

A Bicentennial Cannon You Can Make!

By Hal Kelly

Get a bigger bang out of your personal and community Bicentennial celebrations. Build yourself a jumbo carbide cannon. Ours looks something like the naval cannon from Fort Ticonderoga that played a big part in the American Revolution.

Unlike those heavy and dangerous great guns, this one is light and safe . . . but almost as noisy. The secret is to make the barrel from standard PVC sewer pipe sections and fittings. So, instead of several tons of cast iron, touchy black powder and the resulting danger and mess, you're dealing with light plastic and carbide.

Shooting and construction are both easy and simple. The parts cost us less than \$100 and construction time was three hours.

To load your cannon, put about a pint of water in the bottom section of the 6-in. Tee that forms the breech. The charge is about two-thirds of a teaspoonful of powdered carbide. (Under the trade name of Bangstite, you can order it from Comestoga Co., Inc., Bethlehem, Pa. 18018. If you can't get it locally.) Funnel it into the 1/4-in. touch hole at the top of the breech, just above the water. This forms acetylene gas which flows out through the touch hole in about 10 seconds. Light it with a match, sparkler, propane torch, lighter or burning tow in a proper fluehook and . . . Kablamo! You get a boom that sounds like the real thing.

You cannot over- or under-load this cannon. Too much carbide makes a flash with little noise. Too little goes pffft. The carbide itself is not flammable when dry.

One problem: acetylene doesn't make any smoke, only a flash and a big bang. If you want fake smoke, put about a third of a cup of flour in the barrel before firing. The acetylene won't explode without sufficient air in the barrel. You can blow down the barrel but a much more realistic way of airing the bore is to run a rammer

made from a broomstick with a tin can on one end in and out. Once you get the pieces of PVC pipe, construction is simple. You'll need 1 6-in. Tee, 1 6-in. cleannout

adaptor with plug (or a 4-in. cleannout and a 4x6-in. adaptor), 2 6x4-in. reducers, 1 4-in. cap, 2 4x3-in. bushings, 2 ft. 4-in. pipe, 1 1/2 ft. 3-in. pipe, 1 4-in. coupling, 1 pt. PVC cement and 1/2 pt. cleaner.

The carriage is a straight wood-working job made of plywood. Follow the rough outlines in the drawing but exact accuracy is not important. Cut the 7-in. diameter wheels from 1 1/2-in. wood. Set up a pivot point right angle 3 1/2 in. from the cutting edge of a hand saw blade, put a nail hole in the center of a 7 1/2-in. square of wood and pivot it on the hole after turning on the saw. Once around and

you've got a perfectly round wheel. Assemble the pipe for the barrel by cleaning the joints with methyl-ethyl ketone PVC pipe cleaner and gluing the pieces together with the cement.

PVC pipe comes in white and gray, not very cannon-like colors. For a realistic finish, mix fine sand with flat black paint and give the barrel two generous coats. The wooden carriage can be antiqued by running a blowtorch over it.

For the fake cannon balls on the wooden firing platform, I made a pyramid of nine solid plastic Christmas tree balls, cemented together and sprayed black.

ASSEMBLE plastic pipe parts just as any plumber would put them together to make a drain instead of a super-size carbide cannon. First, clean the surfaces to be joined with PVC cleaner primer (left). Then, apply PVC cement to both surfaces (right) and quickly put the pieces together exactly the way you want them.

PIVOT pins, called trunnions on original old cannons, are mounted in holes drilled in each side of the barrel near the breech.

BARREL may look something like multi-thousand-lb. cast iron original but plastic pipe is lightweight and easy to handle.

