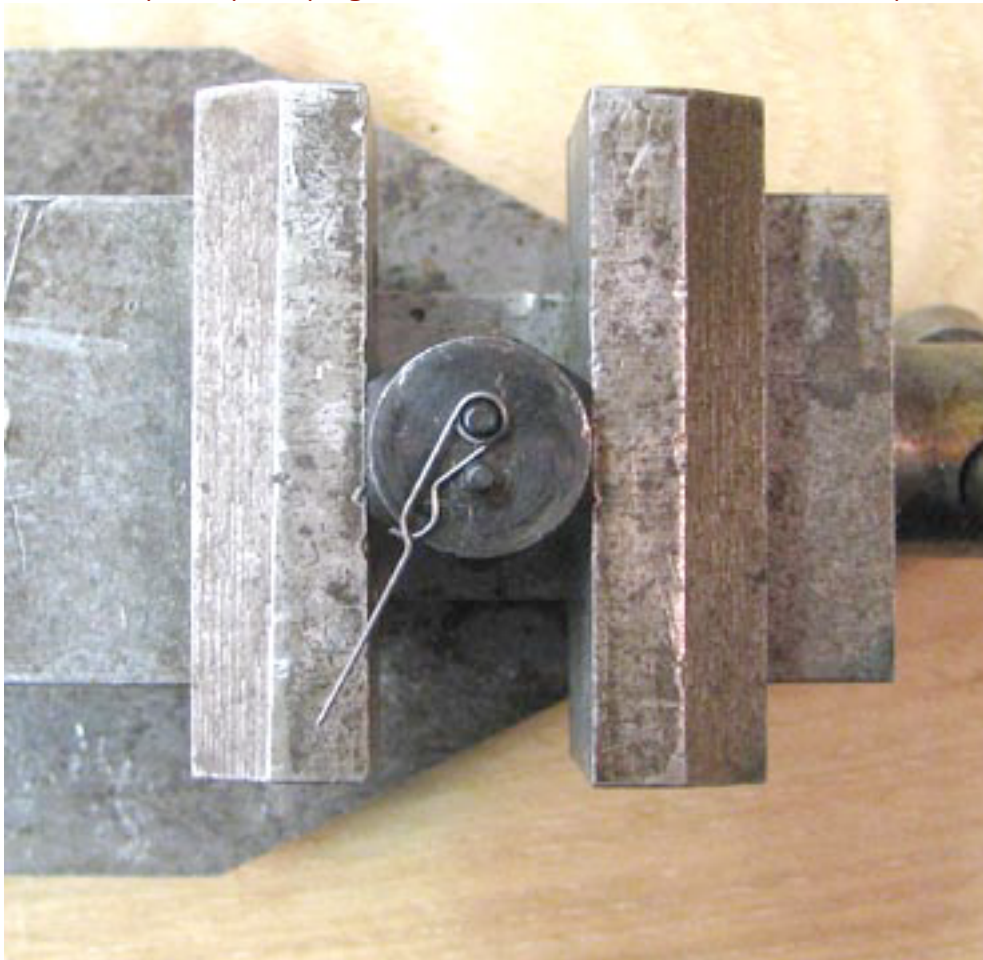




Tower Hobbies bending tools used in this article.
Tandy used the smallest ~ 1/16 inch tool.

I decided to take out a couple of hours this afternoon and make up the high tension lead with a 10K resistor and the special wire clip.

