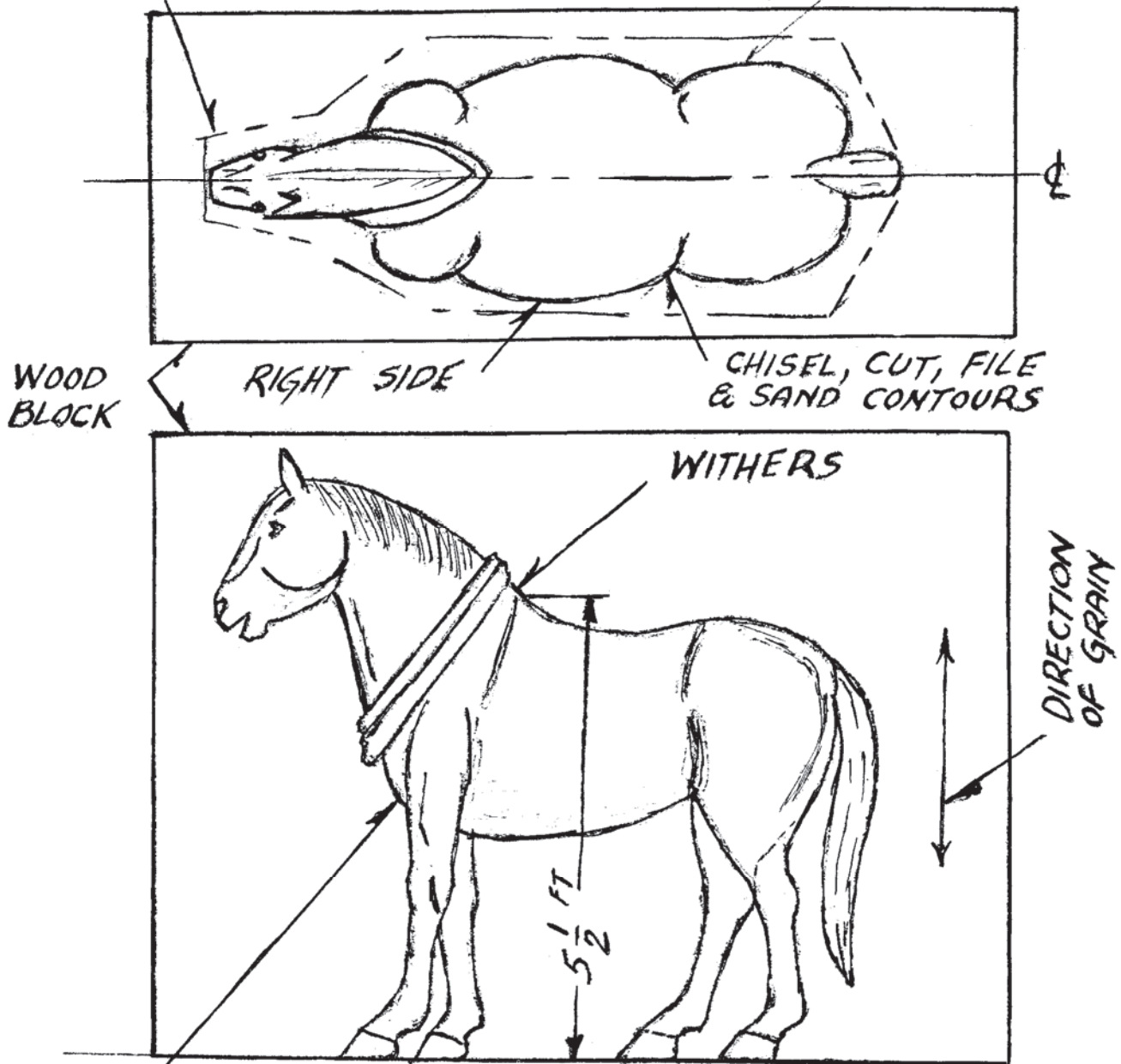


ROUGH CUT EXCESS WOOD AFTER CUTTING SIDE VIEW OUTLINE FIG. A LEFT SIDE



BAND OR JIG SAW OUTLINE OF HORSE BEFORE STARTING TO CARVE

The Art of Wood Carving

DATE: None

SCALE: 1/2" = 1'

