



FORGE

Dedicated to the revival of the "King of Crafts"

Vancouver Island Blacksmiths

www.vibblacksmiths.com



The Mästermyr Project



COMING EVENTS

June 24 2007 Monthly meeting starting at 11:00 Am
Luxton Forge

June 29– July 2 2007 **CanIRON VI** Luxton
Fairground

July 29 2007 VIBA Summer Picnic

Index

Executive Reports.....	2
Show & Tell.....	5
Belt Grinder Plans.....	6-9
Membership.....	10

In 1936 on an island off the coast of Sweden a farmer plowing a recently drained swampland was stopped by something buried in the ground. He found his plowshare entangled in an old chain. As he dug deeper he found the chain wrapped around a chest that contained many old tools. Subsequent investigation by Sweden's archaeologists revealed that it was a tool chest from the Viking era of about 10 centuries ago. They were blacksmiths and carpenters tools over 1000 years old! It has been the goal of the Mastermyr team to accurately recreate the artifacts of the Find in the interest of investigating ancient manufacturing methods and providing an exhibit for the purpose of public education. In addition, the Mastermyr Project is partly intended to demonstrate the effectiveness of theforge (ABANA's blacksmith-related mailing list) as a viable instrument for supporting and furthering the goals and interests of ABANA, and presenting blacksmithing as an ancient craft of profound significance to nearly all world cultures past and present. See the tools on display at CanIRON VI

2007 - Executive

President: Charlie Dowdeswell
478 2460

Vice Pres.: Ray Orchard 478-9839

Secretary: Clint Montgomery 360-6910

Treasurer: Raynier Pipke 743-9945

Librarian: Skip Kennedy 478-8172

Editor: Dennis Gillett

Publishing Info: "Forge" is published monthly by and for members of the Vancouver Island Blacksmith Assoc. General Correspondence for VIBA: 1040 Marwood Ave, Victoria, BC, V9C 3C4. (or directly to appropriate executive member) Permission granted for reproduction of any part of "Forge" provided credit is given to the original source, and the item is not marked 'copyright' or specifically stated to be for the sole use of "Forge". Unless otherwise stated, the editors are the authors of all material. Disclaimer Notice: "Forge" makes every effort to ensure accuracy of the information contained therein, but the executive officers & general membership of the Vancouver Island Blacksmith Association including the editors, specifically disclaim any responsibility or liability for damages or injuries as a result of any construction design, use or application of information contained in this newsletter. The use of any information is solely at the user's own risk.

Submissions & Contributions

Submissions to "Forge" can be made at any monthly meeting or by snail mail to:

VIBA - The Editor
1040 Marwood Avenue
Victoria, BC Canada
V9C 3C4
OR
Email: dgillett@shaw.ca

President's Report

By: Charlie Dowdeswell



Presidents Report Charlie Dowdeswell June 2007

With recognition of all members past, present, and future:
a very big thank you as
VIBA successfully celebrates its 20th anniversary year

The show and tell at our meetings is always a fun visual which recognizes the great diversity and talent of many of our members. The May 27 meeting was no exception to this display. We had hardies, sophisticated gate latches, photos of interesting gates, some of the Mastermyr collection was on display and a very beautiful gate created by some of our members [Charlie L., Clint, Galen and Jake-I think that that is everyone involved in the workshop] at a workshop put on by Jake. Very impressive 'Show and Tell' guys and gals!

We are now in possession of the Mastermyr collection, mentioned above, which has been graciously loaned to us [a collection of replicas of some ancient 'metal tools' that were unearthed in Scandinavia] that will be on display at CanIRON VI.

Having brought up the topic of shop safety at last month's meeting, it was discussed, after some reflecting, at this month's meeting. Neil advised that he had a copy of a shop safety list and that we could use it instead of reinventing the wheel. It will be posted in a prominent location in our shop.

On another note, there are still volunteer positions open for CanIRON VI. A new category for 'non job specific volunteers' has been established so Galen can assign people where/when needed if they are not already assigned. Like I said last month, that I know, traditionally, volunteers just sort of appear and that all of the volunteer positions will be filled and the work will get done, but let's all make it easier for the organizers and give Galen a call at 382-4667 or woodhill@rkc.ca and get those few remaining spaces filled. This way, every one knows which end is up and we can eliminate a lot of the last moment confusion.