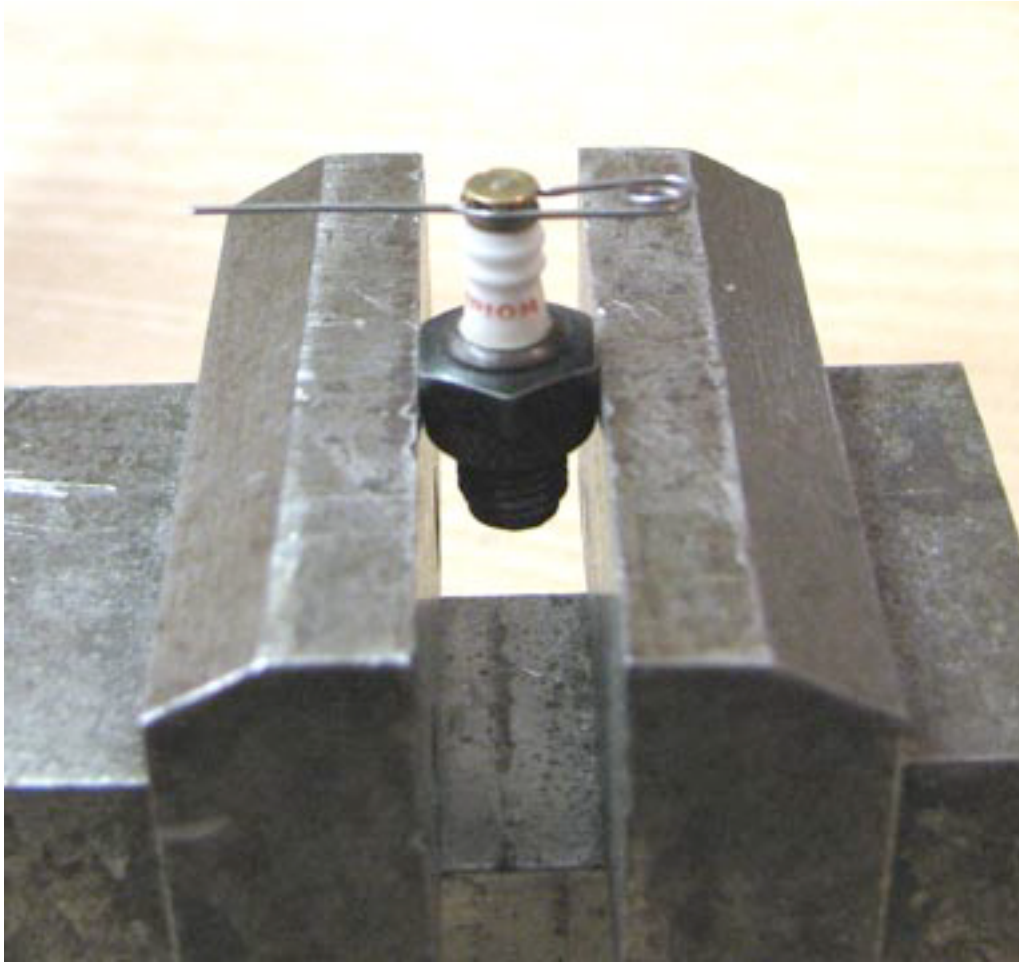
I started with .021" piano wire and bent up and shaped the special wire clip shown below. It has two 3/23" loops to give it spring and a half loop that fits around the brass groove on the top of a V-2 Champion spark plug. Plus there is an offset in stem as you can see below.



This shows a top view of the clip attached on the spark plug.



This shows a side view of the clip attached on the spark plug.

