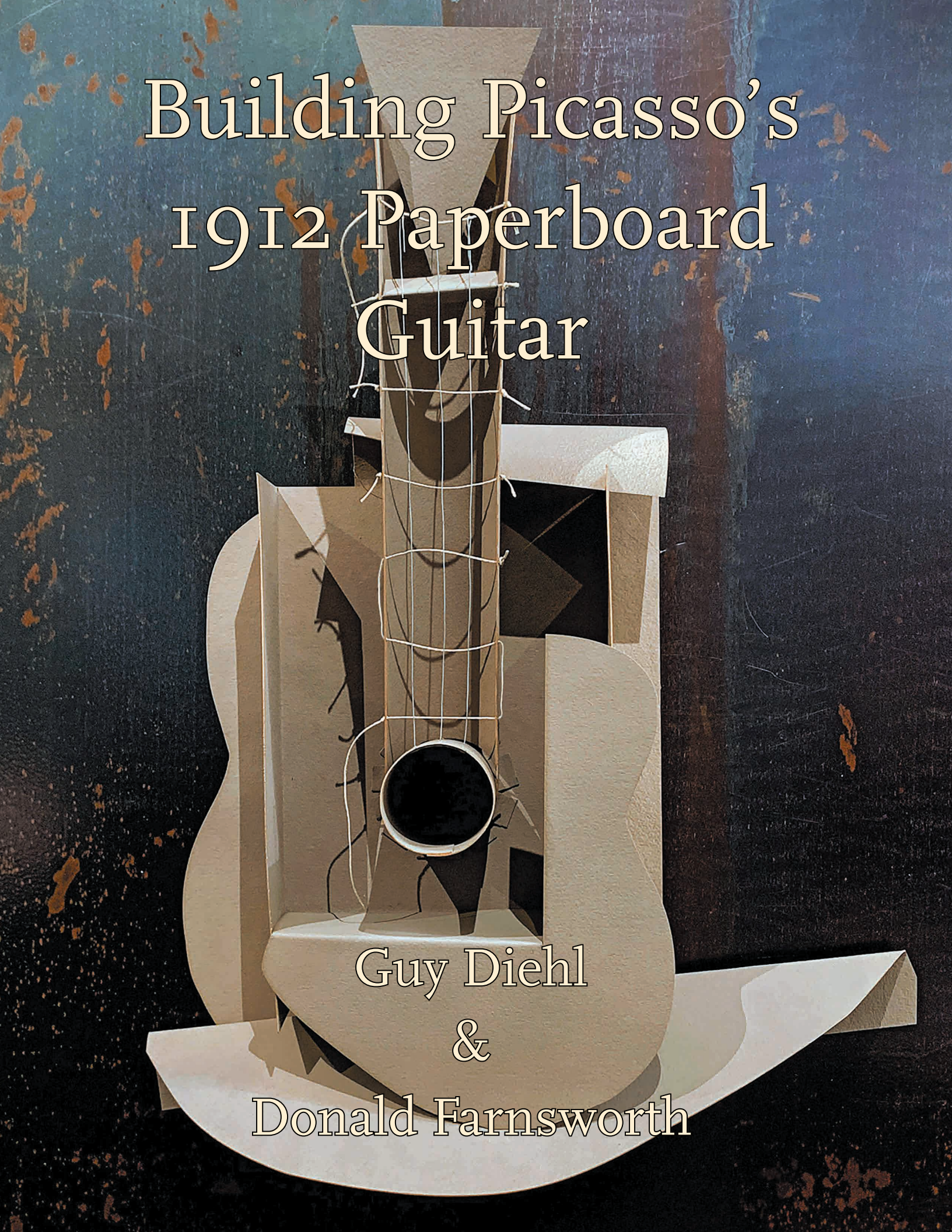
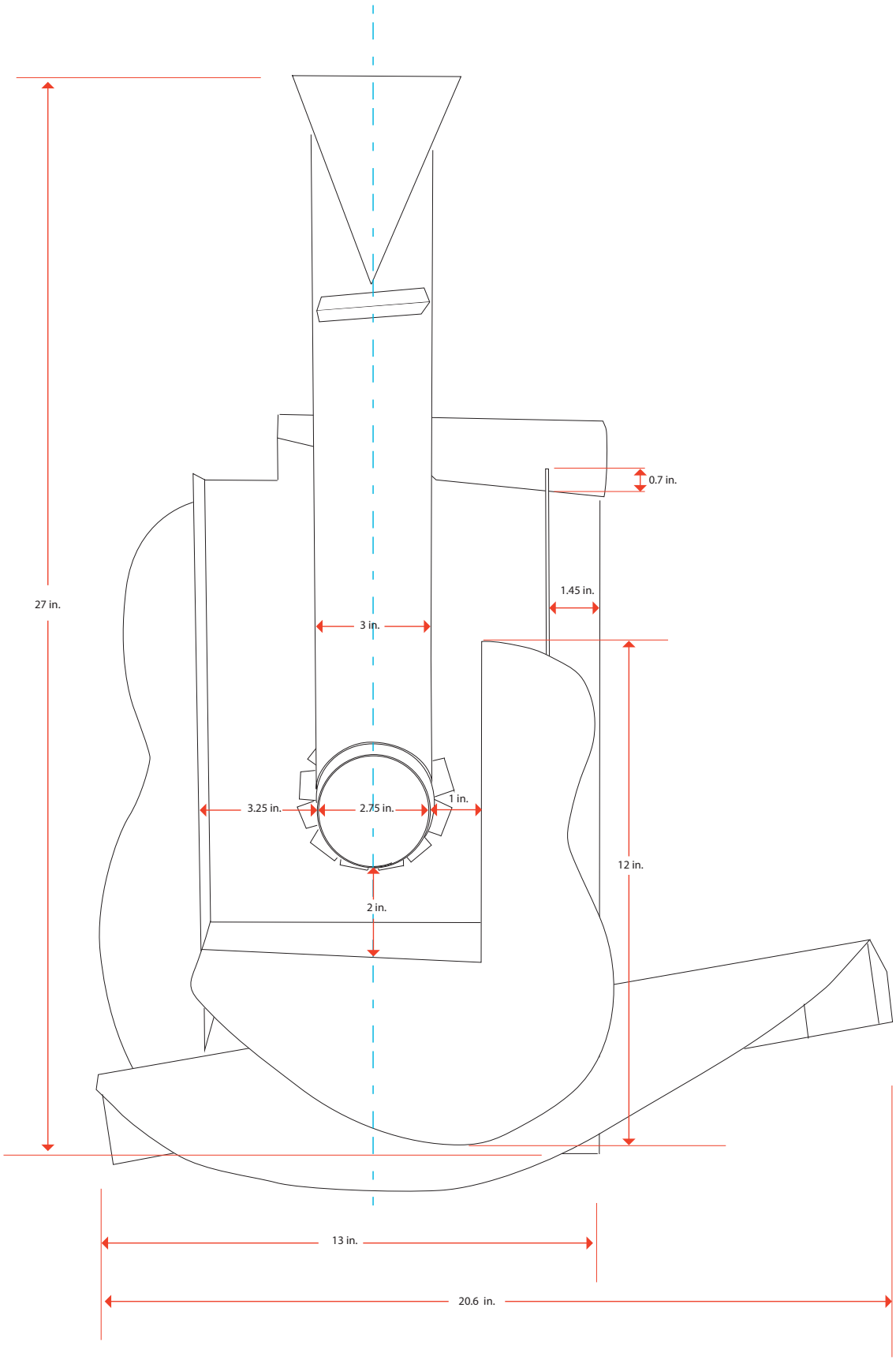
Building Picasso's 1912 Paperboard Guitar



Guy Diehl
&
Donald Farnsworth


27 in.
0.7 in.
1.45 in.
3 in.
12 in.
3.25 in.
2.75 in.
1 in.
2 in.
13 in.
20.6 in.

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Guy Diehl

&

Donald Farnsworth

MAGNOLIA EDITIONS

Building Picasso's Paperboard Guitar has no affiliation or association with Picasso or the Picasso Administration. This instruction guide is for use in the United States of America. Not for download in other countries.

Guitare (Guitar), oil and charcoal on canvas, oval, 72.4 x 60 cm
National Museum of Art, Architecture and Design, Oslo

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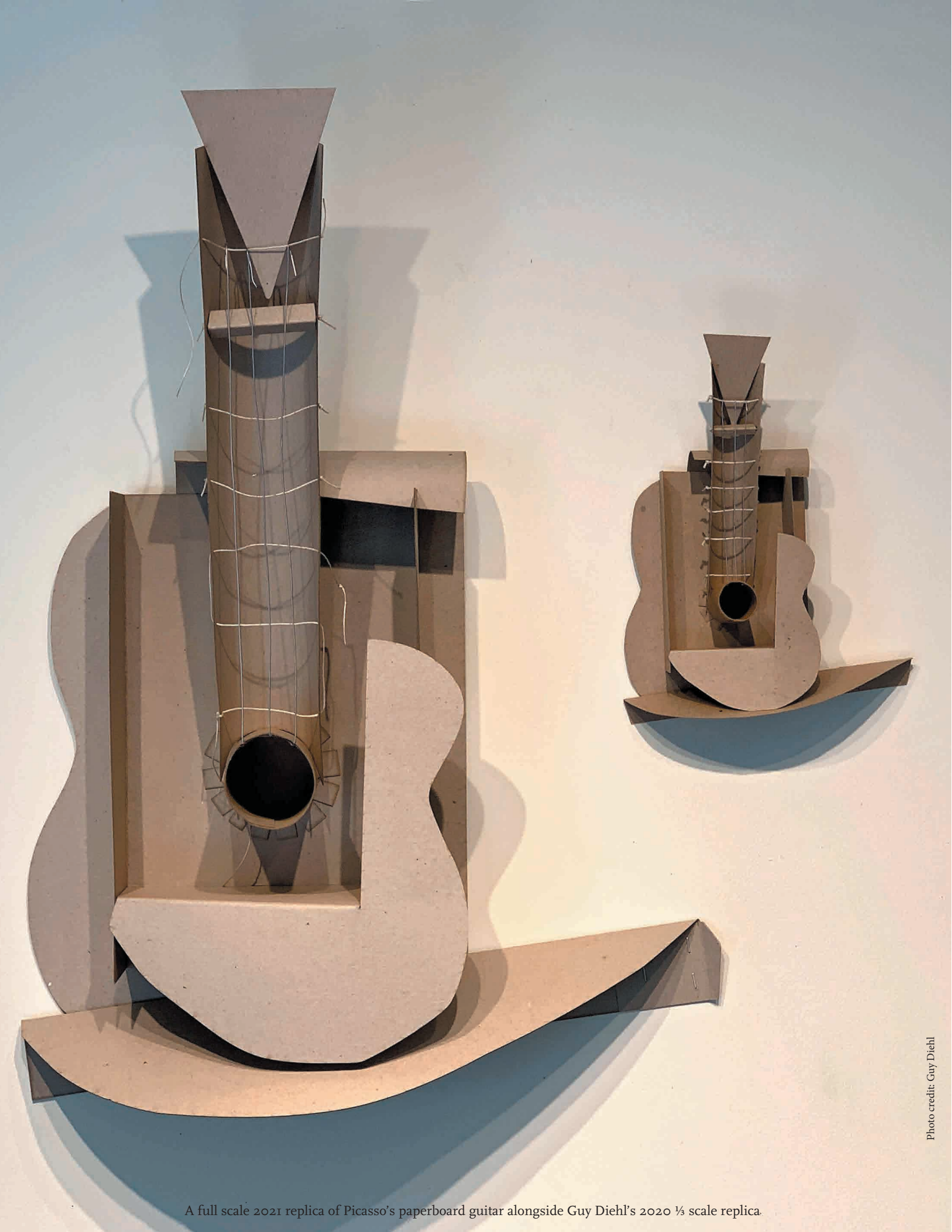


A full scale 2021 replica of Picasso's paperboard guitar alongside Guy Diehl's 2020 ⅓ scale replica.

Photo credit: Guy Diehl

Introduction

In October of 2020, despite the COVID-19 Pandemic, Era and I donned our masks, followed social distancing guidelines, and drove to Marin County to visit Guy Diehl at his studio. For many years, Guy has been making weekly treks to our studio, Magnolia Editions in Oakland, CA, to work on various projects – our reciprocal visit to his studio was long overdue.

Although the tour was expeditious, we explored every nook and cranny. We were impressed to see Guy's well-organized studio, tools, easel, props, brushes, and masterful artwork.

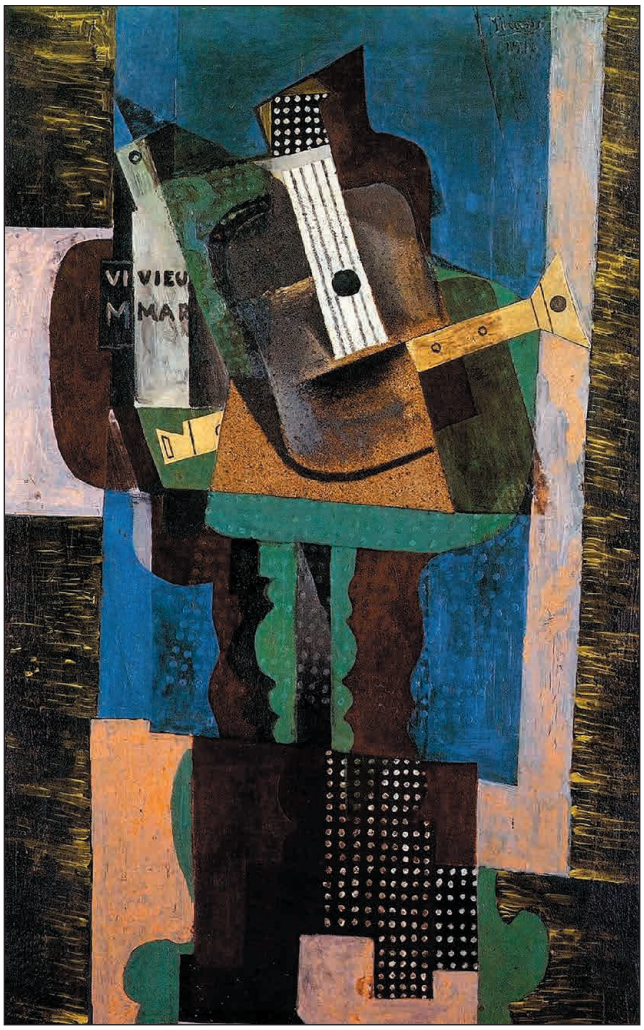
It was then that Era's sharp eyes landed on a scale model of a Pablo Picasso paperboard guitar hanging on a wall under a flight of stairs. She asked, "Where did you get that? "I built it," was Guy's response. On Guy's wall, it is no surprise to find this non-representational cubist abstraction. Diehl is a thoughtful and contemplative representational still-life painter and highly inquisitive. We also noticed portraiture works, minimal canvases, found objects and conceptual works all on display on our tour of his creative space.

Pablo Picasso, 1916, Still-life with Door, Guitar and Bottles, oil on canvas, 152.4 × 205.7 cm
Statens Museum for Kunst, Copenhagen

He explained that Picasso's cubist paperboard guitar had recently gone out of copyright, (having been made before 1923 and feature in 1913 and 1923 publications: *Les Soirées de Paris, N° 18, Revue littéraire et artistique* and *Les Contemporains, Jean Cocteau PICASSO,* Paris Librairie Stock). He researched and constructed it for a challenge and enjoyment – "I have always wanted to try to make one." I understand his sentiment; it is a pivotal collage work that expanded our collective mind. From Cezanne to Picasso, we inherit a focus on form, color, and the ability to re-experience, re-arrange and re-interpret our fast-moving world. This collage was a turning point. It does not make music; it expanded our minds and changed art forever. Prior to this "three-dimensional cubism," there was no thought to sculpt a guitar unless a person played it within a narrative composition. Picasso breaks through, deconstructs the guitar, makes it a 'Thing' –

Deceptively simple yet extraordinarily profound.

Loving the piece's historical importance and this being the moment of copyright freedom, I responded: "Let's produce a full-scale handmade paper version at Magnolia. I would love to vectorize your templates for producing a guitar of any scale. We can laser cut the parts and focus on materials and the making. Do you still have the templates?" (Indeed, Guy retained templates and sketches he had produced for this ⅓ scale model.) And here begins our quest to reproduce, describe and "open-source" Picasso's full-scale paperboard guitar.



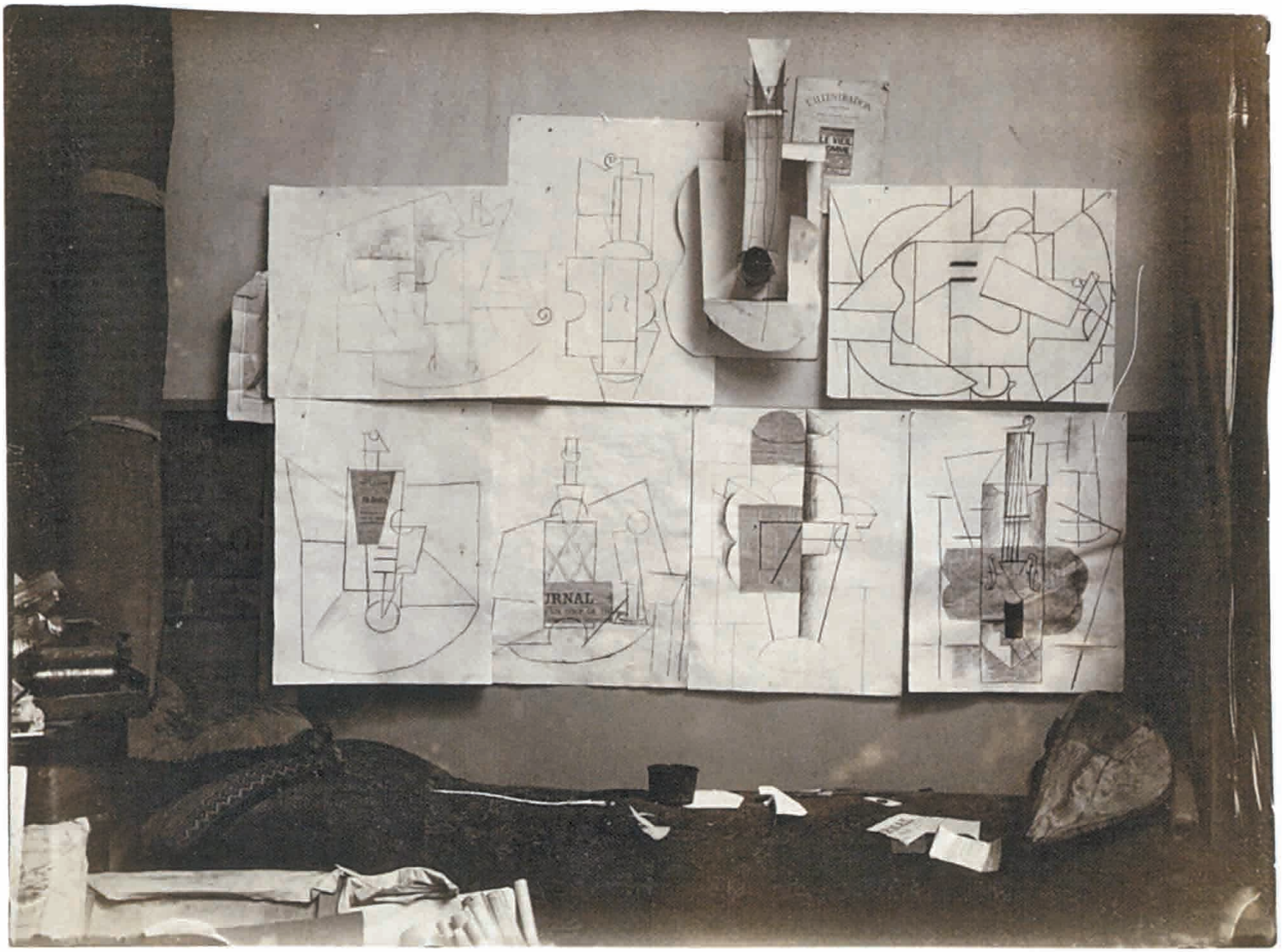
Pablo Picasso, 1916, Guitare, clarinette et bouteille sur une table (Guitar, Clarinet, and Bottle on a Pedestal Table), dimensions and whereabouts unknown

This brilliant example of cubism found in Picasso's paperboard guitar of 1912, as well as his metal guitar of 1914, and his guitar drawings from the same period are well documented and described – sometimes featured on the NY MoMA website, where there is much to learn about this cubist reinterpretation of a guitar. The process of recreating Picasso's guitar provides us a fascinating glimpse into his approach. While deconstructing and deciphering his collage, we stand in awe of the brilliant artist's ingenuity. What seems manageable and straightforward is challenging and demanding of our attention and skills in the making.

Picasso's eight shapes fit together in a seemingly simplistic manner, yet are challenging and involved in the making, and complex in the illustration and explanation. Where paperboard is concerned, the paper's grain must be parallel to the bends. Stray from this, and the *neck*, *sound hole*, and *guitar back* will not cooperate. To some extent, one can channel what Picasso was up to – at least partly – his pure spontaneous creativity.

At Magnolia these past five months, Guy and I have made dozens of laser cut models, reworking the vectors, adding refinements at every iteration with endless modifications to the illustrations and text. Master printers Nicholas Price and Tallulah Terryll operate the large Trotec laser, making the cuts and scoring in the paperboard that allow Guy and me to focus on the model design, while alleviating most utility knife work.

Pablo Picasso, 1912, Paperboard Guitar | Courtesy: The Museum of Modern Art, New York

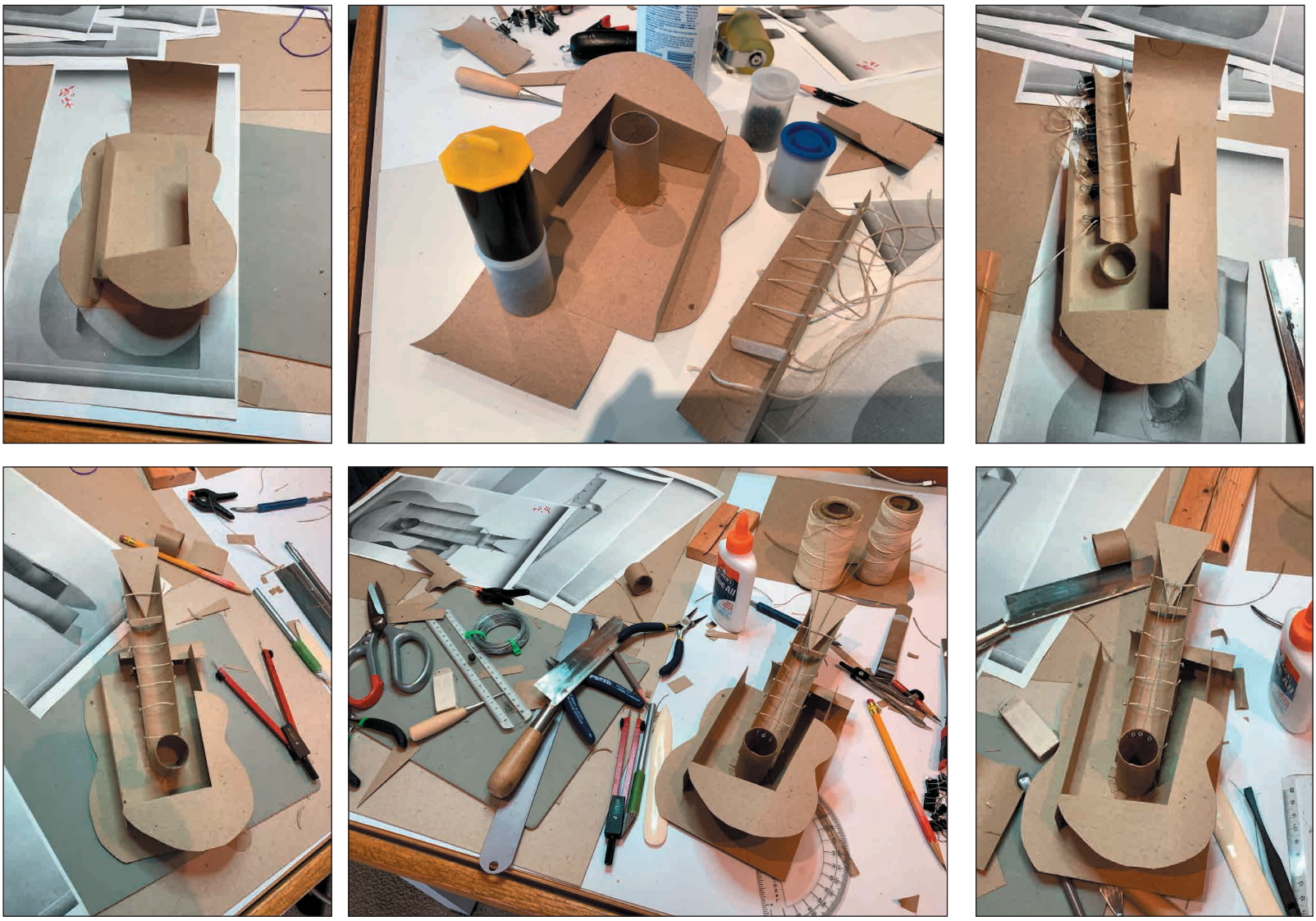


Picasso: Guitars 1912-1914 | Paris studio photo – Courtesy: The Museum of Modern Art, New York

In this utterly enjoyable yet painstaking exercise, we take license here to remake a new, pristine expression of his work; we swore no oath to Picasso (but we do channel his spirit). Those who venture to build Picasso's guitar also have options and judgments to make – Nevertheless, like the maestro, we pursue delight, pleasure, and satisfaction. So the questions arise; do you create a rough cut, beaten, creased, skewed, and aged rendition, or make something clean, smooth, straight, and plumb? The choice is yours, the maker. Although we present the clean, smooth, and refined model, distressing and skewing are entirely possible and quite acceptable using the templates and instructions herein.

