

A Handheld Power Weeder, Version 1.2

By R. G. Sparber

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About ten years ago, I decided to kill my little 1000-square-foot lawn. Living in Arizona, even this tiny lawn wastes precious water. I poured a few gallons of RoundUp on it, waited a few weeks, and did it again. Most of the weeds are gone, but those that survived are tenacious.

Here is a close-up of the weeds crowding near a drought-tolerant shrub.

If I pull on the weeds, they break off at the surface. Dig down, and I find a maze of tough roots going down about three inches.



My solution is an attachment for my right angle, battery-powered drill. A regular drill should work, but you may find your wrist gets stressed over time.



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I first push the prongs into the ground while the drill is running. Then, I turn it sideways and sweep the soil underground.



Sometimes, weeds do wrap around the tool. These are easily cleared away once I stop the drill.

A previous version of the tool had the tines angled away from each other. That configuration was much harder to clear.



The tool has pulverized the roots down to a depth of about three inches. The soil is now nicely aerated and weed-free.

New weeds will grow back, but it will take a while. When I just pulled the weeds, they would return in a few days.



This was intended to be a proof of concept but turned out to be rather useful.

A steel bar $\frac{1}{4}$ -inch thick and about $1\frac{1}{2}$ -inches long has been drilled and tapped in three places². I used two $\frac{1}{4}$ -20 bolts as my cutting tines. The threads tend to saw through and shred the weed roots.

I did hit a tree root, and you can see that the tine on the right is bent. If desired, I can easily replace it with a new bolt.

I chuck the center bolt into my drill. I planned to braze it into the bar, but the lock nut works well. I was also considering going with a $\frac{3}{8}$ -inch rod, machined with three flats to fit the jaws of the drill chuck better. However, this holds well so I won't bother.

The left end of the bar is about $\frac{1}{2}$ -inch too long. This imbalance is not noticeable when I am grinding through the soil. If made from scratch, I would make it the correct length.

Earlier versions of this tool used $\frac{1}{8}$ -inch diameter steel wire bent into tines.

Especially here in Arizona, where [Valley Fever](#)³ is common, a face mask is a good thing to wear while using this tool.

² Actually, this is a bit of scrap what was drilled and tapped every $\frac{1}{2}$ -inch and then chromed.

³ Spores are found in the ground. If inhaled, they can get you very sick.



Jeffers Caffeneracer wrote:

I made one for myself, and it works well for the deep rooted weeds I have.

I used 5/16" bolts with threaded aluminum plate.



The carriage bolt head locks in the leg bolts.

I ground a triangle drive that locks in my worn-out drill chuck.



As a later refinement, I ground off one side of the threads. This made it easier to remove the roots.

[Here](#) is a video.

Great job, Jeffers!

I welcome your comments and questions.

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