

Comments on “Making a Ukulele.”

While the Panama-Pacific International Exposition is almost always touted as the event which popularized the ‘ukulele on the Mainland, the instrument had in fact already enjoyed several years of notoriety on the West Coast, particularly in California. “Bird of Paradise,” a hugely successful theatrical



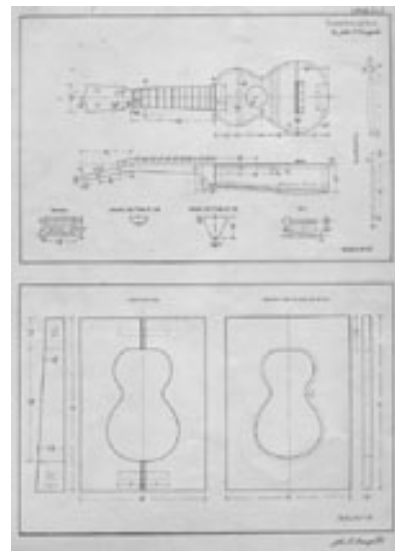
potboiler which featured a quintette of native Hawaiians with guitars and ‘ukuleles, opened in Los Angeles in 1911, and debuted on Broadway the following year, Sears, Roebuck & Co. began selling ‘ukuleles in 1914 and no fewer than a half-dozen ‘ukulele method books had been published by the time Jonah Kumalae was awarded the Gold Medal for his exhibit at the P.P.I.E. in 1915. So it isn't surprising that John Bangerter, a Los Angeles “manual arts” teacher, would be among the first

on the Mainland to publish plans for making an ‘ukulele.

Written for the secondary—or high school—shop teacher, and originally published in *The Industrial-Arts Magazine*, a Milwaukee, Wisconsin based publication, in December, 1915, the plans are of the most rudimentary kind, more remarkable for their early appearance than accurate directions. For instance, the fret placement is poorly measured, and while the resulting instrument might resemble an ‘ukulele, its intonation would surely be faulty. The copy that this electronic file was made from survived precisely because its previous owner was interested in making an ‘ukulele: “Making a Ukulele” is boldly inscribed and underlined on the cover. In the same large manilla envelope with the magazine were a 1917 catalog from C. F. Martin and several ‘ukulele templates and unused mahogany ‘ukulele “sets.”

-John King

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MAKING A UKULELE.

By J. E. Bangerter, Los Angeles, Cal.

DURING the past two years the musical world has received a new instrument. The bringing of the Ukulele to the Pacific Coast States has created much interest. It is used in accompanying the voice in the native Hawaiian melodies or in other Popular Airs. It is an instrument that can be played with only a little instruction. The construction is so simple that many students in Manual Training Shops of Southern California have made their own instruments.

Being a teacher of Manual Arts I became interested in the making of the Ukulele and found that the instrument would be a good project for advance grade or highschool students to make, provided careful instructions were given. The following is the method that I used in the Carroll Park School of Long Beach, California, and found it to be both satisfactory and practical.

Materials Required for the Ukulele.

1 Pc. Tobasco Mahogany 1 3/4 x 2 1/4 x 12" (Neck)
1 Pc. Tobasco Mahogany Veneer 1/16 full x 6 1/2 x 20" (Top and Bottom)
1 Pc. Tobasco Mahogany Veneer 1/16 x 1 1/2 x 27" (Sides)
1 Pc. White Pine 1/4 x 6 20" (Support, Braces, etc.)
1 Pc. White Pine 1/2 x 2 x 2 1/2" (Sounding Post)

1 Pc. White Pine 5/8 x 10 x 14" (Clamping Board)
1 Pc. White Pine 2 1/4 x 10 x 14" (Form)
1 Dozen Frets
1 Violin A String
1 Violin E String

Directions.

The first part to make is the form for the bending of the sides of the Ukulele. The form will require a piece of wood 2 1/4 by 10 by 14 inches in size as stated in lumber bill. Lay out the outline of the Ukulele body as shown on drawing. Make the slant required before the form is sawed out. In sawing, be sure to use a saw that has enough kurf that will be equal to the thickness of the veneer. After this form is made we are ready for the bending of the sides. Take a piece of string or paper and measure the distance around the outside of the inside of the form, to find out the exact length of the strips of veneer that are required for the sides. Cut them to the dimensions found and boil in water or steam for one hour, when they will be ready to put in the form. Be careful not to let any blisters form when clamping. Use two bar clamps to hold form together and do not remove clamps for 24 hours. The surplus wood may then be removed and the clamps taken off being careful to mark the edge that is to join the top of the Ukulele, so there will be no mistake when the neck and the sides are glued together.