Picasso constructed the sheet metal guitar two years after the paper version. In the metal guitar, most of the eight shapes coincide in scale and form to the paperboard version, indicating he likely used a set of templates himself for both works – the eight primary forms – now discarded or lost.

Picasso's choice of a monochromatic construction stresses the importance of light and shade within the work. Our attention is drawn to the movement, pattern, geometric



A constructing sequence of Guy Diehl's 2020 ⅓ scale Picasso guitar

Photo credit: Guy Diehl

and organic shapes that appear when light is cast on Picasso's guitar. This shape-shifting alerts and attracts our attention, begging to be deciphered, giving us an ever-changing, complex, and contemplative exercise in re-experiencing our world, taking us out of our comfort zone of understanding and sameness.

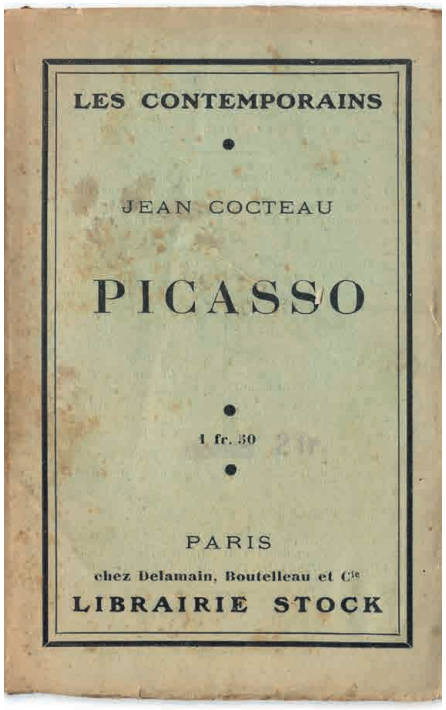
Not all of Picasso's guitar texture comes from its 109 years of age; Picasso used a recycled paperboard box, paper tape and twine to hold his construction together – added textural layers of complexity. By using the guitar parts as templates, rather than bending, folding, and gluing them into a collage, it is possible to build a replica out of any flat material; (book board, distressed paper, wood, painted flat surface, recycled paper or printed matter), thus taking Picasso's sculpture in a unique direction.

Our beta guitar makers are taking the collage in innovative directions and have added valuable insight into making this a better publication. It has been and continues to be a great pleasure to work with Guy Diehl on this and channel Picasso's creative spirit.

– Donald Farnsworth

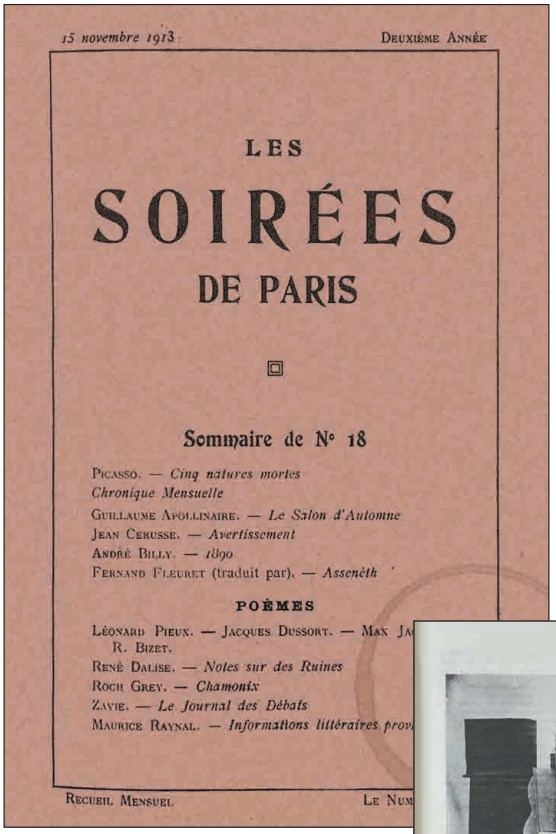
1913 & 1923 Publications

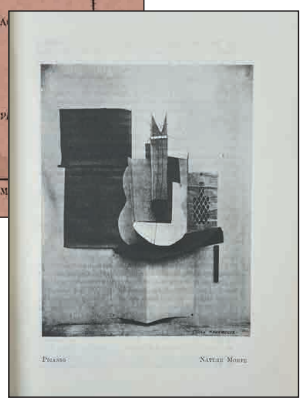
Featuring Picasso's paperboard guitar construction



La Guitare (construction) from the 1923 publication *Les Contemporains, Paris,* (front cover and p. 49).

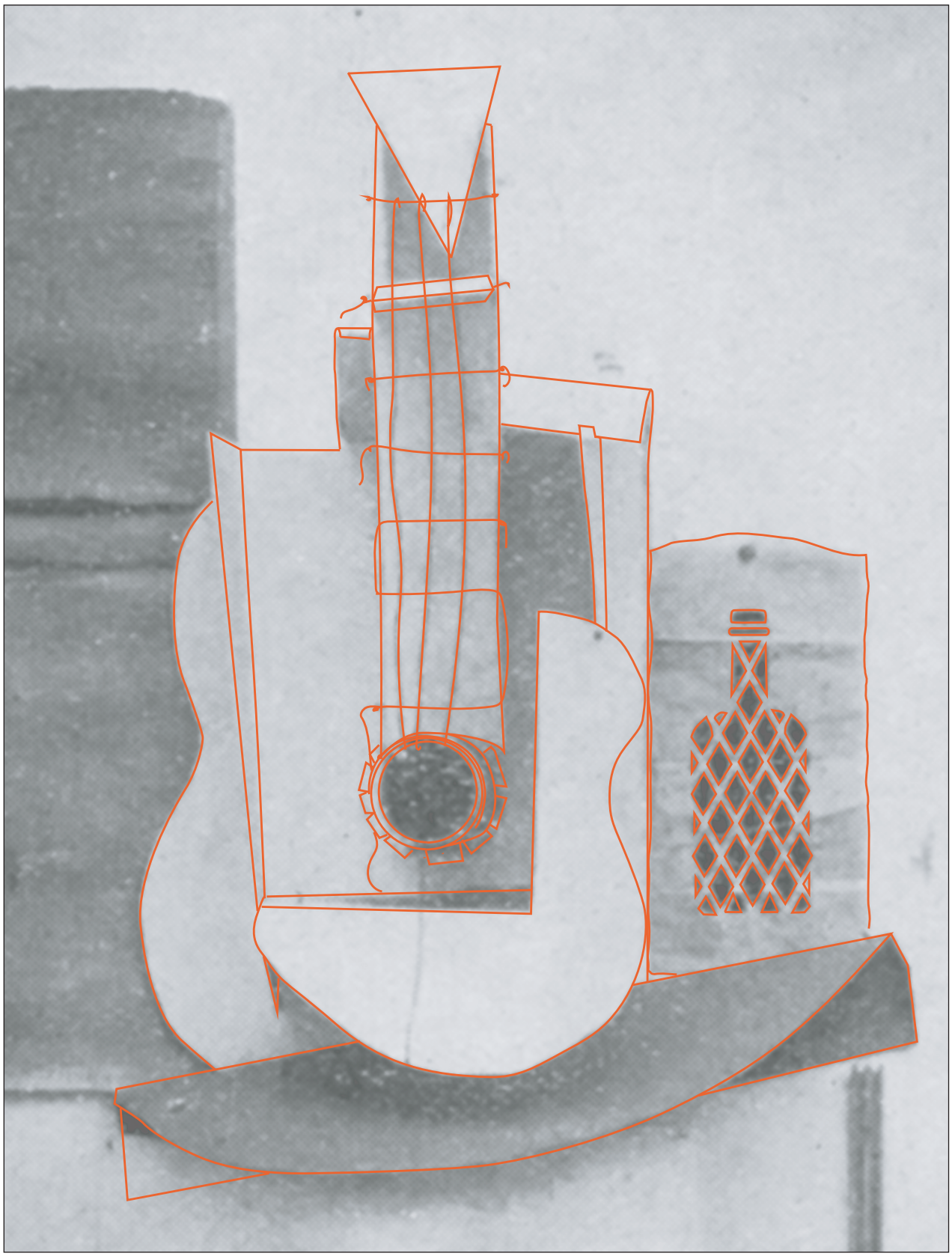
Picasso Portrait by Man Ray, from the 1923 publication *Les Contemporains, Paris,* (p. 33).





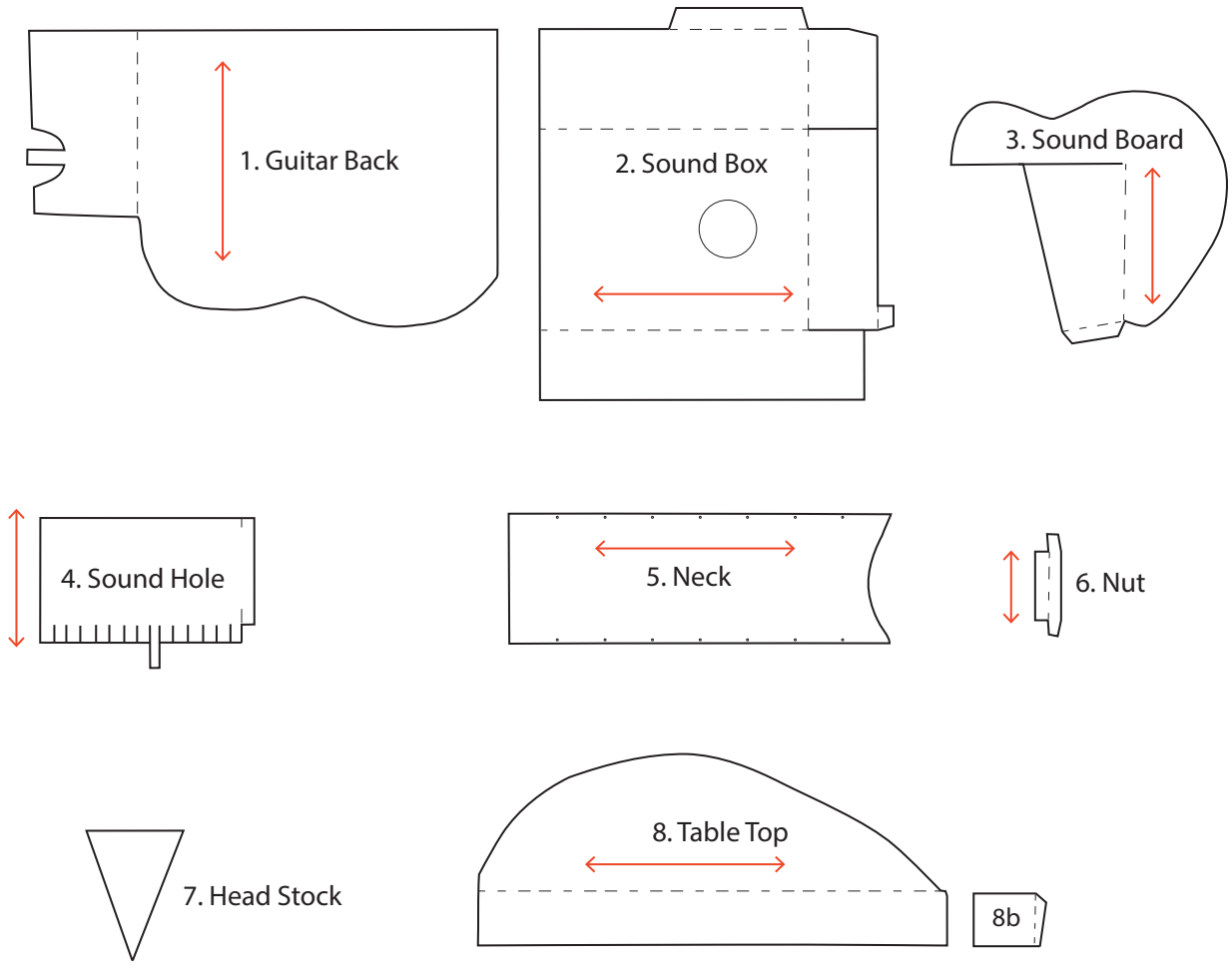
Picasso's paperboard guitar construction first appears in the 1913 publication *Les Soirées de Paris, N° 18, Revue littéraire et artistique* (p. 29).

Regarding copyright in the USA:
Artworks appearing in authorized publications before 1923 are in the public domain.



Tracing of Picasso Paperboard Guitar found in 1913 and 1923 publications: *Les Soirées de Paris, N° 18, Revue littéraire et artistique* and *Les Contemporains, Jean Cocteau PICASSO,* Paris Librairie Stock

Picasso Guitar Components

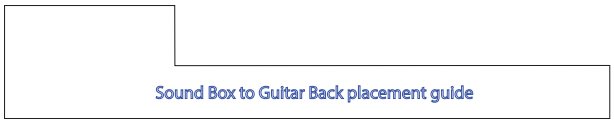


Components
These are the eight key shapes that make up Picasso's Paper Board Guitar.

Grain direction:
The grain of the paper should run parallel to curves and folds whenever possible.
For more on paper's grain see: http://printwiki.org/Grain

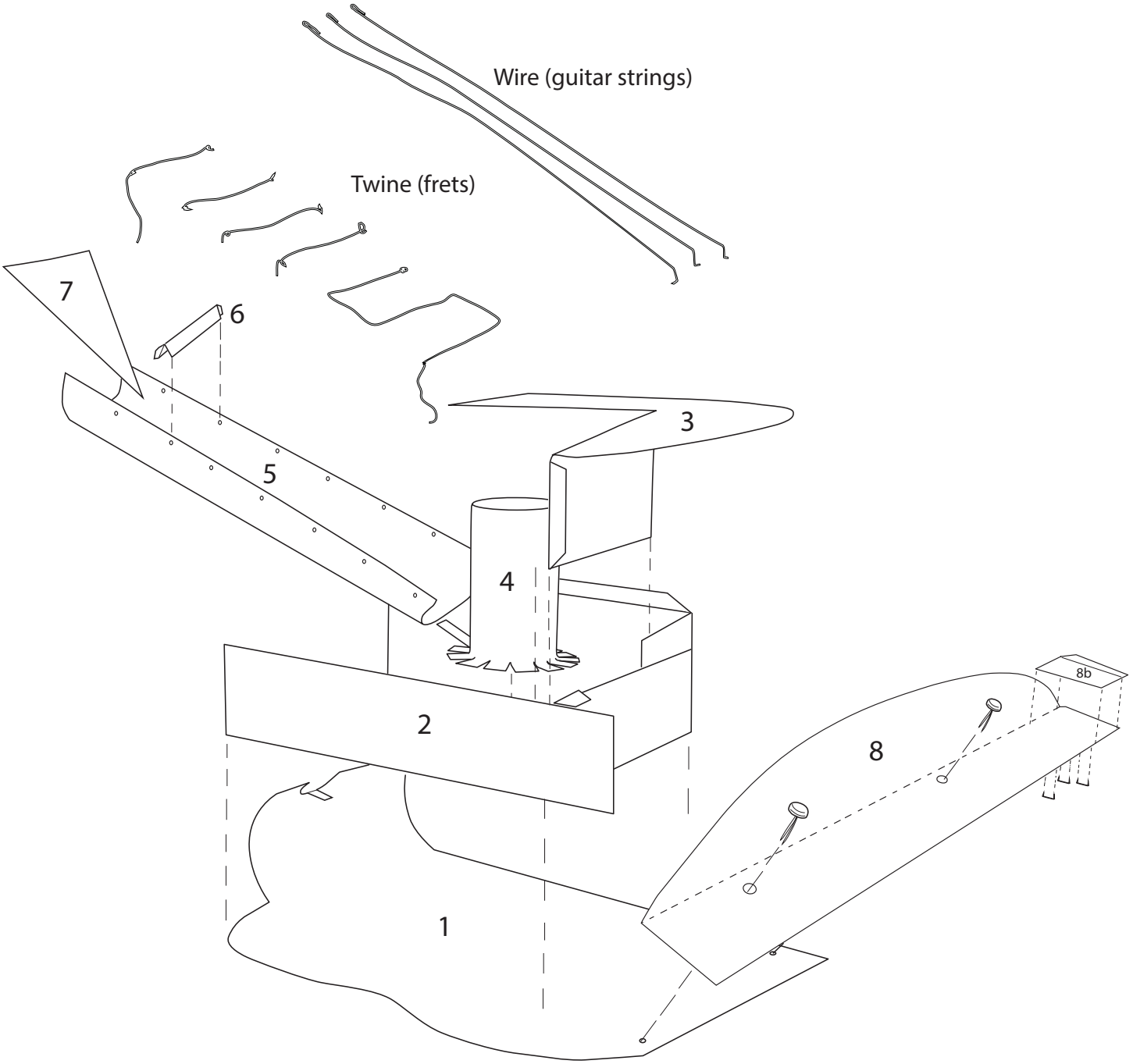
Note: 

In the above diagram of components, we have added structural tabs to Picasso's original design. These tabs and gluing locations add structure to provide long term stability to the assembled guitar collage.



In the *Template* section you will find a ***sound-box-to-guitar-back-placement-guide***. This is aligned on the right and bottom edge of the ***guitar back***, to assist in the placement of the ***sound box***.

Picasso Guitar Exploded View



Tools & Supplies

Awl

Beaker, small dish

Blotter paper or window screen

Brushes; glue and watercolor brush

Bone folder

Binder clip, clothespins, clamps

Calipers

Cloth tape

Glue; PVA or wood glue

Hot glue gun

Hot plate or burner & pot

Masking tape or paper tape

Pliers

Right triangle

Scissors

Straight edge, ruler

Twine

Utility knife

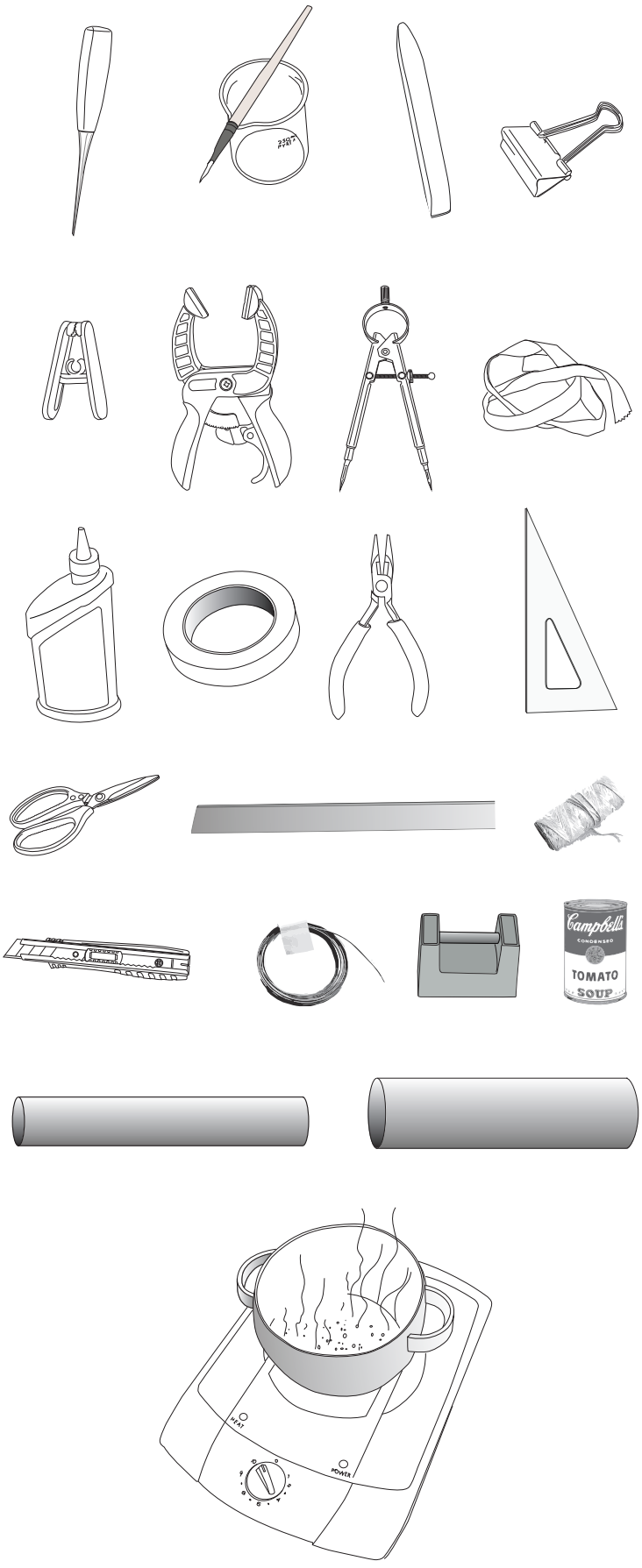
Wire (19 gauge)

Weights

PVC pipe or paper tube:

2-in. dia. x 20-in.

3 or 4-in. dia x 12-in.



Getting Started

The list of tools and supplies on the previous page might seem daunting; however, substitutes, commonly found around the studio (home), will likely suffice. Soup cans or steam iron as weights, ribbon for cloth tape, a rolling pin, for example, substitutes nicely for PVC pipe, etc.