Thanks. The huge effort being put into CanIRON VI and with all of its bits and pieces seems to be progressing quite satisfactorily. A lot has been done, and a lot is left to do. However, with an air of confidence, I know we will do it. Just a little under 3 weeks to go and CanIRON VI will be the **happenin'** place getting ready to 'take its place in our history book, along with the other successful CanI-

RONs I through V. Several of us will be camping ‘on-site’ and living the life at Luxton for a couple of weeks putting up, taking part and taking down. A few of us were out on the weekend erecting a ‘trial tent’ and painting the hoods/stands for the new forges [nice construction job, the units look great! Well done guys.] Upon reflection, I still am amazed at the effort being put into staging this event. Some very dedicated members. While I managed to get out to Luxton Forge for the Sunday of the Rodeo, I noted that [in the midst of all of the CanIron preparation] a hats off is in order to Willie, Keith, Benoit, Skip, Ray and Chad for manning the volunteer demo tables etc. at the ‘Forge’ for the event [with apologies to anyone I may have missed]. Well, that’s it for this report – I look forward to seeing everyone at the meeting on Sunday, June 24th. I’m sure CanIron will be on the agenda.

Happy 20th Anniversary VIBA
Charlie.

**Meet your friends at
CanIRON VI**
June 29 - July 2, 2007
Luxton Fairgrounds, Victoria BC Canada

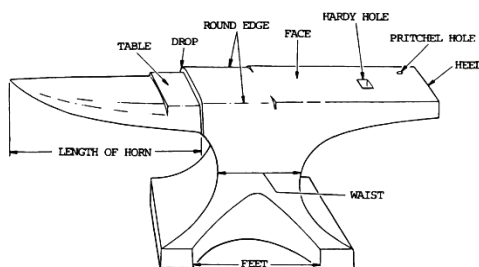


Figure 5-43. Blacksmith's anvil.

Anniversary Greetings:

This just received from Pat and Derry Cook:

Hello Dennis:

I don't think I have had the pleasure of meeting with you. My name is Derry Cook and I would like you to pass on to all the Members of the Vancouver Island Blacksmiths' Association, a very Hapy 20th Anniversary. The years have passed so fast for the Association and a lot has happenend in the wonderful world of Blacksmithing.

I have been fortunate to have been part of this organization and have benefitted from the knowledge gained and the camaraderie that has evolved in both Canada and the United States.

Which brings me to CanIRON VI. I am extremely disappointed that my wife Patricia and myself are unable to attend your Conference. I am sure that the whole event will be an outstanding success and a great time will be had by all 'smiths and guests. I sincerely hope that plans are already in place for CanIRON to make its way across Canada for the second time; it has been a truly successful venture and something to make us all feel very proud.

Sincerely,
Derry

Secretary's Report

By: Clint Montgomery

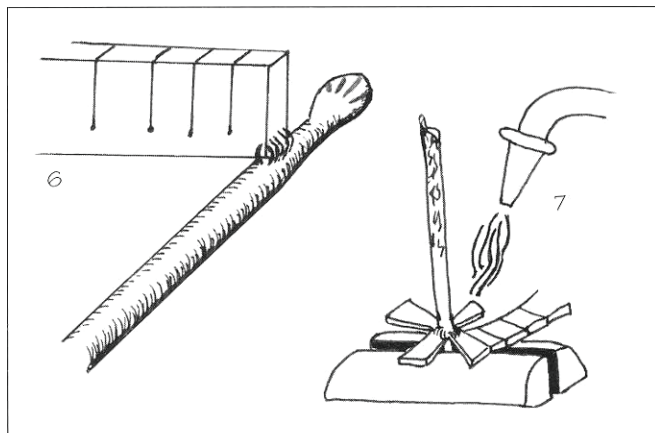
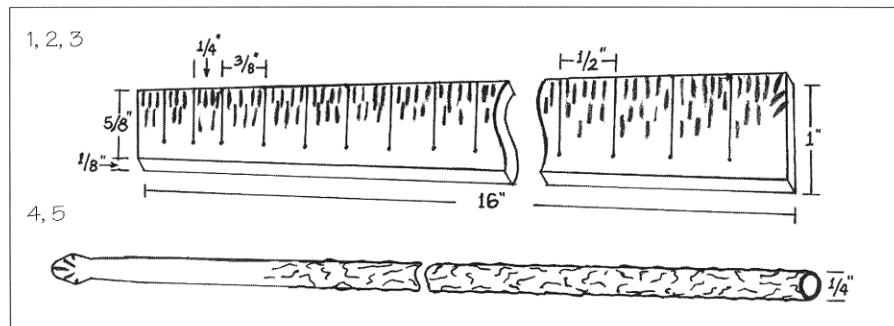
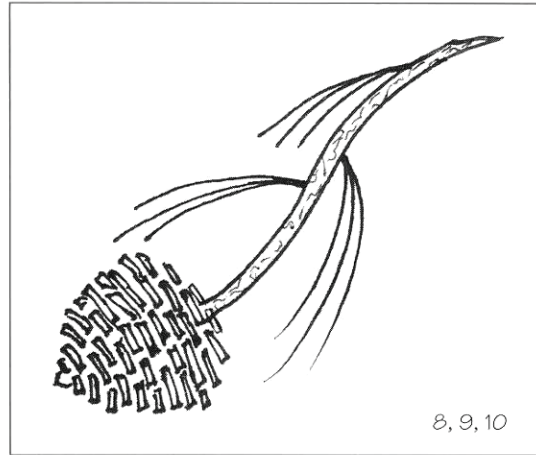
Clint is moving. His time is used up, his computer is down. His temper is likely short, and the list of things he has to do is quite long. I could pressure him for the report, but the pressure I would feel as he delivered it would make sitting down a painful process. We will find out what went on eventually anyway.