While the sides are drying, the neck, sounding post, supports, braces, keys and bridge may be made according to the drawing.

The sides are fastened to the neck by making a saw cut just large enough to let the veneer slip into and then glued. Also glue in the sounding post and leave the glue set over night. In order to get the sounding post in the center, measure half the distance around the side by the use of a string or a strip of paper. The supports which are made out of the 1/4" piece of white pine may now be glued in around the sides; their shape being traced from the inside of the form used in forming the sides. After the glue that holds the supports to the sides has set, the braces may be mortised in to the supports by making a half lap joint and gluing.

To make the top: Trace from the form the shape of the top and back on the piece of mahogany 6 by 20 inches and allow about 3/8 inches all around the outline drawn, as it will be easier to make the exact size after it has been glued on. Cutout the hole and then glue to sides. When gluing on the top, be sure to keep the center of the neck and the body of the Ukulele in a straight line and lying in the same plane. To do this clamp the instrument to a long, flat board. Leave the instrument set over night and then remove clamps.

We may now proceed with gluing on the back. In order to get the desired curve in the back a device for clamping will have to be made which is as follows: Take the 5/8 inch board and trace the outline of the body of the Ukulele as shown in drawing. Make another line 1/4 inch inside of this outline which will be the required line to saw on. This leaves the outside piece whole. This follow board will

allow the back to rise and help to make a good joint at the same time. Before gluing on back, moisten it with hot water to make it bend easier, and then clamp on tight. Dry out back by holding over a fire and then remove clamps. It may now be glued and clamped again and allowed to dry for 48 hours. Wedges may be driven between follow board and back to help make a better joint.

The frets and bridge may then be glued on after the top and back have been trimmed even with the sides, and the Ukulele sandpapered all over until all the mill and tool marks have been removed.

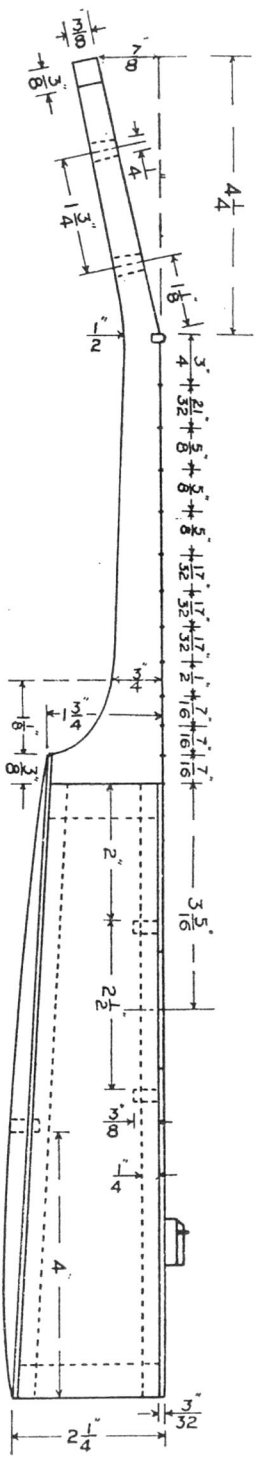
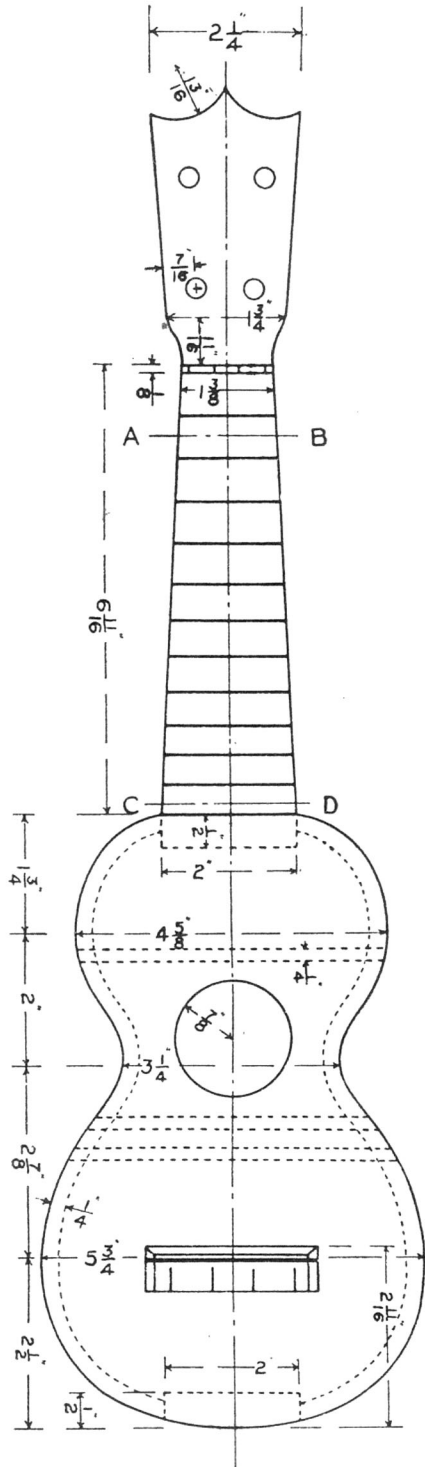
Finishing the Ukulele.

