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The Southern Appalachian Dulcimer

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THE SOUTHERN APPALACHIAN DULCIMER

A Paper
Presented to
Dr. Haruda

A Report Submitted
in Partial Fulfillment
of the Course Requirements
of Music 521

by
Stewart S. Nutter
December 1973

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Chapter 1

INTRODUCTION

The Appalachian Plucked Dulcimer is an instrument neglected by musicologists for several reasons: (1) its history has been clouded in time due to the lack of written information concerning it, and (2) the plucked dulcimer is often confused with that of the hammered dulcimer, one of the early ancestors of the piano. Very little information is available concerning its history, construction and playing techniques.

IMPORTANCE OF THE STUDY

The study shows that in all probability, the dulcimer's ancestry is directly related to that of the German Scheitholt and has remained basically unchanged in design from that of the Scheitholt and its relatives.

Because of the neglect given the dulcimer by musicologists, the study therefore shows that dulcimers hold a legitimate place in the evolution of plucked stringed instruments. Furthermore, because the dulcimer still retains the basic characteristics of its ancestry, knowledge of its design, construction, tunings, and playing techniques will broaden the musicologists knowledge about

the Scheitholt family, its evolutionary development into the plucked dulcimer, and the plucked dulcimer's present uses in the United States Southern Highlands.

LIMITATIONS OF THE STUDY

The study is limited to the traditional aspects of the dulcimer and avoids the modern, commercialized uses of the instrument.

Chapter 2

HISTORY OF THE APPALACHIAN DULCIMER

Most of the documented research concerning the plucked dulcimer has been furnished by Miss Jean Richie, an amateur musicologist from Viper, Kentucky. In 1949 Miss Richie was visiting the New York Metropolitan Museum of Art where an exhibition showing old stringed musical instruments drew her attention. One instrument in particular, the sixteenth-century German Scheitholt, had the same basic shape and fretting arrangement as the dulcimers used in the mountains. (Figure 1.)

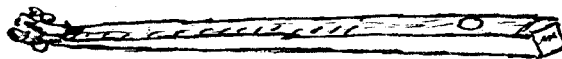


Figure 1

German Scheitholt

Subsequent research by Miss Richie revealed several facts about the Scheitholt and its European descendents: (1) it is tuned in the same manner as the Appalachian dulcimer; and (2) it is played in the same manner, i. e. the use of a noter on one string to play the melody while the remaining strings are treated as drones, the whole being plucked by a goose quill.

It is unknown where the Scheitholt originated; however, it is known that at least three European instruments developed from it: (1) the Norwegian Langeleik; (2) the French Epinette des Vosges; and (3) the Dutch Hummel.

The descendants of the Scheitholt underwent quite amazing changes in Europe over the centuries. On the other hand, the Appalachian Dulcimer has retained most of the characteristics of its ancestry and provides an excellent living example of these ancestors.

A brief description of the dulcimer's forerunners will reinforce the assumption that the dulcimer is a direct descendent of the Scheitholt.

LANGLEIK

The usual shape of the Langeleik was as a long, oblong box, with seven to eight strings attached at one end beyond a nut to small iron nails, and at the other end, over a second nut and to the tuning pegs inserted vertically into the peg box. The top of the box or table often had heart-shaped or f-shaped soundholes. The strings were tuned a, a, a, a, e', a', e' or a, a, a, e', a', c-sharp, e. The frets were placed below the melody-string only and gave a normal Ionian scale. (Figure 2.)



Figure 2

Norwegian Langeleik

The Langeleik was played by a long elastic plectrum held in the right hand, while the three middle fingers of the left hand produced melody changes by moving from fret to fret on the foremost strings.

EPINETTE DE VOSGES

The French Epinette de Vosges had a long, oblong body and was strung similarly to the Langeleik. The two melody strings were tuned to g' , g' , and the accompaniment strings to g' , g' , c' . The melody strings were used either in unison by placing a noter on them which was handled by the left hand, or they were divided between two fingers in order to accompany the melody with the third below. The right hand held a goosequill, used to vibrate the strings. (Figure 3.)

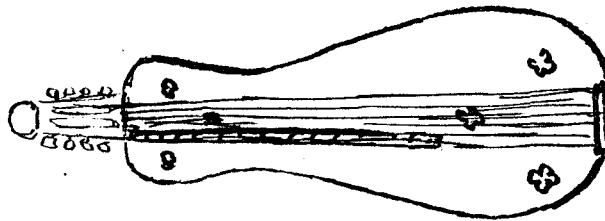


Figure 3

French Epinette des Vosges

HUMMEL

The Hummel is the only one of the aforementioned instruments named after its sound. Hummeln, the Dutch word meaning "to hum," was quite descriptive of the drone

strings. Thus the instrument came to be known as the Hummel.

The Hummel was advanced beyond the others of its type. It had more strings, a distinct fingerboard, iron pegs, and a distinct bulge in the soundbox, the bulge being most commonly on one side only. The Hummel also had a larger and more intricate scroll at the end of the pegplate than its forerunners. Except for the straight side and larger number of strings the Hummel looks very much like the Appalachian Dulcimer. (Figure 4.)



Figure 4

Dutch Hummel

Chapter 3

DESIGN OF THE APPALACHIAN DULCIMER

Appalachian Dulcimers come in myriad shapes and sizes. The early maker often developed his own particular design and stayed with it throughout his years of productivity. A certain characteristic of his craftsmanship could well serve as his trademark, just as a certain type of violin construction often identifies the maker.

SOUNDBOX DESIGN

Figure 5 shows nine traditional forms of dulcimer design. Notice the similarity between the designs of the dulcimers and those of the instruments in figures 2, 3, and 4. Figure 6 shows twelve of the more common soundhole designs used to enhance the appearance of the soundbox as well as improve its tone. The heart-shape seems to be the most popular used on the instruments that are available today, although the diamond is used quite regularly also.