SCANNED & REVISED:
4/27/2007

Pg 1 of 6

Circus Model Builders

Drawn By
John W. MacKey

DRAWING NUMBER

On several occasions, while displaying some of my models at National and Ring Gatherings, I have been asked about how, when and why regarding my wood carvings of horses, animals and people. I will try in this article to explain and describe how it is done. Now there are many excellent carvers already well established in the Circus Model Builders and each may have his own methods so remember this article is only one of the methods used in carving.

I am often asked how long does it take to carve an item and where do I find the time. Now as to how long – this will vary from one hour to eight or ten hours, but is that really important? You must have patience, and the end result will be your satisfaction. My first horses were quite crude compared to some of my later models and I am never quite satisfied so I try harder on the next item. When it comes to time; this is purely a hobby. I do it when I feel like it and I find it most relaxing and gratifying. My wife and family are most encouraging and my roughest critics. (Be sure you don't neglect your work around the house - you might find yourself in trouble with your wife).

Now down to business first I would suggest you use good clear white pine or sugar pine, be sure it has as little grain as possible. This will save you some problems. I use an "Exacto" hook blade (see Fig. J) for most of my carving. However, there are times you will need good chisels and hand carving tools. I also use hand motor grinding tools and files. As we progress through the article I will try to point out how and where these various tools are used.

For this article I have elected to use a draft horse as my subject. I believe I have carved more of them than any other animal, so here goes.

Depending upon the scale of the animal and the sizes of wood available you will find techniques will vary. There are many pictures of horses available that you can trace or sketch, be sure you make your model to the proper scale. As a guide a draft horse is approximately 5 1/2 feet high at the withers. (See Fig. A.)

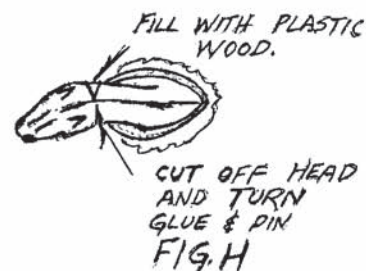
Draw the side view of the animal on a piece of paper (you will probably make some changes.) Then trace your outline on to the wood. (Be sure the wood grain is parallel to the legs).

Now there are two basic methods of carving either by using a solid block of wood or two separate pieces glued together.

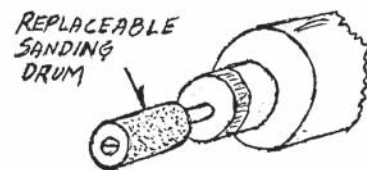
First let's describe the solid block, as shown in Fig. A. Cut out the side contour of

the horse using a jig or band saw. Then rough cut away excess wood using a coping saw, bench saw or chisel. (See top view Fig. A.) I always use a solid block for any scale less than 1/2 inch. As a help turn the horse upside down, clamp in this position and make a saw cut long ways of the horse, between the legs to the belly of the horse. This will facilitate cutting off the extra legs on opposite sides of the horse. I use a vise to hold the work at this stage. For any scale larger than 1/4 inch to the foot I have made some wooden inserts that fit onto my vise and grip the horse by the middle of the back and belly in a horizontal position. After the rough sawing and chiseling you are ready to shape the legs and hoofs. I find the Exacto hook blade No. 28 excellent for this operation. Be sure you show the joints, hoofs and muscles in the correct position and scale. Next shape the head and neck and finally the body. There are many good artists books on horses that will give you this detail. For details of muscles, joints, head, leg and body contours I strongly suggest you buy the Sketch book "How to Draw Horses" by Walter T. Foster. They are available in all artist supply stores. After we have the horse fairly shaped use a rotary drum sander or files for final detail. The eyes are pin heads with plastic wood eye-brows. If you want to turn the head, cut the head off about the middle of the neck, pin and glue back on after turning to your satisfaction. Fill in any gaps with plastic wood (See Fig. H). I carve the collar right on the horse, this is easier than making a leather one or building one up with plastic wood. Figs. B and C will give you an idea on how to place the legs (don't make them look like they are stuck on the outside of the body). Fig. D shows the head in a different position and view A-A and sec. B-B will you an idea on shapes of heads and necks. Figs. E and F. show variations in hind leg positions.