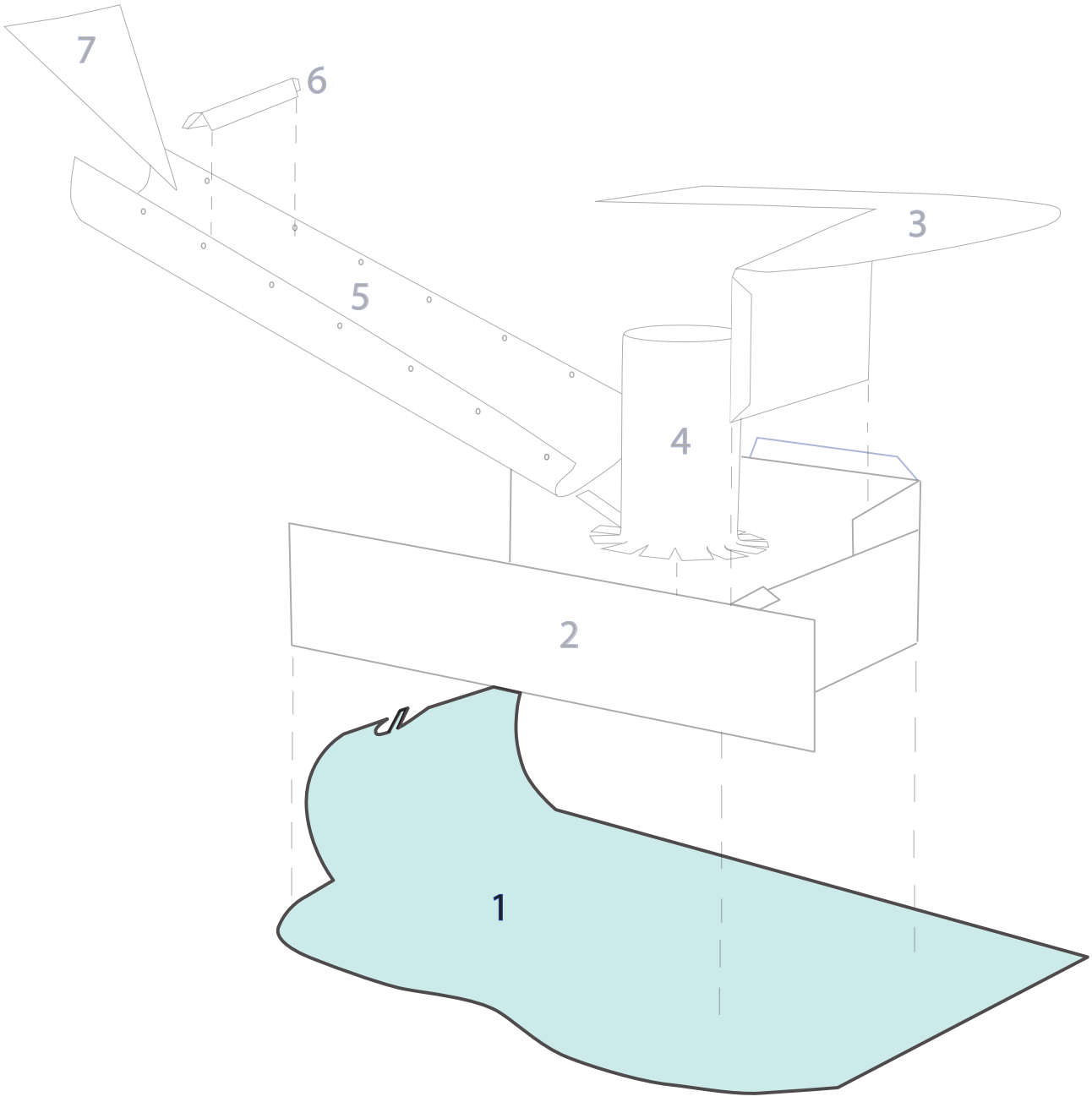
We start by steaming and bending the three parts to make assembly smooth; however, jumping around the instruction set is possible. We have a John Cleese quote hanging on display at Magnolia Editions' studio:

Nothing will stop you from being creative so effectively as the fear of making a mistake

I am and have always been in alignment with Mr. Cleese in this approach to life. For decades both Guy and I have lived by this motto and have found that we discover new processes and ideas within our "mistakes." I have one caveat, safety is mandatory; celebrate mistakes but at the same time, stay safe.

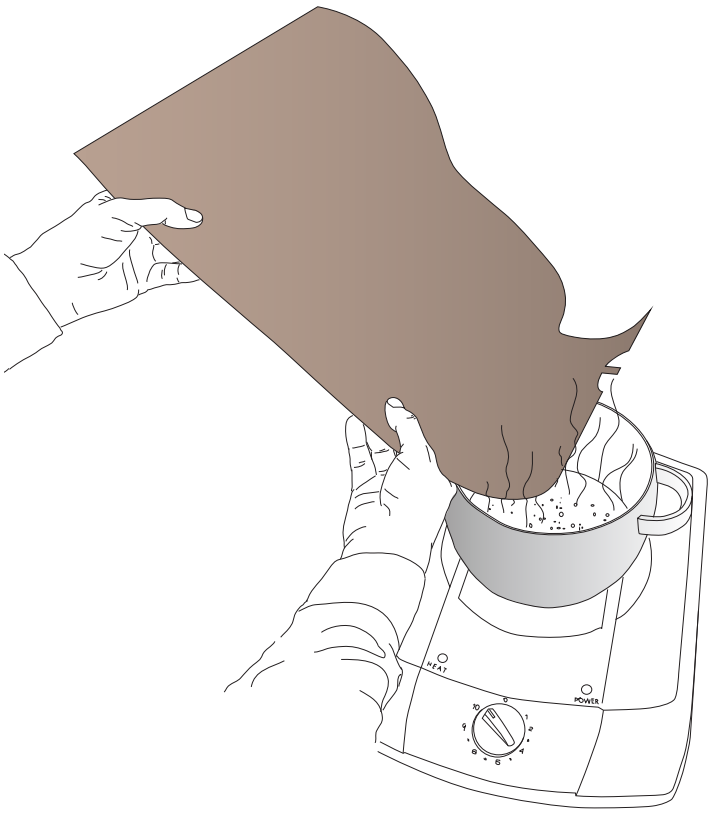
Picasso's paperboard guitar might be judged, by some to be a *mistake*: it's not playable; it can follow no melody; the strings are not straight, the neck has no fingerboard, the frets don't work, it's crimped and torn, and has sloppy construction – But, in reality: It's beautiful, fascinating, novel, revolutionary and priceless. Picasso's colossal *mistake* teaches us something new every time we experience his cubist paperboard guitar collage – as it did for his contemporaries in 1912.

Bending Guitar Back(1)

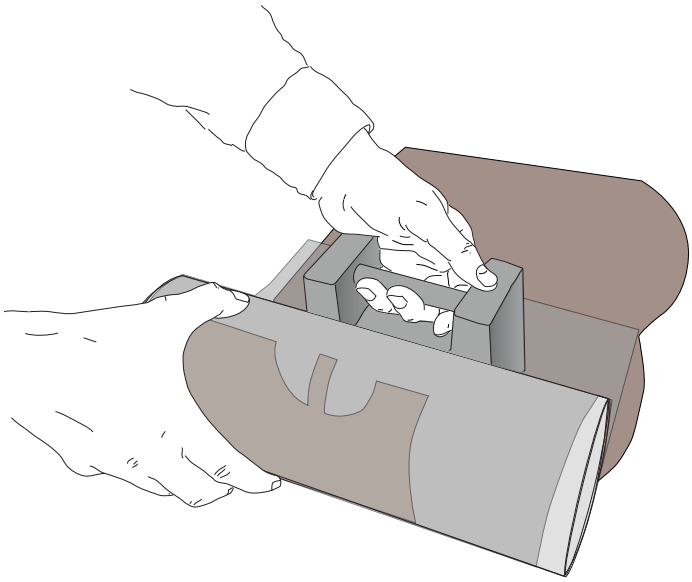


Overview: Steaming and bending the upper section of the ***guitar back***(1) requires a source of steam and a 3 to 4-inch diameter tube about 12 inches long. Use a pot of boiling water, kettle, or garment steamer to provide steam.

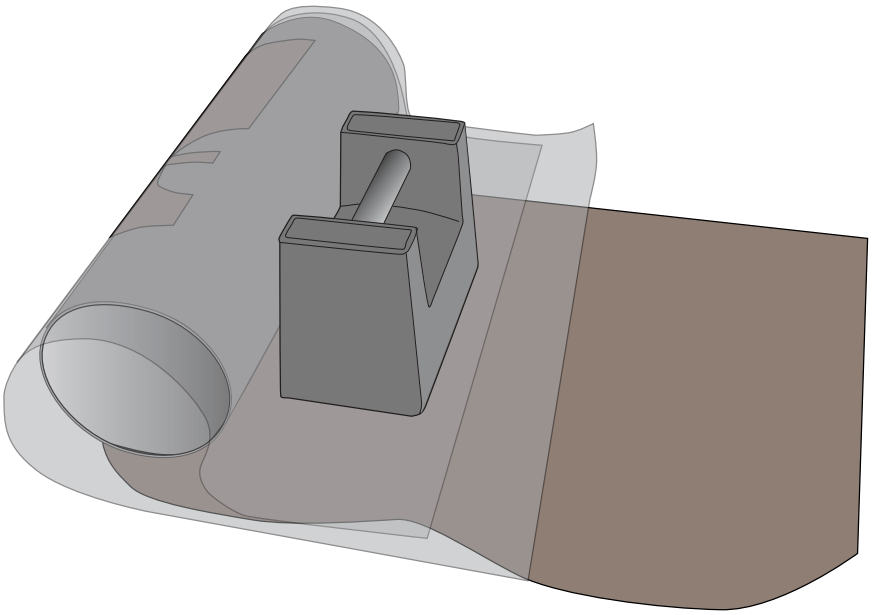
Bending Guitar Back(1)



1. Steam top section of ***guitar back*** until bendable (about 3 to 6 min)

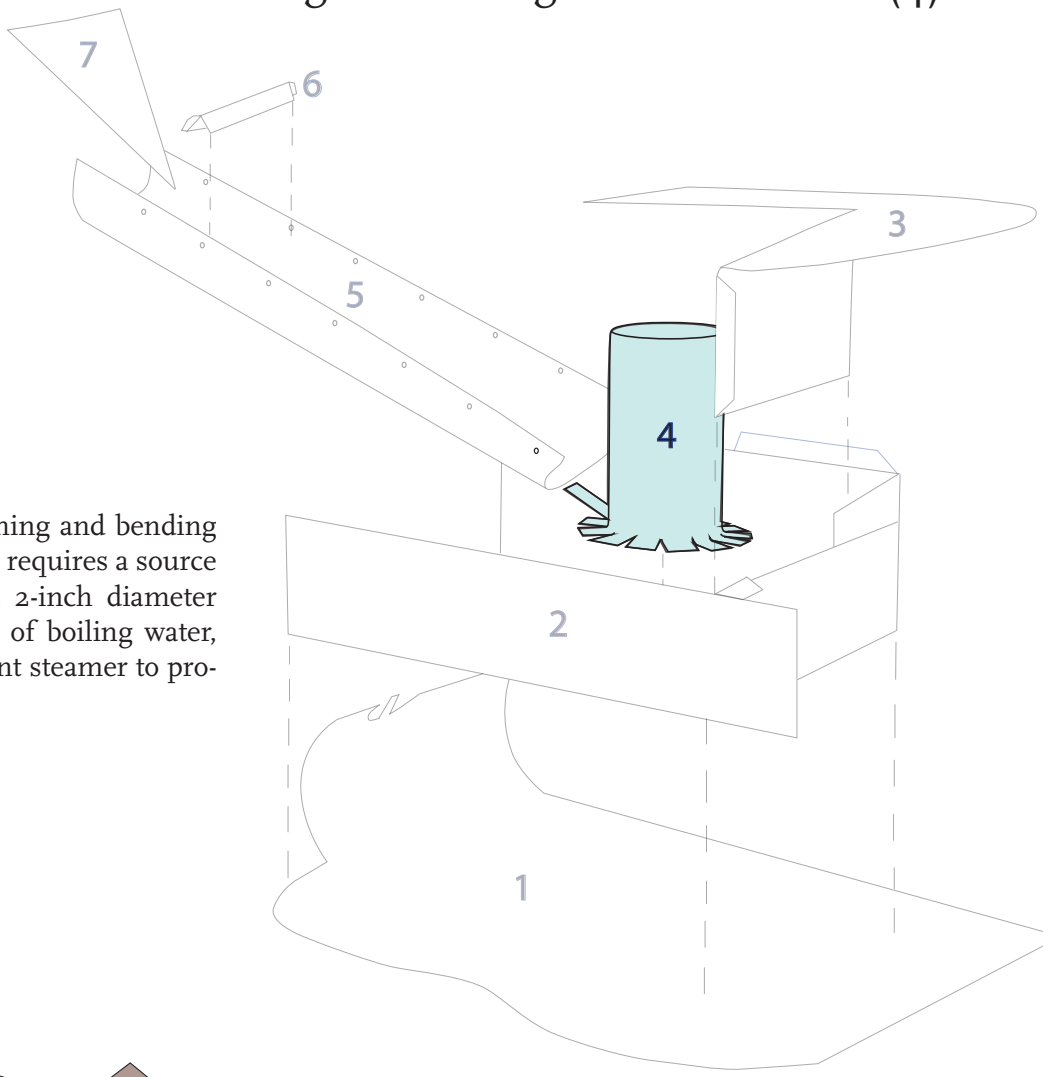


2. Wrap the arched section of the guitar ***back*** around a 3-in. or 4-in. PVC pipe or paper tube. Hold the ***guitar back*** in place with an outer wrapping of window screen or blotter paper. Position a weight to hold the curved portion of the ***guitar back*** in place.



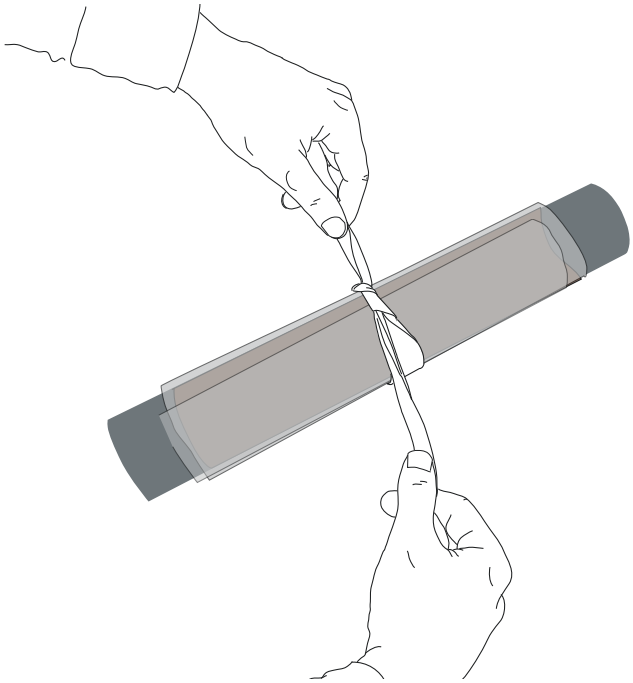
3. Allow the arc of the Back to dry.

Steaming & Bending the Sound Hole(4)



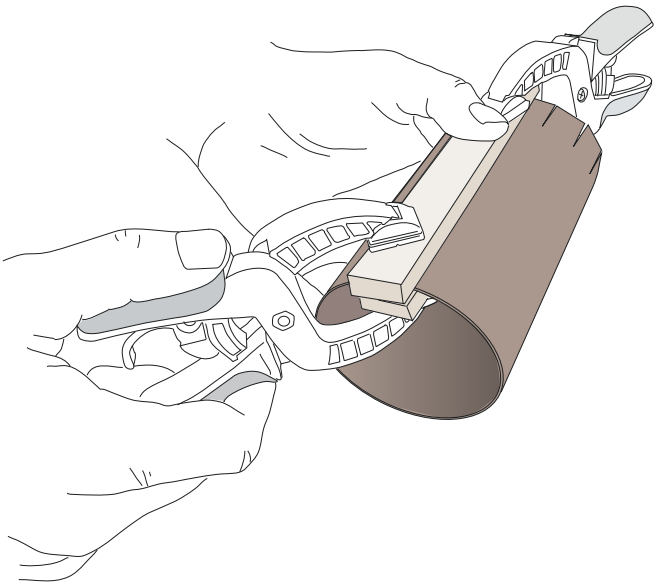
Overview: Steaming and bending the ***sound hole***(5) requires a source of steam and a 2-inch diameter tube. Use a pot of boiling water, kettle, or garment steamer to provide steam.

1. Steam ***sound hole*** until bendable (3 to 6 minutes)

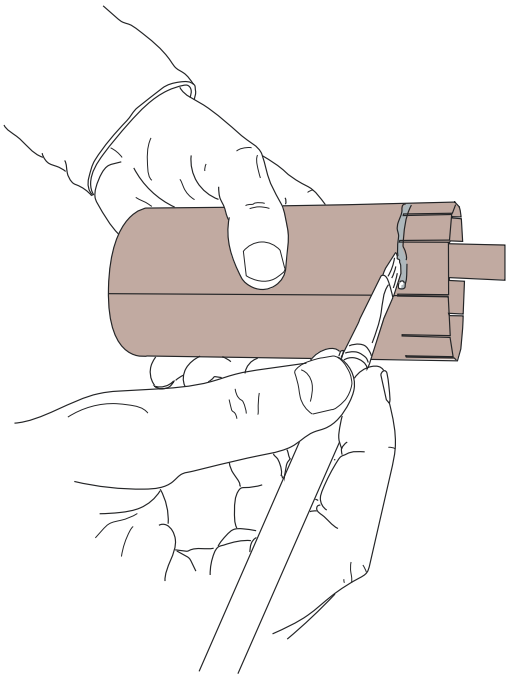


2. Wrap the moistened ***sound hole*** around a 2" PVC pipe or paper tube. Wrap blotter paper or window screen to hold the ***neck*** in place. Tie it off and let dry.

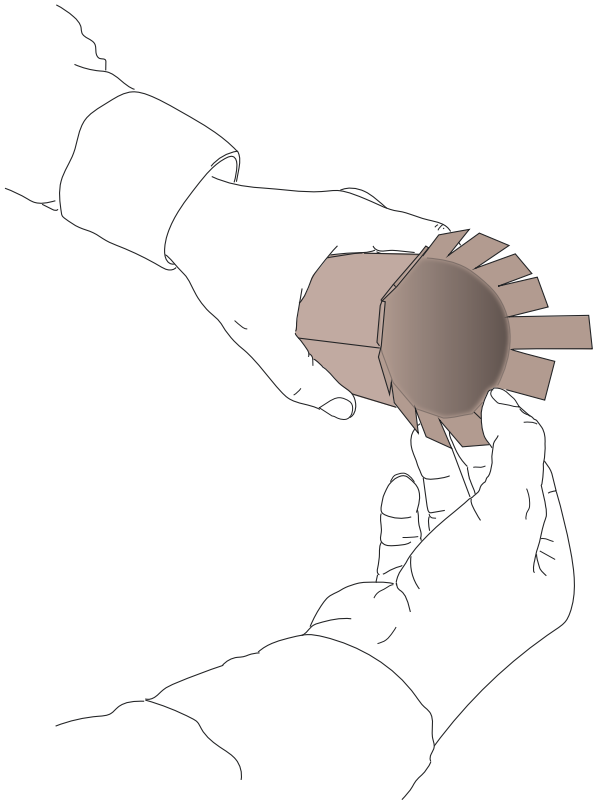
Gluing the Sound Hole(4) & Moistening Tab Folds



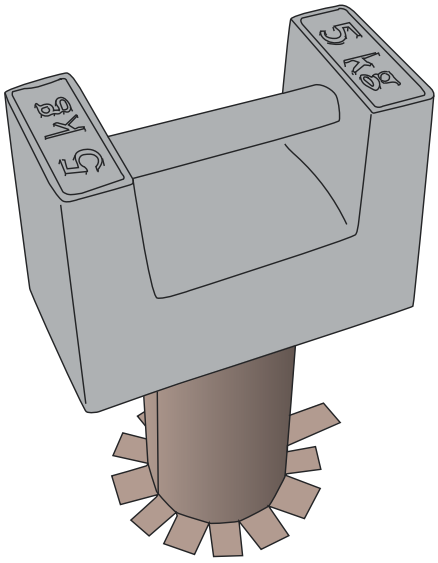
3. Apply glue to the overlapping seam and align; then hold in place with wooden strips and clamps until dry.



4. Using a small brush, moisten at the bending point. Moisten both sides of the bookboard.

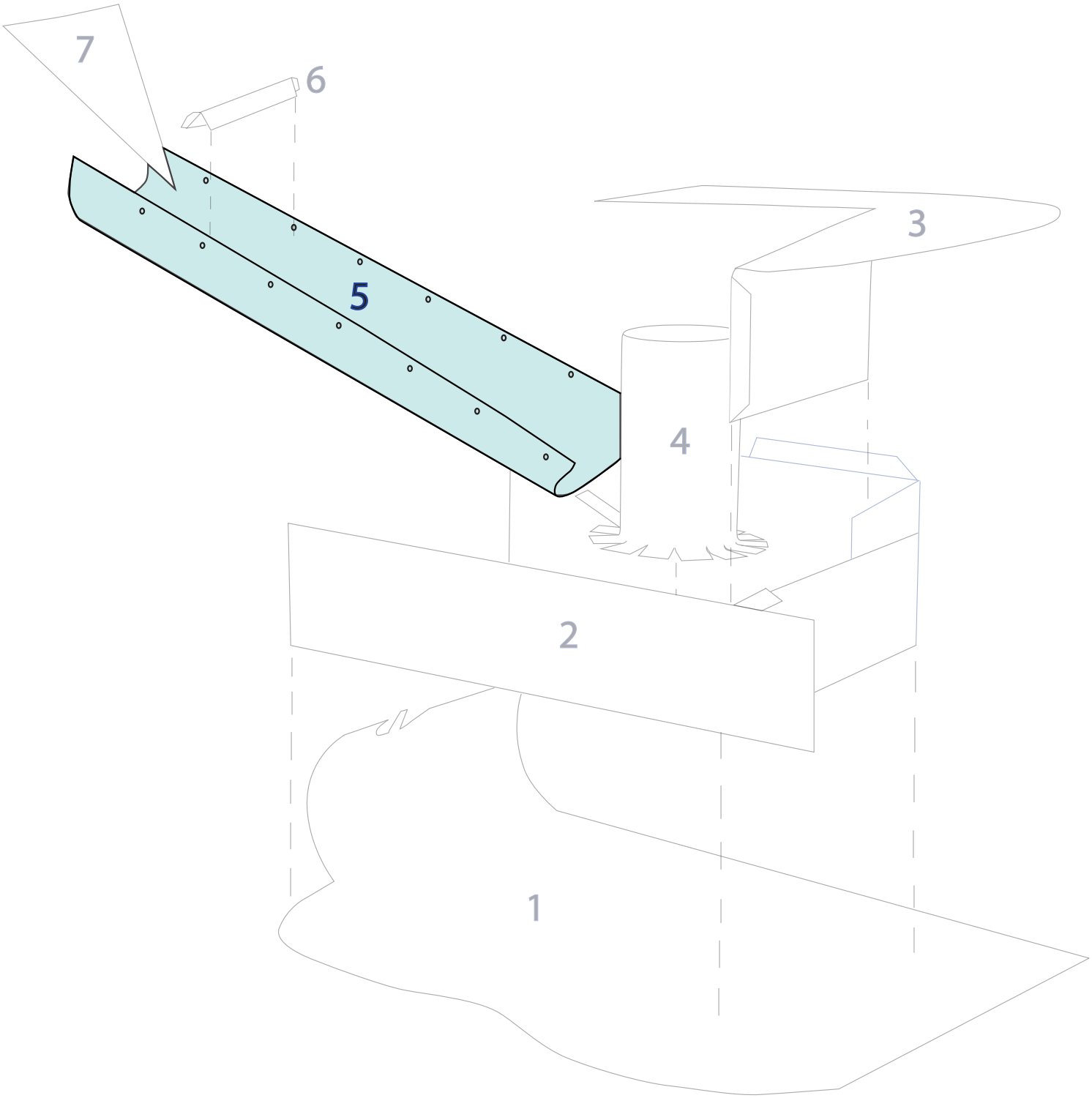


5. Bend the tabs outward (gently)



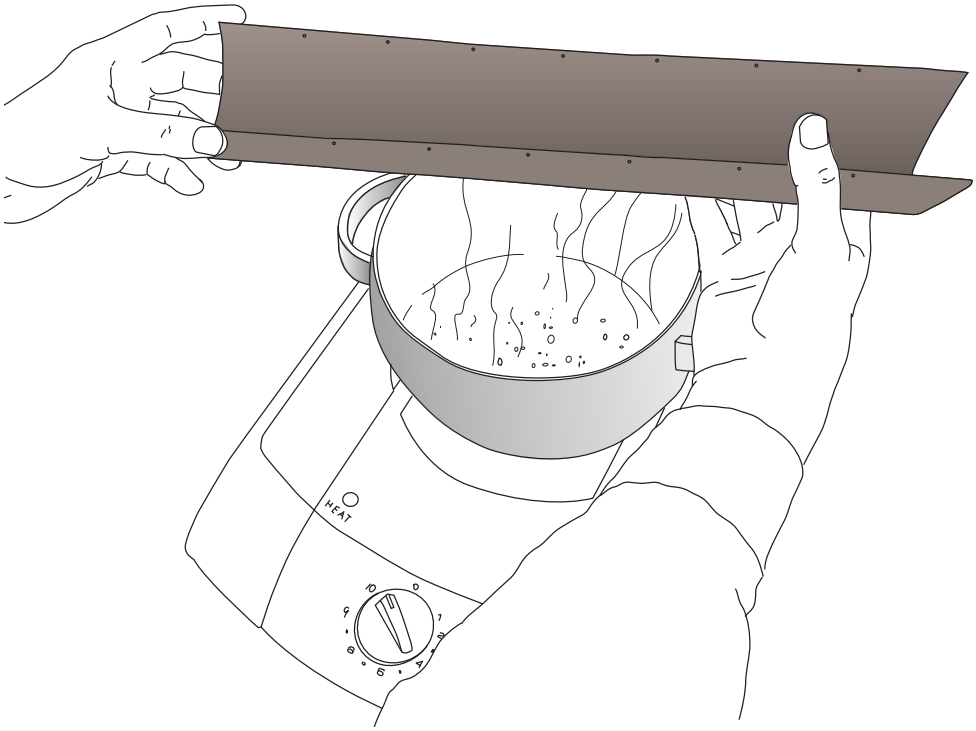
6. Carefully press tabs on a flat surface to spread and bend at a right angle. Apply moderate weight until dry.