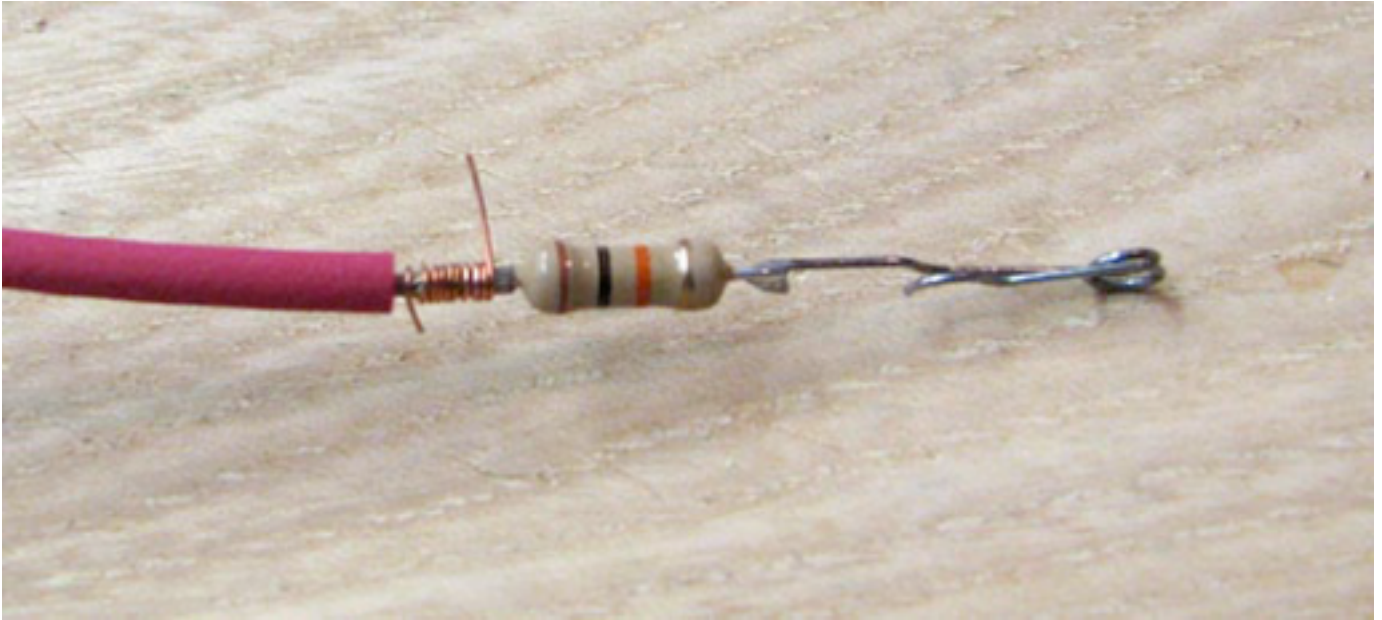


A small hook is bent on the end of the clip. The lead of a 10K resistor is trimmed off short and also bent into a small hook. The clip and the resistor are hooked together and soldered as shown below.



Next I spooled of a 10" length of probably No. 14 (?) red multi stranded wire shown below. I removed a 1/4" of the insulation and probed open a small hole in the end of the wire

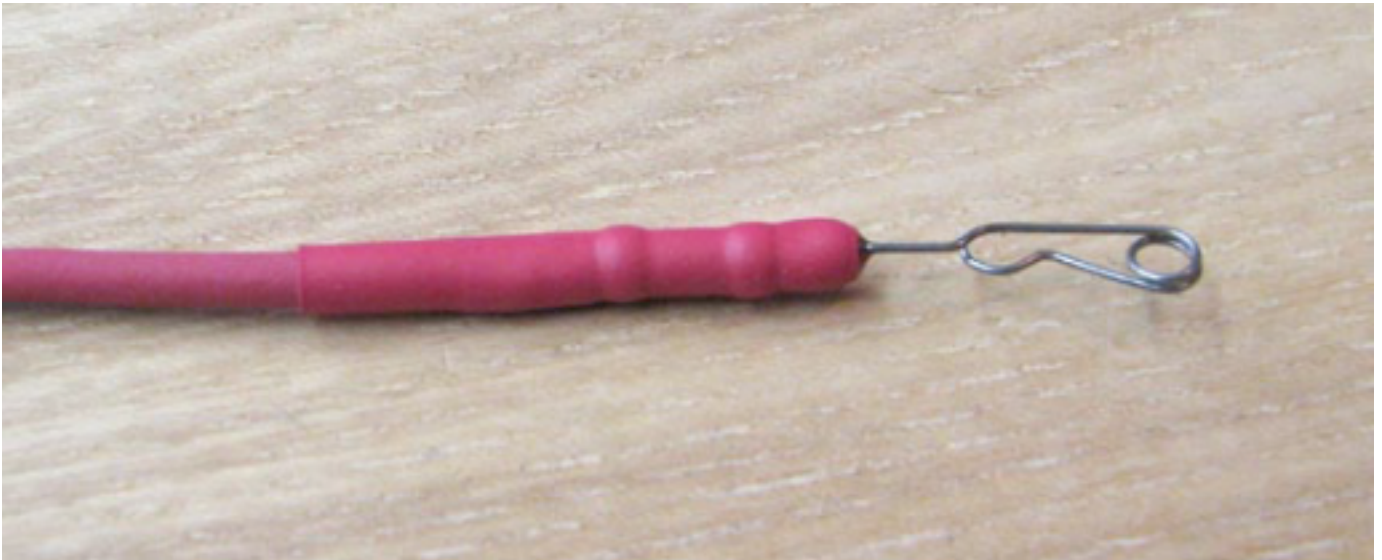
strands. I trimmed off the other lead of the 10K resistor to 1/4". This was inserted into small hole in the end of the wire strands. I pulled one copper strand from a scrap piece of multi stranded wire and used it to wrap the bare 1/4" section of the red multi stranded wire as shown below.



