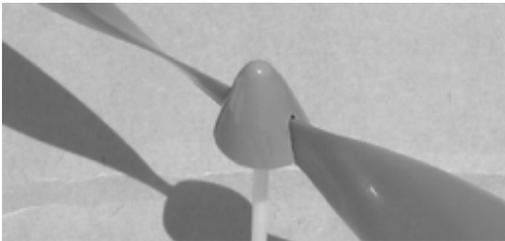
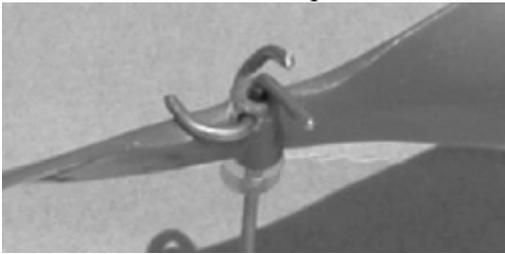


# THE NASON PROP CLUTCH — MORE

By George White

Have you ever had the “thrilling” experience of seeing you model cruising nicely over head and suddenly hearing the rubber motor run wild as a result of the motor hitting something inside the fuselage, kicking the free-wheel device into action, and seeing the model gently glide down as the remaining motor power screams inside the fuselage? It's enough to make a model flyer downright cross.

In the September 2006 issue of this exciting rag, I described the concept after observing it on George Nason's model at Geneseo. In that article, I showed a couple of photos of George's props. Using plastic props, George cut the ramp off and simply drilled a hole through the prop as close as possible to the prop shaft, bent one end of a small size wire into a semi-loop, pushed it through the hole and then bent the other end as seen in the photos below. It is small enough to allow it to fit under spinners as seen.



Since George used the bent end of the prop shaft as a drive dog, and it looked as though bending that other curve in the clutch, I had been reluctant to try the idea. I don't use many plastic props, and as a consequence, like to be able to remove the prop in case of breakage.

Since publishing that article I've continued to get stories from folks who've used the clutch with great success. I'm now going to have a go at this technique. Two things have changed my mind. First, folks have started using it on wooden props, and

Gene Smith has shown that it can also be used for formed props in which the center section is an aluminum tube. Simply epoxy a tube across the center section aluminum tube in the same manner as shown below where in that case he used a plastic prop.

What I've come to realize is that the wire used for the bent clutch doesn't have to be anywhere near as large as the prop shaft. The moment arm of the drive is so short that a much smaller wire will take the load, hence also be easier to bend to form the clutch. Art Holtsman, an enthusiast for this type freewheeler, has concluded that the drive clutch wire can be as little as 2/3 the diameter of the prop shaft.

In making this clutch arrangement for a wooden prop, Art simply cuts a notch at 90° to the prop span, close to the prop shaft, makes the clutch on his bench and then CA's the assembly into the notch on the prop. Conventional wisdom also has developed that the two claws need to be at least 90° apart, or better yet, near 120°. Also don't get carried away with making the bends too severe — the more severe bends may tend to jam. Just bend the main claw enough to ensue the drive from the prop shaft will catch, and that the other end will rest comfortably on the prop.

The beauty of this scheme is that the clutch engages automatically, and if the motor hiccups, it will reengage automatically at the next revolution if there's still power on the motor.

As a guy who likes to take the prop off without having to make a new prop shaft, I intend to experiment with the use of a wheel collar through which a drive wire has been attached.