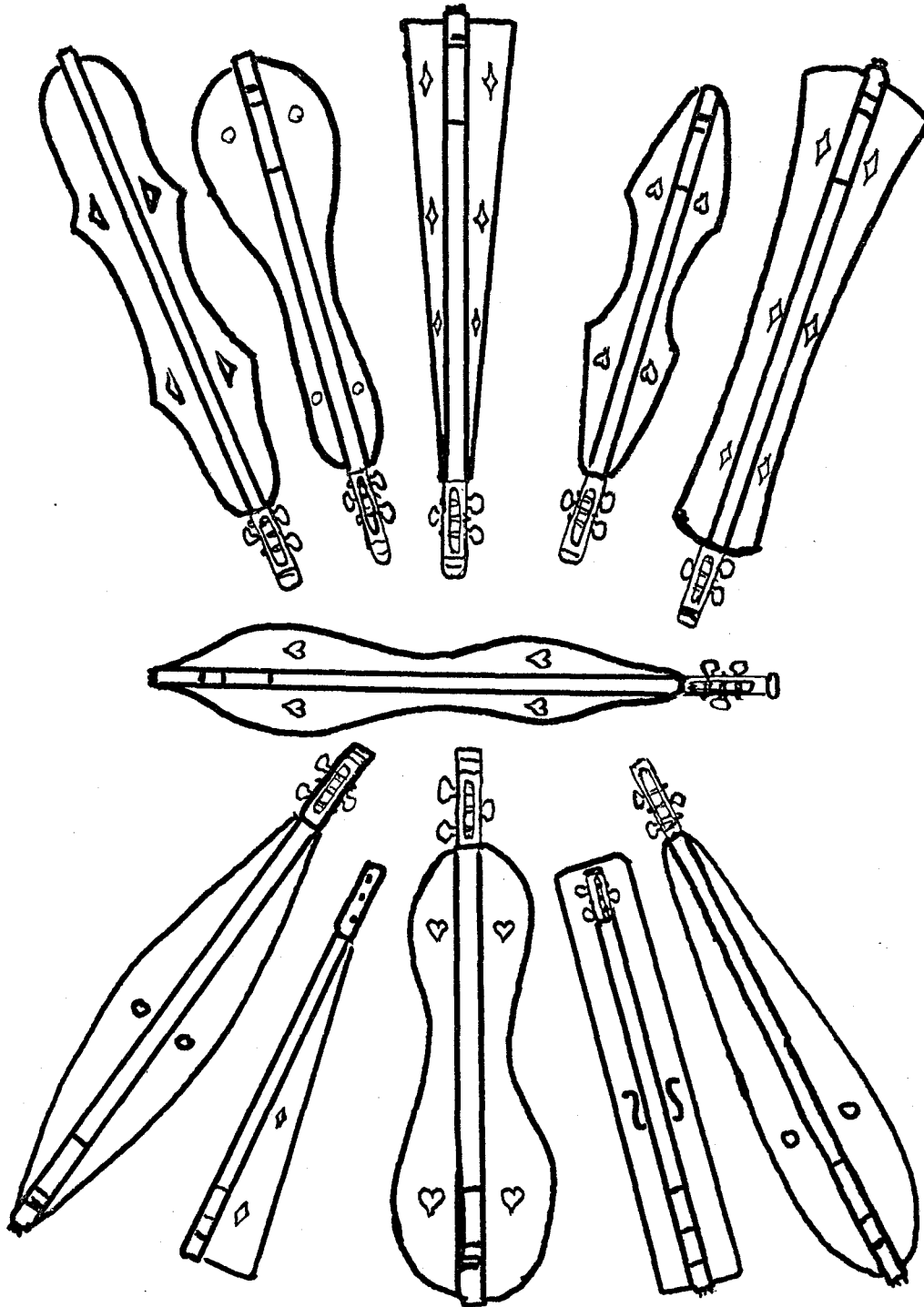


Figure 5
Dulcimer Design

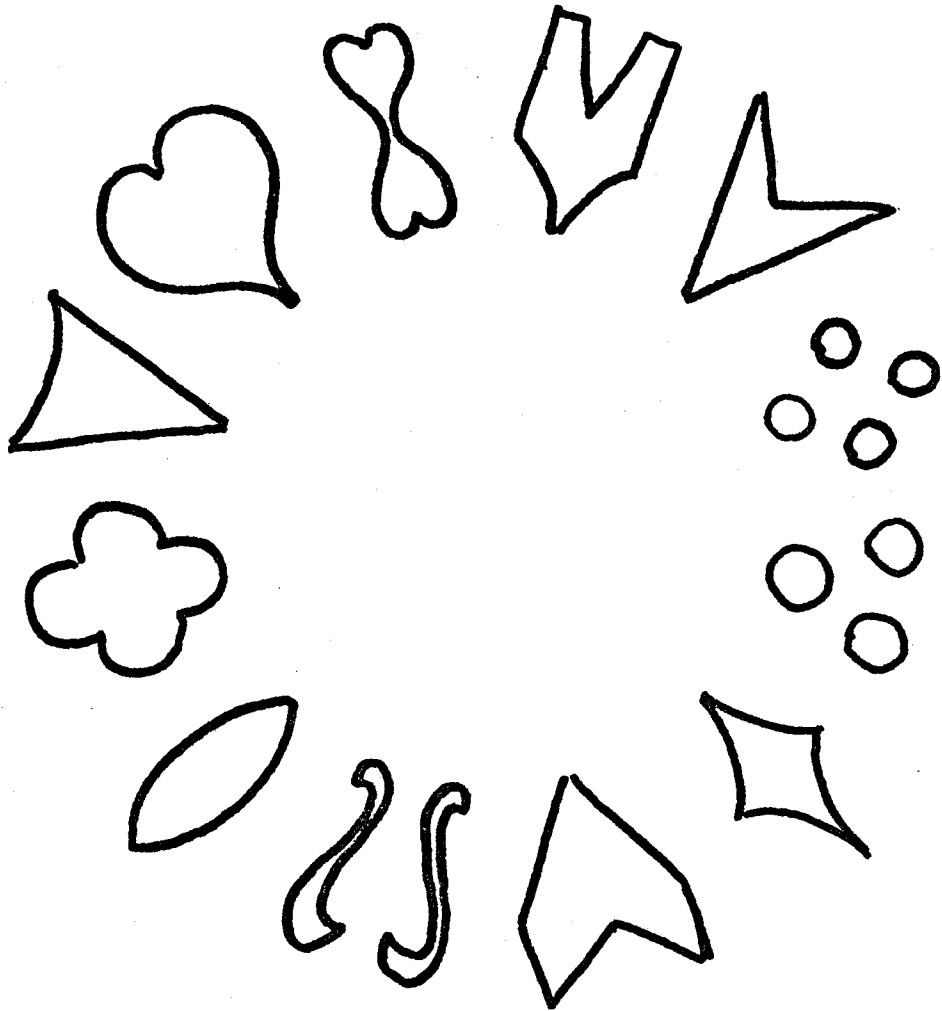


Figure 6
Soundhole Design

HEAD DESIGN

The head or scroll of the dulcimer is another area of craftsmanship that portrays the individual maker's artistic tastes and abilities. Due to the difficulty of making intricate scrolls, many of the homemade instruments have scrolls of quite simple design. Figure 7 illustrates six of the more common scroll designs found in existing instruments.

FINGERBOARDS

The fingerboard extends the full length of the instrument soundbox and has a depression cut into it called the strum hollow. (Figure 8.) A few dulcimer makers hollow out the underside of the fingerboard which produces a larger sound. This practice is rather uncommon among the less skilled builders due to the considerable amount of extra work, skill, and time involved in doing so.

FRETS

The frets on the traditional instrument extend across one-third of the fingerboard and are under the melody string only. More recent innovations have extended the frets completely across the fingerboard and permit extensive chording using all of the strings. Most of the instruments produced commercially contain this feature. (Figure 8.)