If you elect to use two pieces of wood instead of one block, see Fig. G placing the legs associated with a side by cutting them out with that side only. This eliminates cutting away extra wood. After shaping the legs, dowel and glue the two body halves together. Dowels can be either or finishing nails with their heads cut off. Once this assembly has dried cut off the head at the collar line and dowel and glue it in the center of the body (see Fig. B). Then proceed to carve and finish the horse as if it were a single block of wood. In all cases carve the tail separately and pin and



EXACTO BLADE
#28
FIG. J



REPLACEABLE
SANDING
DRUM
ROTARY HAND
TOOL
FIG. K

glue it to the body after all carving and sanding has been completed on the other parts of the horse. (See Fig. F.)

I use a bench saw for cutting away excess wood after I have cut out the side view contours of the horse. A coping saw is excellent for roughing out the legs and head. (Save the ears until last; they may break). Then holding the horse tightly, shape in more detail on the head and legs using the exacto knife. I find this to be my tool that does 80% of the work.

After you are satisfied with the general shape use a half round file (size to suit scale of horse) and shape legs, joints, neck, jaws, hoofs etc.

Refer to your book "How to Draw Horses" for the detail information. If you have a hand rotary tool (see Fig. K) you can use sanding drums for much of this work. Be careful you don't take off too much wood. If you do, you can fill it in with plastic wood - let dry for 12 hours before you try to work the filled in areas. Now drill holes for the nostrils and small holes for the eyes. Pin heads make excellent eyes. Use just a little plastic wood for eye lids and brows. You can either carve in the mane

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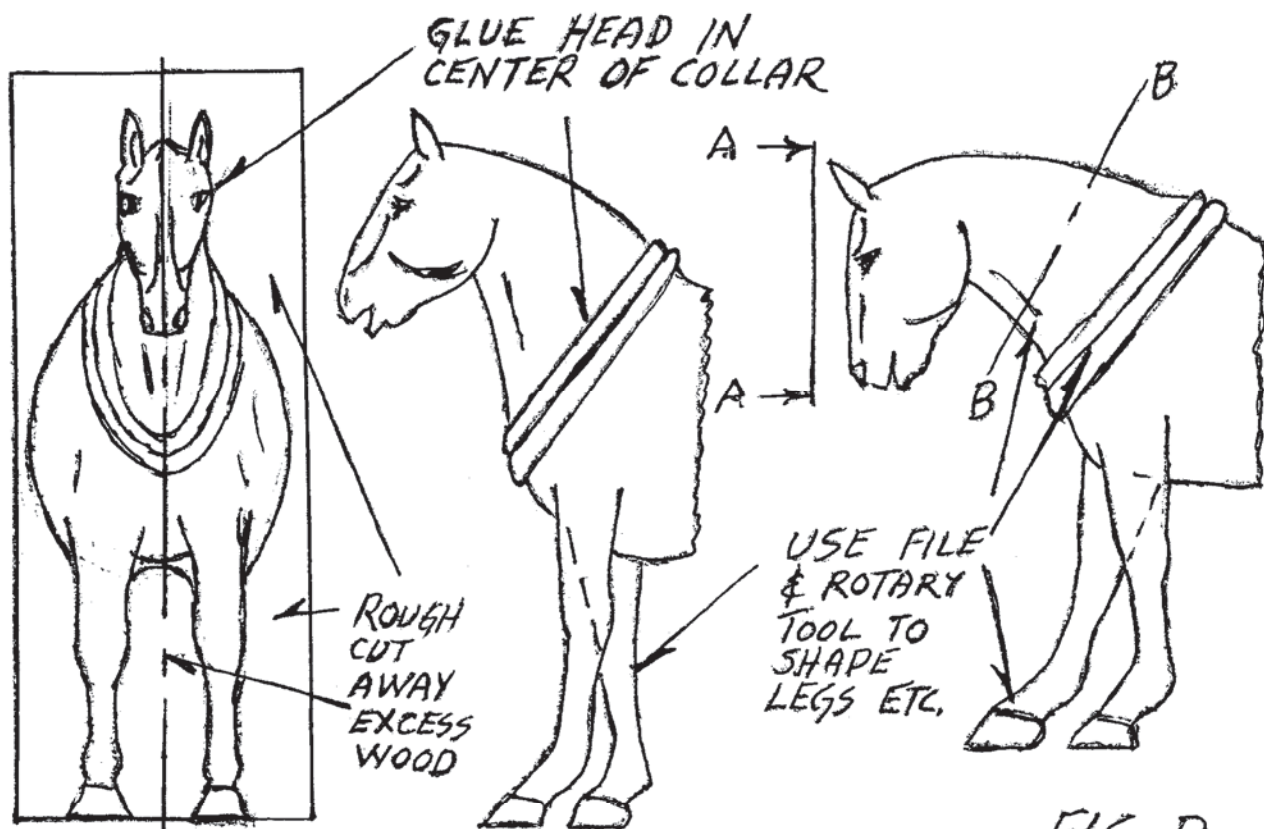


