

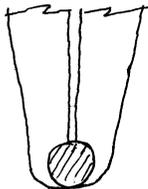
Special Wire Bending Pliers

by George White

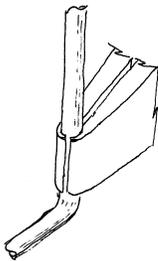
In an article published in the September 2006 issue of this exciting rag entitled "A Couple of Inventive Free Wheeling Ideas" I described George Nason's idea for creating a free wheeler for plastic props. The article is now on our website in case you want to refer to it. Windy Sock editor Joe Joseph raised several questions, the gist of which amounted to "how in the world do you bend those wires so close to the prop hub?" An email to George to ask his advice produced some interesting possibilities. Of course there's the wire bending plier described in an article in this rag several months ago, which can be obtained from KTMarketing of Littleton, CO, 315-555-5555, or go on the internet to <http://www.ktmarketing.com/>. The price is \$21 plus shipping. The part number to ask for is PLR-745.00. George also says that wire bending pliers are available from Micro-Mark and from Model Train Suppliers where they are used to bend couplers.

After saying that, he provided a set of drawings for making a pair of pliers which will allow you to bend wire flush with the surface of the object through which the wire is protruding, as is required in making the free wheeling clutch depicted in the previously mentioned article. None of the pliers described above will allow you to do that, although the KT Marketing plier gets very close.

Here's what George recommended: Buy a cheap pair of pliers (the cheaper the better) and after clamping the jaws together, drill a hole in the tip with a bit the exact size of the wire you intend to bend. See the illustration. Place a piece of masking tape between the jaws so that when the plier grips the wire, there's still clamping force.



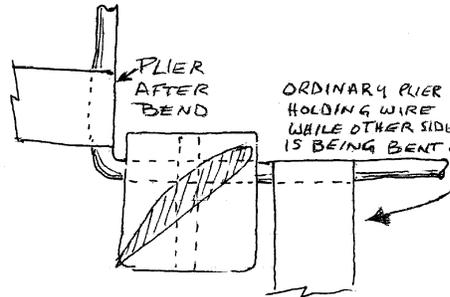
Then grind the tips of the pliers down until the wire just exactly fits to the nose of the jaws as see in the next illustration.



Then, you can grab the wire at the surface of the prop or whatever else into which you have it inserted, and bend it without a gap which would normally be the case with needle nose or other type of narrow plier.

Referring to the Inventive Free Wheeling Ideas article, George says that the illustration below shows the special pliers that

you just made on the left, bending the wire at right angles. The pliers on the right can be ordinary pliers, or if you wish, another pair of the special pliers described here. The purpose of the pliers on the right is to hold the wire and take the stress off the plastic prop. After bending the wire on the left, reverse the pliers and bend the wire on the right so that you have a "U." Once you have the "U" you can then proceed to bend the wire on both sides into whatever shape you wish to have.



Pliers like these can solve all sorts of wire bending problems where the bend is close in to the structure.