The Editor

Lory Wedow's 20-Minute Pine Cone

*Tweaked from Tales of the Western Reserve, Fourth Quarter 2005
Ohio's Western Reserve Artist Blacksmith Association*

1. Start with about a 12" length of 1" x $\frac{1}{8}$ " mild steel. Taper it to $\frac{5}{8}$ " width keeping the $\frac{1}{8}$ " thickness throughout. The tapered length will be approximately 16".
2. Leaving a $\frac{1}{8}$ " spine, make slits along one edge every $\frac{3}{8}$ ". (You may wish to narrow the spacing to $\frac{1}{4}$ " for the last three slits at the narrow end and widen the spacing between the first three slits at the wider end to $\frac{1}{2}$ ".)
3. Crosspeen the edges of each petal along the slit edge to $\frac{1}{16}$ " thickness. Not shown are the resulting fan shape of each petal and the fact that the bar will curl in as the outside edges are peened.
4. Texture about 8" of $\frac{1}{4}$ " round tapering it slightly for 1" at one end. Use crosspeen or texturing hammer.
5. Flare and flatten the tapered end to $\frac{1}{8}$ " thickness as shown.
6. With the tapered end of the flat stock resting on the round, and the peened petals facing the tip about $\frac{5}{8}$ " from the tip, tack-weld the two pieces together. They will be at right angles to each other. (When they are attached and the tip is pointed upwards, the peened sides of the petals will face up.)

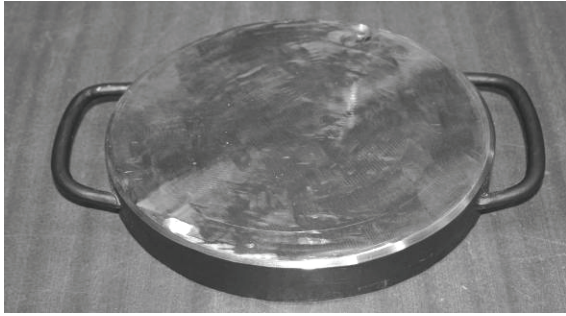


7. Clamp the tip end in the vise and while heating the spine of the petals with an acetylene torch, wind and tack-weld the first five or six petals around the $\frac{1}{4}$ " round stem. Subsequent winds will spiral away from and up the length of the stem. Tack-weld as needed to create the proper shape. Use pliers or small tongs to adjust petal positions while they are warm. You may need to let the assembly air cool occasionally. Keep the heat only on the spine. As you get to the last seven or eight petals, spiral in towards the stem.
8. Bring the stem to life by giving it a slight curve, and taper the end as if it were broken off of a branch.
9. Torch-burn the edges of all the petals to unsterilize your pinecone.
10. Cut, bend and weld together three pieces of welding rod for needle bunches along the stem. ♣

If you would like to see this demonstration, you could go to Bill Warner's Hammer-In on March 25, 2006, in Ohio, but you will have to get back in time for CBA's Spring Conference on March 30.