FIG. E

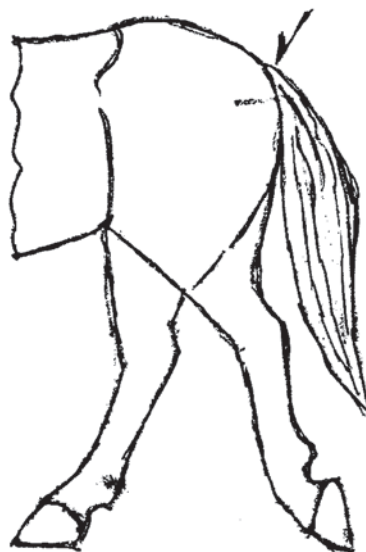


FIG. F

PIN & GLUE ON TAIL



VIEW A-A



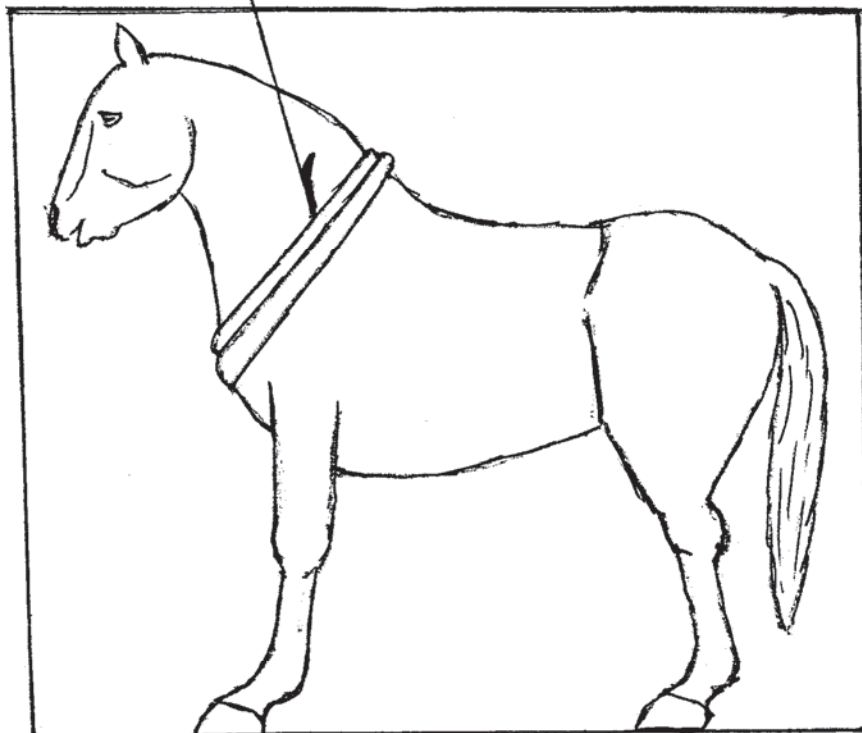
SEC B-B

or use plastic wood - scoring it before it sets. I score the tail with a knife (and then pin and glue to the body. - see Fig. F).

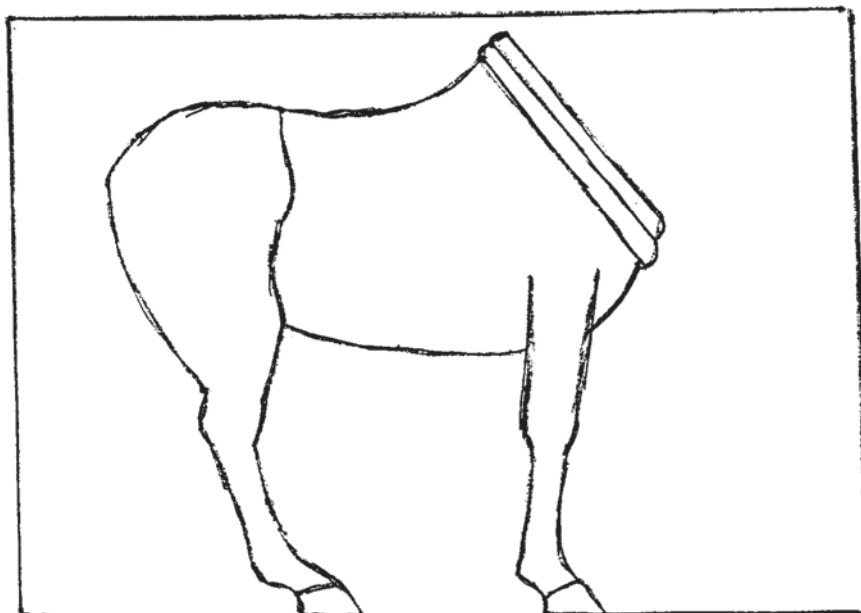
A horse's head is quite narrow with almost flat sides on his jaws taper his head to the nose. His eyes are quite on the side of the head not like a cat so he can see partially to the rear. You can change expressions by head positions, ear turning and mouth openings.

The Art of Wood Carving

SEE NOTE A



RIGHT SIDE



LEFT SIDE
FIG. 9



Note A

After roughing out head, cut off at collar line before shaping body.

The Art of Wood Carving

After you have carved a few horses you are now ready to paint and make harnesses. There are many good paints in the market that will give you a life-like finish. I use flat enamels or Flo-Paque (this dries rather quickly). Always paint the horse with one coat of flat, white under coat before applying finish coats (you may need two final coats). Since horses are varied in colors you may wish to mix two or more colors for a desired hue. Be sure to mix sufficient to complete the job. It is hard to remix an exact color combination.

Since many circus draft horses were dapple gray let us start with directions to paint such a horse. First give entire horse a coat of flat white undercoat. Then two coats of flat white or off-white enamel. Paint the hoofs gray; now make the lower part

of the legs dark gray U use my finger and apply stamp pad ink by rubbing the ink into the legs.) Blend the gray unto the upper part of the legs. Apply the same techniques to the mane and tail and now rub a little gray around the nose and muzzle of the horse.