Steaming & Bending the Neck(5)

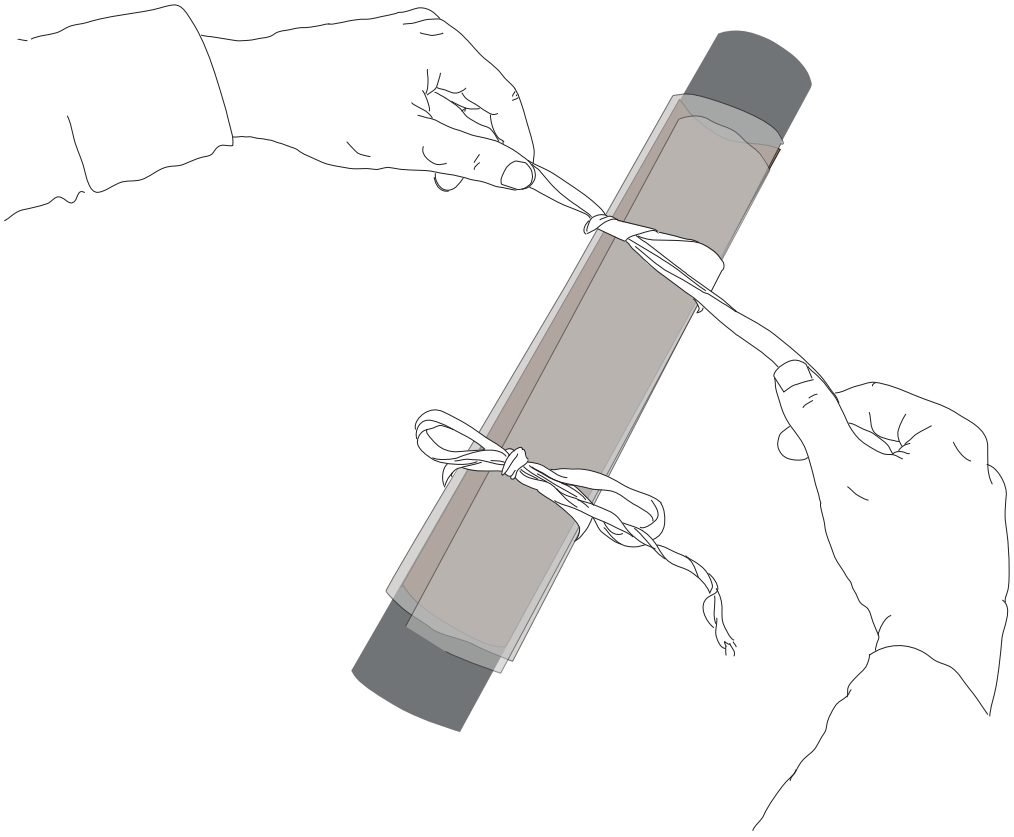


Overview: Steaming and bending the guitar ***neck***(5) requires a source of steam and a 2-inch diameter tube about 20 inches long. Use a pot of boiling water, kettle, or garment steamer to provide steam.

Steaming & Bending the Neck(5)

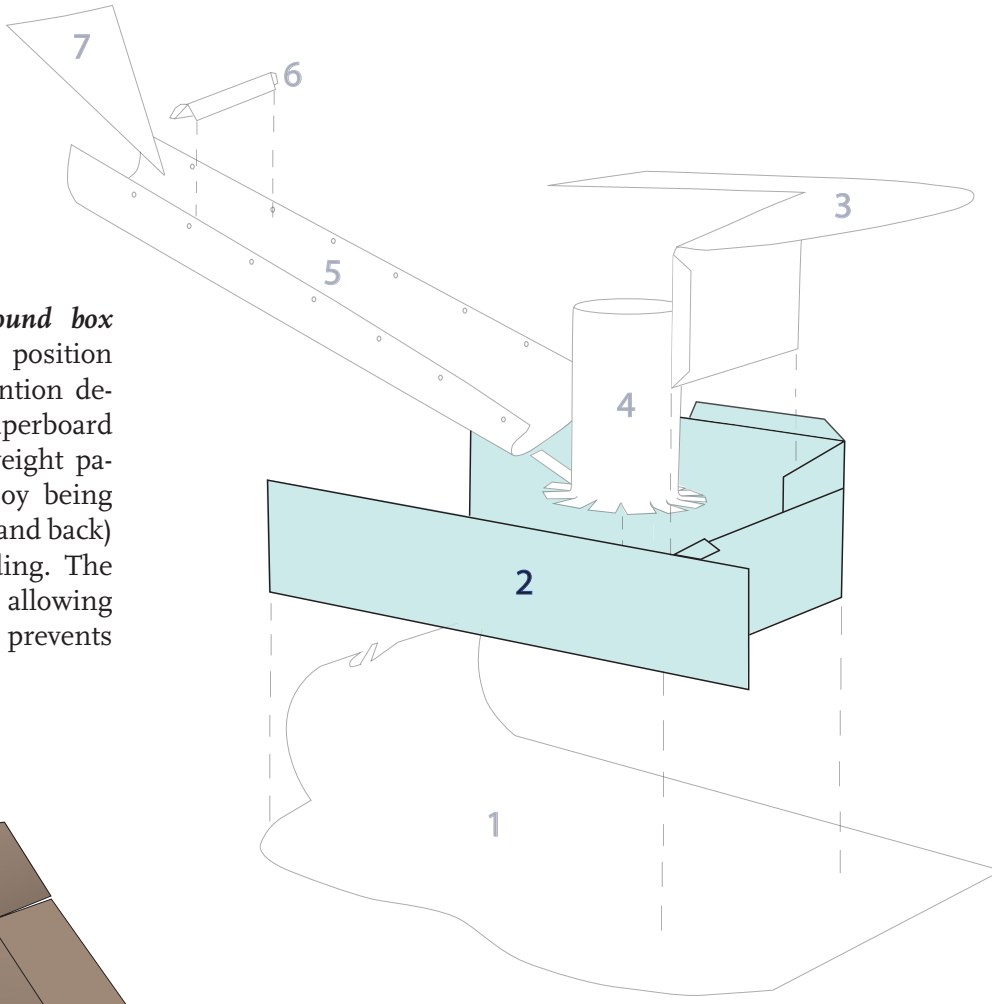


1. Steam the guitar ***neck*** on both sides until bendable (about 3 to 6 minutes)

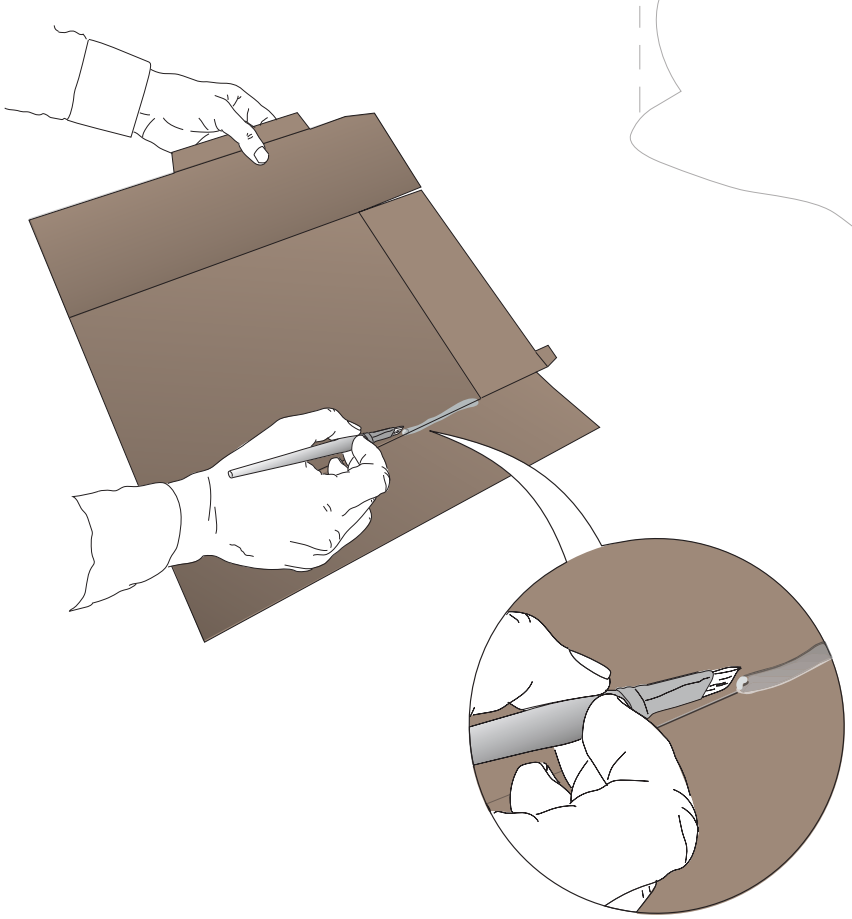


2. Wrap the moistened ***neck*** around a 2" PVC pipe or paper tube. Wrap blotter paper or window screen to hold the ***neck*** in place. Tie it off and let dry.

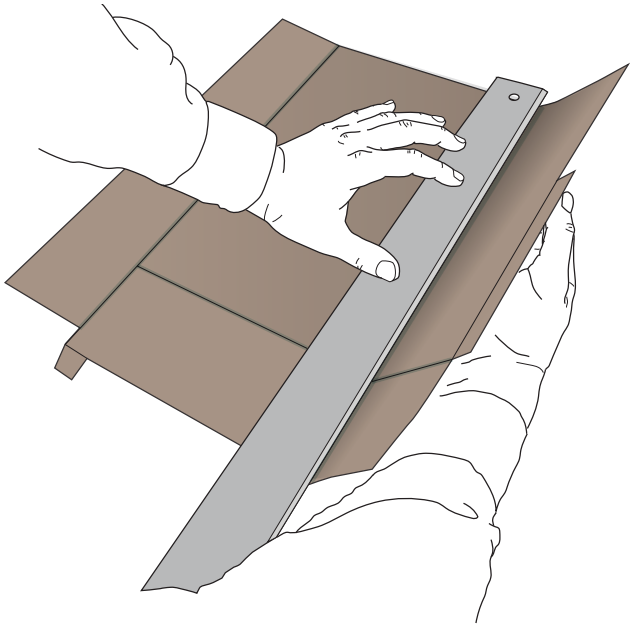
Moistening & Folding Sound Box(2)



Overview: Folding the ***sound box*** walls(2) to their upright position might require careful attention depending on the type of paperboard being using. Most heavyweight papers and paperboards enjoy being "relaxed" (moistened front and back) along the fold before folding. The moisture softens the fibers allowing for a more robust fold and prevents cracking.

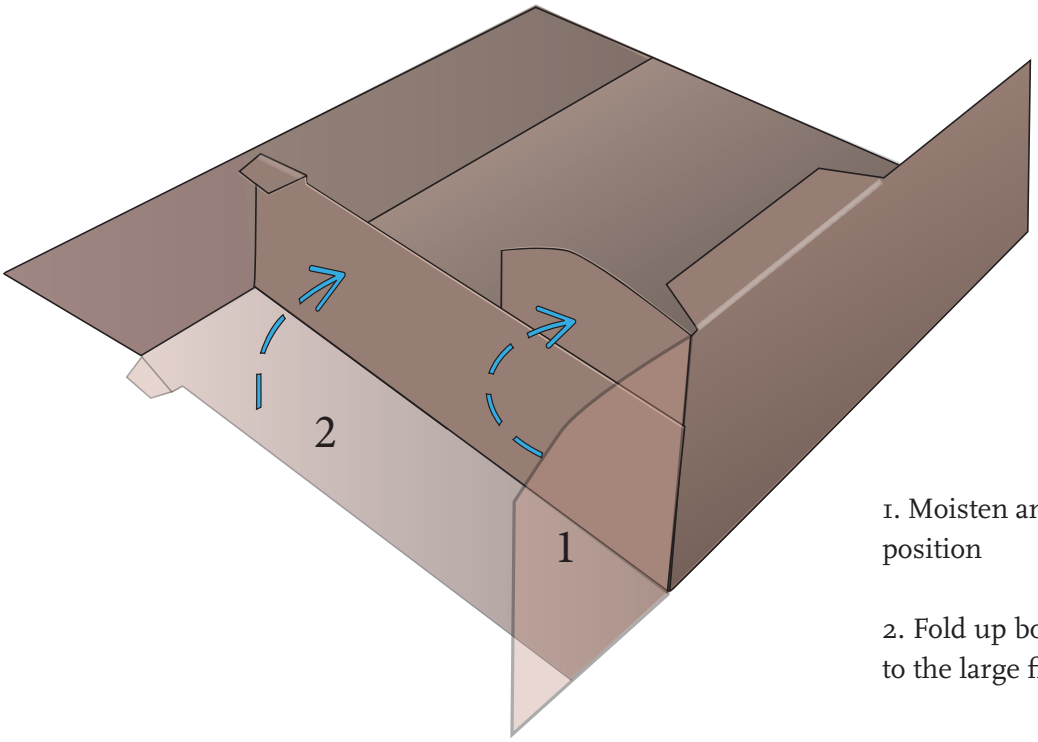


1. Before folding the ***sound box*** walls to their upright position: use a small brush and moisten along the folding lines – moisten both sides of the bookboard.



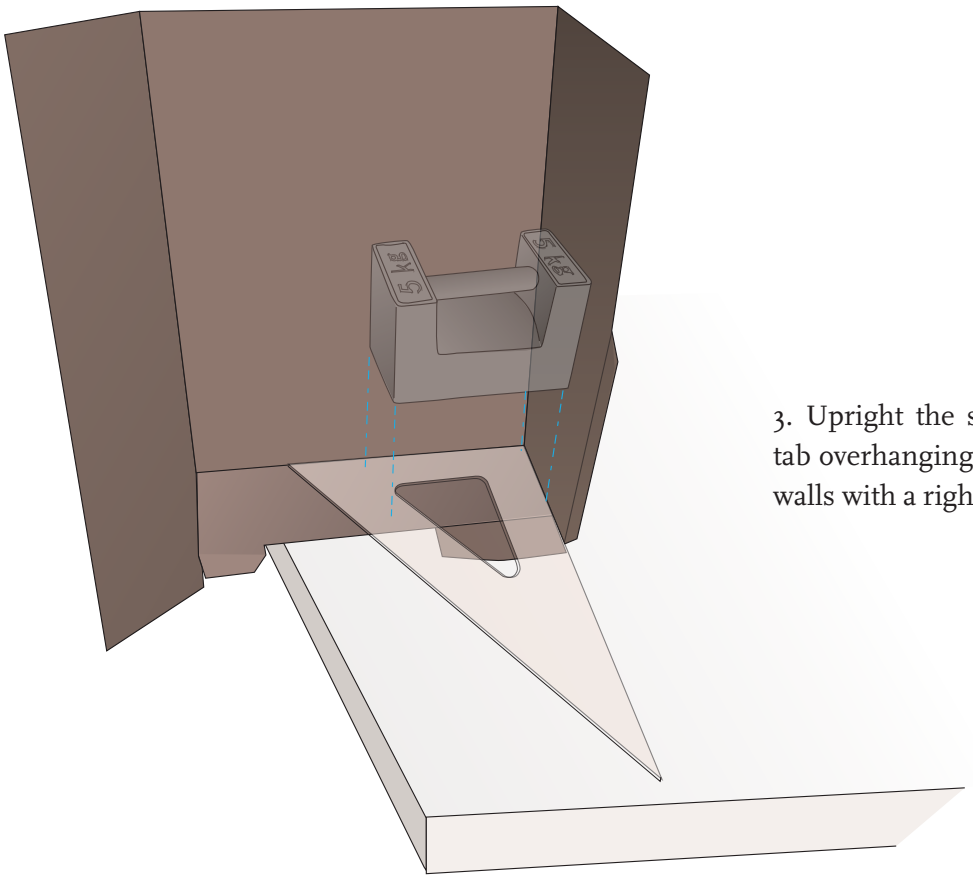
2. While the fold is moist, coax the walls of the ***sound box*** into their upright (90°) positions using a straight edge.

Folding & Gluing the Sound Box(2)



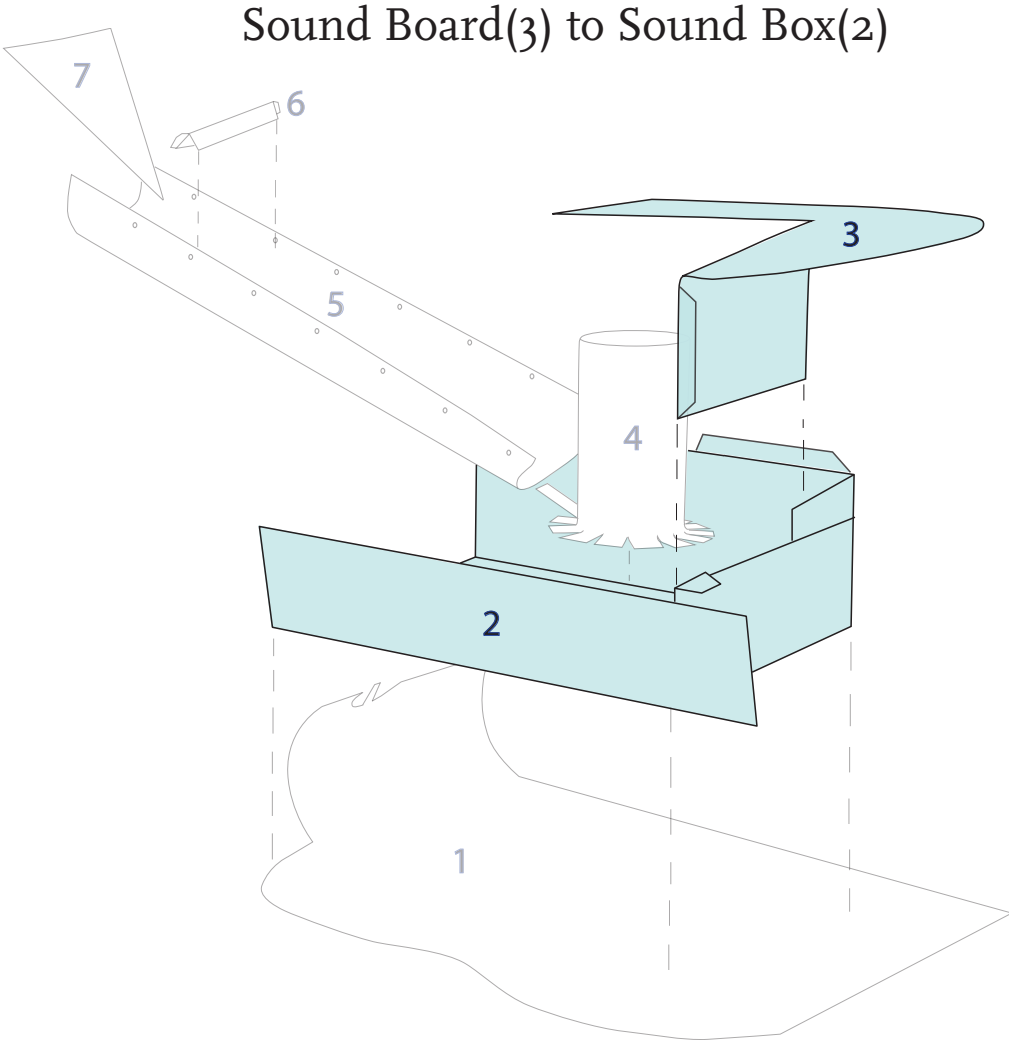
1. Moisten and coax the large flap into its folded position

2. Fold up bottom ***sound box*** wall up and glue it to the large flap upright position.

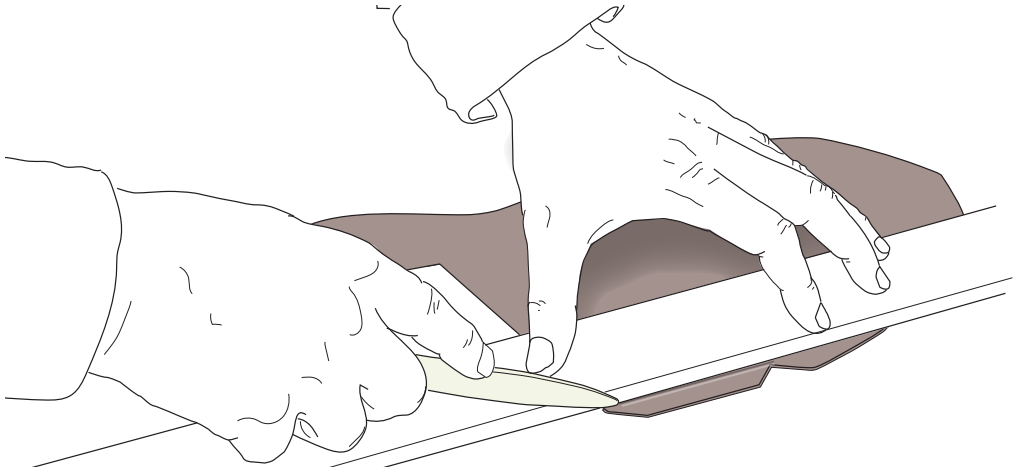


3. Upright the sound box with the left wall and tab overhanging a table edge. Align the two glued walls with a right-angle triangle—weight until dry.

Sound Board(3) to Sound Box(2)

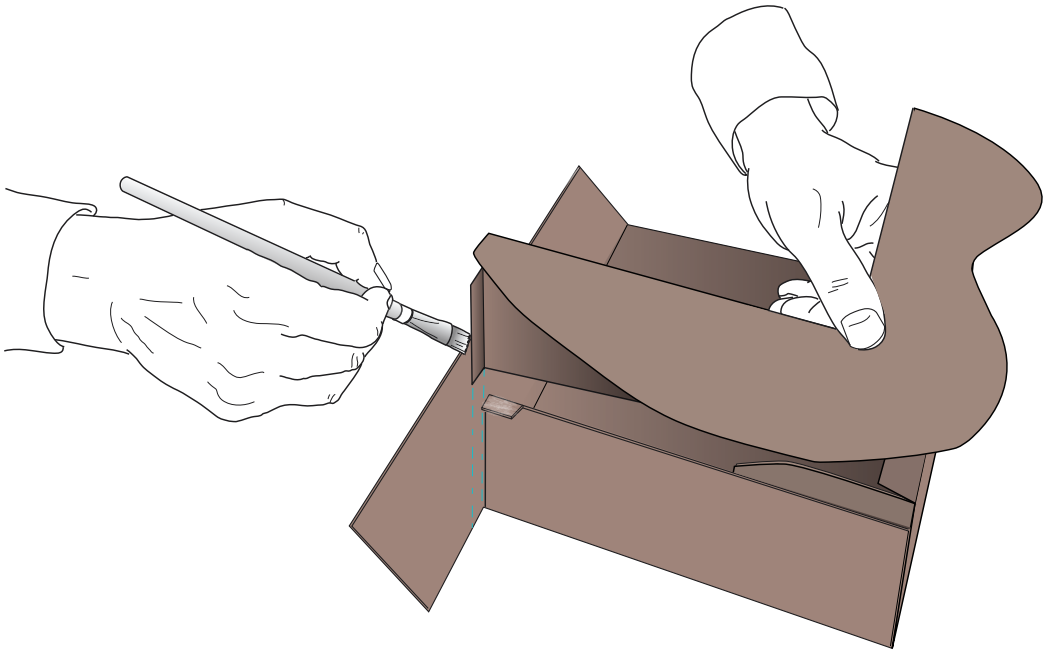


Overview: The ***sound box***(2) left-hand wall should, at this point, be folded but not glued. The right-hand and bottom ***sound box*** walls should be glued and dry (as per instruction above). The ***sound board's*** tabs will secure the left-hand wall of the ***sound box*** to its upright position. Have your brush, glue, clamps, and weights handy.