Show and Tell

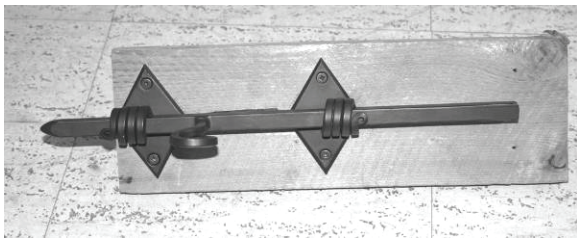
Photos by D Gillett



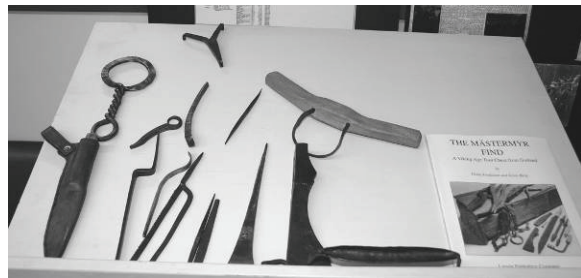
Dave's bench anvil



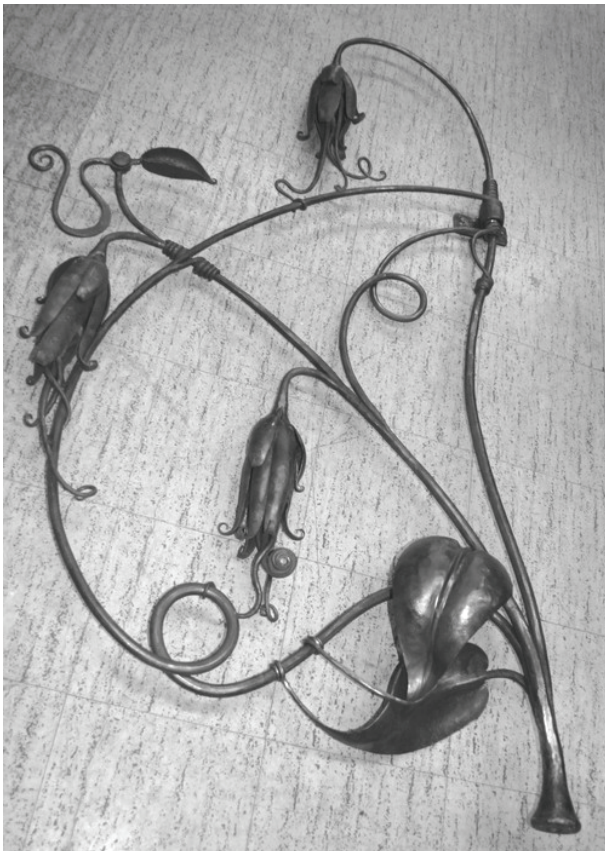
Dave's hardy hot cut
from hammer head



Roger's Gate Latch



Neil brought in some of the
Mastermyr tools



Jake's gate project for CanIRON
completed by Jake, Garnet, Char-
lie, Galen, and Clint

BELT GRINDER DESIGN & CONSTRUCTION

By Otto Bluntzer-
Genesee Forge

THIS ARTICLE With a keen interest in designing, building and making things work and at the request of several members of the Genesee Forge, this article describing an approach to building a "Belt Grinder," comes about. Some of you are aware that my primary interest is that of "Bladesmithing" not to lessen the rewards derived from forging articles as fashioned by our current and Ancestral Smiths. On October 15th 2001 I began a very beneficial class at the **American Bladesmith School** in Washington, Arkansas called, "Intro to Bladesmithing". At this two week class I had repeatedly made use of "**Bader Grinders**" and became very comfortable with how they functioned. Prior to this I had converted a "**Craftsman**" belt grinder by adding a third pulley to allow for "Slack Belt Grinding". This third wheel had a rubber boot to allow a smoother grind. The modification proved useful, but the overall machine had serious limitations. Soon thereafter an opportunity to visit "**Centaur Forge**" in Burlington, Wisconsin resulted in the purchase of an "**Ickler Grinder**". This machine has only a cushioned contact wheel driven by a 1/2 HP AC motor and an idler wheel which also serves as the belt tracking mechanism. A good machine, it too needed a heavier motor.