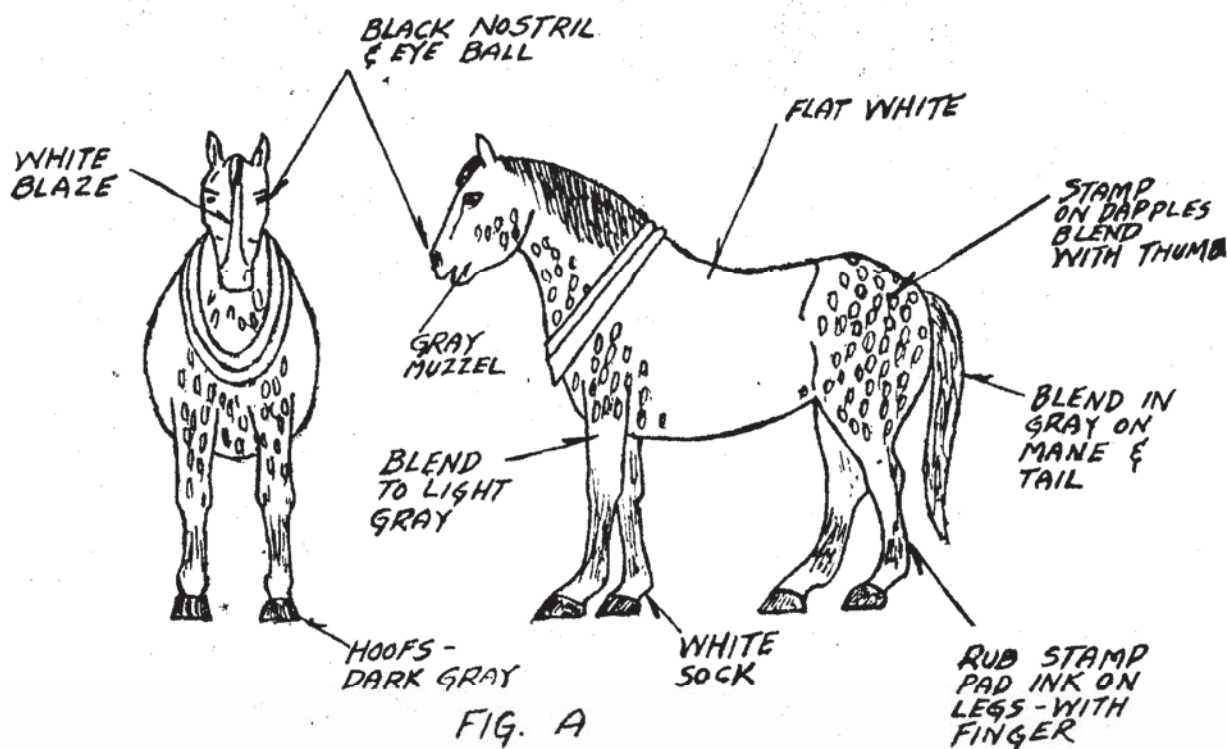
The dapples are made by stamping a small "O" (see note I) with a rubber stamping stick using a black stamp pad for the ink. After stamping the dapples blend them into the body paint by pressing your thumb over the stamped O's. This will require practice as you want them to blend into the paint. Leave a white blaze on the nose and maybe one or two white hocks (just above the hoofs), See Figure A.

Note I - You may find that cutting off the top or bottom portion of the figure 8 on a stamping stick will

give you the desired size for your dapple.

One other tip, blend your various colors together before they dry this eliminates definite lines and looks more like natural coloring. Do not use high gloss enamel on animals the color will not look natural, it is too shiny.

Now the circus also had many browns, bays, chestnut, black and gray horses so use your imagination and color away. Be sure you take the stirring stick out of the paint while painting, it sure is hard to get out of the parlor rug if you tip it over. I suggest you paint matched teams I believe they look better unless you want a checker board arrangement.



The Art of Wood Carving

Now we have the horses carved and painted so the next step is to put on the harness. Depending on the scale of the horse I use various materials. For 1/2 inch and less I use black, paper base masking tape. It comes in various widths however, I usually buy 1 inch wide rolls and cut it to the various widths I require. This is done by stretching a strip 12 to 15 inches long on a piece of plastic or glass and by using a brass edged ruler and sharp knife I cut it to desired widths. Since we have already carved the collar on the horse all we have to do is paint this part flat black.