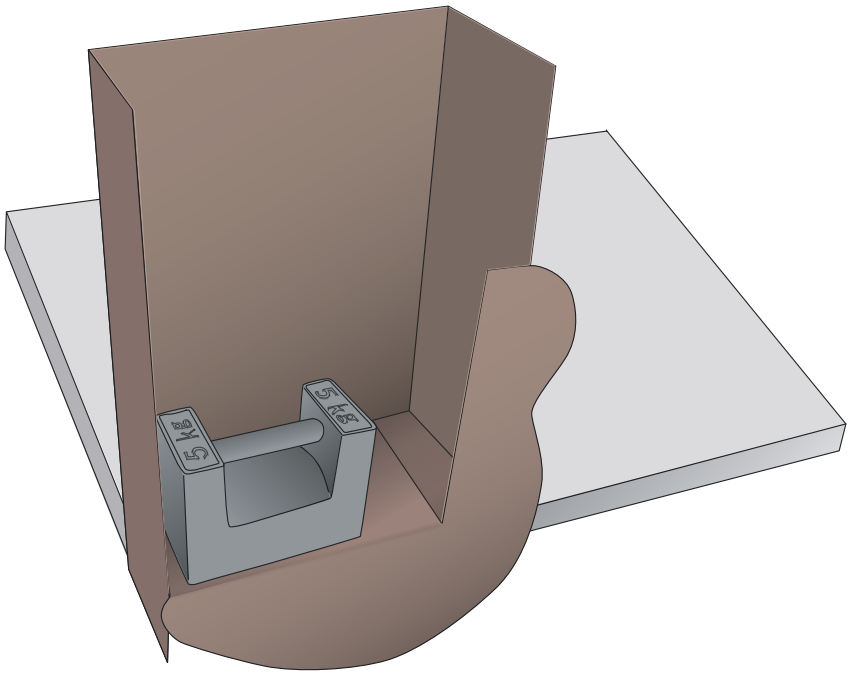


1. To insure a sharp fold, use a bone folder and score the extended tab on the ***sound board*** before moistening. (Note: some techniques and papers prefer scoring after moistening.) Draw the bone folder's tip along the edge of a ruler to make a dent in the paperboard—repeat on the flip side. Take care not to press too hard and crack the surface of the paperboard laminate. Moisten the scores.

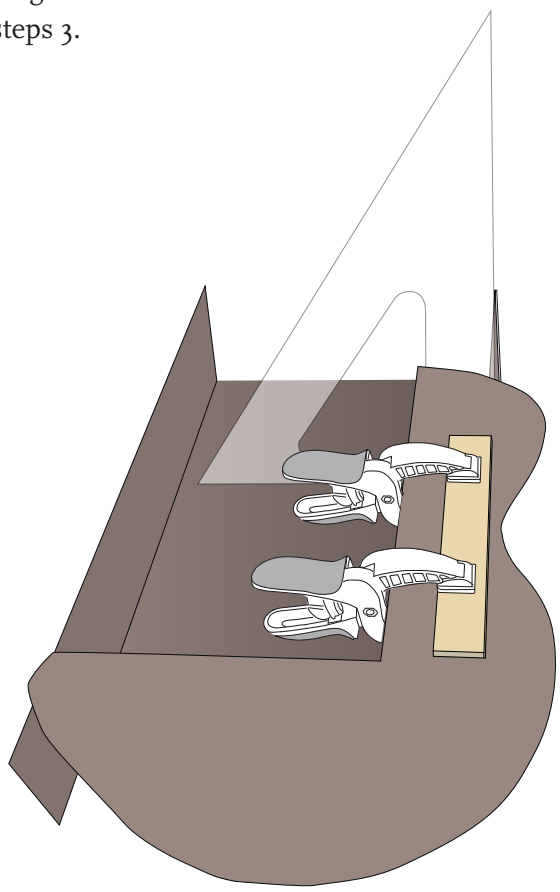
Sound Board(3) to Sound Box(2)



2. Apply glue on the inside of the ***sound board's*** vertical flap and on the tab. Also, apply glue to the small tab on the left side of the ***sound box***. With these areas glued, lower the ***sound board*** into place while uprighting the left-side ***sound box*** wall. Weight and allow those two tabs to dry as per steps 3.

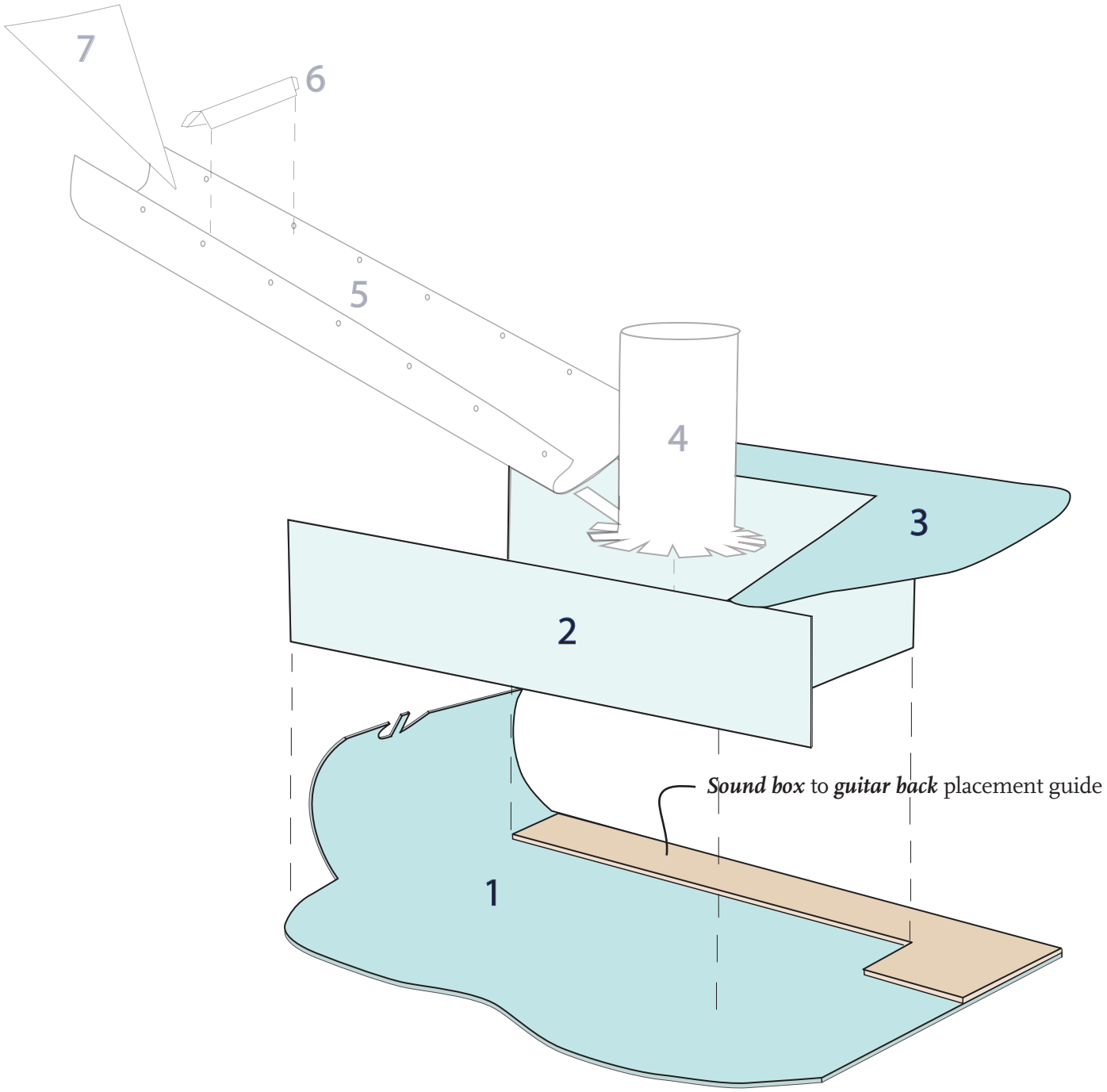


3. Place the ***sound box*** and ***sound board*** on a table edge and apply weight.



4. Glue the remaining ***sound box*** tab (on the right hand wall) to the upper ***sound board***. Check and adjust to insure the is wall vertical while the glue is still moist, then clamp until dry.

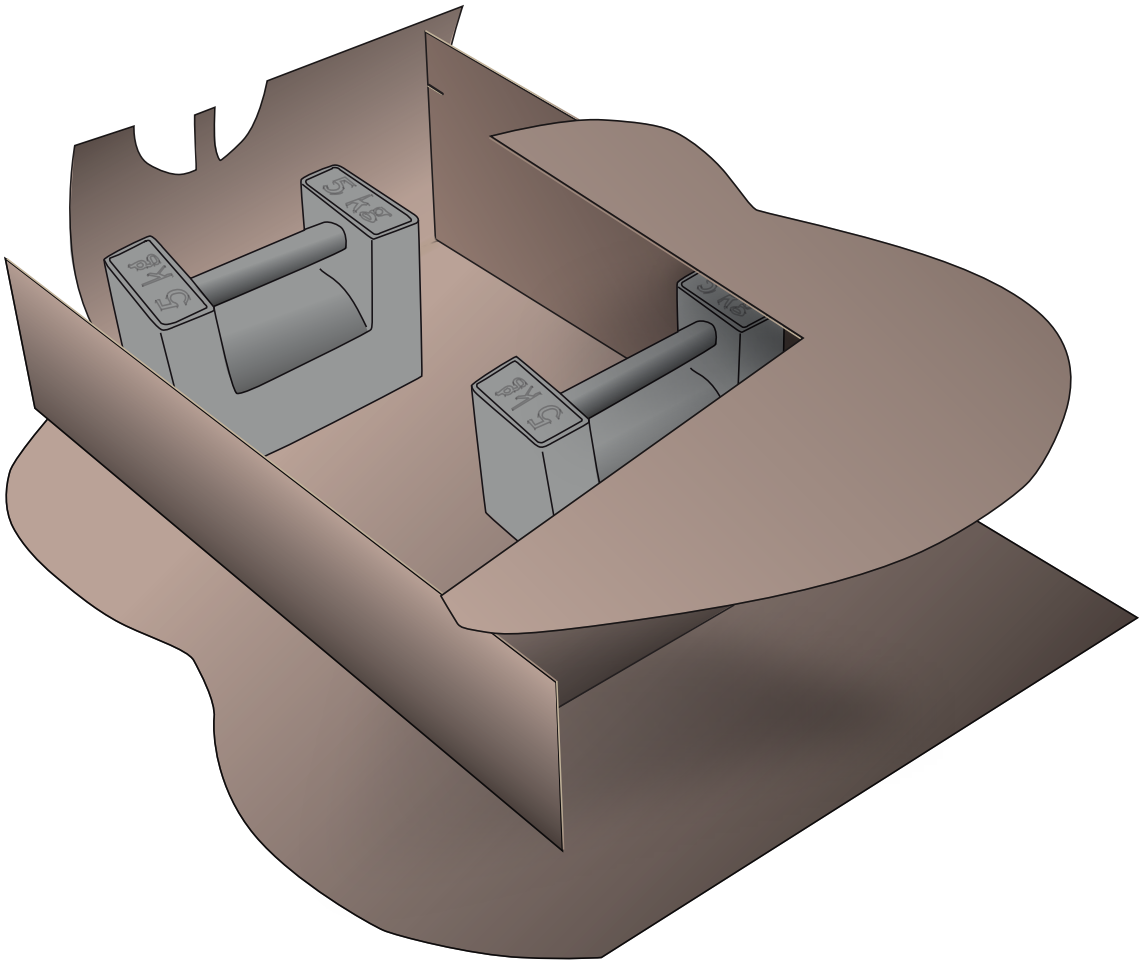
Sound Box(2) & Sound Board(3) to Guitar Back(1)



Overview: In attaching the **sound box**(2) to the ***guitar back***(1), we recommend only applying the glue to one surface – the sound box's underside.

Note: The ***sound box's*** upper-left edge (2) extends beyond the left top edge of the ***guitar back***(1).

Sound Box(2) & Sound Board(3) to Guitar Back(1)

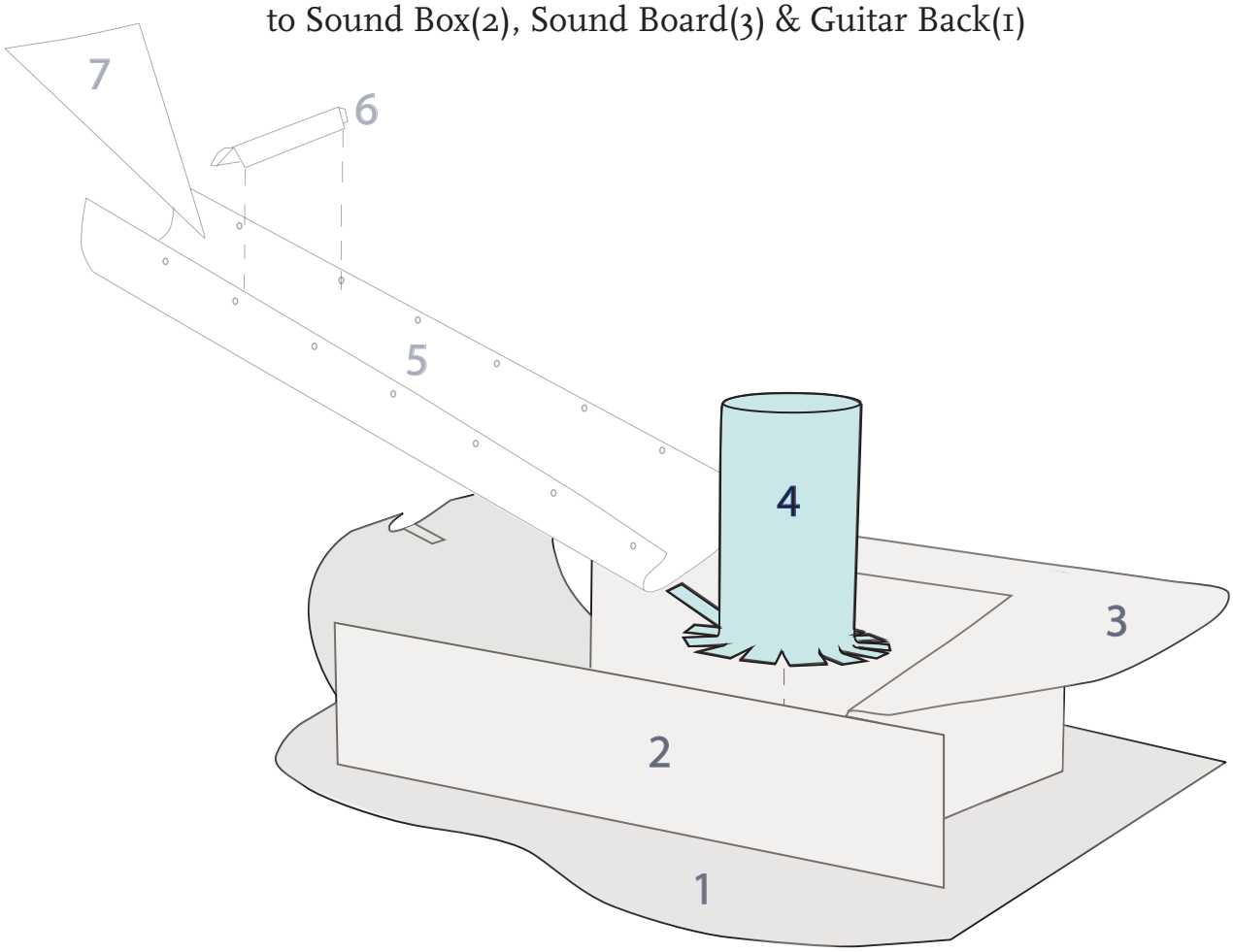


Gluing the ***sound box,sound board*** set (2 & 3) to the ***guitar back***(1) using the ***sound-box-to-guitar-back-placement-guide*** *(as a registration device):*

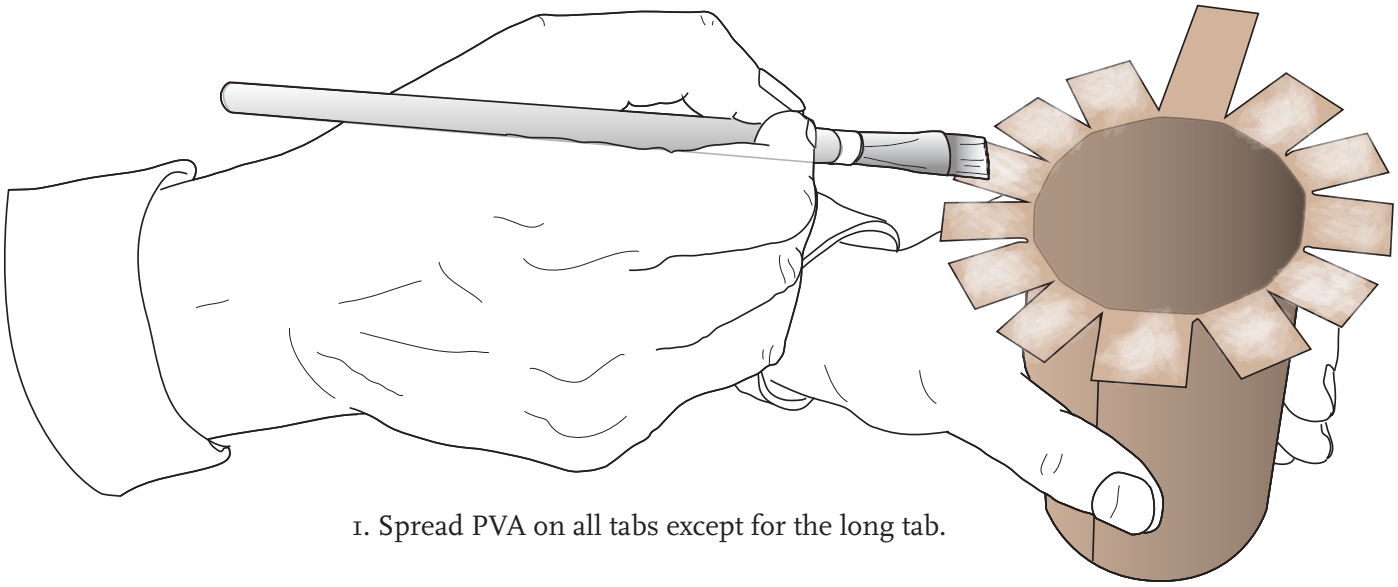
Procedure:
1. Apply a bead of glue around the perimeter of the ***sound box's*** underside ½-in from the edge.
2. Continue in an inward spiral to the center of the ***sound box***.
3. Brush evenly towards the center to level the glue.
4 Position the ***sound-box-to-guitar-back-placement-guide***, aligning it to the right and bottom edge of the ***guitar back***, and place the ***sound box***.
5. Position weights inside the ***sound box*** to ensure a secure bond.

Gluing larger surfaces:
Excessive amounts of water-based PVA glue can cause larger guitar areas of the paperboard guitar to warp. Therefore, apply glue sparingly.

Sound Hole(4)
to Sound Box(2), Sound Board(3) & Guitar Back(1)



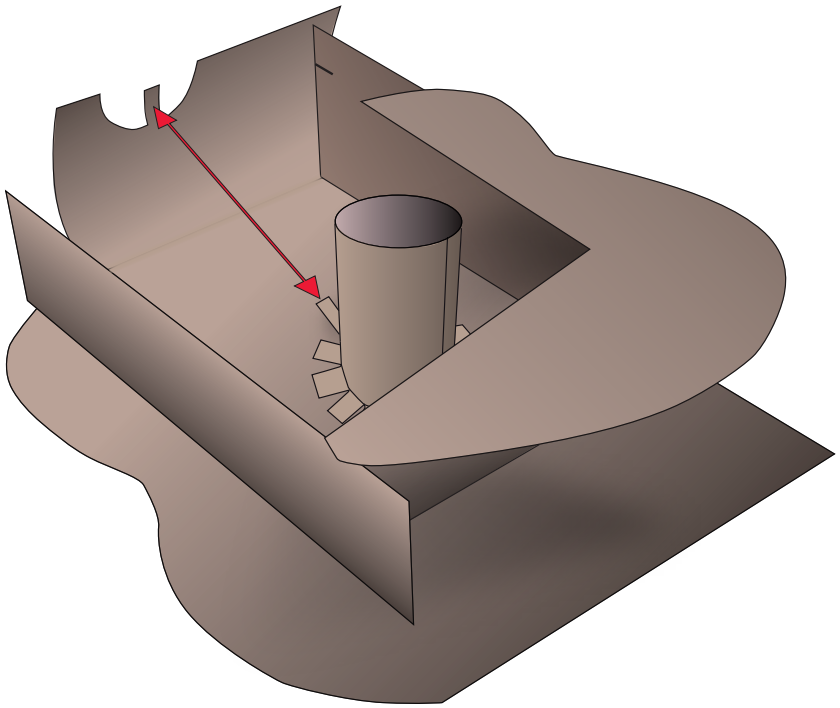
Overview: The ***sound hole***(4), at this point, should be is steamed and glued into a cylinder with the tabs bent back (as per instruction on p. 18-19). Now we are ready to glue, position, and attached the ***sound hole***(4) to the ***sound box(***2). Have your brush, glue, a roll of masking tape (with an inner diameter of 3-inches), and weights at the ready.



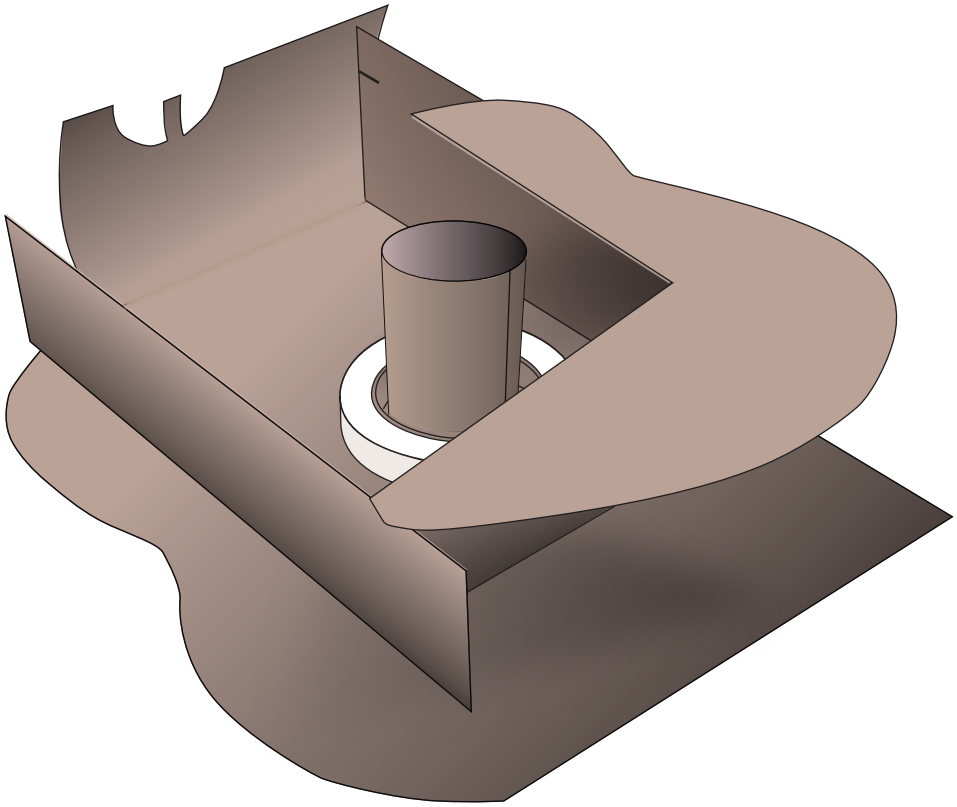
1. Spread PVA on all tabs except for the long tab.