RATIONALE Several reasons for constructing my own grinder were: (1) The need to make use of many grinding techniques, (2) Cost, and (3) The need to select different sizes of contact wheels. In order to execute this project it would be necessary to have what might represent more than average shop tools. It should also be mentioned that many articles and several books written by Wayne Goddard provided ideas of importance in the initial design phase.

PREPARATION Over a period of many months, sketches, drawings and a number of CADD designs made me feel comfortable that the necessary information was in place. A collection of metal stock earmarked for the different assemblies then proceeded. Along the way I had come into possession of a metal lathe & mill which made possible the construction of pulleys and other parts.

SPECIFICATIONS The Grinder must make use of: 2" X 72" belts, A 110V. DC Motor rated at 1.5 HP minimum, A belt speed, SFM (Surface Feet per Minute capable of reaching a maximum of 3,500 SFM, Speed to be adjusted by either a touch pad or potentiometer, Contact wheels to be easily and rapidly changed, and finally it was determined that parts of the machine were assembled in a manner allowing for removal and modification if that became necessary.

MATERIALS ON HAND Cost of all materials purchased were under \$50.00 due to availability of parts which came from a commercial grade Treadmill. The Baldor 1.5 HP DC Motor, the motor rectifier and control panel, and most of metal stock came from the same treadmill. All ball bearing assemblies came from similar machines. Basically the only cost was that of aluminum stock purchased from surplus and for a 5/8" high quality drill bit needed to bore holes in the pulleys. A small amount of bar stock was purchased.

WHERE TO BEGIN As sketches were being made it was realized that the project could not be completed if the necessary materials or tools to shape these materials were not in hand. An inventory of materials collected, the quantity and size of materials was made. Page 12 begins with the materials list. On page 12 is a list of tools used.

MATERIALS LIST

<u>Item</u>	<u>Size/Quantity/Amount</u>
(1) Base Plate	1/4" T X 12" W X 19" L (has a 2" lip at 90 degree angle on one end)
(2) Upright Support	Shaped with Plasma Cutter from a 1/8" X 18" X 14-1/2" Plate.
(3) Drive Pulley on Motor	Aluminum billet, 5-1/4" D X 3" W. (5/8" bored for motor shaft)
(4) Idler or Tracking Pulley	Aluminum billet, 4-1/2" D X 3" W. (5/8" bored for 6" L idler shaft)
(5) Idler Shaft	5/8" D X 6" L (Mild steel OK if ball bearings are used)
(6) Mounting Brackets	For Contact Wheel Arms - 1" X 1" Angle Iron. 3 Foot needed
(7) Contact Wheel Arms	1" X 1" Square Stock - 8 Foot required (needed for other parts also)
(8) Contact Wheels	
(A) 8" D X 2" W	Made of a Rubber Wheel taken from industrial size Cart.
(B) 3/4" D X 2-1/2"	Made from a Steel Tube, incorporates two small ball bearing assemblies)
(C) 2-1/4" X 2" W	Made of two Rubber Rollers with Bearings mounted side by side on shaft
(D) 14" X 2" W	Same as in item "D" (Neither of these last two wheels are easily balanced)
(E) Flat Platen	(Not yet built as the Ickler grinder is used in place of until completion)
(9) Belt Tensioner Lever	1/4" X 3/4" Stock, 18" L (Forged to shape as will be shown)
(10) 15", Additional Stock	Same as above 1/4" X 3/4" (Used for tracking mechanism & brace)
(11) 1.5 HP. DC Motor	Baldor - Commercial application use
(12) Controller Assembly	Includes rectifier and digital touch panel (Taking from Trotter Tread Mill)
(13) Ball Bearings	Matched Pairs for Contact Wheels (Size determined by application)
(14) Valve Spring	From B & S or Tecumseh 3-1/2 HP to 6 HP (for tracking mechanism)
(15) Bolts & Nuts	2- Head Bolts from B & S or Tecumseh engine for locking mechanisms)
(16) Bolts & Nuts	Generous Assortment of 1/4 X 20. (Used for assembling parts)
(17) Round Rod	1/4" X 6" L for making three, T - handles for item above.
(18) 3/8" X 1-1/2" X 6"	Stock to be drilled, tapped and welded to Contact Arm Brackets

