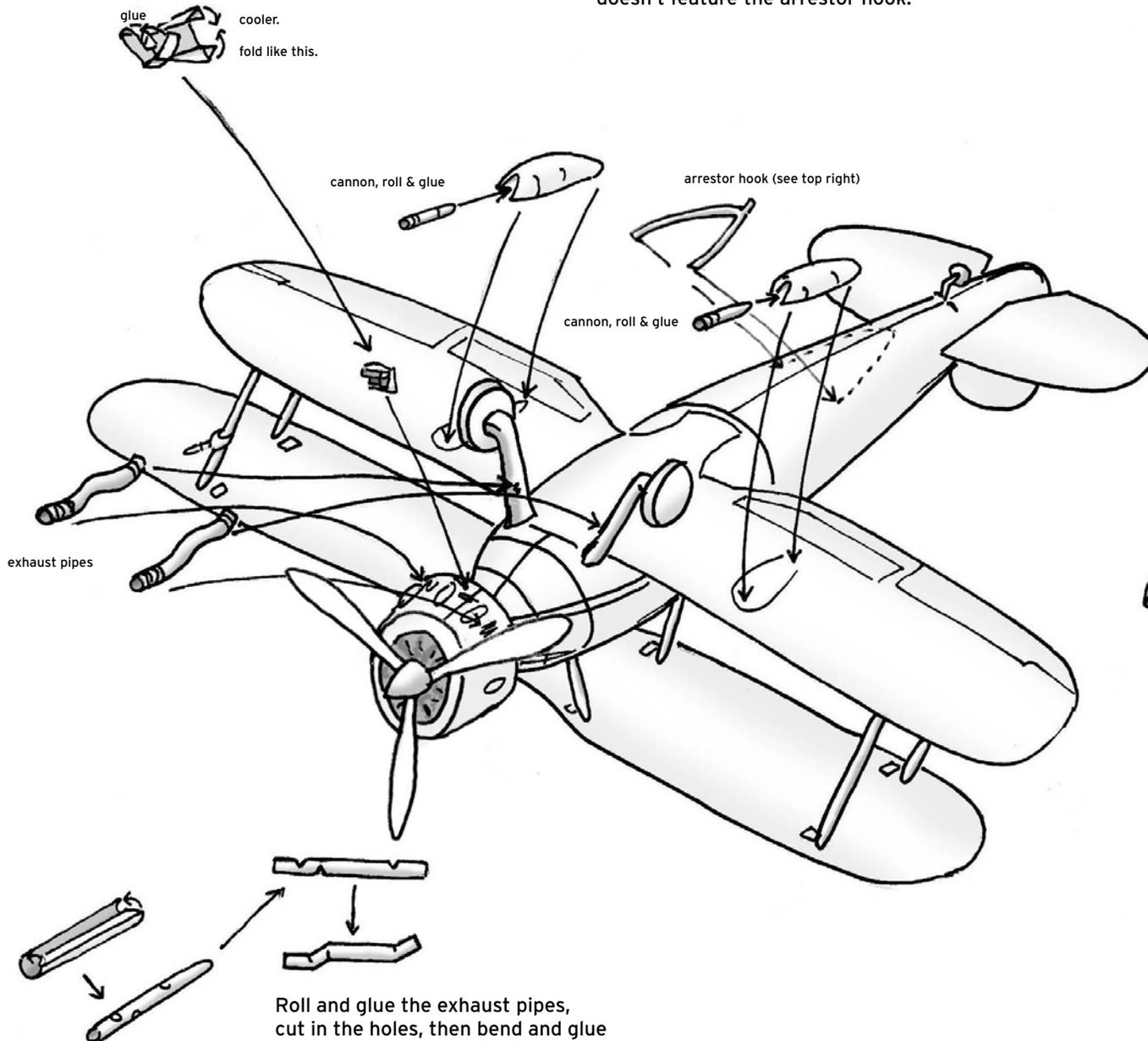
30. Attach the landing gears



## 31. Attach the details

! The Portuguese Air Force version doesn't feature the arrestor hook.

use this image to determine the position of the arrestor hook



32. rounden these parts and glue them on the front of the exhaust pipes