Sound Hole(4)

to Sound Box (2), Sound Board (3) & Guitar Back (1)



2. Place ***sound hole*** on the engraved circle with the long tab pointing at the tab found in the cutout of the arched ***guitar back*** (as illustrated).

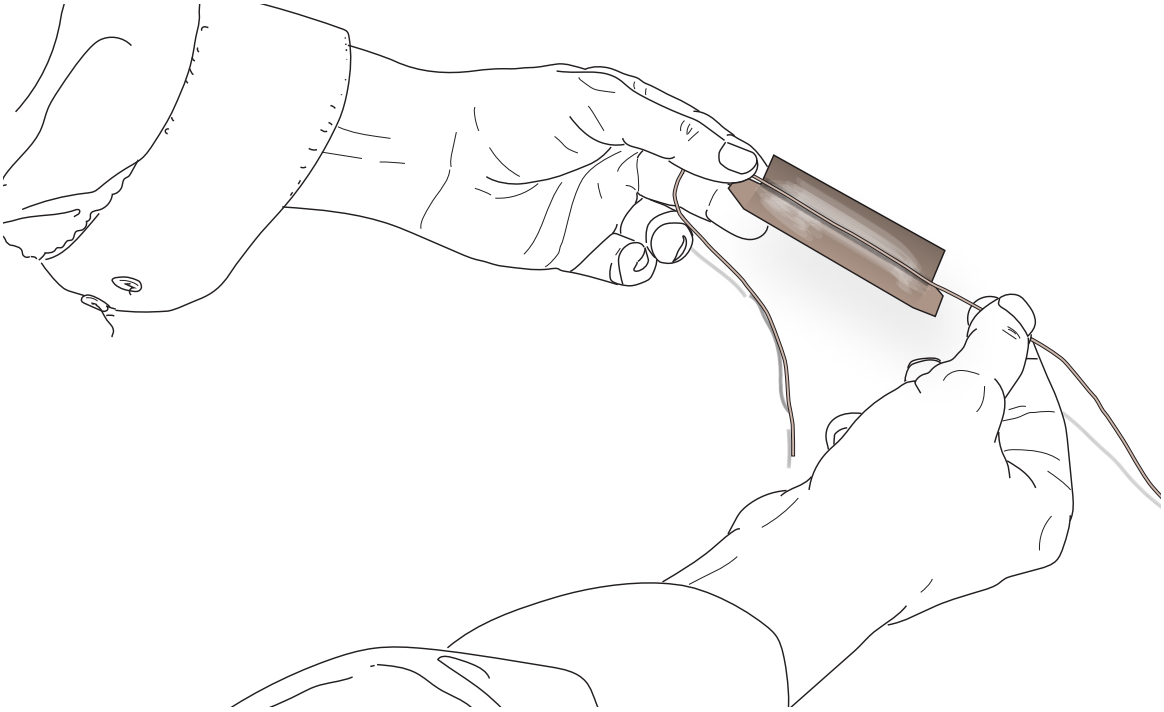


3. Weight the freshly placed ***sound hole*** tabs with a roll of masking tape. Place weights on the tape.

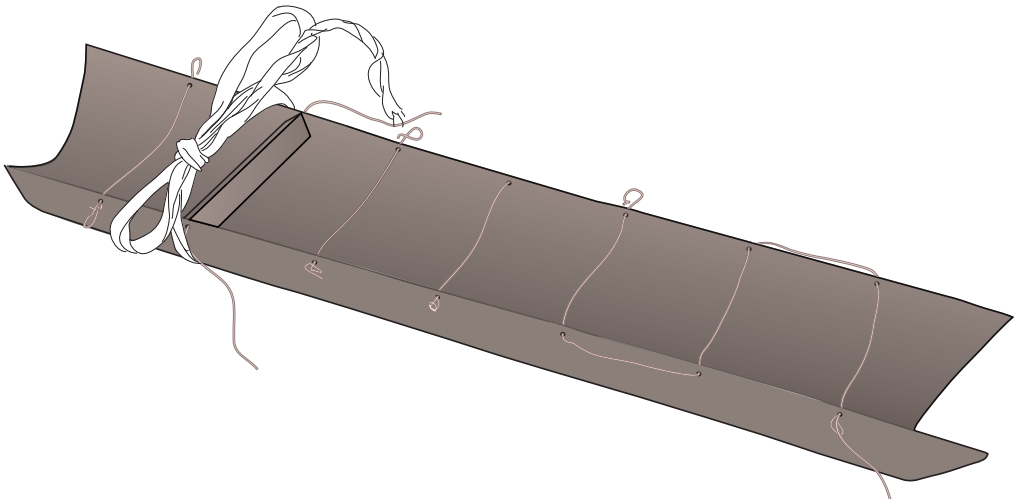
Lacing the Twine (frets)

1. Lace neck as shown. The twine (frets) help hold the 3-inch width curve of the ***neck*** in place. (Do not lace the second from the top set of holes just yet.)

Twine & Nut(6)



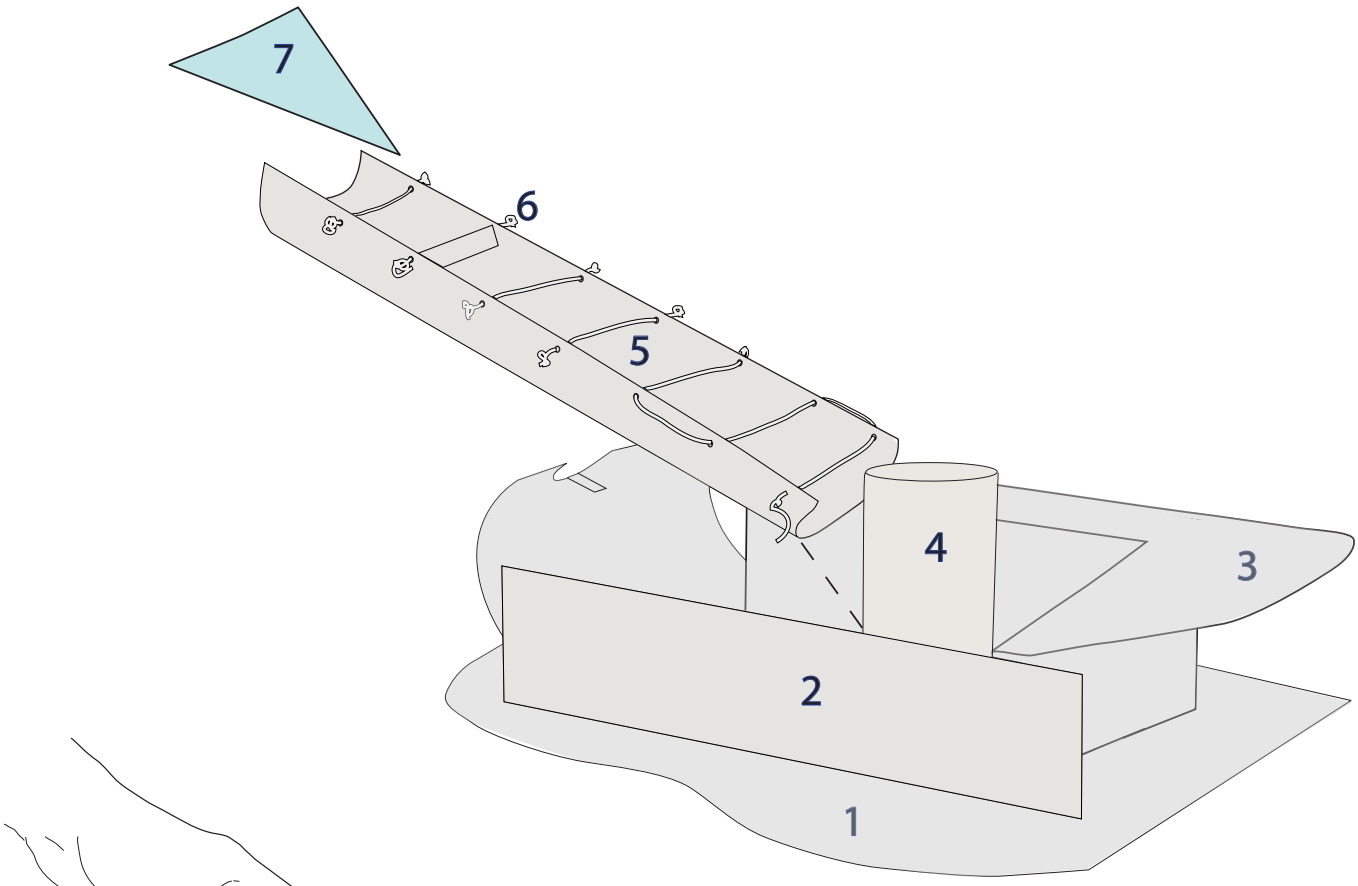
2. Optional: Place and glue a length of string along the inside the crease of the folded ***nut***.

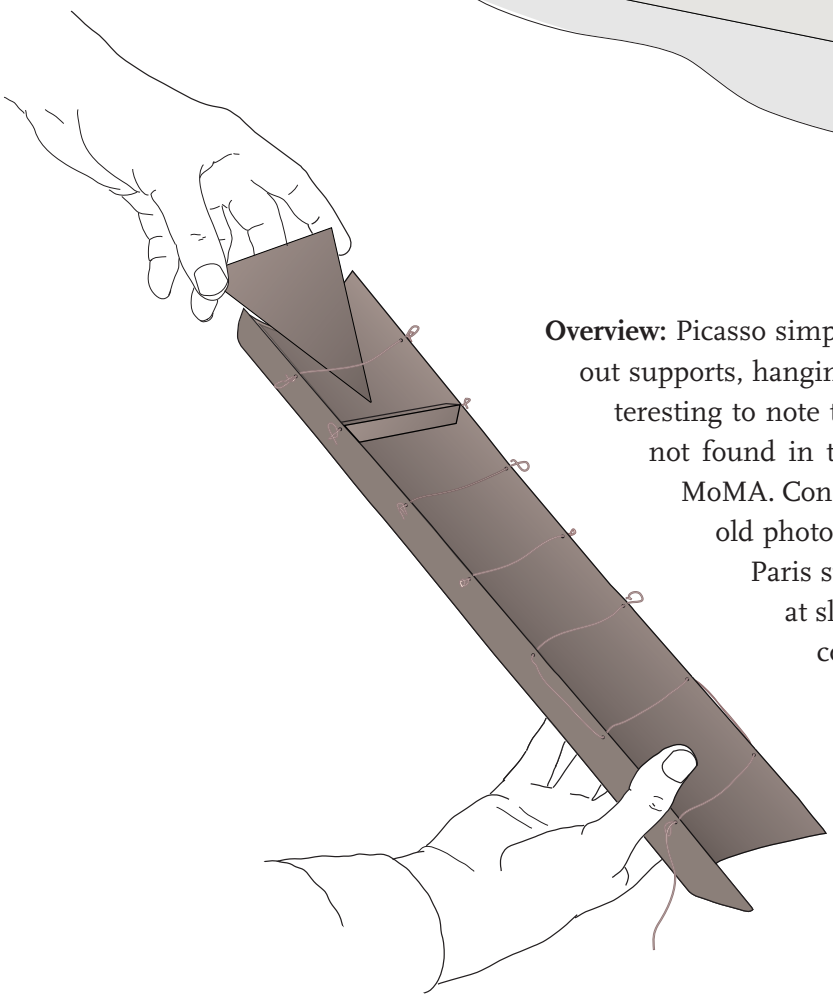


3. Once dry, lace twine through the second-from-top set of holes on the upper ***neck***. Dab glue on the two tabs, place and secure ***nut*** in position. Use cloth ribbon to cinch ***neck*** sides tight against ***nut***. When dry tie twine fret knots to further secure ***nut***.

The ***neck*** with ***nut*** is ready to install into the body of the guitar, with or without the ***head stock***. If you want to simply place the ***head stock*** and let gravity hold it in its display position, as per Picasso, skip the next step. If you would like to glue the ***head stock*** in place, proceed to the next step.

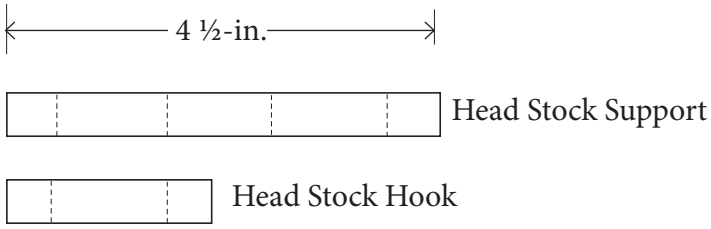
Head Stock(7)

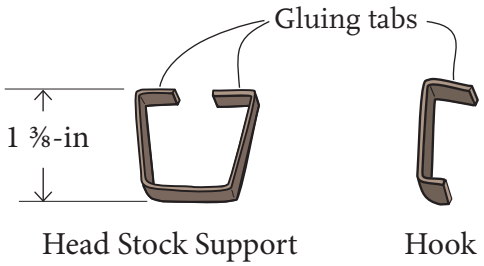


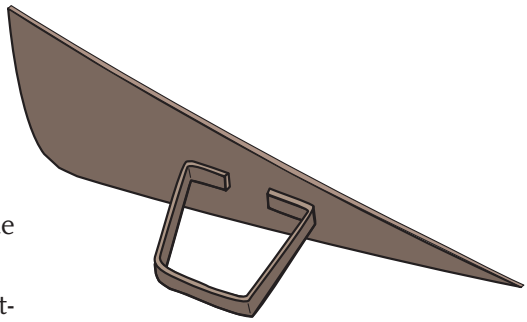


Overview: Picasso simply placed the ***head stock*** into position without supports, hanging it from the top edge of the ***neck***. It is interesting to note that his original ***head stock*** was lost; it was not found in the box of guitar parts bequeathed to NY MoMA. Conservators remade the ***head stock*** referring to old photos. We too have made calculations from old Paris studio photos of the guitar and have arrived at slightly smaller dimensions than NY MoMA conservators.

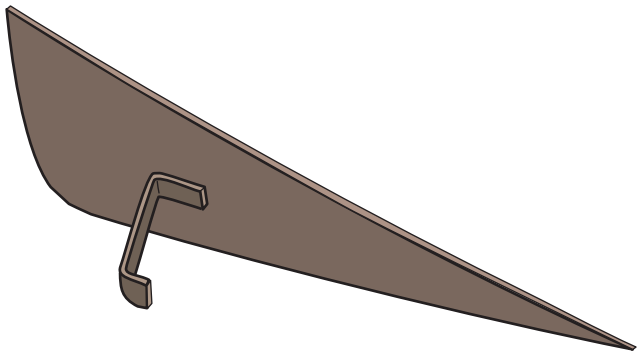
Head Stock(7)
(optional)





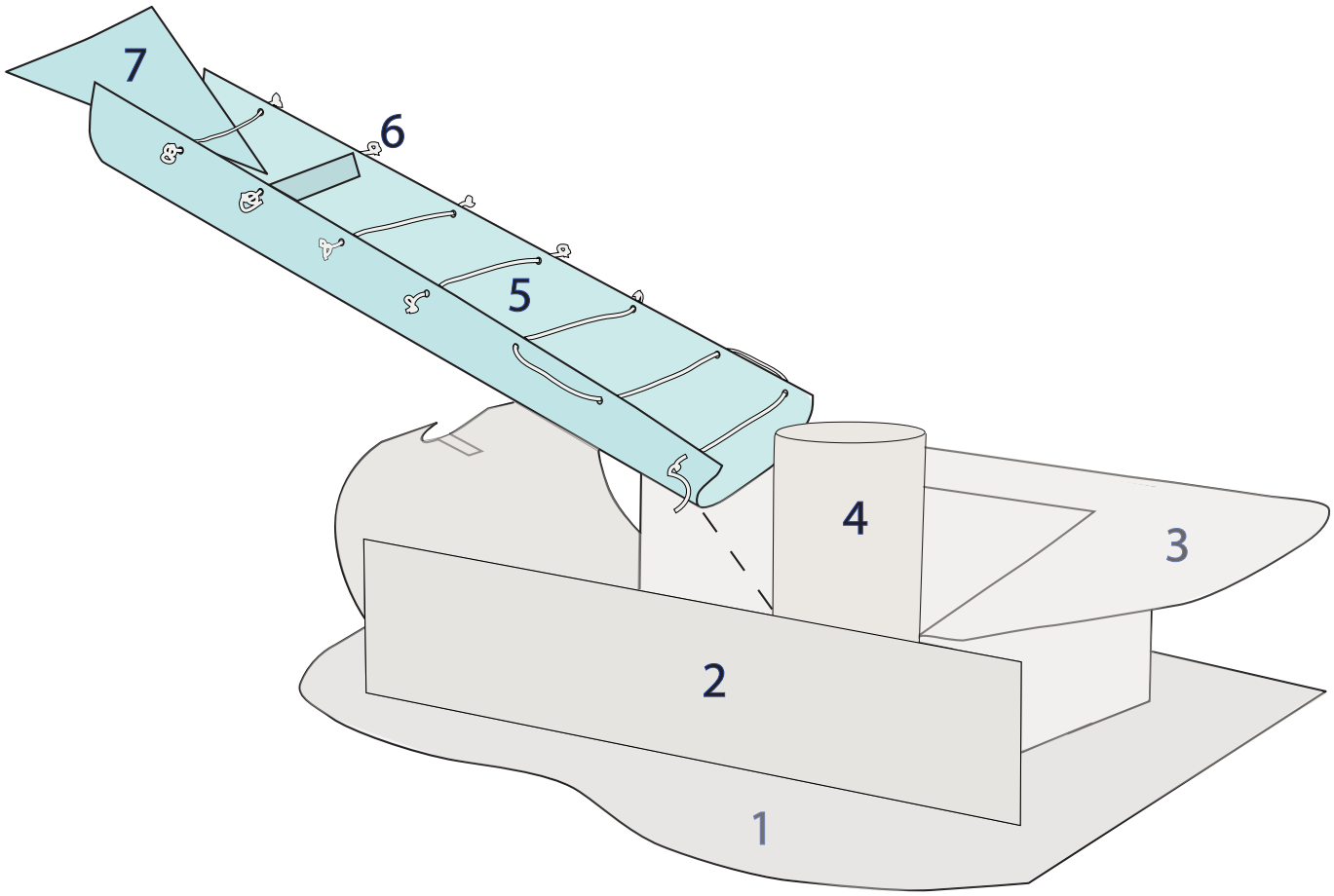


Optional: 1. Permanent ***head stock support***:
Using a 4 ½-in x ½-in strip of scrap material, construct a "U-shaped" ***head stock Support*** to a height of 1-⅜ inches. Glue tabs to the back of the ***head stock*** as illustrated. Apply glue to the bottom of the "U" and attach the ***head stock*** to its final resting place under the first fret twine (above the ***nut***).



Optional: 2. ***head stock hook***:
Using a 2 ½-in x ½-in strip of scrap material, construct a "C-shaped" ***head stock hook*** to a height of 1-⅜ inches. Glue tab to the back of the ***head stock*** as illustrated, testing positioning before the glue sets.

Attaching assembled Neck(5)

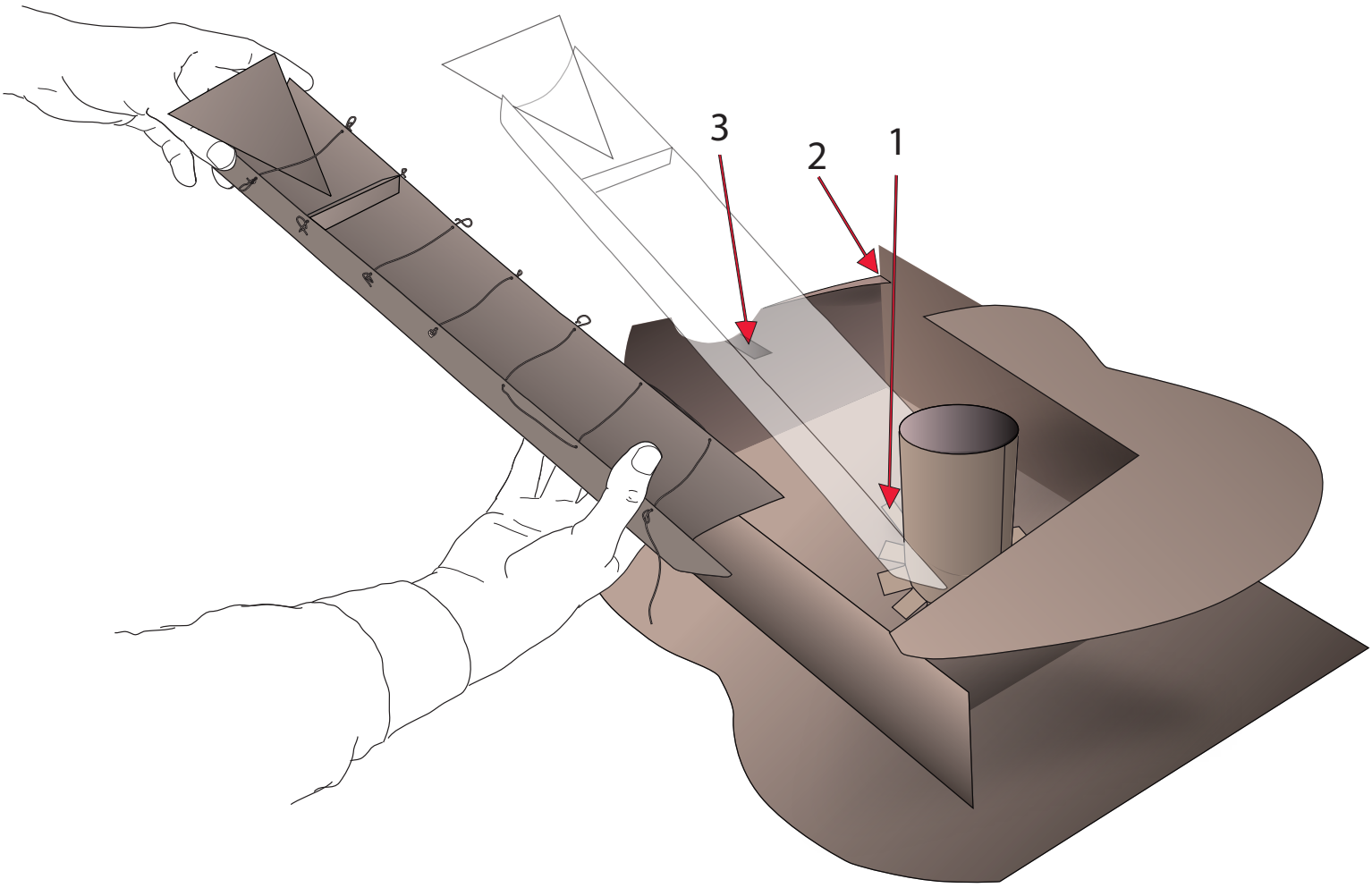


Overview: Placing and attaching the guitar ***neck*** involves three variables, two tabs, and one alignment slot (joining the sound-box-wall and guitar-back-shoulder).

Tabs: One, the extended tab on the sound hole, and tab two on guitar-back-neck-cradle.

Additionally and critically, there is a slot in the sound-box-wall that must be connected to the upper edge of the guitar-back's-shoulder; where you make this union will determine the vertical alignment of the guitar neck.

