

## Here's one way to build a solar-heated shower

By Harry G. Nemeč

The summer heat felt good after a long winter of planning how to refurbish an old house we had purchased the previous autumn. We did the emergency repairs, replacing broken window glass and cleaning out the rubble.

By spring we had sanitized the one room that would be our living quarters, while we systematically removed the horse hair plaster and lath from the walls and ceilings.

Since our commute to this building was four hours one way, it didn't take long to realize that being covered with plaster dust was not the way to travel.

It wasn't too long before the "short shower" from the garden hose wasn't working. A blast of hot water, often too hot, followed by cold well water: it was better than nothing, but much of the time was too uncomfortable. For three of us, there was too much complaining: someone got all the hot water, the last one got all the cold. There had to be a better way.

I had an idea that I could use a large plastic drum, paint it black, and put it on the roof of the shed. Then I looked at the inside of the shed roof. The filled drum would weigh far too much, and might cause the entire shed to collapse. Back to the drawing board. I hadn't looked around enough. On the rear wall of the house was a fuel oil tank raised up to provide gravity for the oil to the heater, one of those old pot type oil burners.

I removed the fuel tank from the large metal stand and moved the stand near the shed. That part of the shed was soon to be our new shower.

Our commute that following week consisted of carting a 60-gallon plastic drum securely strapped to the roof rack of our commuter vehicle, a 1978 Chevrolet Chevette. Inside the little

car I had plastic cement, some hose fittings, two hose Y's, and a couple lengths of ½" plastic pipe and some elbows (90's and 45's).

Since we traveled at night, not many people saw this little car with that big white plastic drum strapped to its roof, which must have looked like the car was hatching out of a large egg. Those who saw us did double takes as we passed through each little town.

The concept: split the water that is going into the tank so that there is some cold water to mix with the hot water at the shower controls. Next: make an inlet for the tank at the bottom end (hot water is lighter than cold water) so that the hot water at the top of the tank is available. The cold water coming in from the bottom of the tank pushes the heated water out the top of the tank. The concept sounded good, but would it work?

I began by fastening the feed hose to a secure support beneath the tank. (That is important because any movement of any of the pieces before the glue sets screws it all up. All the fittings must be dry before any glue is applied.) Next, I eyed up the run of the hot water line from the top of the tank to the shower controls on the other side of the wall. At the bottom of the tank, at the cold water inlet, I put a T for a cold water line to the shower control. The final task was to glue everything together.

While the glue was setting, I found some old roof shingles and bricks for water run off. Nothing like getting a shower and having dirty feet because of soapy mud. When the glue was set, I could fill the tank, which was joyfully painted with spray cans of flat black paint.

Since I had no plans for the plumbing inside the house yet, I also installed a drain for winter emptying. I also had to put a 1/8" hole at the top in

the back for expansion when heated water was not used, since we were not there every day.

Early the following day, I checked all the fittings to be sure the glue had set, then I filled the tank. By nightfall, I would know if the concept worked.

It did!

Total expenditures: about \$10. We used it for four summers, until we had hot running water inside.

What is important to understand here is the value of an idea. The world is full of great thinkers that come up with ideas, but stop there. The ideas are usually for others. This was my idea: I conceived it, nurtured it, built it, and used it. You can do the same. Δ