TOOLS USED

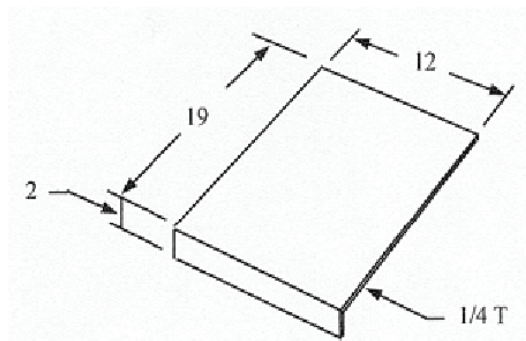
(1) Metal Lathe	Extensively used for turning and boring Idler and Drive wheels.
(2) Metal Band Saw	Extensively used for cutting stock to desired length.
(3) MIG Welder	Used for welding up brackets and small parts as needed
(4) Bench Drill Press	Used for drilling holes prior to assembly of frame.
(5) Hand Drill	Used for drilling holes after basic metal frame is completed.
(6) Bench Grinder	Used periodically for bringing parts to rough tolerance.
(7) Belt Grinder	Frequently used for creating smooth operating surfaces.
(8) Angle Grinder	Used to touch up edges of frame and parts assembled to frame.
(9) Forge, Anvil etc.	Used to shape handle used for installation & removal of belts.
(10) Bench Vise	Useful when draw filing.
(11) Tap & Die Set	Used at locations indicated on drawings.
(12) Dial Calipers	Frequently used for general as well as lathe work.
(13) General Tools	Commonly used for basic metal work.

ASSEMBLY SEQUENCE & ILLUSTRATIONS

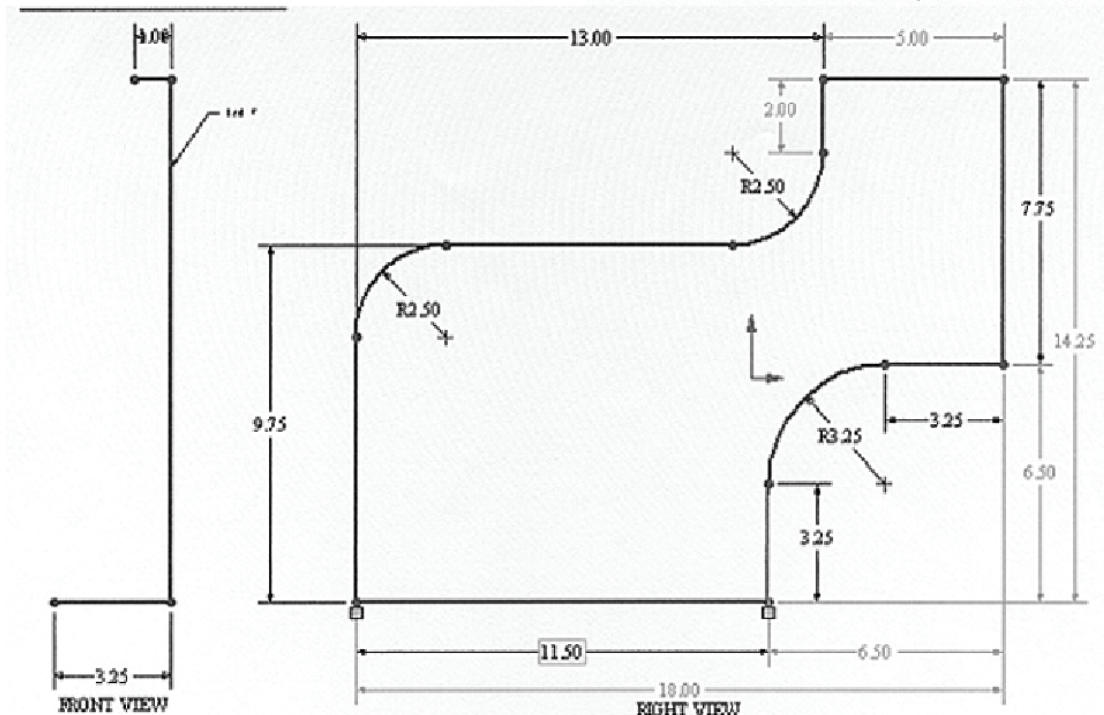
(1) BASE PLATE

NOTE: All dimensions given are in inches unless otherwise noted.

As per most parts, the exact dimension of the Base Plate is only incidental! It's what I had in stock!