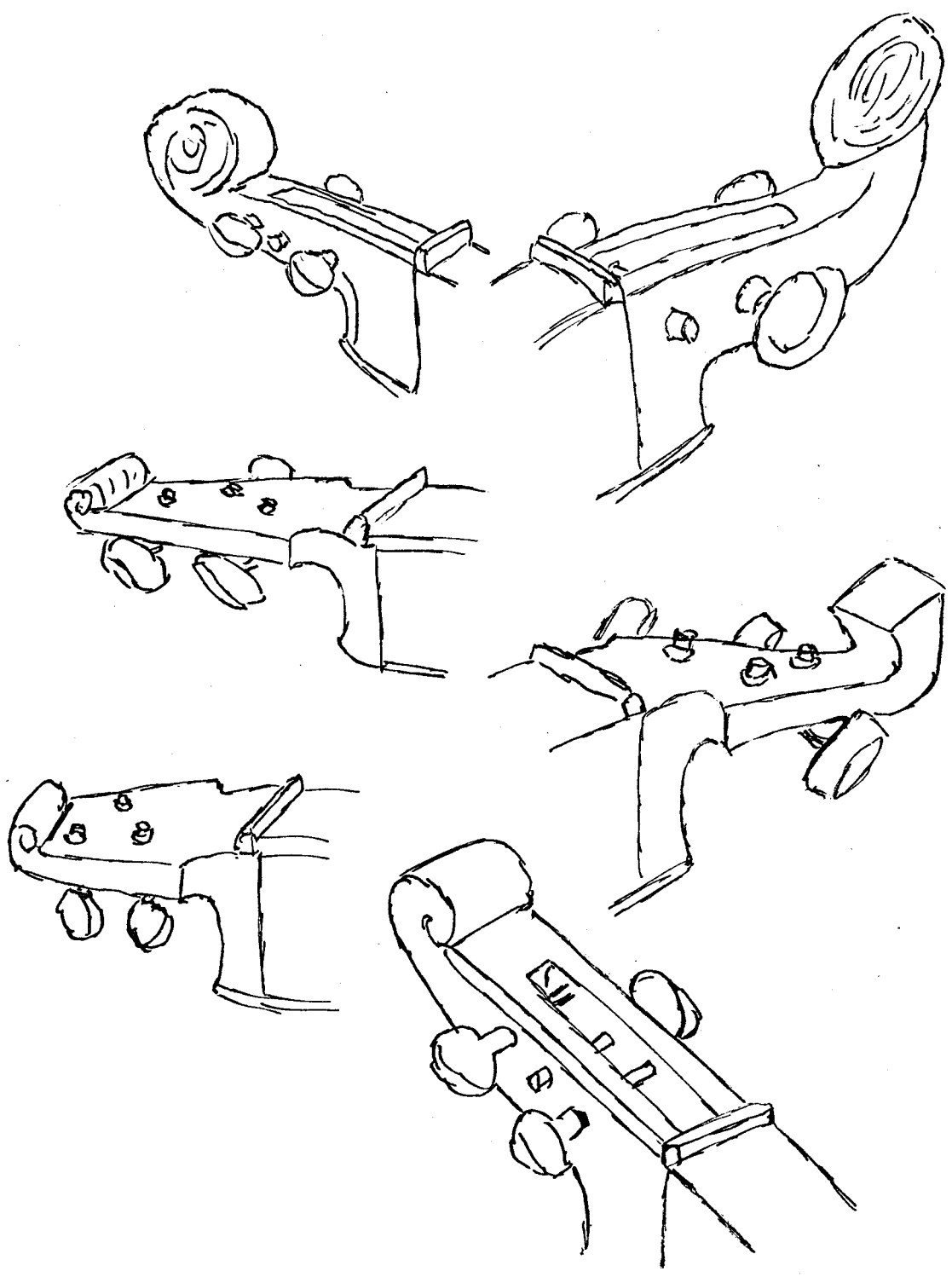


Figure 7

Scroll Design

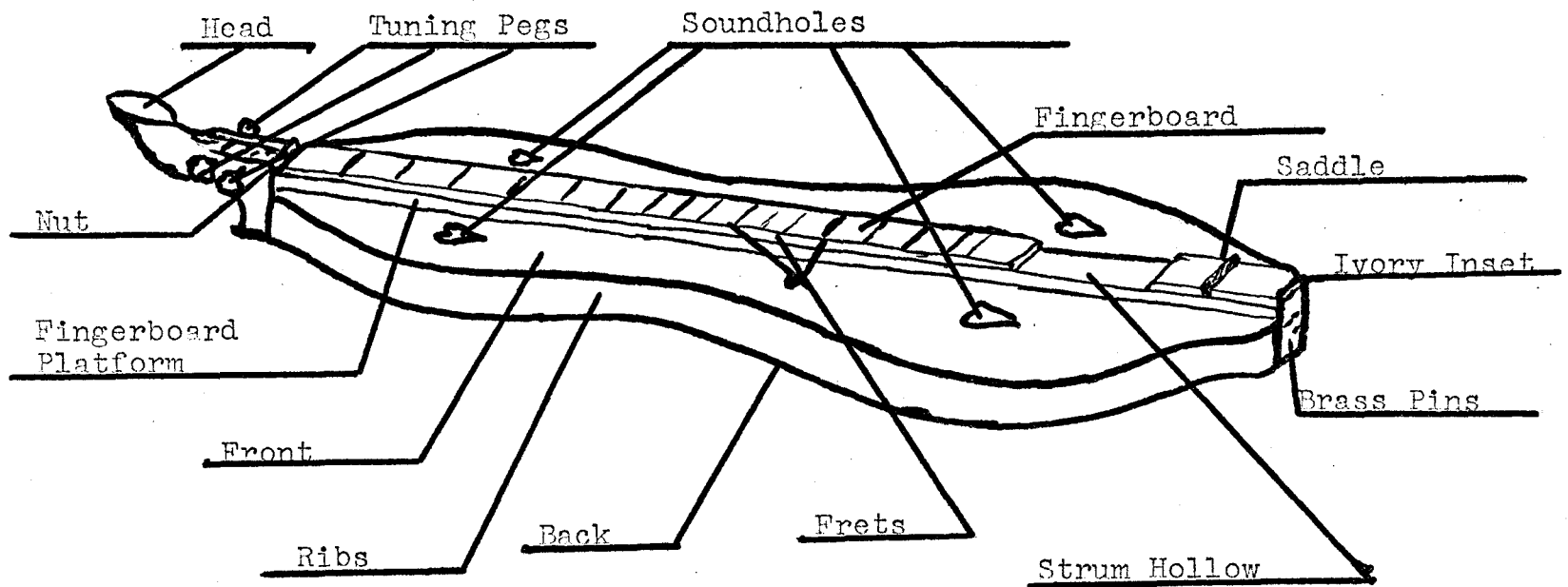


Figure 8
Dulcimer Nomenclature

Chapter 4

CONSTRUCTION OF THE APPALACHIAN DULCIMER

Methods of constructing the dulcimer vary from maker to maker. The following instructions are adaptations of those given by John Bailey in his text, Making an Appalachian Dulcimer. They were selected on the basis of clarity and completeness. Each craftsman will undoubtedly vary these procedures due to available tools, materials, and capabilities.

PRELIMINARY SETUP

The easiest way to form the shape of the dulcimer is through the use of a rib mold and bending pipe. These two items must be made prior to beginning construction. Figure 9 illustrates the shape of the dulcimer used in the construction of the mold.

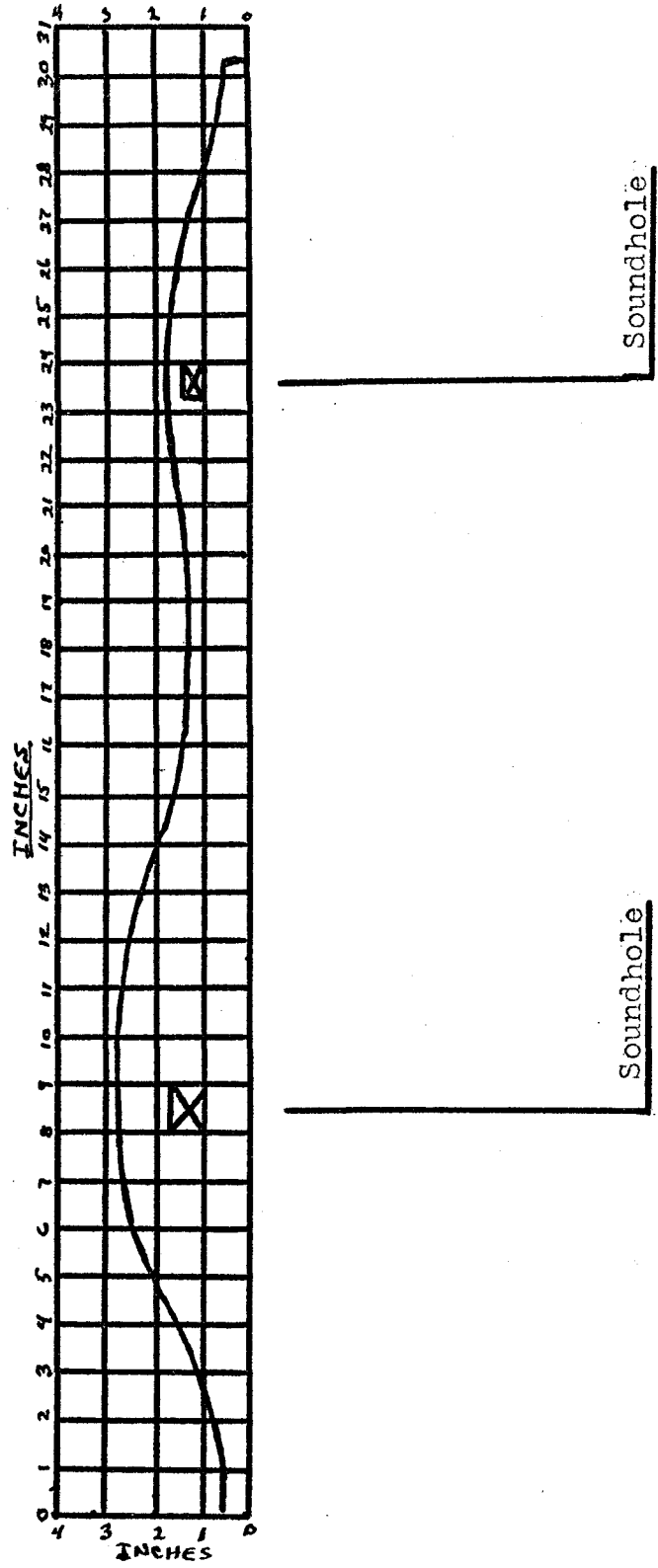


Figure 9
Shape of the Dulcimer

The Mold

The mold is made of a piece of one inch plywood, thirty-two inches long and six and one-half inches wide. Accurately mark out the shape of the dulcimer on the plywood and cut out the shape with a coping or band saw, being sure to cut just inside of the lines. After the center piece has been removed, dress down the shape to the line, using a spoke shave or wood rasp. Finish the dressing down with sandpaper. It is important to remember that the shape and finish of the rib mold greatly affects the quality of appearance in the finished instrument. (Figure 10.)