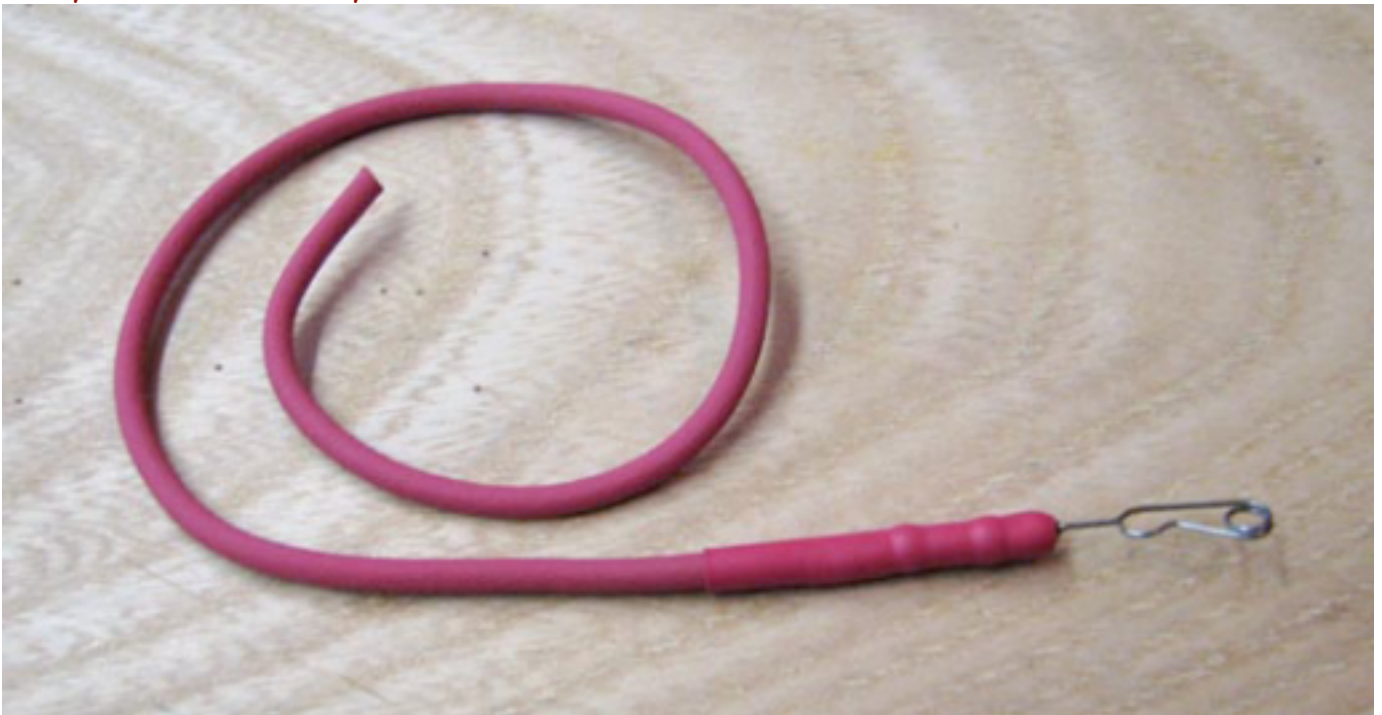
This was soldered and the ends of the copper wrapping wire were cut off and filed down smooth as shown below.