Attaching assembled Neck(5)

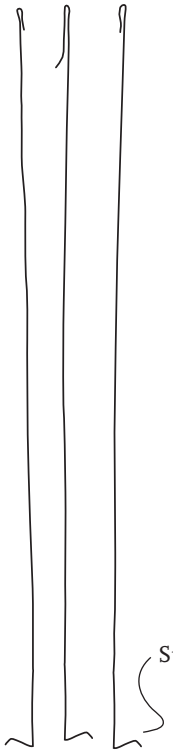


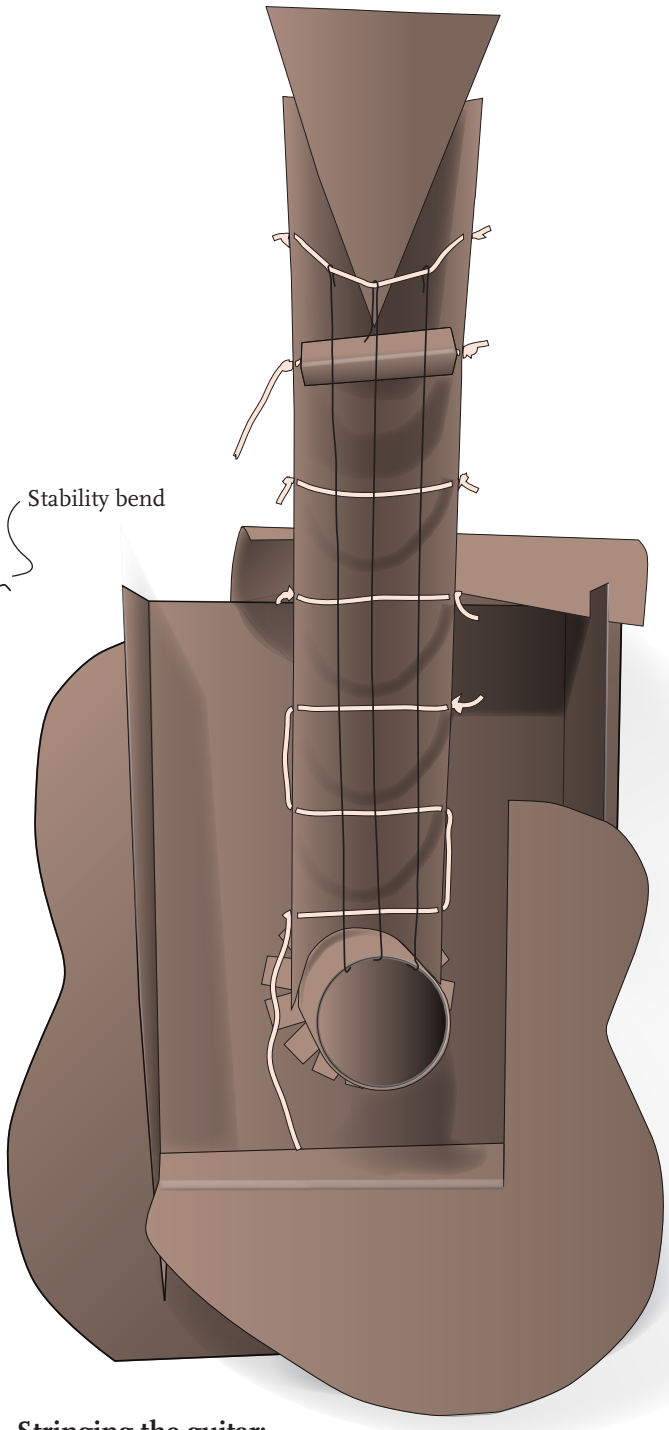
1. Apply PVA/glue on the top side of the extended tab on the ***sound hole***. Place the ***neck*** such that its arced base wraps and fits snugly around the ***sound hole*** base, then adhere the tab.

2. Insert the ***guitar back*** arched shoulder into the slot on the right-hand ***sound box*** wall. It may be necessary to enlarge the incision with a utility knife or scissors. Determining the location of this union will affect the overall alignment of the guitar ***neck***. Once located and well-positioned, make a ⅜-inch cut in the top edge of the ***guitar back*** arch shoulder to secure the union. Join with a drop of glue or a mini "L" shaped tab hidden under the arch.

3. Gently lift the upper ***neck***, bend the ***guitar back*** neck-cutout tab forward and apply glue to the top surface then adhere it to the upper ***neck***.

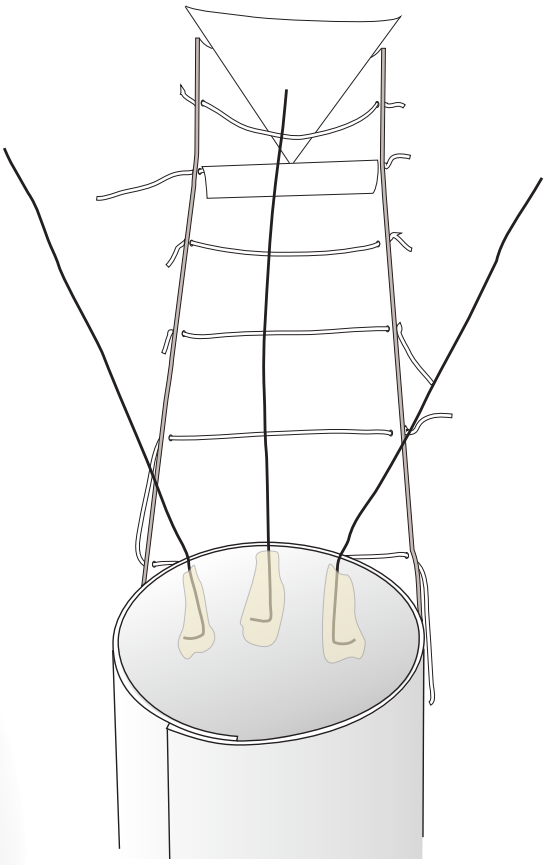
Stringing Guitar





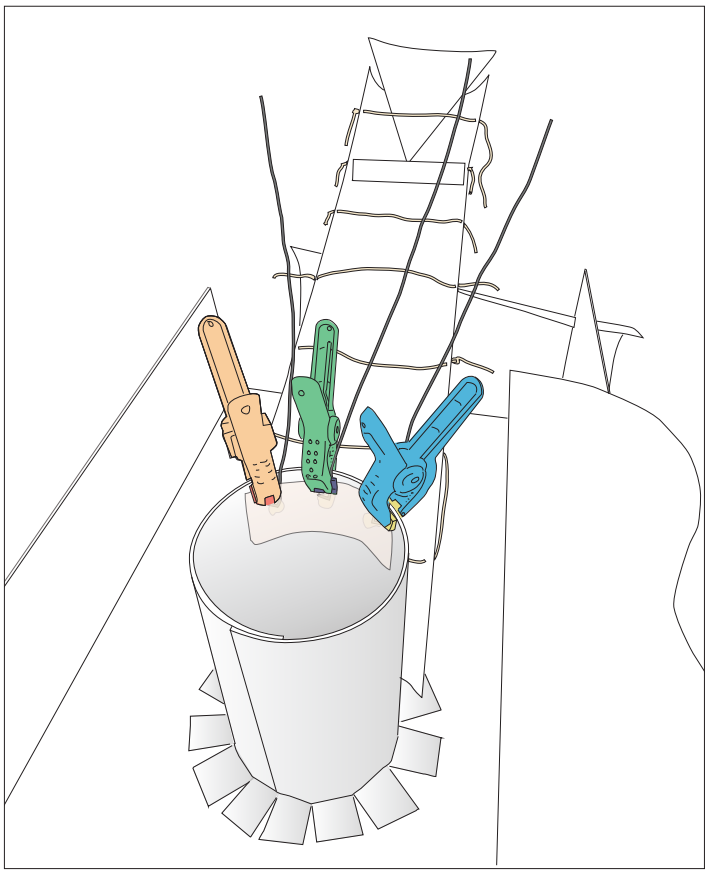
Stringing the guitar:

1. Bend each 19 gauge wire's ***sound hole*** end and test for spacing, length, and placement. The ***sound hole*** end of the three wires has an "L" tip for added stability.

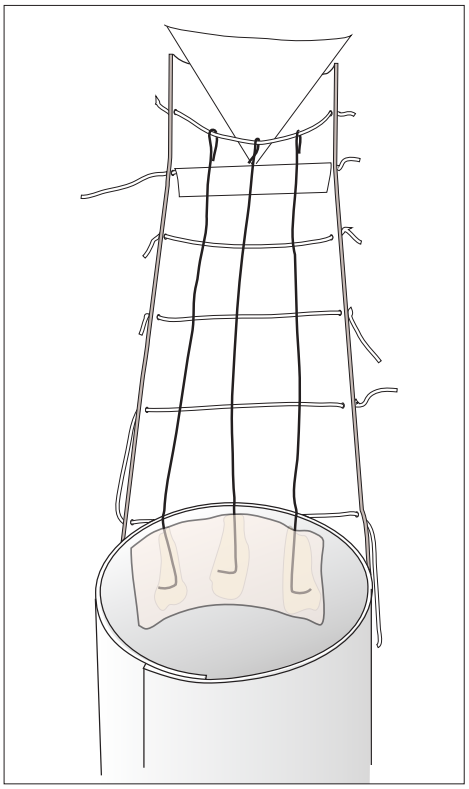


2. Apply a thin layer of hot glue to the (stability) bend of the center wire. While still hot, attach it into the ***sound hole***, let the hot glue cool. The other end will be a little unwieldy and tend to splay, which is okay for now. Hot glue the outer two wires to the ***sound hole***.

3. Peel a rectangular scrap of bookboard to make a half thickness bookboard.

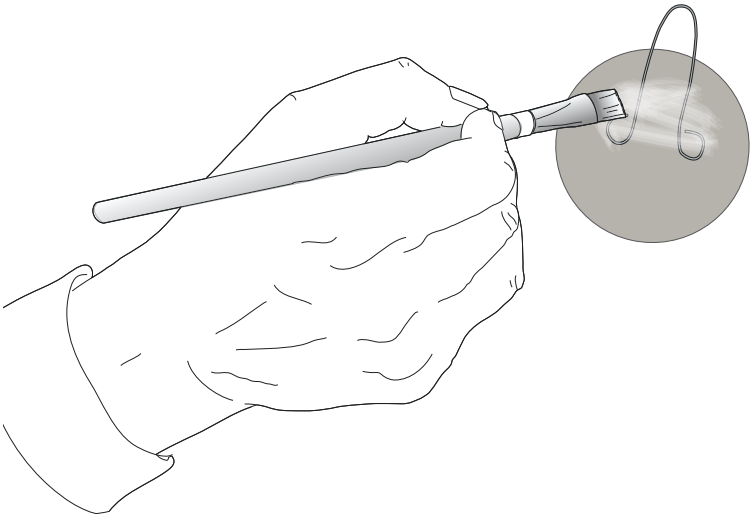


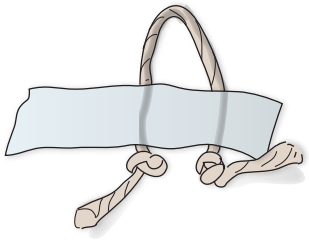
4. Glue the peeled bookboard rectangle over the three hot-glued wires, clam until dry



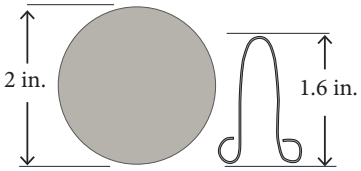
5. Position each wire, then bend and hook them onto the top fret twine.

String & Wire Hangers
Back Side





Picasso's twine hanger: Above is the hanger found on the back of Picasso's 1912 paperboard guitar. Simply a length twine with two knots and a strip of gummed paper tape securing it to the upper-edge of the ***guitar back***, just before the bend.



Wire Hanger: Bend a 4-inch length of 19 gauge wire into the shape above, and glue it to template 9, a 2-inch disk of paperboard. When dry, add another coat of glue and affix it to the upper center of the ***guitar back***.

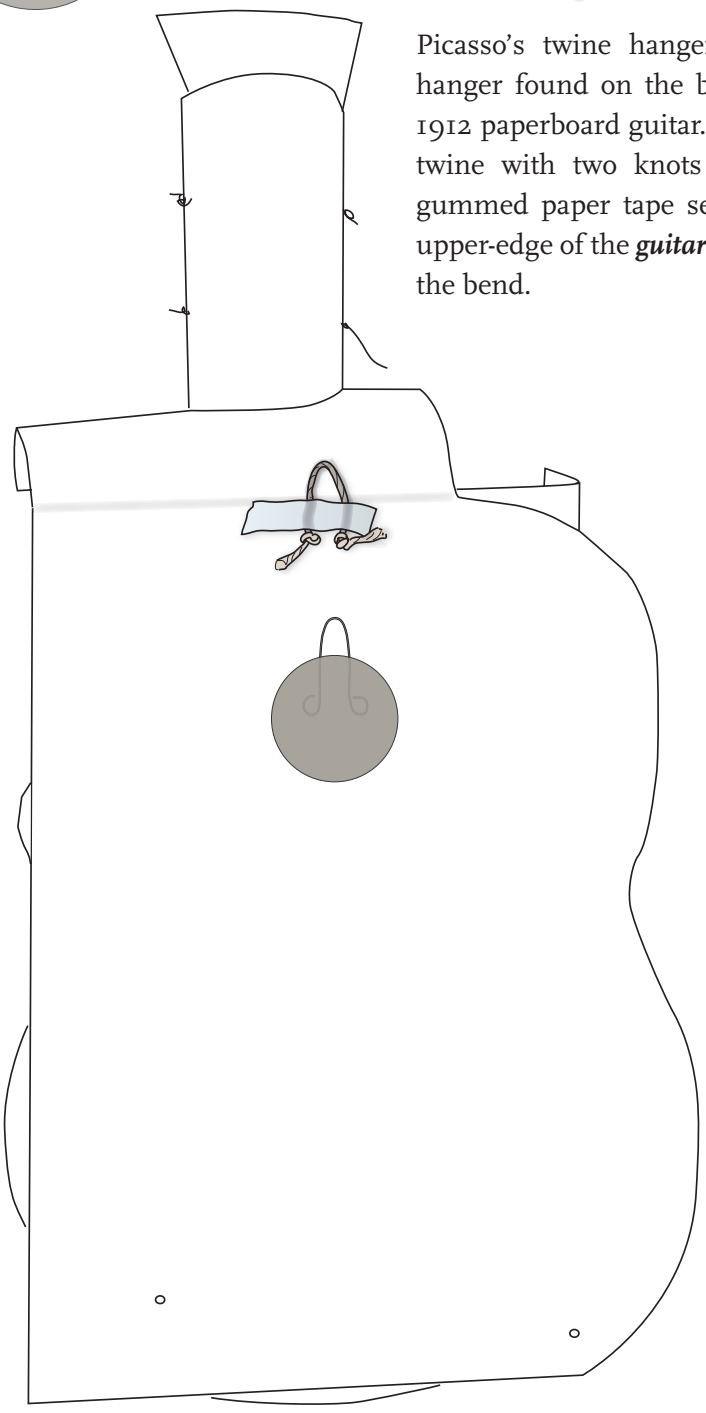
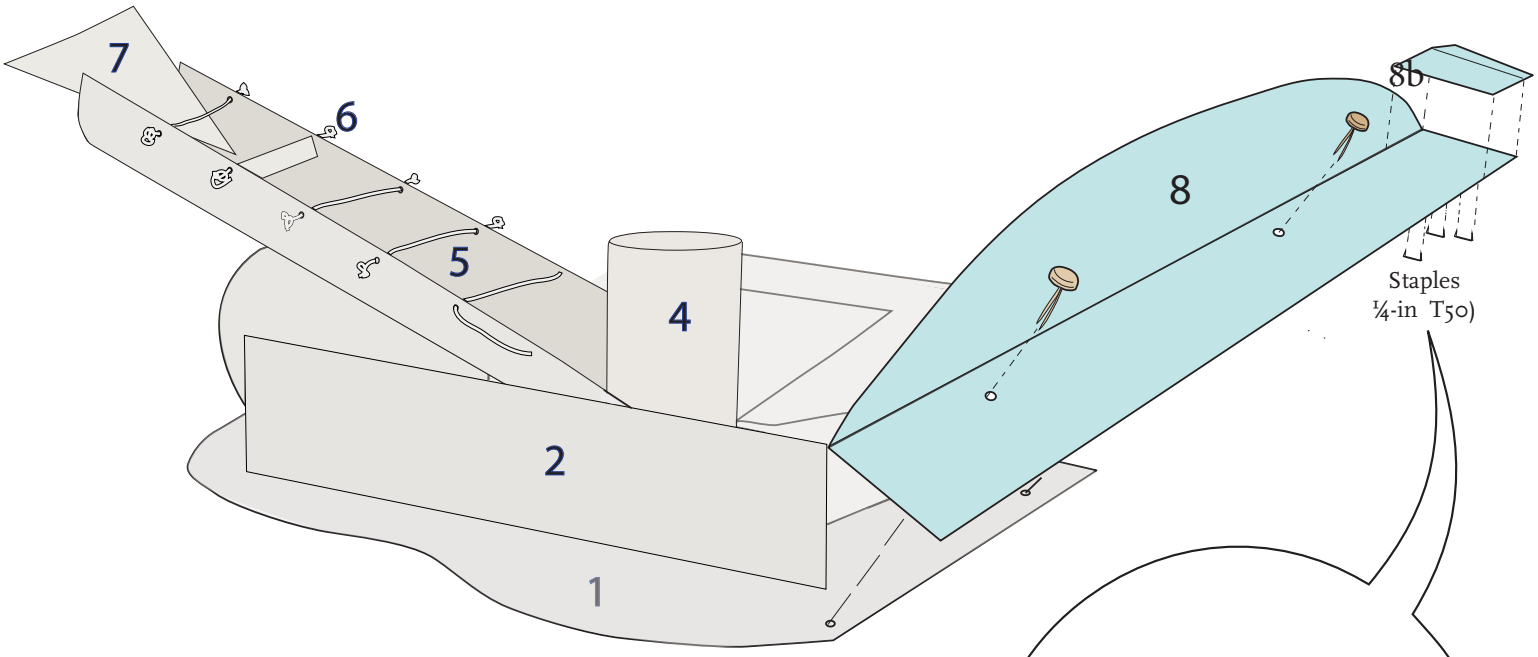
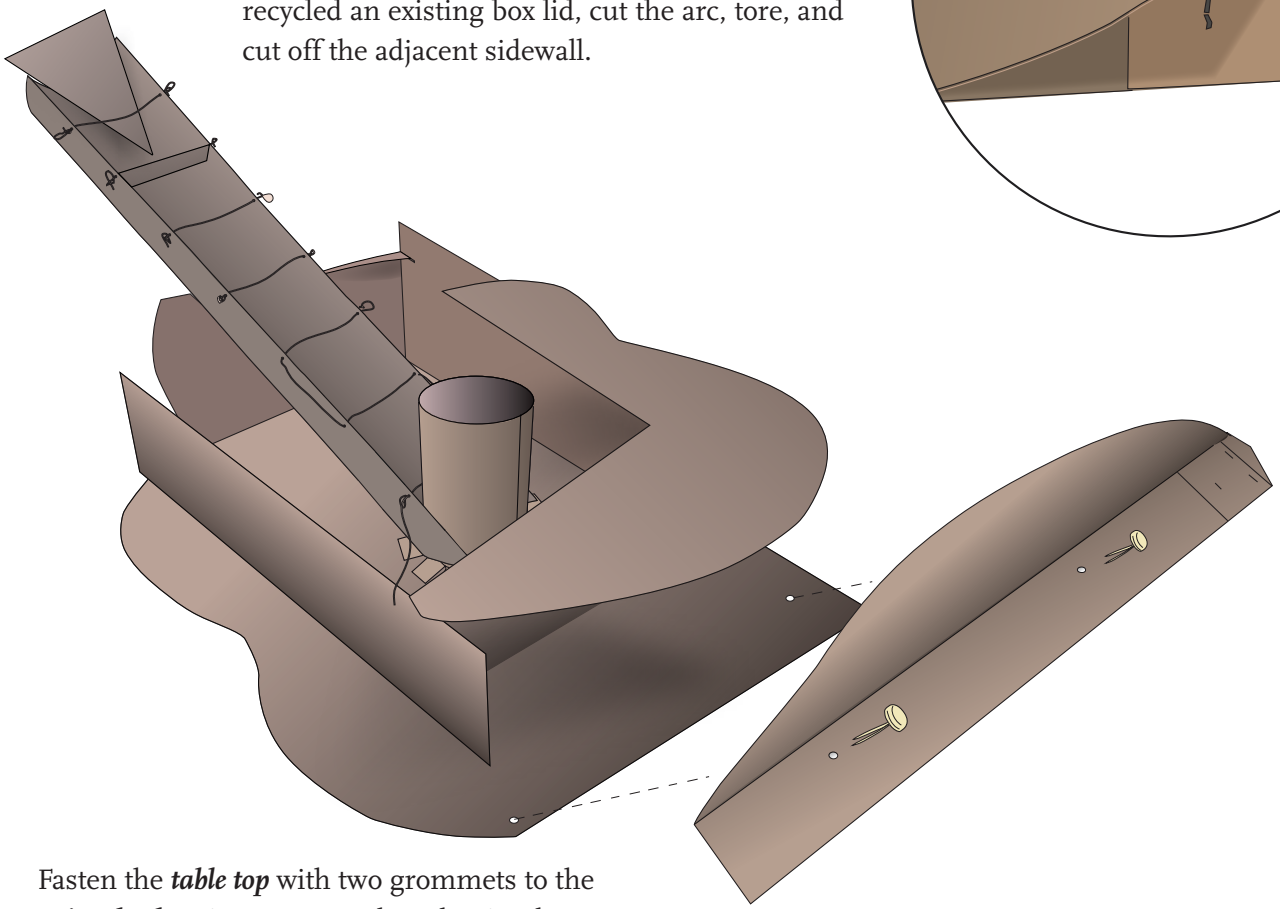


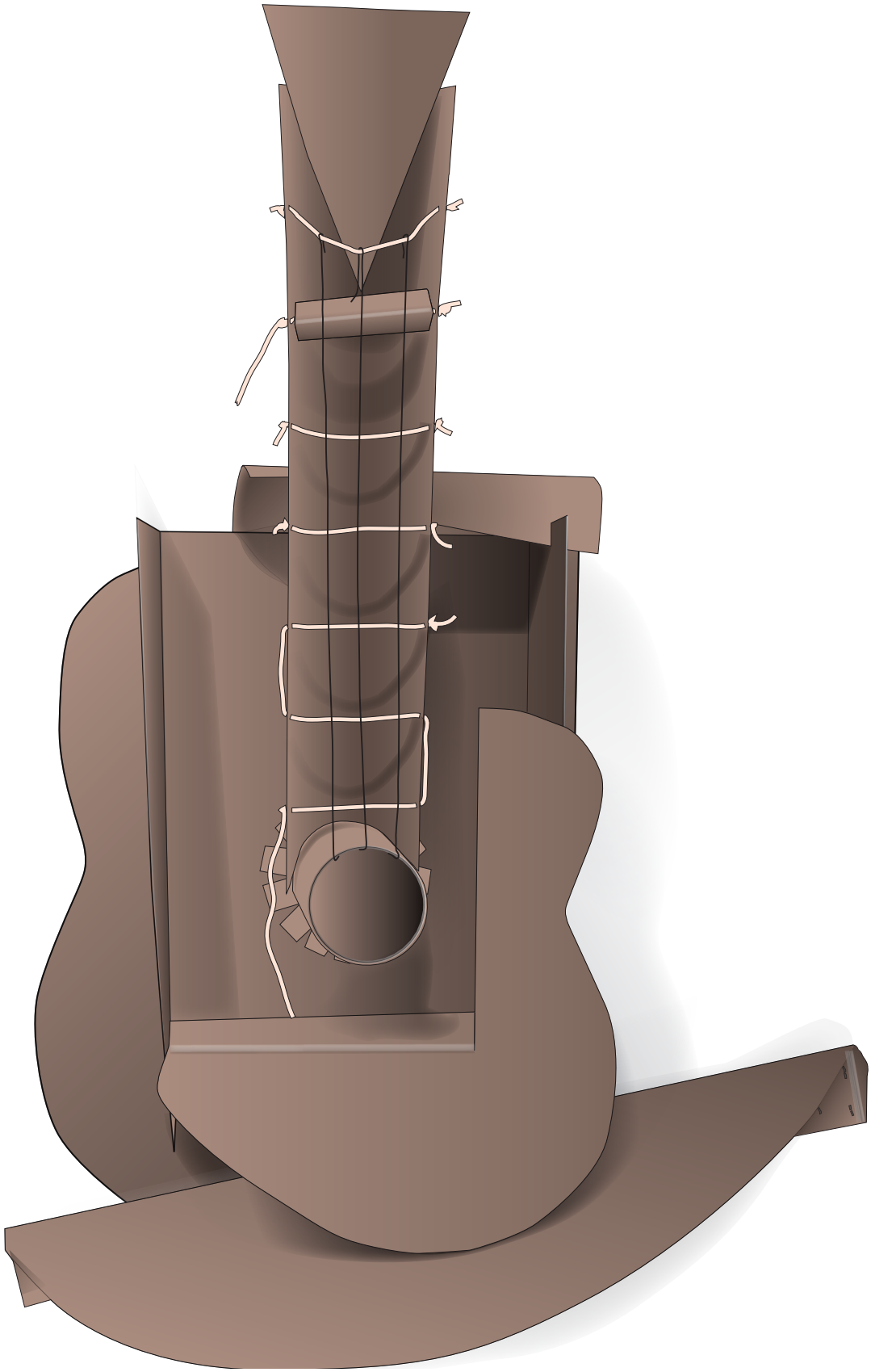
Table Top



Attach 8b using three ¼-inch T50 staples, as illustrated. The upper right corner of 8b is torn and folded in Picasso's paperboard guitar. It seems he recycled an existing box lid, cut the arc, tore, and cut off the adjacent sidewall.