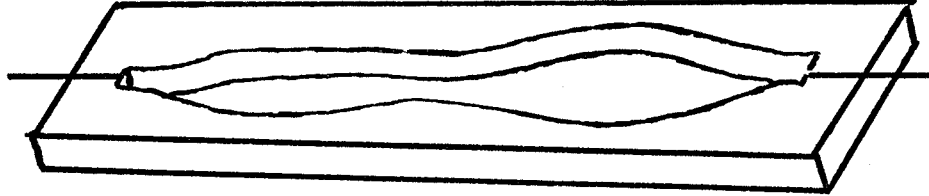


Figure 10

Dulcimer Mold

After the dressing down is completed, coat the surface with several applications of varnish or some other sealer so that the mold will not absorb moisture.

The Bending Pipe

The bending pipe is nothing more than a piece of two or three inch iron pipe approximately twelve inches in length. The pipe is clamped into a pair of blocks by the use of a vise, leaving at least eight inches of pipe above

the blocks. (Figure 11.)

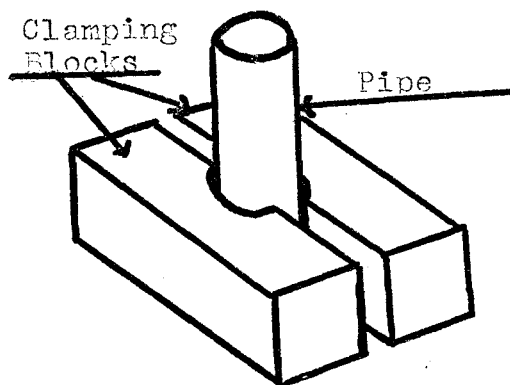


Figure 11

Bending Pipe and Clamping Blocks

ASSEMBLY

The assembly of the dulcimer is not too difficult if the maker does not try to rush the work. Each part must fit before glueing the joint and the glue must dry at least twenty-four hours before continuing work. All glue drip-pings should be cleaned up before they dry, for this will save hours of chipping and sanding later on.

The assembly is done in twelve steps: (1) the ribs; (2) the glue blocks; (3) the dovetail housing joint; (4) the back; (5) the front; (6) the head; (7) the fingerboard; (8) the frets; (9) the end pieces; (10) the action; (11) the finish; and (12) the strings.

The Ribs

The ribs of the dulcimer are cut several inches over length to allow space to handle them when bending without

getting burned. Dampen the ribs well with water and heat the iron pipe with a blowtorch to a temperature sufficient to produce steam when water is applied. Apply the damp ribs to the pipe, bending to the desired form to fit the mold. (Figure 12.)

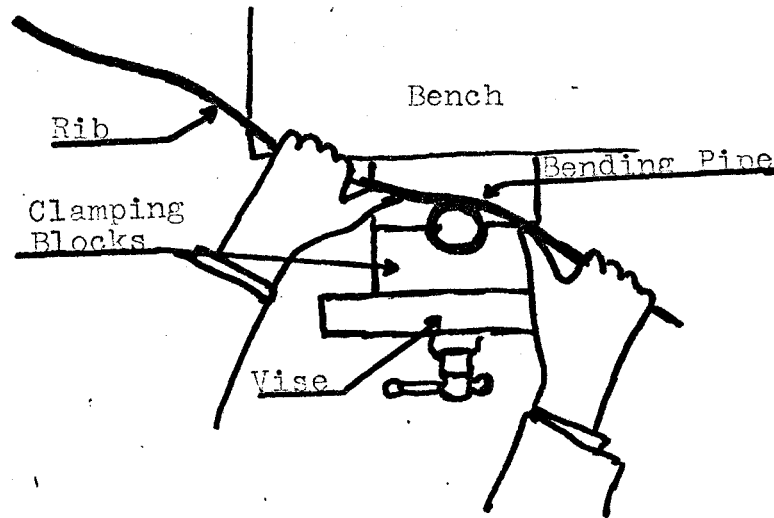


Figure 12

Using the Bending Pipe

Care must be taken that the proper curves are applied to the ribs. Do not try to unbend a wrong curve unless the wood is re-dampened to permit the steaming process to work, or breakage may very well occur.

When both the ribs fit the mold, cut off the waste at both ends and brace them. After the ribs have dried completely, glue in the end blocks. Lining the inside of the mold around the end blocks with paper will keep the glue drippings from sticking to the mold. When the glue is dry, sand the inside of the ribs and check the ends to

see if they are true. (Figure 13.)

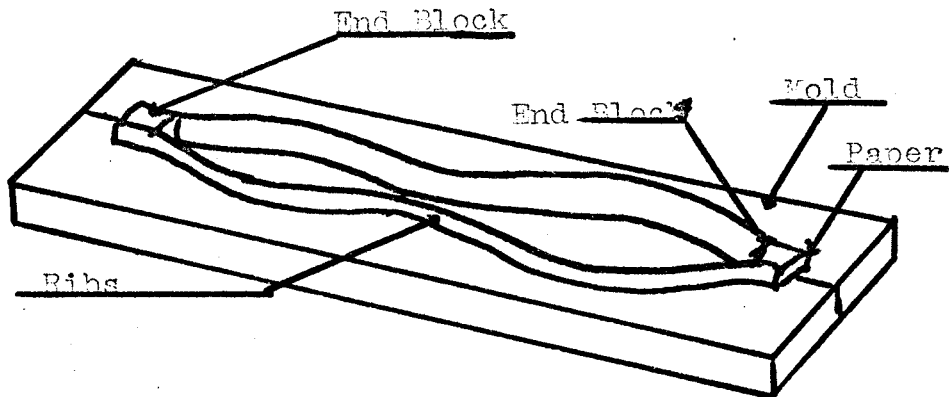


Figure 13

Ribs and End Blocks
Together in Mold

Correct them by planing, if necessary. (Figure 14.)

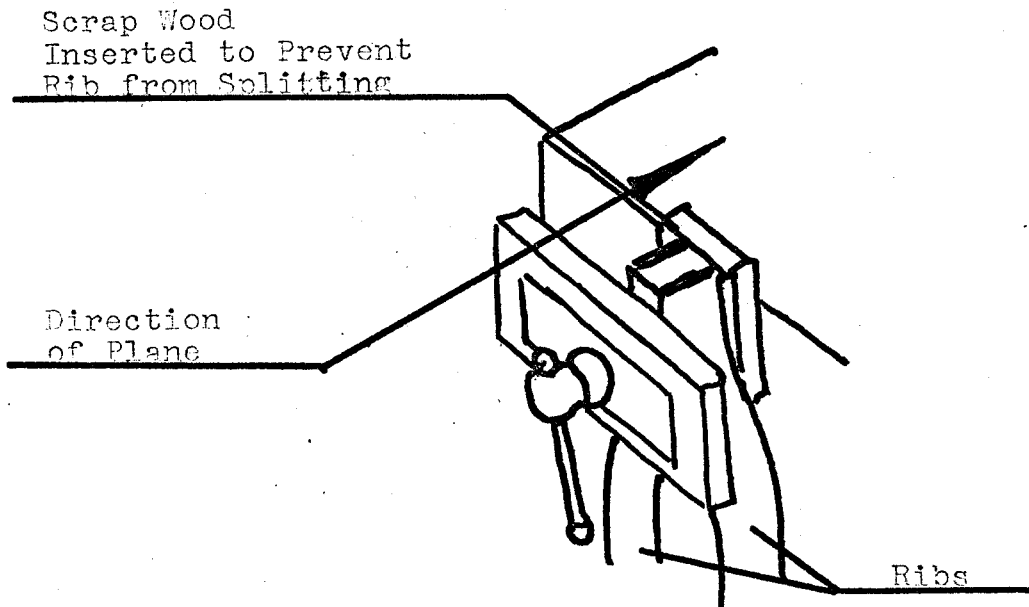


Figure 14

Showing How Ribs Are Set Up
in the Vise for Cleaning Up End Blocks

Glue Blocks

Cut out a number of glue blocks and glue them around the edges of the ribs both top and bottom. The purpose of the blocks is to permit additional glueing surfaces when the front and back are glued onto the ribs. (Figure 15.)