For inch scale horses and larger I use leather to make the harness similar to Bob Clarke.

(This method is very well described in Gordan Carver's Question and Answer section of the December 1969 - January 1970 issue of the Little Circus Wagon).

If you have an old Sears and Roebuck Catalog 1902 or so, reprints are on the market, you will find good examples of various harnesses. However using our same bask 1/2 scale horse I will try to show you a typical wheel horse harness. The lead and swing team harnesses are the same except the rump britching is replaced by a single strap to keep the tug straps in place. (See Fig. B.)

I use round head pins (like those found in new shirts) for tops of hames. You can buy

various sizes of brass-chain and brass rings at your local hobby store or some of our CMB who sell model supplies and carry them in stock.

One nice advantage of using masking tape is the fact that it sticks in place while fitting to the horse. You will also find it great when threading through rings and folding back so that the sticky sides of the tape come together.

I use various sizes of pipe cleaners for parade plumes. Clean off about 3/8 inch of the fuzzy material, exposing the wire, drill a small hole in the horses head and push the wire in place.

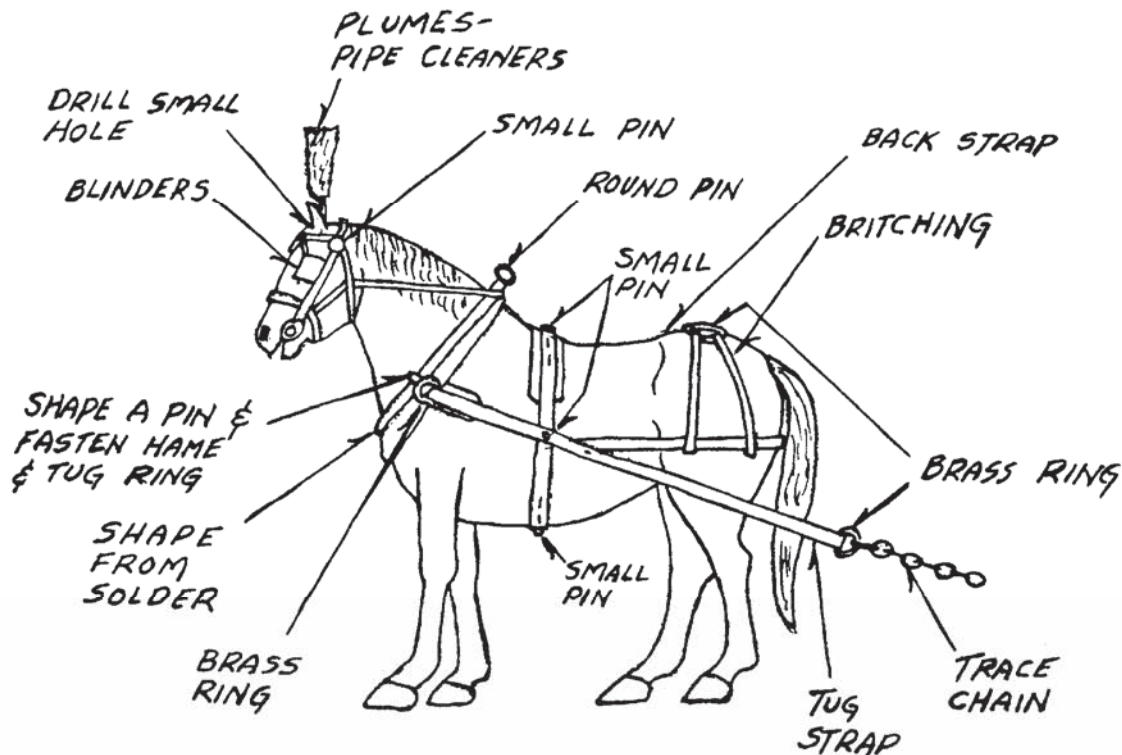


FIG. B

The Art of Wood Carving