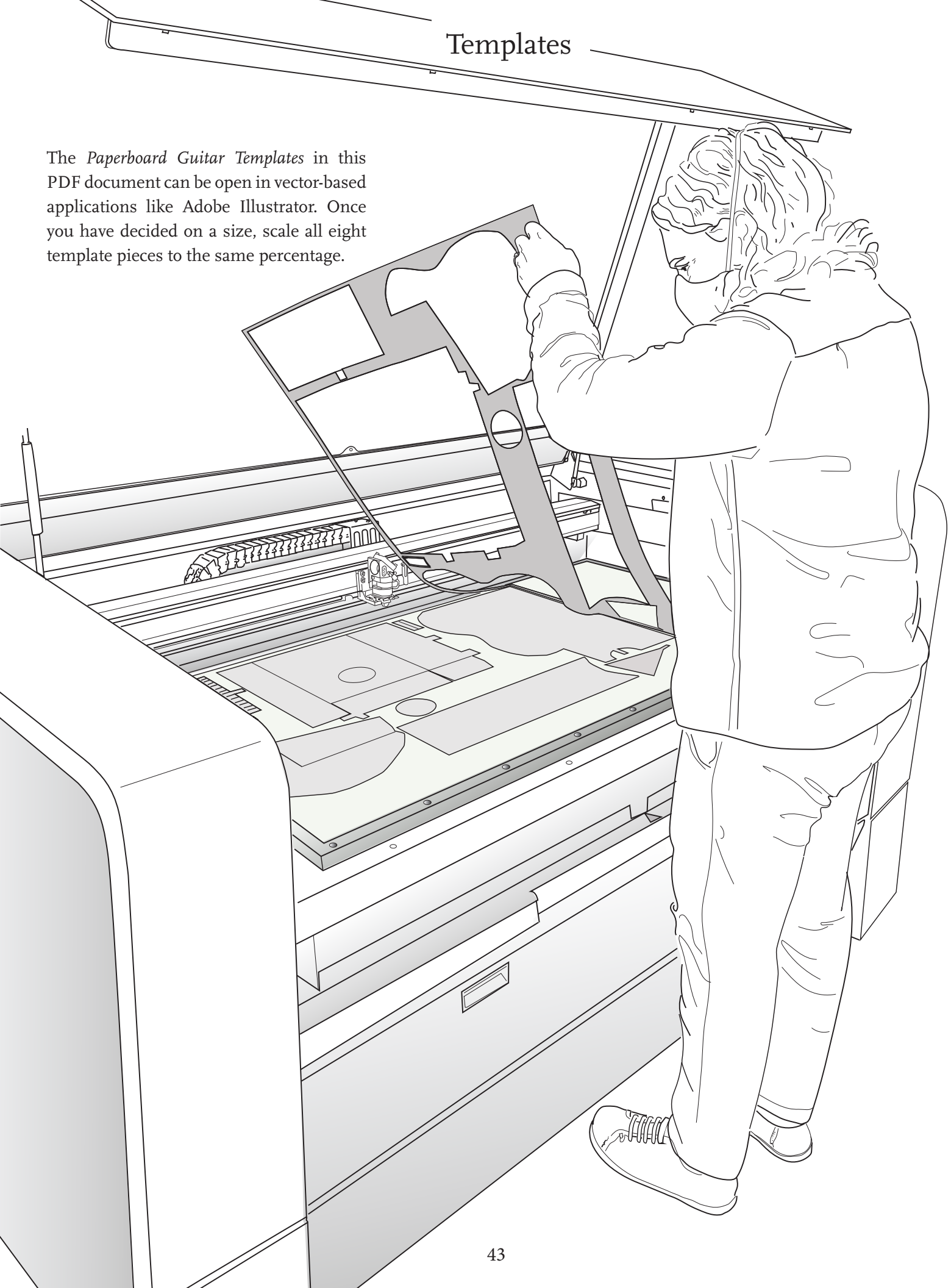


Fasten the ***table top*** with two grommets to the ***guitar back***. (Picasso's paperboard guitar has been shown with and without the ***table top***.)

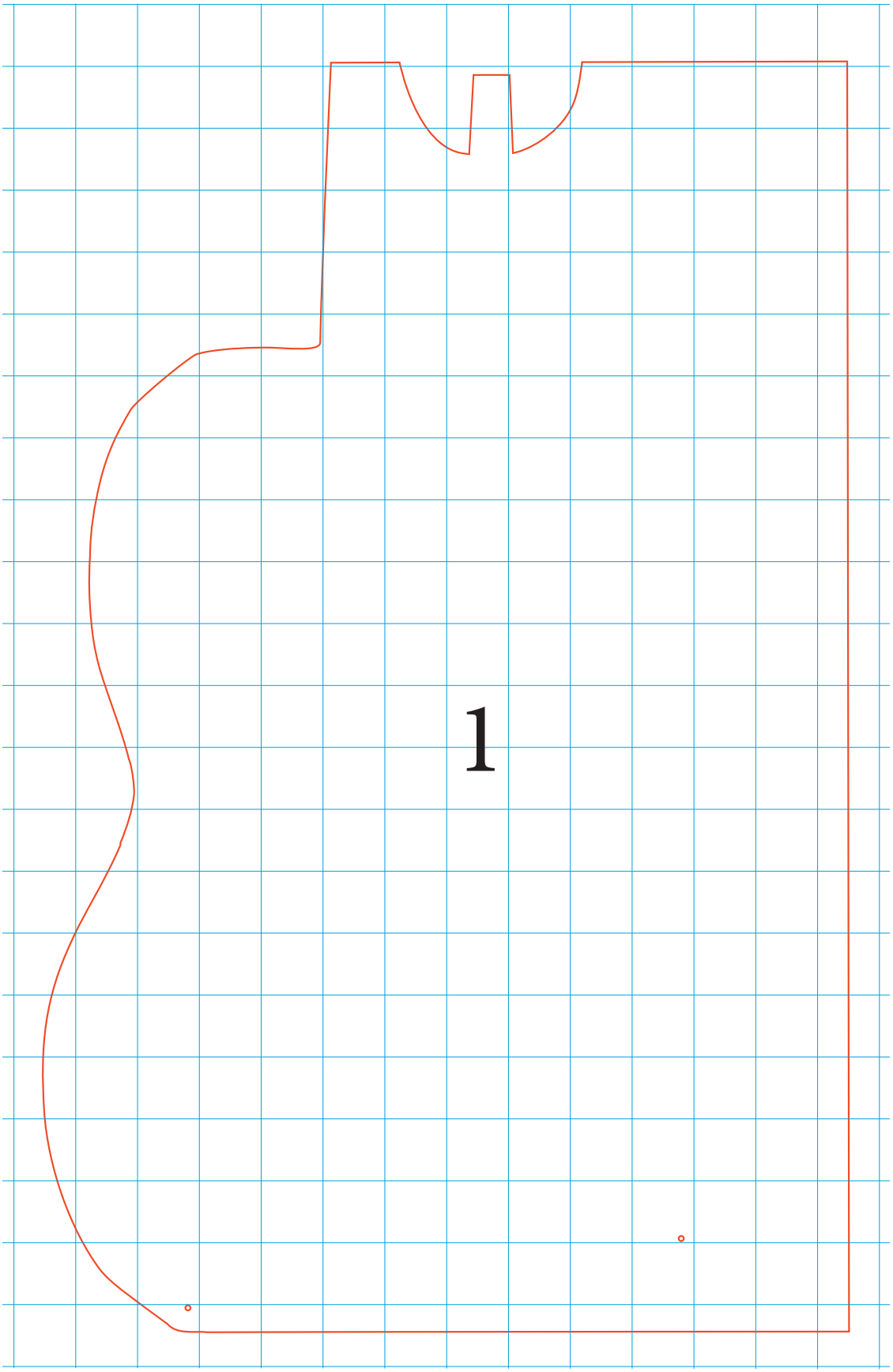


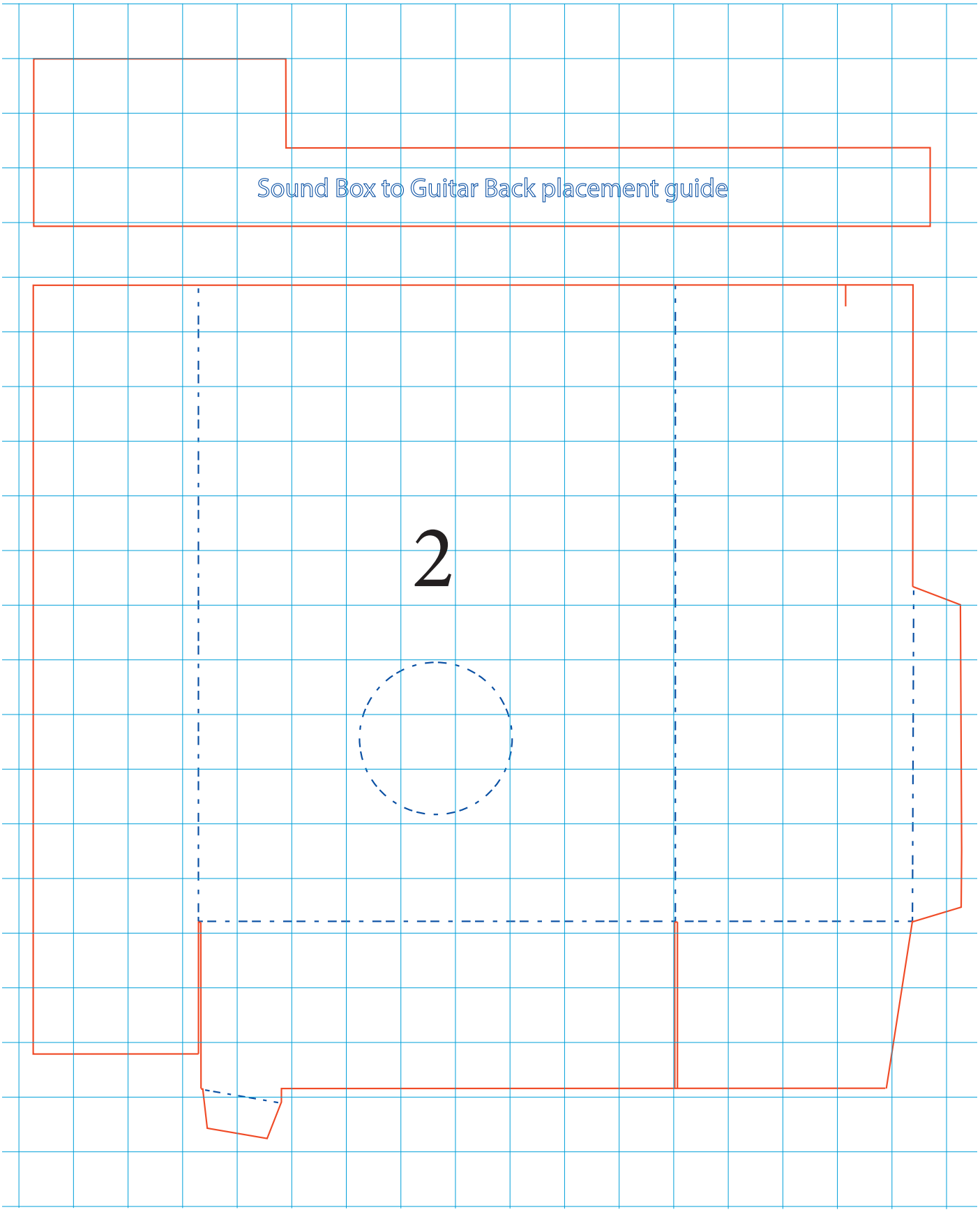
Templates

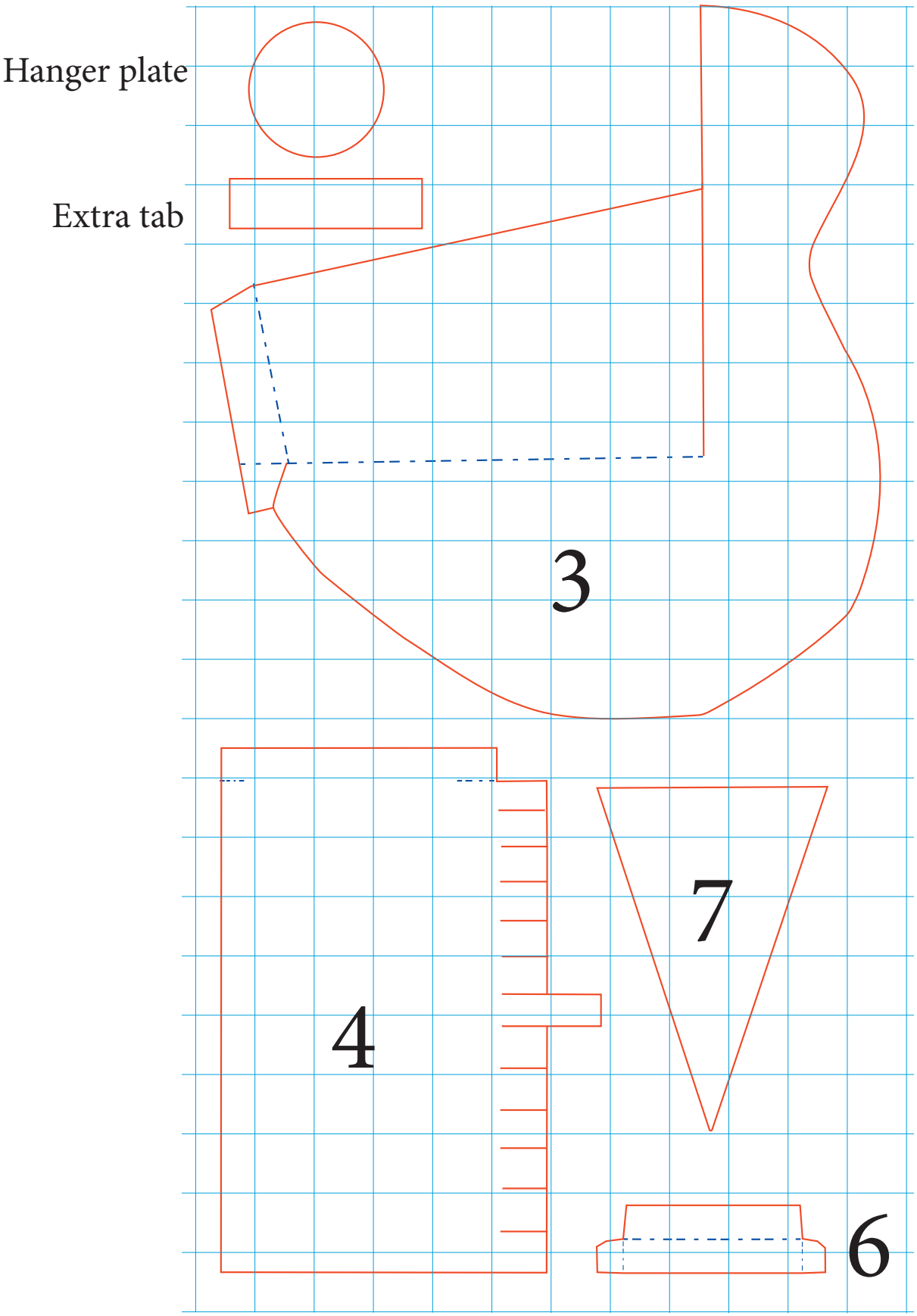
The *Paperboard Guitar Templates* in this PDF document can be open in vector-based applications like Adobe Illustrator. Once you have decided on a size, scale all eight template pieces to the same percentage.

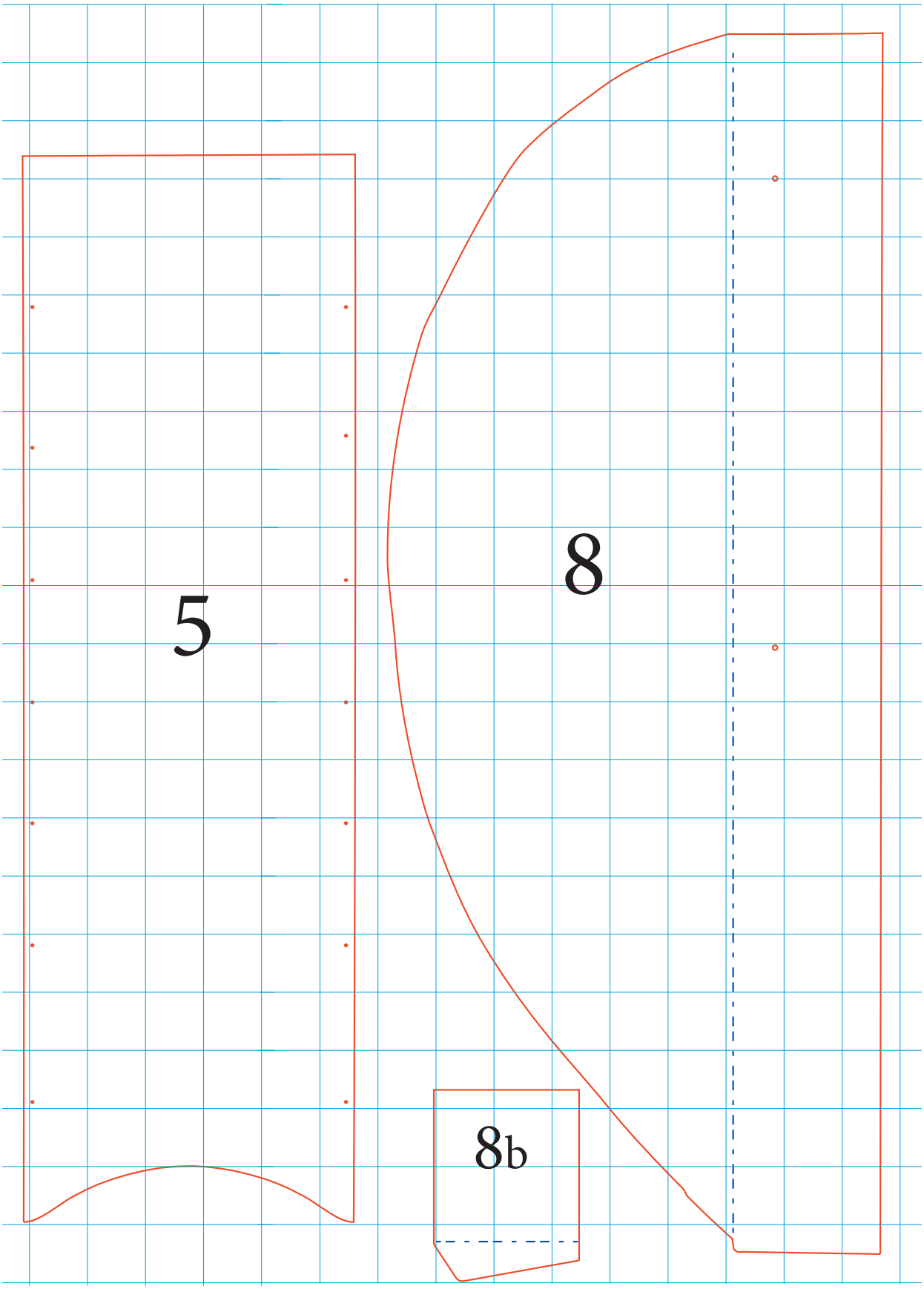


Picasso Paperboard Guitar Templates



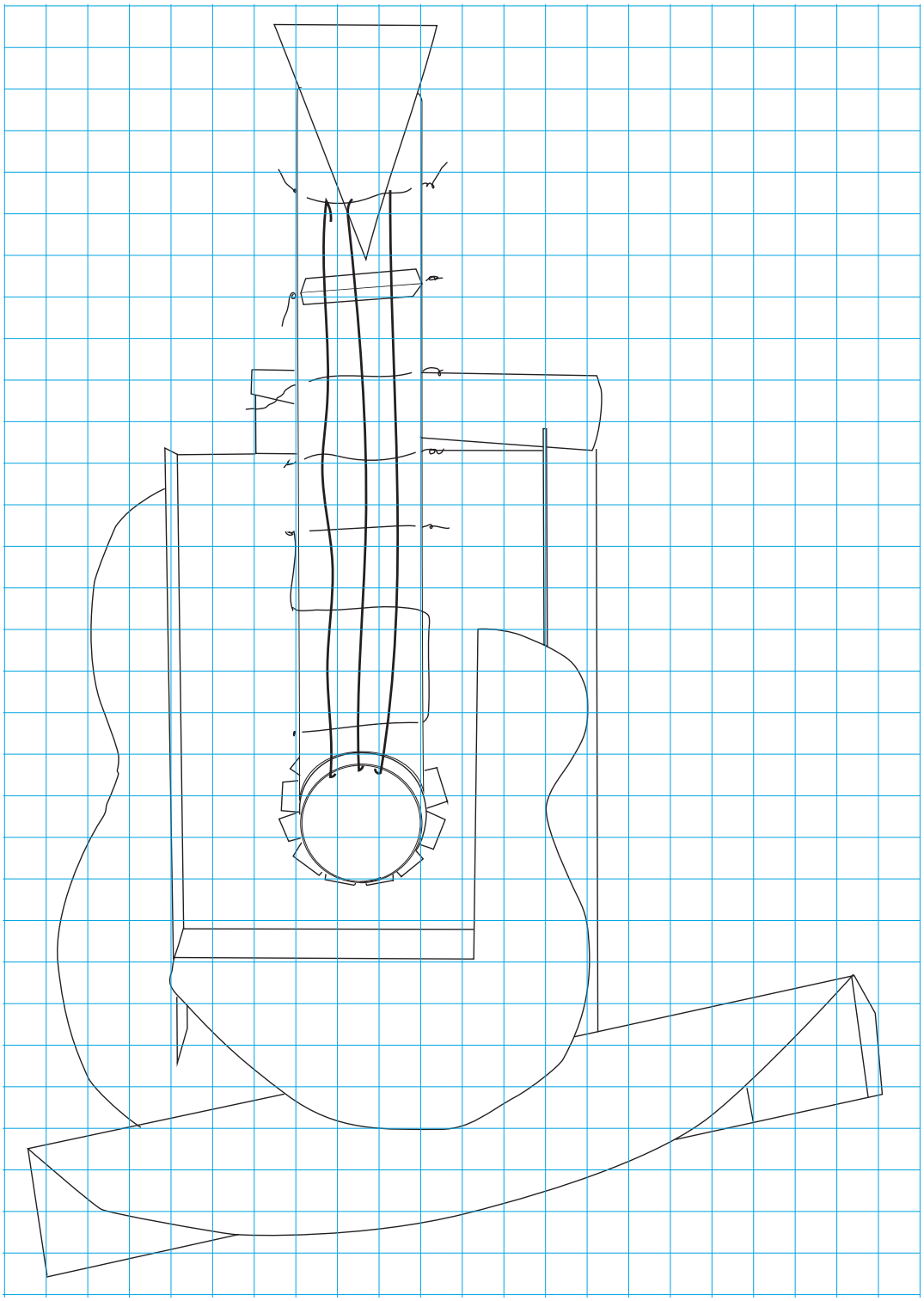

Sound Box to Guitar Back placement guide
2


Hanger plate
Extra tab
3
4
7
6


5
8
8b

Elevation with 1-in. Grid

(from 1913 studio photo, Paris)



scale: 1 inch grid

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