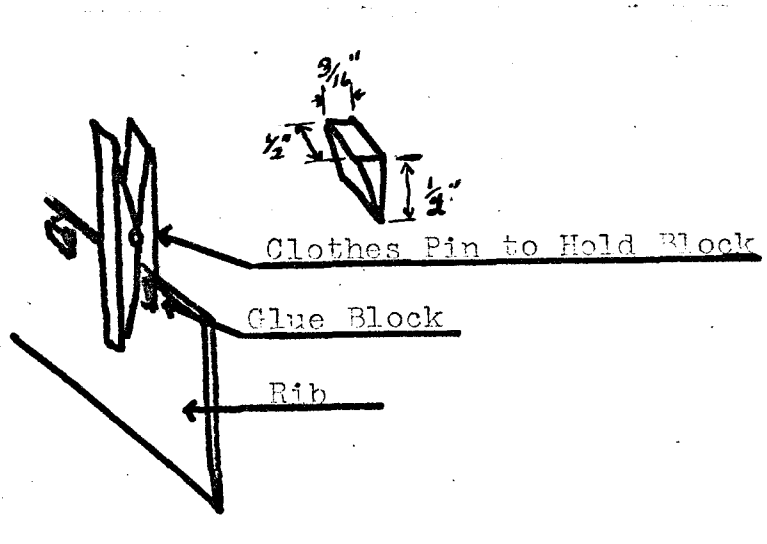


Figure 15

Glue Blocks

Dovetail Housing Joint

The head of the dulcimer is fastened to the end block by the use of a dovetail housing joint. This must be cut into the top end block with a fine saw and then chiseled to exact specifications. Extreme care must be taken to get them exact so that a good glue joint will result when the head is fitted. When this is completed, the rib assembly may be set aside. (Figures 16 and 17.)

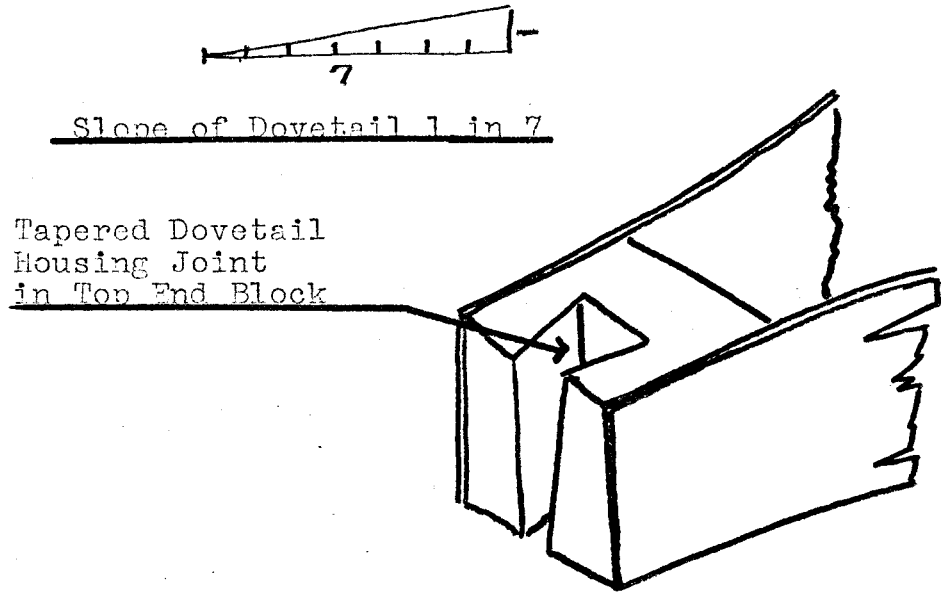


Figure 16
Dovetail Housing Joint

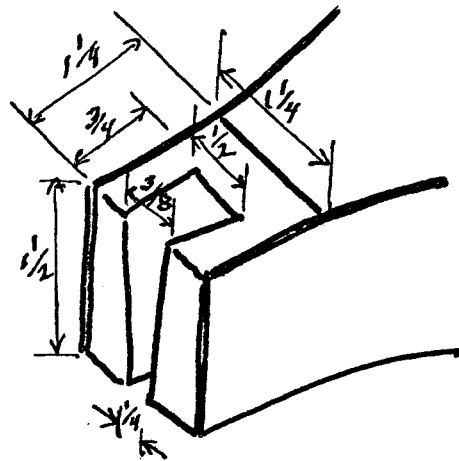


Figure 17
Dimensions of Dovetailed Housing

The Back

The shape of the back is marked out on the wood and an additional margin of one-quarter inch all around is allowed to permit trimming and cleaning up later on. Be sure to leave extra for the heel. (Figure 18.)

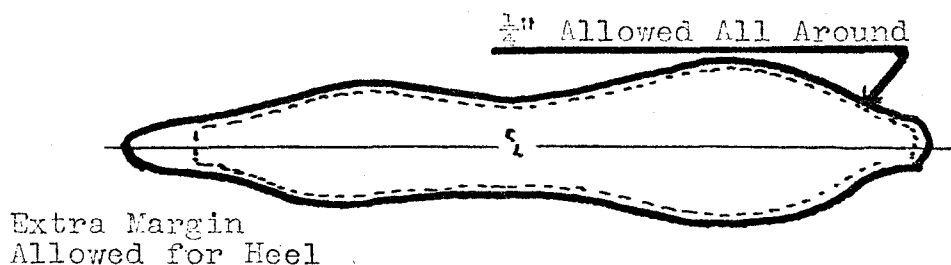


Figure 18

Outline of Back Marked Out

Some dulcimers have a curved back which is produced by the addition of struts. Since this procedure adds a considerable amount of effort to the construction process, and does not significantly improve the sound, it will not be discussed.

To glue the back on, place the rib assembly into the mold and place the back on the ribs. Make any adjustments necessary to fit the back and mark the location with a sharp pencil. When satisfied that the back is going to fit, clear the work area of everything but the ribs, back, a true piece of board, clamps and clamping strips, and the glue. The glueing process should be as rapid as possible without being careless. Place generous amounts of glue on all glueing surfaces and clamp the back onto the ribs. The

true board goes on the bottom side of the mold to permit a surface for the clamps on the bottom side. Be sure to place the clamping strips between the clamps and the back and do not over-tighten or dents will occur on the back. (Figure 19.)

