

Flying the Bell-Huey "COBRA"

TONY BRAY describes the first steps in learning to fly!

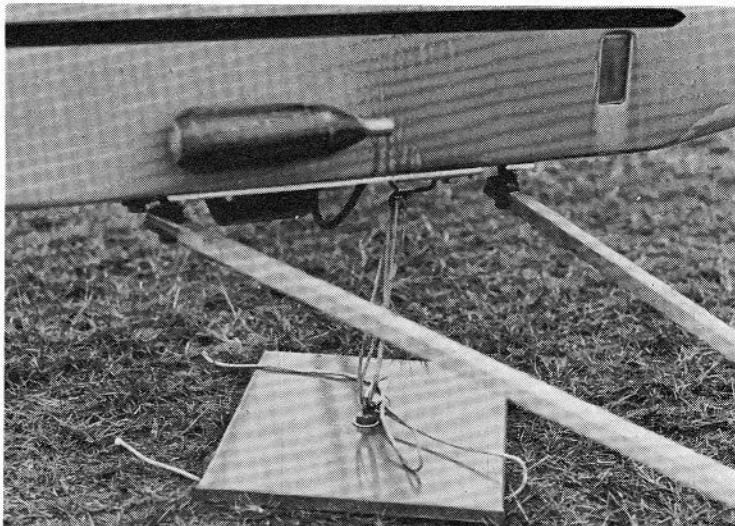
HAVING COMPLETED the construction of the Bell-Huey *Cobra* we come to the main object of the exercise, to learn to fly a radio controlled helicopter.

Schluter advises against attempting to fly with any form of restraint or tether to the model. This would restrict the natural tilting of the machine and destroy the stabilizing effect of the main rotor system. Also, attempting to fly with a tether requires the pilot to hover the machine over a fixed point; this is the most difficult manoeuvre to fly and not the one to be attempted first. However, despite these recommendations I fixed a suitable eye-bolt to the motor/gear box chassis on the axis of the rotor shaft to enable the machine to be tied down.

This facility was useful as it enabled the motor to be run up to full power, to check the true path of the rotor tips, to check the correct operation of the clutch and also to set the mixture and the slow running. This eye-bolt and wire bracket is very light and I shall leave it as a permanent fitting.

Having checked the machine for loose nuts and screws we crept quietly off to the nearest large, flat uninhabited field and prepared for the moment of truth.

With the motor running and the machine eight to ten feet ahead, facing into the wind, it was only necessary to open the throttle for the lesson to begin—but now the newness of it all was very apparent. There is no one to help, to lift it from the ground to a safe height



A tethering plate holds the 'copter down while the blades are checked for trueness, engine settings are confirmed and so on. We got the impression, so great was the thrust, that a few more revs and we would have had a lift-off—!!!b. plate and all!





A modification to the training undercarriage is to fit castoring wheels. These are essential as, at first, one is never sure in which direction the model will skate off, or land, come to that, and fixed wheels would cause the 'copter to tip over more readily, which will break a rotor blade or, at the very least, bend the blade mounting plates and the stabilizer blade rod, necessitating a return to the workshop for repairs and re-alignment. Standard steerable nosegear is easily modified, as shown right.



so that you can get the "feel" of the so very different controls, or to bring it safely back when you have got it into the most impossible attitude. There is not even anyone to give you advice based on their experience. You have read all the books—and you are on your own. So you *slowly* open the throttle.

As the rotor r.p.m. build up the machine becomes light on the ground and rotates about its axis. If the pitch of the tail rotor has been correctly set it will be possible to trim this movement out. Initially, there is a tendency to watch the tail rotor rather than the fuselage and this results in incorrect commands as, when the tail moves further to the right, you give left stick and, of course, the tail moves further to the right! A little more throttle and the machine will lift off but one thing is certain—it will not stay in one spot. It will tilt and before you can correct this it will accelerate in the direction of the tilt—even a slight slope in the ground can cause the model to move in a "downhill" direction. Because this tilt can be in any direction, the castoring wheels are

Continued on page 52