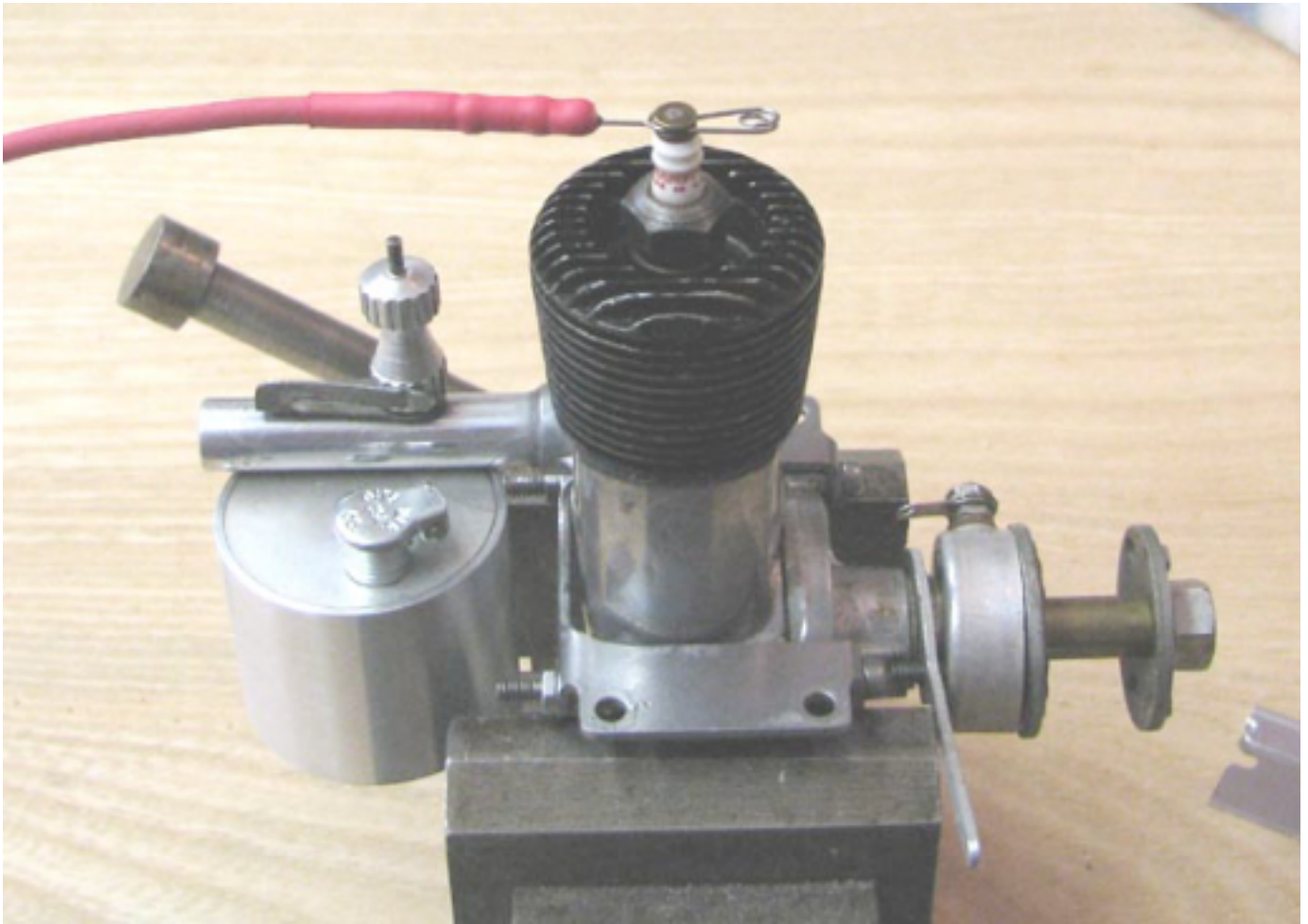
I used some 1/4" plastic tape and wrapped the bare 1/4" section of the red multi stranded soldered wire to bring the diameter up to the same height as the red wire insulation and resistor. I also split a piece of the 1/4" plastic tape into a 1/8" width and wrapped the clip/resistor hook solder joint on the other end to bring the diameter up to the same height as the resistor. Then I cut a 1-1/8" length of red heat shrink tubing, slipped it over the end, and shrunk it down tight over the two solder joints as shown below. Also, if you look close, I applied a drop of CA where the clip wire goes into the end of the red heat shrink to completely seal the end.



This shows the finished high tension lead fitted with the 10K resistor and special wire clip ready to solder to Larry Davidson's coil.



Just to show you how it will look, here is the high tension clipped onto the V-2 Champion spark plug of my Ohlsson .23 sideport engine. The big advantages to this special clip of mine is that (1) it is so light that engine vibration does not affect it, (2) you can clip it on and take it off of the spark plug with ease, and (3) I have never had one pop off during engine operation.



Editor's Note;

There are other ignition engine experts that believe the resistor should be mounted half way down the ignition lead so as to reduce the vibration experienced by this delicate part. Vibration can cause the resistor to crack and cause intermittent spark, a very difficult problem to diagnose.

Nevertheless, the construction of such a lead may use the same methods as Tandy describes.