(2) UPRIGHT SUPPORT



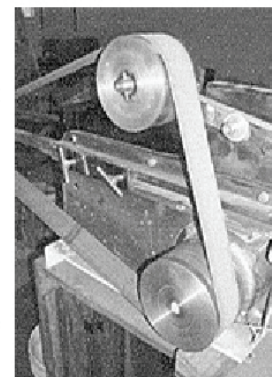
This "Upright Support" is made from 1/8" plate. By itself, it is much too weak to support the idler and contact wheels. It is recommended that a thicker plate be used. The scrap from which this plate is made has a 3-1/4" bend at the bottom which extends as shown in the front view. This was used to bolt the "Upright Support" to the base. There was also a right angle, 1" bend at the top.

(3) MOTOR MOUNTING

The motor is bolted to the rear of the "Base Plate". The motor shaft is located at the focus point of the 3.25" radius of the "Upright Support" as shown in # 2 above. The drive wheel will extend over the edge of the "Base Plate".

(4) DRIVE PULLEY (Lower right corner of picture)

Make the "Drive Pulley" approximately 6" D X 3" wide. The maximum RPM of the motor along with the diameter of this drive pulley determines the maximum SFM of the belt. This arrangement produced 3,400 SFM. The motor shaft is 5/8" D. The pulley was turned on a shaft for precision balance. A keyway was cut into the pulley to match the keyway on the motor shaft.



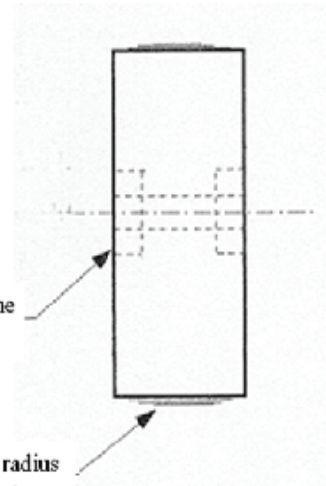
(4) IDLER or TRACKING PULLEY

This pulley can be the same diameter and width as the drive pulley described in step # 3. Ball bearing assemblies are included for free rotation on a fixed shaft. The face of the "Idler Pulley" must have a slight crown such as a typical balloontire, but not as pronounced. The crown is 1/6", although 1/8" might be better

(5) IDLER SHAFT

This shaft was chosen to be 5/8" D X 5" long. It will be secured at one end of a 6" length of 1" square stock.

After wheel is turned, recesses are cut with the lathe for installation of bearings on each side



Face has slight radius

(6) CONTACT WHEELS

At present there are four contact wheels in use. An 8" wheel with a 2" width is most often used. This wheel was taken from a typical industrial cart. New recesses were turned into the rubber wheel to retrofit the original. The wheel face was trued on a lathe.

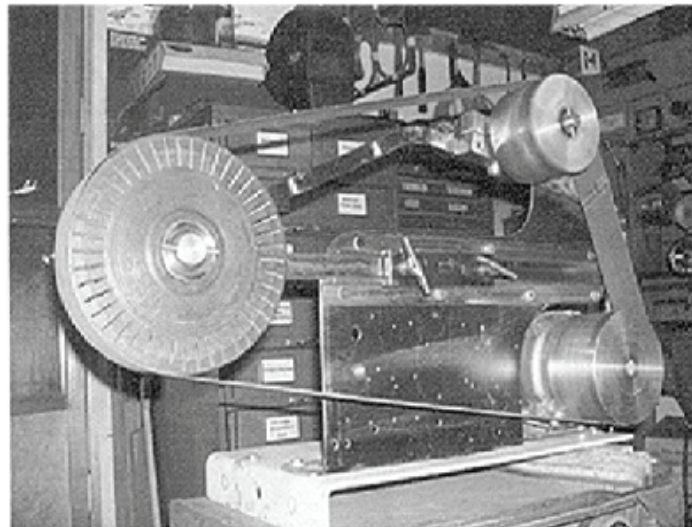
Next, a 3/4" diameter wheel is used for finishing radii less than a couple inches. This is made of a metal tube with bearings inserted. Because of its size, no provision was made for a rubber boot over the metal surface. A rubber sleeve to fit over this contact wheel is anticipated.

Then a 2-1/4" D wheel is used for curves larger than 2" .. This wheel has a rubber boot.