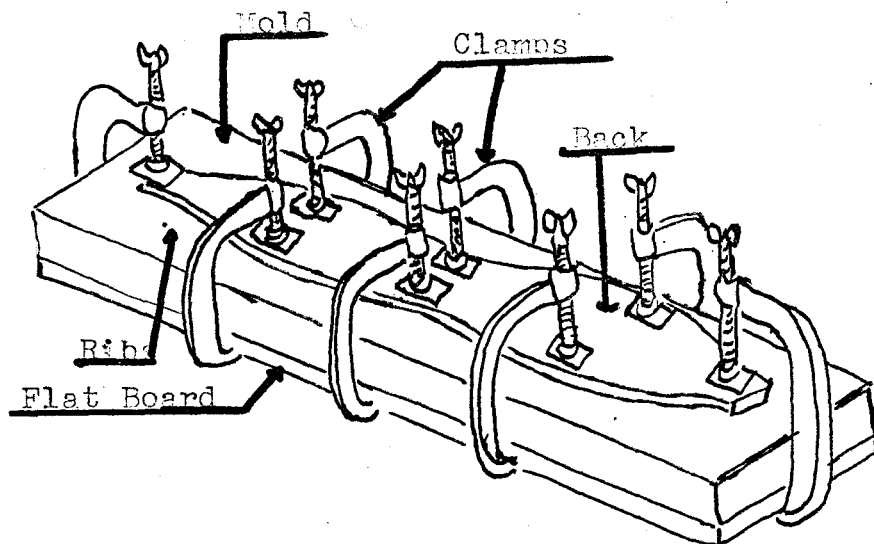


Figure 19

Clamping on the Back

Wipe off the excess glue and let dry for twenty-four hours and remove the assembly from the mold. Clean up any glue drippings that may have gotten into the dovetail joint.

The Front

The front is marked out similarly to the back, leaving the extra one-quarter inch all around the edge. The centerpiece or platform for the fingerboard is glued on next and when dry, a slot is cut out as shown in figure 20.

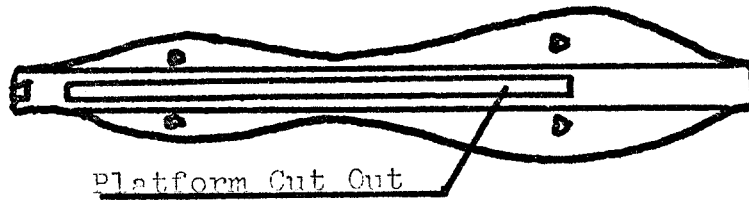


Figure 20

Platform and Front

This makes the dulcimer as light as possible and makes it a completely hollow box or shell. Decide what soundhole designs are wanted and mark them on the front. Cut them out with a very sharp knife such as are available at hobby shops. Be very careful for a slip will ruin the front. After the soundholes have been cut out, then mark out the dovetail at the top and cut out the waste.

Check the fit of the assembled front to the ribs in the same manner as the back was fitted. When satisfied that the front fits perfectly, apply the glue to the glueing surfaces and clamp the front on, using the same clamping precautions that were used on the back. Make sure there is no twist in the body. Remove the excess glue and let dry for twenty-four hours and remove the clamps.

Use a spoke shave and carefully trim off the edge of the back and front to within three thirty-seconds of an inch of the body. Use caution when trimming the piece that will cover the heel of the head, for this will break very easily. True up the front block with a plane and make sure

the dovetail joint is true and clean of all glue. The platform may also be trued and smoothed at this time.

The Head

The head may be of any design desired by the maker. The first thing to consider prior to designing the head is what type of tuning device is going to be used. Friction pegs are traditional but machine heads or tuning screws are used by some. This discussion will deal only with the use of the friction pegs.

Mark and cut out the head in rough form as shown in figure 21, but do not cut out the dovetail as yet. Make sure that the head will align perfectly with the axis of the body. When assured of this, mark out the dovetail and cut it out well on the waste side of the lines so that a good margin is allowed for cutting the fit.

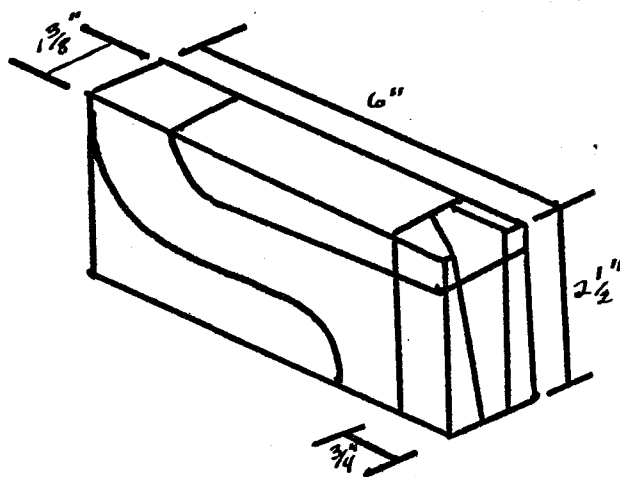


Figure 21

Head Marked Out

Coat the inside of the joint on the body with chalk and insert the dovetail on the head and remove. Any high points will show and these should be carefully dressed down and the fit tried again. Continue this until a perfect fit is obtained. Following this step, the head may be shaped to its rough final shape. (Figure 22.)

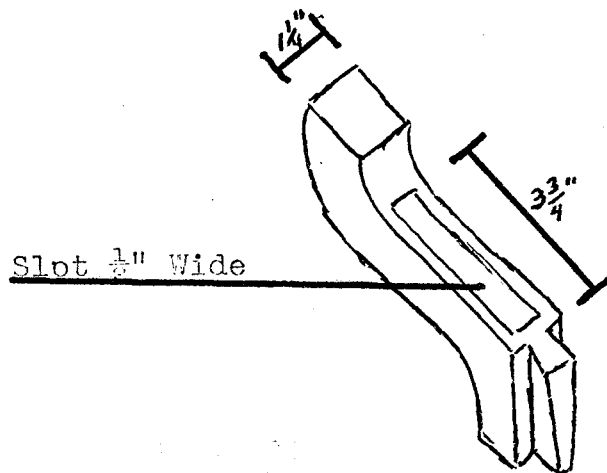


Figure 22

Rough Final Shape

Obtain the pegs from an old violin or purchase new pegs. Mark out and drill the holes for the pegs. (Figure 23.)

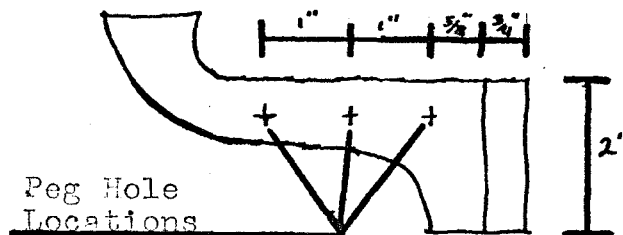


Figure 23

Peg Holes

Remember that the pegs are tapered, so the holes must be drilled undersize and then cut to the proper tapered shape by use of a small bladed knife or other small tool. Check the peg fit frequently so that the holes are not cut oversize. Cut out the slot in the head using either a drill and chisel or a router. This cut may extend all the way through as in a violin peg box or only deep enough to permit stringing the pegs. Use a rasp and sandpaper to finish the head to its final shape. (Figure 24.)

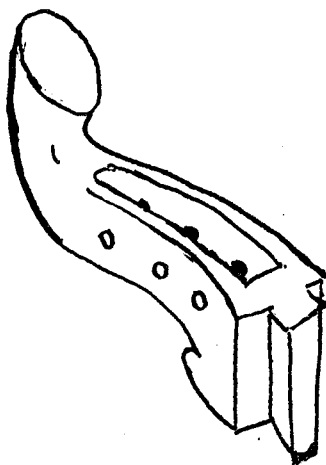


Figure 24

Final Shape

After the head is completed, try the fit dry and make sure it is in line both ways with the body. If everything checks out in line, then apply glue and clamp, making sure the clamp does not force the head out of line and that the platform is flush with the head. Remove the surplus glue and let dry for twenty-four hours and remove the clamps.

The Fingerboard

The fingerboard is cut and trimmed to fit the platform. Next measure the exact location of the frets and mark them using a square and a marking knife. (Figure 25.) Use a saw with a kerf the same width as the fret wire and saw in the cuts to one-sixteenth inch deep.

When the cuts are all made, set the fingerboard on the platform to make sure it fits flush, and make any necessary corrections and glue and clamp. Remove the surplus glue and let dry for twenty-four hours. Check with a straightedge to make sure it is flat, true and straight. Any excess can be planed away. The saw cuts are then deepened a fraction more than the tang of the fret wire.

