

The Bartz Concrete Bench

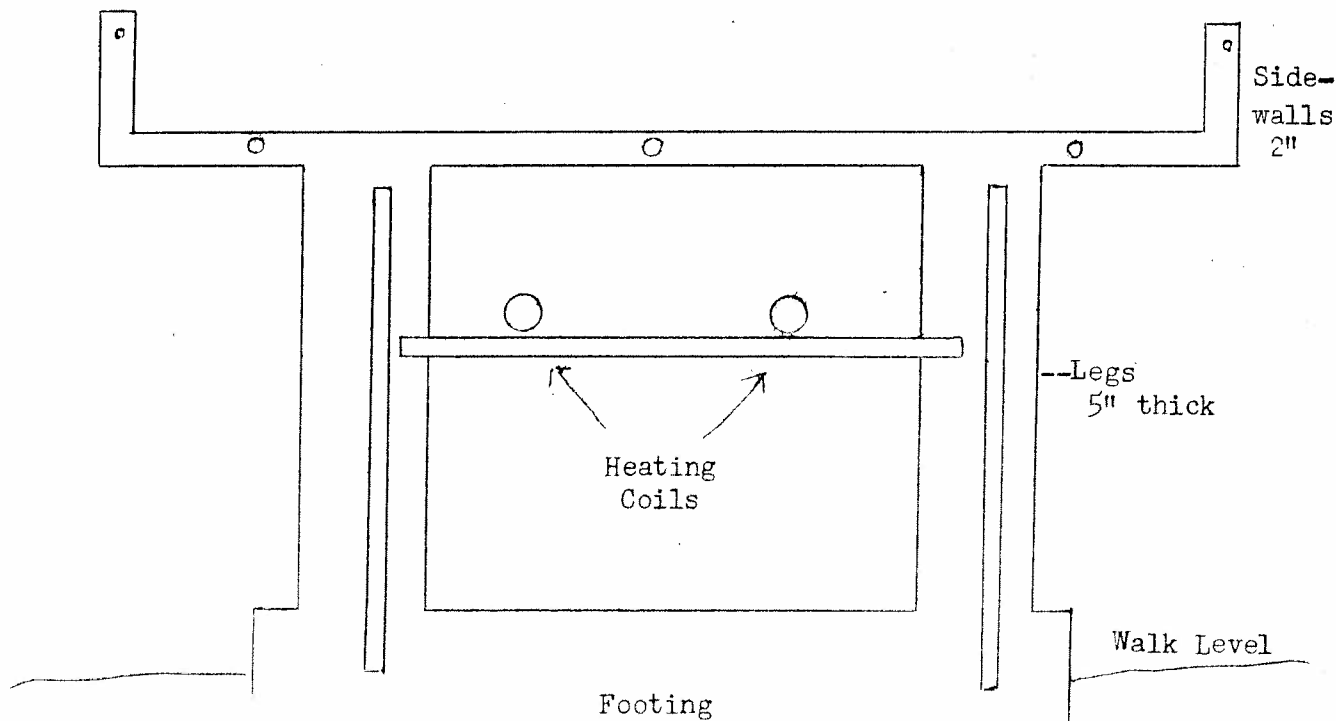
It was our pleasure recently to see and get details on an inexpensive concrete bench. Carl Bartz and son Merle who operate the Bartz Floral and Nursery, Grand Island, Nebraska, worked out the details for this bench and have constructed quite a number of them so far. The cost of the bench is so low and the apparent stability so great that I pass the ideas along to any who contemplate bench construction.

They begin by pouring a footing about 6-7 inches wide, $2\frac{1}{2}$ ft. long and 8-12 inches deep for a $3\frac{1}{2}$ ft. bench. A four foot bench would require a footing three feet long. The form for this footing could be tapered to the top so it could be lifted off and used over and over.

Before the footing hardens they set the leg forms in place, push scrap pipe down into the footing for support in the center of legs. They used 6 inch form lumber to make leg forms, but cylindrical metal forms with clamps would pay on a large job. A scrap pipe is also extended from one leg to another for heating coil support and the legs are poured.

The next stage, after the legs and footings have set thoroughly is the bench itself. They use lumber throughout and since much of it is blocked up in place, can use it many times. Actually, on many construction jobs, much of the bench forms can be in sections. The bottom and side walls of the bench are two inches thick.

For drainage they set empty shotgun shells on the bottom form as they pour the concrete. After the concrete sets they tap these lightly and they drop out. To get a semi-water tight bench the empty shells can be placed in the holes in an inverted position or corks may be used.



A Rough Cross Section of the Bartz Bench, Legs and Footing (Diagram for a three and one-half or four-foot bench)

The accompanying diagram shows the bench in cross section at the legs. In addition to the scrap pipe for reinforcing the legs, three $\frac{3}{8}$ inch concrete reinforcing rods are placed lengthwise of the bottom of the bench and a $\frac{1}{4}$ inch rod is placed near the top of each side wall. All these rods are tied together with $\frac{1}{4}$ inch rod at each pair of legs. The $\frac{1}{4}$ inch rod is carried around the ends just as in the sidewalls.

The form lumber for the sidewalls could be oiled plywood cut to the proper width. Expansion joints should not be necessary unless the bench is over 50 feet long. Some growers have successfully steamed 100 foot concrete benches without expansion joints.

The Bartz list of materials and cost for a 47 foot bench, $3\frac{1}{2}$ feet wide:

- 2 Man days labor to pour footings, posts and build forms
- 1 Man day pouring bench
- 15 Bags cement
- Approximately \$7.00 for steel
- Fine sand and gravel mixture - 1-5 mix.
- Form lumber, the cost of which could be apportioned out to several benches.

They are building this bench for no more than one dollar per running foot. Even at a little higher cost it still compares favorably to other types of construction.