FIG. 2

FIG. 4

(Clockwise from Left) Unassembled parts of the working reproduction; Covers and styles currently available; Upper end plug with D-cell holder; 1939 Blue Bell No. 6 dry cells.

FIG. 1

FIG. 3

THE HALLWORTH DRY CELL

by Ralph Meyer

If you want to restore an old phone to working order, get a copy of Old-Time Telephones where you will find lots of tips and circuit diagrams. You can get parts from other club members. If the phone is a magneto wall phone, though, there is one part you will not be able to find: a working 75-year-old No. 6 dry cell. I love these magneto phones and have thought for years about making reproduction dry cells that have a common flashlight D cell inside. There have been discussion threads about this on the TCI and ATCA listservs, and now TCI member, Dennis Hallworth, has done it. Dennis is planning to sell these to club members for about $20, and I am his first customer. (I bought four.) His craftsmanship is so good that I want to pass along some of the details.

Dennis starts with a real No. 6 dry cell such as shown in Fig. 1. He removes the cover, scans it, and cleans it up electronically – then makes prints on a color laser printer. So the covers are picture perfect and are not going to run if they get wet like your typical ink-jet print job. The other major component is a length of 2-inch PVC pipe, into which are fit a lot of other little parts, as shown in Fig. 2. The upper end-plug assembly, with its D-cell holder, is shown in Fig. 3. The top is painted to match the tar, phenol, or other material used on the vintage cell being replicated. Even the head of the screw that fastens the center Fahnestock clip has been ground down so it looks like the rivet that was originally used. A lot of attention has been paid to details.

Dennis will make non-working models for show only (a little cheaper), and he will make working replicas without the weights (again saving a little on cost). But if you go for the full monty, you will get a replica that looks like the original, has the same voltage, and weighs exactly the same as the original. Further, the old No. 6 carbon-zinc dry cell had a capacity of 20-30 ampere-hours and a single alkaline D cell has a capacity of about 20 ampere-hours, making this working replica about as authentic as you can get.

At the present time, Dennis has a variety of covers and styles available and they are shown in Fig. 4. To be fair, Dennis is not the only one making reproduction No. 6 dry cells. A little web search will find some reproductions for electric clocks, at www.kensclockclinic.com. A pair of Ken's simplest 1.5-volt cells goes for $49, a little more than Dennis's price. Brooke Clarke has a very interesting web site about batteries at www.prc68.com, but his reproductions seem to be in the prototype stage. ☎