The Frets

Mandolin fret wire is perhaps the best substance to use to make the frets although it first must be serrated with a file on the tang to allow it to bed down firmly when hammered in. Cut the fret wires to length and hammer them in. Many light taps are far better than several hard blows, for the instrument is delicate and will not take hard hammering. Some makers bed the frets in glue or plastic wood so the frets will not loosen with use. When this is finished, the frets may be rounded with a file so the hand can move easily across them. Check the level of the frets with a straightedge and file down the high ones with a file that is perfectly flat. At this time the ivory or bone top-nut can be glued into position.

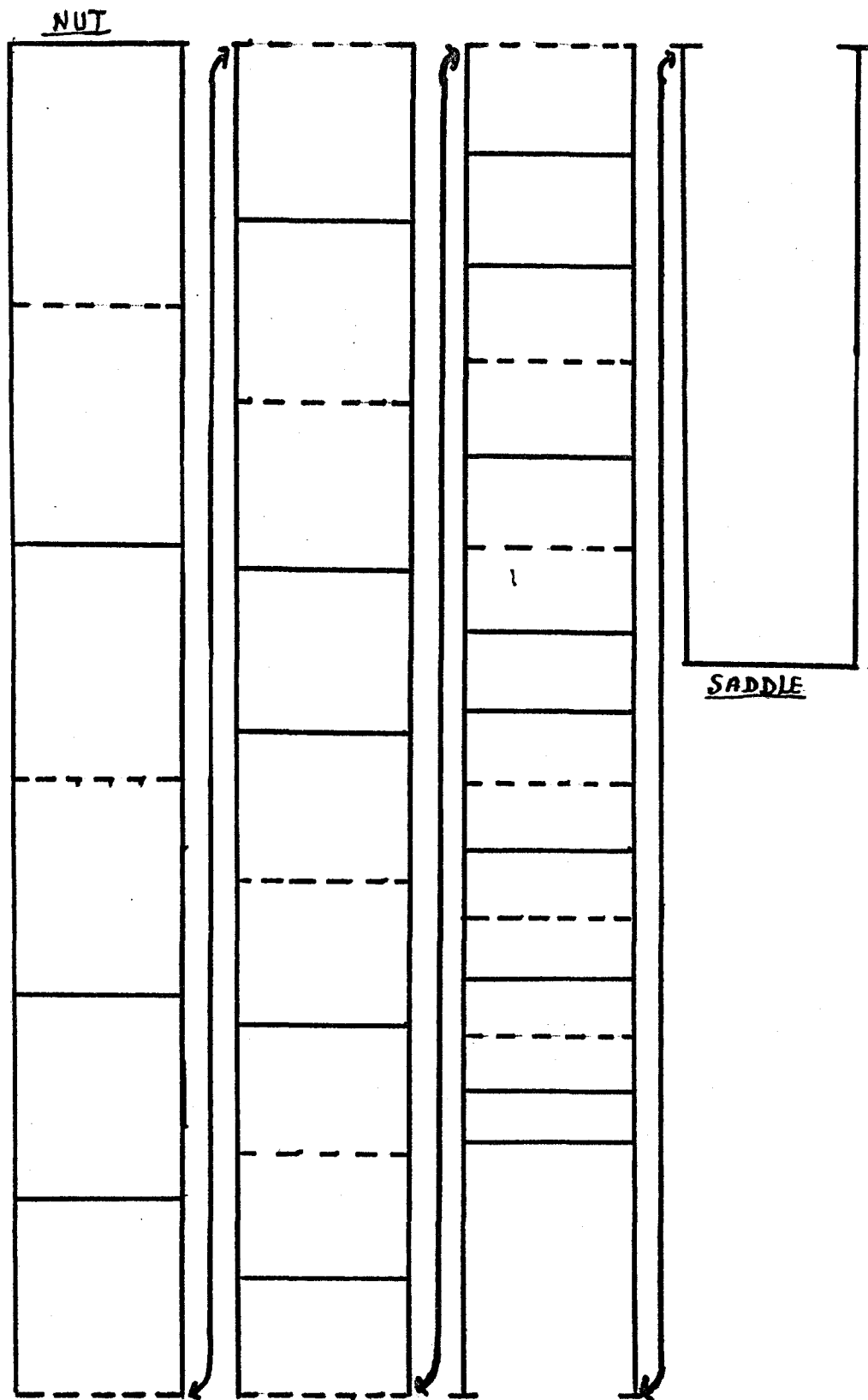


Figure 25

Fingerboard Fret Positions

The Facing Pieces

Two pieces of hardwood are glued onto the front of the dulcimer; one to take the saddle and the other the pins that anchor the strings. (Figure 26.)

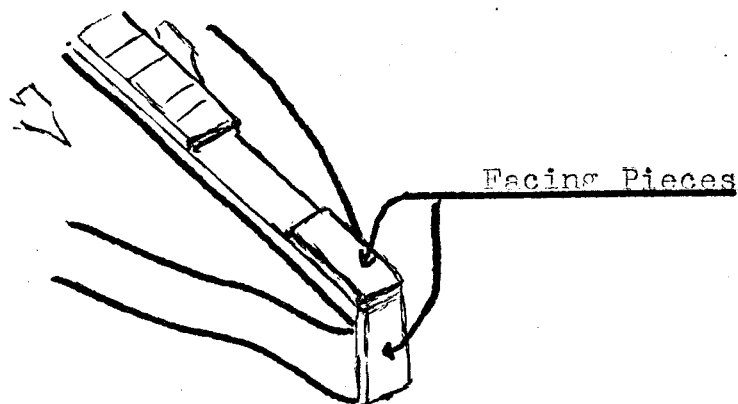


Figure 26

Facing

After the glue is dry, a small piece of wood is cut out of the front where the strings go and a piece of ivory or bone is fitted in and glued to prevent the strings from cutting into the wood. (Figure 27.)

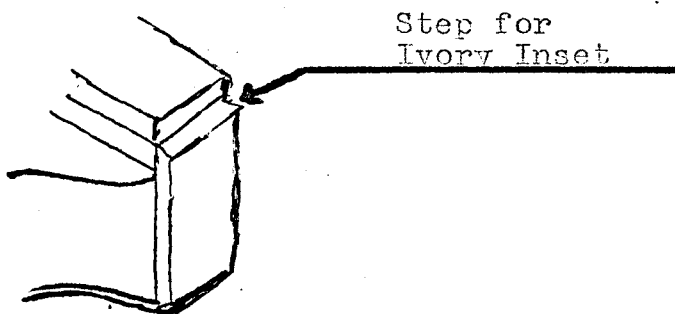


Figure 27

Inset Location

Mark and drill the holes for anchor pins enough smaller than the pins so that they must be tapped in.

(Figure 28.)

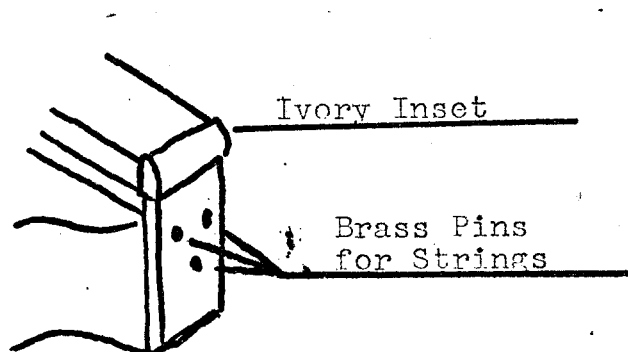


Figure 28

Brass Pin Locations

Fit the ivory or bone saddle and nut and glue in-to place.

The Action

Drive in the brass pins and file in the cuts in the saddle and the nut for the strings. This determines the action of the strings and must be adjusted to suit the maker. The lower the action the easier it is to play, but the more likely it is to develop a buzz in the strings against the frets.

The Finish

Use a very fine sandpaper and round all of the edges in preparation for applying the finish. The old makers used nothing more than a hot linseed oil finish with a buffing that gave the instrument a soft, glowing appearance. If a hard, high gloss finish is desired, any one of the modern

finishes on the market will suffice, although it is very difficult to repair mars and scratches on this type of surface.

The Strings

Any light gage wire instrument strings will work to string the instrument. Do not use any of the heavier type strings, for they may collapse the instrument from the high tensions involved. Banjo strings are commonly used for stringing the dulcimer, using one fourth and two first strings. After the strings are on, do not try to tune the instrument until a complete understanding of the tuning process is reached.

