



## Replacing plastic fletchings

Nothing lasts forever and the fletching on your arrows is no exception! Eventually, the vanes will become damaged or detached from the shaft of your arrows, with the result that they may not fly straight, ending up everywhere on the target except where you were aiming!

It's best to check your flights regularly to make sure they are secure on the arrow shaft and that the vanes are not damaged or badly out of alignment. If you find any that are, set those arrows aside until they have had their vanes replaced.

Modern plastic vanes are cheap and simple to replace when they become damaged or detached. Don't worry, it isn't as hard as you might think to re-fletch your arrows (although feather vanes and spin-vanes are more difficult, this article doesn't cover these types).

### You'll need

- some new vanes! Remember that you need three vanes for each arrow, and usually one in three of these is a different colour (the "cock" feather or vane). So, for example, to fletch 12 arrows you will need 24 green vanes and 12 yellow ones, 36 vanes in total.
- a knife (sharp enough to cut through the vanes but not sharp enough to cut through your shafts!)
- acetone (available from chemist's shops)
- fletching glue (other glues will do but the "proper" stuff is better and only a bit more expensive)
- a fletching jig (these are available for between £12-£25 or can be borrowed from other archers or the club)

### How to

#### 1. Clean and prepare the arrows

The first thing to do is to make sure your arrows are clean and ready for the new vanes to be attached. This is important because you can spend as long as you like fixing your new vanes to your arrows only for them to fall off because the glue has stuck to the old glue instead of the shaft.

1. Remove the damaged or loose vanes. It's best to remove those vanes that have become partially detached because it is very difficult to reattach part of a fletch properly. You won't be using these vanes again so don't worry about damaging them (and I'd recommend discarding even those vanes that look like they could be re-

used). Take care not to damage your shafts, especially if they are carbon wrapped. There is no need at the moment to make sure everything has been removed from the shaft.

2. Wash off any dirt there may be around the rear of the arrow. Dry thoroughly.
3. Take a knife and carefully scrape off any of the old glue that may remain and any bits of old vane too. Be gentle and try not to mark your shafts. This is where you should try to get the shaft as clean as you can.
4. When you have cleaned the shaft as much as you can, take a cloth or some kitchen roll and apply a small amount of acetone. Rub the area of the shaft where the glue was previously applied and make sure all traces of it are removed. **WARNING:** *acetone is a solvent and as such should be treated with care. Make sure you use it (and the fletching glue for that matter) in a well ventilated area. Always read the instructions carefully before using any solvent based product*
5. Your arrows are now ready for fletching!

## 2. Prepare the vanes

Your vanes will be almost ready for application direct from the packaging, but there are a couple of things to remember -

- examine the vanes before you apply them and reject any that are badly out of shape. There should not be many of these, but the odd one or two out of a bag of 100 will be a bit “wiggly” in shape!
- some vanes are intended for use with particular fletching glues and come with a layer of glue on their bases. If you are not going to use the same manufacturer's glue you will need to remove this layer. This is easily done with a wipe over of acetone (see above). It is usually obvious from the packaging that a layer of glue is there, but it is good practice to give the bases a wipe over anyway, to remove any dirt or oil that may be left over from the manufacturing process.
- work out how many vanes you will need and what colours. Have them to hand.

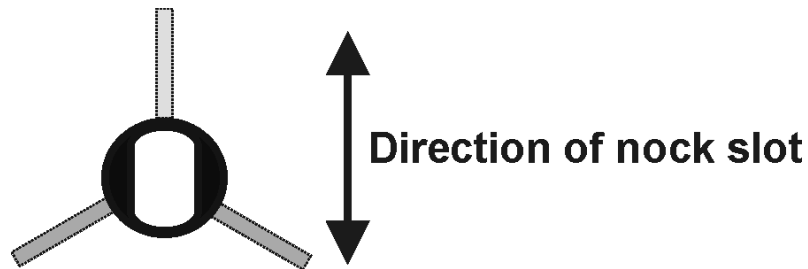
## 3. Glue the vanes on

The fletching jig you use has two important characteristics –

- it has a detachable “bulldog clip” that holds the vane while you apply the glue and keeps it in place on the shaft while the glue sets
- it has a knob that rotates the arrow with “click-stops” at every 120 degrees to give an even spacing of the vanes on the shaft.

Examine the jig you will be using and make sure you are familiar with these two characteristics before you start fletching.

1. Place the arrow to be fletched into the cradle of the jig with its nock firmly placed into the locator of the “rotator”. Rotate the arrow using the knob until the slot in the nock is vertical and has clicked into a click-stop.



2. This first vane is the cock vane so you should use your contrasting vane colour here. Subsequent vanes should be your “main” vane colour. When replacing only one or two vanes you will, of course, use the same vane colour as that being replaced.
3. Place your vane into the “bulldog clip” so that only the base of the vane shows at the bottom.
4. Holding the “bulldog clip”, apply a thin, even line of glue along the base of the vane. Don't use too much glue as it will spread out when you press the vane onto the shaft and using too much results in big blobs of glue either side of your vanes!
5. Place the “bulldog clip” into position on the jig and press it against the shaft. If you are replacing a vane, make sure the replacement vane is the same distance from the nock as those remaining. If you haven't got other fletches to refer to, make sure you mark the jig or arrow as a reference point to make sure all your fletches are in the same place on the shaft. The “bulldog clip” will hold the vane in place while the glue becomes tacky.
6. After thirty seconds or longer, carefully open the “bulldog clip” to avoid moving the vane and take it off the jig ready for the next vane.
7. Rotate the shaft in the jig taking care not to dislodge the vane on the jig body. Make sure the jig clicks firmly into the next click-stop.
8. Repeat from number 3 above until you have completed the fletching on your arrow.
9. Remove the newly fletched arrow from the jig and put it somewhere where it can be left without any pressure on the vanes whilst the glue dries fully.
10. Do the next arrow!

#### 4. Shoot!

You should be able to shoot your newly fletched arrows within an hour of adding the new vanes, but you should refer to the instructions with your fletching glue for more advice on how long the glue needs to set properly.

## Some questions

### **Do I have to replace all the vanes at once?**

If the remaining vanes are undamaged then no, there is no need to replace all the vanes.

### **What size vanes should I use?**

The vanes slow the back end of the arrow by causing drag, and the larger the flights the more drag they have. This drag has the effect of straightening the arrow in flight, but also slowing it down. When shooting shorter distances arrow speed is less important and you want this straightening to happen quicker, so larger vanes may be more useful if your arrows typically take a few meters to “settle down” in flight (although at longer distances you want your arrow to be as fast as possible so small vanes are better as they have enough drag to keep the arrow straight without taking too much of its speed away). Large arrow movements in flight are more likely to be remedied by tuning your bow than using different flights.

If you have bought pre-fletched arrows, it is likely that they already have the proper size vanes on them, and replacing them with the same size vanes would be the best thing.

### **I've got glue all over my hands and I can't get my vanes straight!**

Don't worry! It does take a little practice to glue on a vane without getting glue all over your hands, your jig and your arrows, but a wipe down with acetone will cure any glue mess so you can start again!

As for getting the vanes straight, after a little practice (three or four arrows I would think) your arrows will begin to look like they have been fletched by a professional!

*Good luck with your fletching and I hope this helps in re-fletching your plastic vanes!  
If you have any comments (or corrections!) on the contents of this article, please let me  
have them at the address below.*



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