***BigstuffUK***

# Turn-Buckles/Bottle screws for

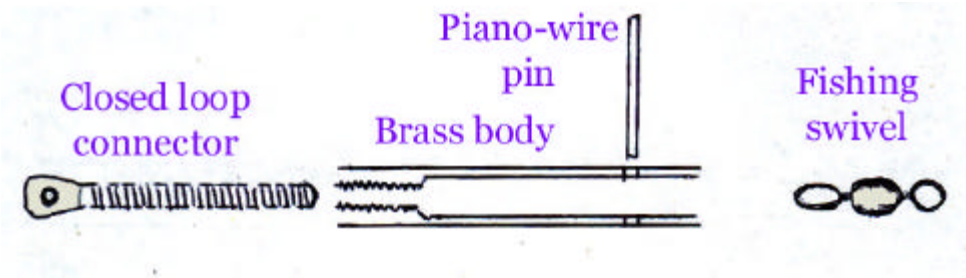
# Scale Aircraft

## *A Cheap effective solution*

When building scale Biplanes, the cost of scale Bottle screws can amount to a quite high percentage of the value of the complete model. One solution is to make these. I have never had one, fail yet, They are cheap to make and although not true scale they do look very scale-like when they are in position. Also the single thread makes adjustment much finer than a double screw and there are no Left-hand taps & Dies to buy.

## Construction for 1/5 to 1/6th scale
## With an eye each end:

The body is made from 4 mm. dia. Brass bar (Available at most model shops), Cut the bar into 1" lengths.
Drill each right through at 1.6 mm. Then drill about 70% the way through with a 3.0 mm. Drill.
Tap a 2.0 mm. Thread then clean up both ends.
A standard closed loop connector will is used as the adjusting part.
Get some suitably sized Fishing swivels. And carefully squeeze the loop at one end so it wil just slip into the bored hole.
Check where the end of the lop comes and mark it.
A light, centre punch (with a drill inserted into the hole to stop distortion)
Then, drill a 1.3 mm. Hole across the body at this point.
Clean the body and a piece of 1.24 mm. (18swg) Piano wire with steel wool.
Insert the swivel and retain with the Piano wire, Soft solder each side to secure in position.




## Construction for 1/5 to 1/6th scale
## With an eye one end & a Clevis at the other:

The body is made from 4 mm. dia. Brass bar(Available at most model shops), Cut the bar into 1" lengths.
Drill each right through at 1.8 mm. Then drill about 70% the way through with a 8.0 mm. Drill.
Tap a 8BA. Thread then clean up both ends.
File the sharp edge off the end of some 8 BA studding and force screw it into a standard metal clevis.( The aim is to get the tread locked in the clevis without over-straining the clevis) Use a clevis which has a sprung thread ie. A slot down one side of the clevis thread.
Get some suitably sized Fishing swivels. And carefully squeeze the loop at one end so it wil just slip into the bored hole.
Check where the end of the lop comes and mark it.
A light centre-punch (with a drill inserted into the hole to stop distortion)

Then drill a 1.3 mm. Hole across the body at this point.
Clean the body and a piece of 1.24 mm.(18swg) Piano wire with steel wool. Insert the swivel and retain with the Piano wire, Soft solder each side to secure in position.

## Bottle screws for Other sizes of Scale:

I have scaled the process up to use 3mm standard Closed loop links with the same diameter body and have made larger ones for up to 50% scale using steel 4 mm. Screws with a body diameter of 3/16th and ¼ ". The soft soldered piano wire pinn should be rounded off at the ends to prevent accidental piercing of the wing covering.

## Afterthoughts:

For weight concious modellers the wall thickness of the body can be quite thin as any stress in in-line with the tube. A lock-nut can be used on the adjusting thread so when assembling the model, All that is necessary is to clip on the clevises to the anchorage points and fly. I use these in conjunction with Stainless steel fishing trace which is available in 40, 75, 100 and 150 lbs. Breaking strain

I hope that this may be of use to you.

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