Chapter 5

PLAYING TECHNIQUES

Dulcimer playing techniques include three areas of study: (1) tuning; (2) the use of the noter; and (3) string manipulation. It is important to remember that the information given is basic and does not include advanced techniques.

TUNING THE DULCIMER

To help in understanding the directions for tuning, a brief word concerning the instrument and how it is held is in order. The strings are numbered one, two, and three, with one being nearest the player. The instrument is placed on the player's lap with the fingerboard and head extending to the player's left. The left hand handles the noter and is in control of pitch change. The right hand is used to sound the strings, either with a plucker or with the fingernails.

The frets of the dulcimer are arranged to give a diatonic scale starting with the third fret. The instrument has no set pitch and is repitched from song to song depending on the singer's vocal range. Caution must be exercised when tuning so that the strings are not tuned too high or broken strings will result. To play in other modes, the relationship of the strings to each other is altered and a

different fret is selected to begin the scale. The discussion will include ⁵ tunings for the Ionian, Dorian, Phrygian, Lydian, Mixolydian, and Aeolian modes and shall commence with the Ionian.

Ionian Tuning

Tune the third string to a tension that is not extreme. Press it at the fourth fret and pluck it. Tune strings one and two to that pitch. The tuning is sol, sol, do for the first, second and third strings respectively. Fret three of the first string is the tonic or do of the Ionian scale.

Dorian Tuning

Tune to the Ionian tuning and then press the third string at the third fret. Sound the string and tune the first string down to this pitch. The second string remains the same. The tonic then begins at the fourth fret.

Phrygian Tuning

Tune to the Ionian mode and then press the first string down at the second fret and lower the pitch of the string until it is in unison with the open second string. Strings two and three remain the same. The tonic begins at the fifth fret.

Lydian Tuning

Tune to Ionian and press the first string down at the third fret and lower the pitch until it is in unison

with the open second string. The tonic begins at fret six.

Mixolydian Tuning

Tune to Ionian and press the third string down at the seventh fret and tune string one up to this pitch. The tonic will start at the open fret or at fret seven.

Aeolian Tuning

Tune to Ionian and press string three at the sixth fret and tune the first string up to the corresponding pitch. The tonic is at the first fret.

USING THE NOTER

The noter is a small piece of wood approximately two inches in length and is held in the left hand in such a manner as to press down upon the first string without touching strings two and three. The pitches are changed in this way. Some dulcimer players use the thumbnail on the left hand in lieu of a noter; however this is more difficult and takes much getting used to. When playing, the noter is not lifted from the string to change notes, but rather the pressure is lightened as it is moved from fret to fret.

STRING MANIPULATION

There are many variations in string manipulation. Those to be discussed are basic to dulcimer playing and include strumming, feathering, beating, finger scratches and finger picking.

Strumming

Strumming is perhaps the easiest way to play the dulcimer. The thumb plucks the first string and after a slight pause continues across the remaining strings. The strings are not to be strummed after every melody note, but only when the melody is sustained. When the melody line is moving, use only the first string and strum when the melody note is held.

Feathering

This type of melody and strum is played with a feather, traditionally a goose or turkey quill. To prepare the quill, remove the barbs from the quill and with a sharp knife slice the thick base off, cutting diagonally as if making a quill pen. To produce a simple strum, hold the quill in the right hand with the thin end of the quill pointing down and draw it across the strings with a twisting motion of the wrist.

The production of a pause variation strum is done by reversing the quill so that the heavy end is down with the uncut portion resting against the first string. The quill is pushed against and over the first string, which produces the melody note and comes to rest against the second string. After a brief pause, the quill continues on, grazing across string two and three.

Beating

The dulcimer is played at times by striking the

strings with a thin, flexible stick, or the quill. To use the quill, grasp it by the thin end and strike the strings with rapid, rebounding taps. The special beating stick is used the same way and must be quite thin and very flexible.

Finger Scratches

At times, reference is made to finger scratches. This is nothing more than picking the first string with the thumb and using the first finger to cross all three strings in a grazing, back and forth manner.

Finger Picking

Finger picking is not considered to be a traditional form of playing the dulcimer, but in order to present more of its musical capabilities, picking must be considered.

To begin, the noter is discarded and the first finger of the left hand is used to determine the melody. The thumb on the right hand picks the first string at the same time the second finger picks the third string. The first finger then plucks the second string. This is a basic picking technique and may be varied.

The basic ripple, which is nothing more than a more complicated picking, is performed by the thumb picking the first string, the first finger picking the second string, the second finger picking the third string and the first finger picking the second string again.

Chapter 6

SUMMARY

The Appalachian Plucked Dulcimer most likely originated from the German Scheitholt through the evolutionary developments of the Norwegian Langeleik, the French Epinette des Vosges, and the Dutch Hummel. Its design has remained virtually unchanged from that of its ancestors.

The traditional construction methods are based on simplicity and permit ease of construction with just simple hand tools.

The dulcimer is tuned in the Greek modes and is a living example of an instrument type used in the sixteenth and seventeenth-centuries in Europe.

The instrument may be played in a variety of ways, each of which produces sounds unique only to the dulcimèr.

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APPENDIX A

Construction Materials List

Ribs: Walnut, mahogany, or maple
2 pieces 32" x $1\frac{1}{2}$ " x $1/12$ "

Back: Walnut, mahogany, or maple
1 piece 32" x 6" x $1/12$ "

Front: Spruce or walnut
1 piece 32" x 6" x $1/12$ "

Head: Walnut, mahogany, or maple
1 piece 7" x $2\frac{1}{2}$ " x $1\frac{3}{8}$ "

Fingerboard: Rosewood or walnut
1 piece 32" x $1\frac{1}{4}$ " x $3/16$ "

Platform: Walnut or mahogany
1 piece 32" x $1\frac{1}{2}$ " x $3/8$ "

Top and Bottom Blocks: Pine
2 pieces $1\frac{1}{2}$ " x $1\frac{1}{4}$ " x 1"

Mandolin Fret Wire: 1 yard

Ivory Saddle, Nut and Inset: Old knife handle or deer antler
3 pieces $1\frac{1}{2}$ " x $\frac{1}{4}$ " x $\frac{1}{2}$ "

Three Violin Tuning Pegs

Three Brass Escutcheon Pins

Banjo Strings: 1 fourth and 2 firsts

Hide Glue: 1 quart

APPENDIX B

Construction Tools List

Steel Smoothing Plane

Various Sizes of Bevelled-edge Chisels (1/8" being essential)

Tenon Saw and Saw for Fret Cuts

Coping or Fret Saw (A good band saw or jig saw will meet all the saw requirements)

Hand-drill and Drills of Various Sizes

Glue Pot

Files Including a Wood Rasp

Eight to Ten 6" C Clamps

Various Screwdrivers

Marking and Cutting Gauge

Steel Straight Edge

Pliers and Wire Cutters

A Fine Oil Stone

APPENDIX C

Dulcimer Makers List

1. Amburgey, Jethro
Hindman Settlement School
Hindman, Kentucky
2. Bailey, John
47 Central Road
Wembley, Middlesex
England
3. Behlen, Stinson R.
Slaton, Texas
4. Christian Appalachian Project
Lancaster, Kentucky
5. HBRE, Inc.
Box 341
Minneapolis, Minnesota 55440
6. Hughes Company
8665 W. 13th Ave.
Denver, Colorado 80215
7. Jeffreys, A. W.
Appalachian Dulcimer Co.
Box 683
Staunton, Virginia
8. Ledford, Homer
Berea College Industries
Berea, Kentucky
9. McSpadden, Lynn
The Dulcimer Shoppe
620 E. Broadway
Forest City, Arkansas
10. Presnell, Edward L.
Banner Elk, North Carolina
11. Richie, Jean
7A Locust Ave.
Port Washington, New York

12. Steele, Henry
Belvidere, Tennessee
13. Tigno, John D.
Frankfort, Kentucky
14. Tugel, Ake
12 Boulevard
Sea Cliff, New York