

January 2010

# HIT & MISS

Journal of the Western Antique Power Associates



## VICTORIAN CHRISTMAS SHOW

The last show of the 2009 season was a huge success. With fourteen members present, parking was at a premium. I would like to thank the members who attended and the toys they brought.

Frank Moody brought his 3 h.p. 1941 John

Deere and a pitcher pump for the kids. Jack Johnson brought his McCormick Farmall Cub tractor available for pictures in the drivers seat. Gus Lukrofka brought his do nothing water elevator powered by a kick-start Briggs & Stratton engine. Dave Ruhland brought a McDonald & Morrison pitcher pump powered by a



Briggs & Stratton engine, a pump jack, and 1910 Denver Fire Clay Company rock crusher, also powered by a Briggs & Stratton engine. Bob Smith brought a 1914 Bean Sprayer engine & spray pump. Leroy Overstreet

brought a 1935 Economy and a Fairbanks Morse Dish Pan engine. Tom Millett brought a pitcher pump for the kids and his 1925 2 h.p. Economy operating a Bevan pump jack. Bob Swan and Dan Kato brought a 1929 1½ – 2½ h.p. New Idea No. 2.

Merle Morse with a scratch built two-cylinder air compressor powering a scratch built marine engine, and two Ericsson hot air engines. Tom Denson brought his 1926 3 h.p. Fuller & Johnson. Ron Haskell brought his 1919 1½ h.p. Fairbanks Morse. Joe Siddons brought his 1½ h.p. McCormick Deering. Joe also sold boats and whistles. Kay Johnson sold Christmas crafts, assisted by her daughter-in-law Gina and Gina's son William.



Thank you all for a successful show. –Bob Smith

**Board of Directors Meeting**  
**February 12, Friday 7:00 p.m.**

The WAPA Board of Directors meeting is held at Heritage Park in Santa Fe Springs. All members are welcome and encouraged to attend. If you have ideas on how WAPA can become a better club, or if you just want to come and join in the festivities, please join us.

Heritage Park Rd. is located just south of Telegraph Road just west of Norwalk Boulevard. The meeting is held in the train depot next to the steam locomotive.

**Forgotten Iron, Branch 206**  
**Wellton, Arizona**  
**January 23-24, 2010**

Reports from Branch 206 are that their membership now exceeds fifty people and they are expecting good attendance for their first show.

The Hit & Miss is the monthly publication of the Western Antique Power Associates. It is distributed monthly to all members. WAPA is based in Southern California and has members from across the globe. For information about the club, shows or membership, please visit our web pages at [www.wapa.us](http://www.wapa.us).

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## **DRILL SHARPENING BY FORREST ADDY ON PRACTICALMACHINIST.COM**

Hand sharpening: Fancy drill sharpening gadgets aren't always available. If you use a common bevel square or a drill gage to get the lip angles equal and a pair of dividers to get the lips symmetrical you can do an excellent job of drill sharpening free-hand. If your skills are well developed you can free-hand sharpen drills by eye alone. All it takes is practice and some experimentation.

Dress the grinding wheel straight across so its periphery is a near perfect cylinder.

Assume a firm comfortable stance in front of the bench grinder.

Hold the drill comfortably so the flutes cradle themselves in your fingers of your right hand and with the shank in your left. The fit of the drill in your right hand registers it when you index (rotate the drill precisely 1/2 revolution).

Present the drill to the wheel and adjust your stance so the lip is parallel to the tool rest and the angle is parallel to the wheel's periphery. If your stance is right your indexing and presentation is almost automatic. If you have to twist or distort your body your drill sharpening will reflect it. Go through a few preliminary sharpening motions to ensure the repeatability of your stance and your grip on the drill.

Touch the drill to the wheel periphery and after a second or two lift up to grind the clearance angle by following the wheel. Make the lift firmly but without haste. Do not rock the drill shank down to grind the clearance. It makes you stoop and throws off your stance, the clearance angle, and often your parallelism to the wheel face. Lift the whole drill up without rocking or rotating it and follow the drill in. If the clearance is excessive don't lift the drill so high. If the drill needs more clearance start the lift sooner.

Index the drill in your fingers to grind the next lip without thinking about it too much. Just give it a quick rotation with the hand and re-cradle it as you resume your grip. Let your senses tell you when the drill is properly indexed. You'll be surprised how accurate and repeatable these neuro-muscular maneuvers are when not interfered with by a worry-wart brain. Check the parallelism of the lip and the angle with the edge of the tool rest then immediately grind.

Grind the drill through several indexes stopping to check the lip angle, symmetry, and clearance. If all is well, good. If not, no harm is done; sharpen it some more until it's right. Try the drill in the drill press. If you get two equal spiral chips great. If you get two unequal chips maybe not so great but if the hole is less than 0.005" over nominal you did good.

There is no need to slavishly adhere to the 118 degree included drill point angle. You need to be close but it's more important for the drill point to be centered, symmetrical, and equal angled in its two cutting edges. Different materials might call for special cutting angles and clearances which may be found in appropriate technical references. When the need arises you may wish to grind a special point on the drill. There's nothing to keep you from doing it except the cost of the drill (low) and the number of sharpenings the drill can endure (many) before it gets to short for use.

Smaller drills – those 3/16" and under – I free-hand sharpen with a hand stone. I might touch them up on a bench grinder but I finish them with a hand stone. It takes but a few minutes and you have much better control over the angles and other features.

Sharpening drills is a manual skill requiring practice and training of the neuro-muscular system. You cannot verbalize free hand-drill sharpening except as a means to get the beginner started. It's like riding a bicycle or catching a ball. The skill lies in the reflex loops you develop not conscious thought. If you don't sharpen a drill perfectly the first time, don't worry about it. They make drills long so apprentices can practice sharpening them. When you sleep your brain will re-program itself and you'll do better the next day. That's what sleep is for. Practice! Practice! Practice!