After it has been sandpapered give the instrument a heavy coat of boiled linseed oil, and then put on a coat of paste wood filler. Rub this filler in good with the hands; and then remove the surplus with a rag and allow to dry over night. Several coats of shellac or varnish may then be put on, rubbing down between coats with pumice stone and finishing with rotten stone. If a flat finish is desired use water with pumice stone, or oil, if a polish is cared for.

Note—The word ukulele is pronounced u-ku-lay'-lee.

UKULELE

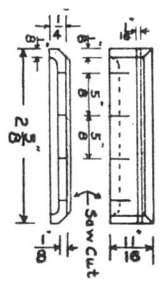
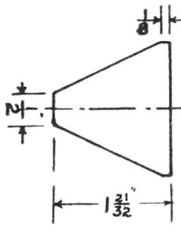
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By John S. Carpenter.



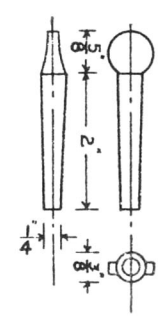
CROSS SECTION AT AB



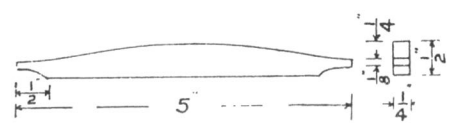
CROSS SECTION AT CD



KEY

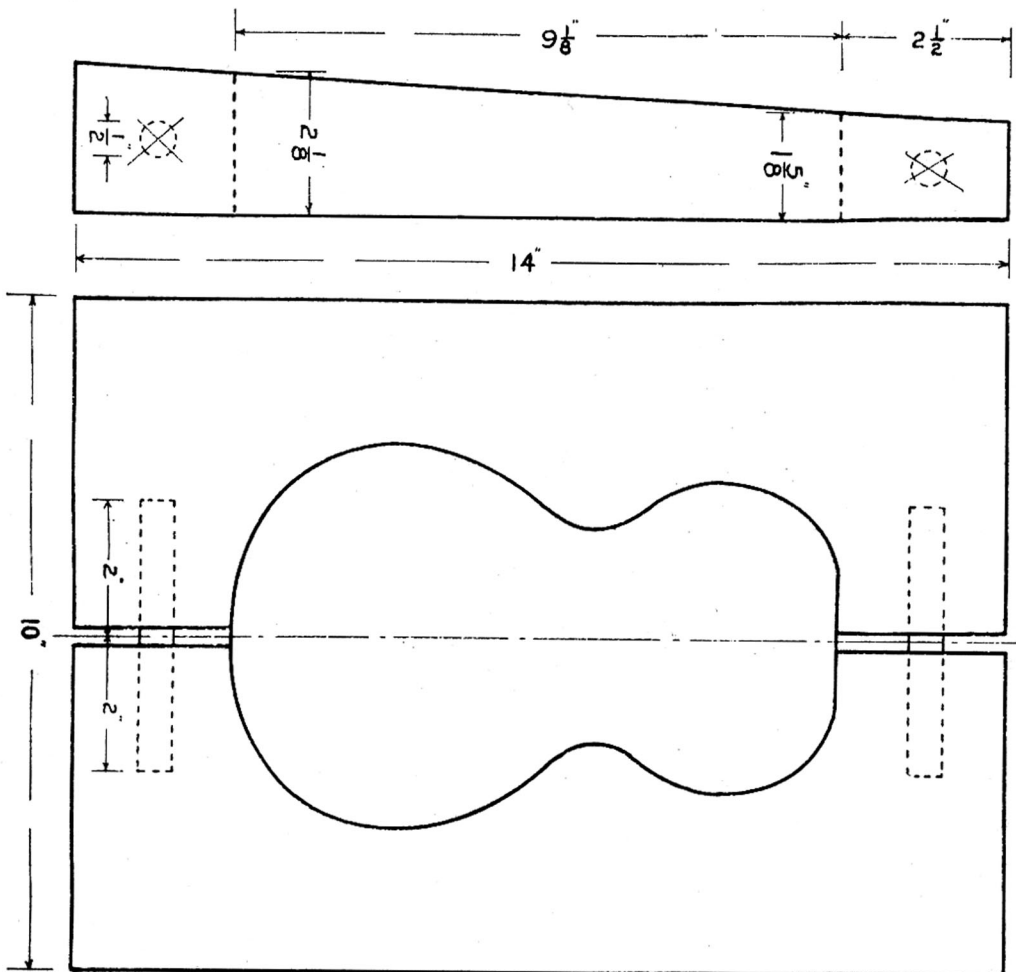


SUPPORTS

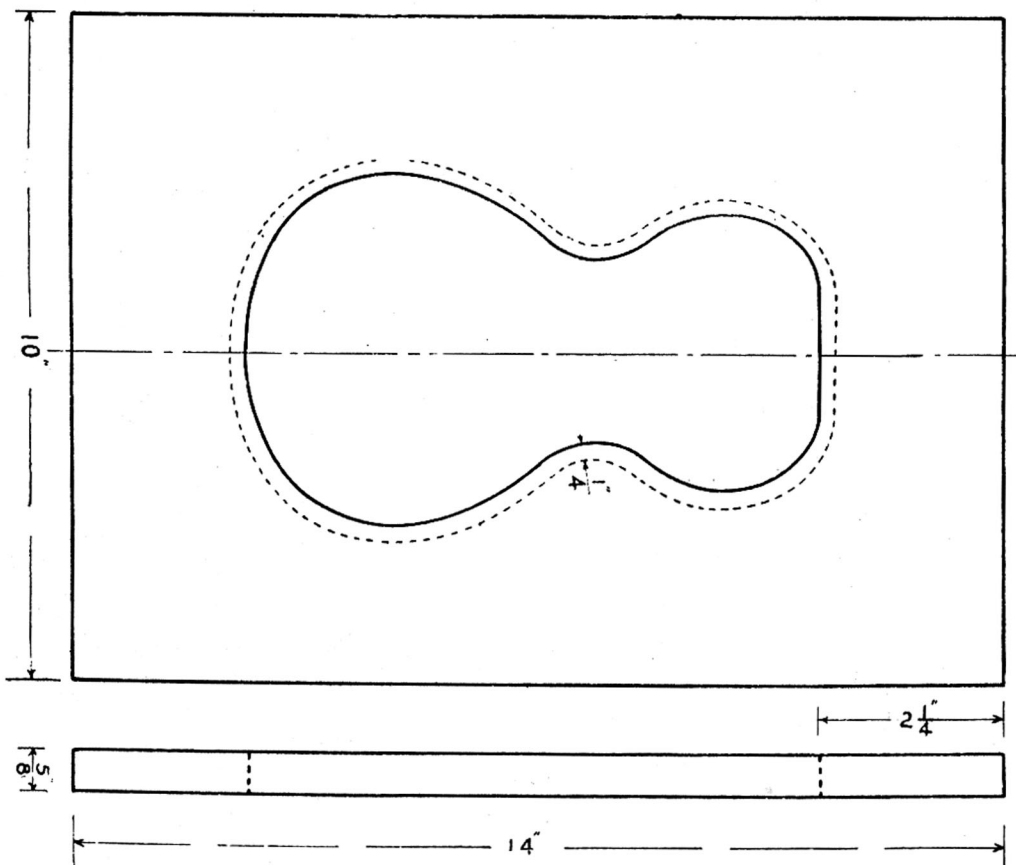


SCALE: 6"=1'-0"

FORM FOR SIDE



BOARD FOR GLUING ON BACK



SCALE: 6"=1'-0"

John E. Bangerter