Finally there is a 14" D wheel. Because of its size it is difficult to balance. It is generally used for creating "Hollow Grinds" on knife blades. The surface is made of a plastic composite. It should have a rubber boot on it. Later drawings will show mounting details of the above "Contact Wheels". (The 8" "Contact Wheel" is pictured at lower right)

Not yet made is a "Platen Grinding Attachment".

The Idler Grinder currently in use has a good platen grinding arrangement. The 1/2 HP motor it driving that grinder is grossly inadequate.

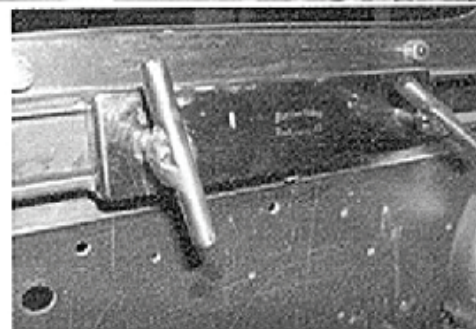


(7) MOUNTING BRACKETS

Two pieces of angle iron, 1 X 1 X 18" are bolted to the "Upright Support" to allow insertion and removal of the "Contact Wheel Arms". These arms are made of 1" X 1" Square Stock. The brackets may be welded, however, bolts allow for adjustment should that become necessary.

(8) CONTACT WHEEL ARM LOCK

This is made of a 1/4" thick plate measuring 1-1/2" X 6", welded to the two "Mounting Brackets". As shown at right, there are two bolts used to secure the "Contact Arm". Bolts used are taken from a B&S small engine. Rods measuring 2-1/2" long X 1/4" D are welded to the heads of the bolts to serve as handles. The bolts were cut off to a length of one inch. "Really pleased with how well this mechanism functions!"



**Vancouver Island Blacksmith Association
Membership Application**

Name: _____

Address: _____

City: _____ Prov./State: _____

Post/Zip Code: _____

Email: _____

Phone: (____) _____

Fax: (____) _____

Are you a: New Member Renewal

Regular Membership \$30.00 Annually

Contributory Member \$100.00 Annually

Members are required to sign a Liability Waiver
Make cheques or money orders payable to:

Vancouver Island Blacksmith Assoc. (VIBA)
1040 Marwood Avenue
Victoria, BC CANADA
V9C 3C4

**Artist Blacksmiths Assoc. of North America
Membership Application**

Name: _____

Address: _____

City: _____ State/Prov.: _____

Zip/Postal Code: _____

Phone: (____) _____

Fax: (____) _____

- Full Time Student.....\$35./year
- Regular Membership.....\$45./year
- Senior Citizen (age 65+).....\$40./year
- Overseas Surface Mail.....\$60./year
- Oversea Air Mail.....\$80./year
- Contributory Membership.....\$100./year
- Public Library Subscription.....\$35./year

Credit Card Payment

Card No. _____

Visa Mastercard

Expiry Date: _____

Signature: _____

by Phone: (706) 310-1030

by Fax: (706) 769-7147

Mail: ABANA, P.O. Box 816,
Farmington, GA, USA. 306380816



June 29—July 02, 2007
Victoria, B.C. Canada
Vancouver Island Blacksmiths Assoc
www.caniron.ca www.viblacksmiths.com

Canada's biennial blacksmithing conference will take place this year in the city of Victoria on beautiful Vancouver Island. It will be hosted by the Vancouver Island Blacksmiths Association.

Featured demonstrators include;

Richard Bent FWCB, Paul Thorne, Jake James, Daniel Orton, Joe Delisimunovic, Peter Fuller, Al Bakke, Renato Muskovic, Tony Austin, Doug Newell.

We also have a hands on forging/teaching area, repousse' teaching station, demonstrations by the Western Canadian Farriers Association and the Western Canadian Wheelwright Association.

We have arranged for hands on craft classes for spouse/family members, including basketry, felt making, mosaic art, quilting, fragrant wreath making, broom making, traditional metis beading and glass bead making.

Camping & R/V parking will be available on site, offsite dorm rooms at the Royal Roads University, b&b's and hotel/motel rooms close by.

Test your skills at the standards of **THE WORSHIPFUL COMPANY OF BLACKSMITHS!!** (est. 1352)
As part of CANIRON VI we will be hosting an ADJUDICATED GALLERY as well as a LIVE FORGING COMPETITION.

Check out the website <http://www.caniron.ca/> for more info

