



ALFRED WOLL

The Art of Mandolin Making

HISTORICAL DEVELOPMENT AND CONSTRUCTION
OF THE MANDOLIN

Edition **MANDO**

Content

Foreword by Prof. em. Marga Wilden-Hüsgen	9
Introduction	11
<u>PART I: HISTORICAL DEVELOPMENT</u>	
1. The origin of the mandolin	17
The baroque mandolin	17
The early Neapolitan mandolin	18
The origin of the Romantic mandolin	21
2. Mandolin making in Italy around 1900	29
The Vinaccia family	30
Luigi Embergher	54
Raffaele Calace	82
Traditional mandolin making method in Italy	112
3. The Mandolin in Germany	119
The rise of the mandolin in Germany	119
Further development of mandolin technique	122
Mandolin making in Germany	125
Features of German mandolins	132
German flatback mandolins	138
4. The origins of the Seiffert mandolin	149
Reinhold Seiffert's career	149
Special characteristics of the Seiffert mandolin	158
5. Steps to your own model	169
A "Seiffert" as starting point	169
Bold experiments	179

PART II: BUILDING A MODERN MANDOLIN

6. Plans, forms and choosing wood	199
Plans and templates	199
Building the form	200
Suitable woods	206
Requirements for the soundboard wood	206
Requirements for the bowl wood	210
7. Making the soundboard	213
Choosing the tonewood	213
Jointing the soundboard	214
Inserting the soundhole rosette	216
Thickening the soundboard	217
The bracing	220
8. Constructing the bowl	229
Choosing the wood	229
The neck and tail blocks	231
Bending the ribs	234
Assembling the bowl	236
Fitting the linings	245
9. Attaching the soundboard	249
Positioning and gluing the soundboard	249
Fitting the binding	253
Preparing the neck joint	257
10. Making the neck	259
Cutting the blank	259
Shaping the headstock	264
Fitting the neck	266
11. Fingerboard and neck profile	271
Making the fingerboard	271
Shaping the neck profile	274
The armrest	276
Inserting frets	280
The nut	285



Fig. 2-30. Raffaele Calace (1863–1934)

(Photo courtesy of Annamaria Calace)

Raffaele Calace

During the eventful phase of mandolin development at the beginning of the 20th century, another notable personality attracted attention in Naples: Raffaele Calace (29.12.1863–14.11.1934). As well as being one of the most outstanding luthiers of his time, he was no less celebrated as a mandolin virtuoso, composer and teacher.¹

In 1825, his grandfather, Nicola Calace (1794–1859), opened a workshop as an independent guitar maker on Procida, an island off Naples. Nicola's son Antonio (1828–1876) also worked there and continued to run the manufactory after Nicola's death. In 1850 Antonio moved to Naples, where he built lutes as well

as guitars and, from the early 1870s, increasingly mandolins. One of these earned him a silver medal in Palermo in 1872. The Calace family still owns one of his mandolins from 1859 with steel strings and metal tuning machines.²

Antonio had two sons: the first-born Nicola-Maria (1859–1924) and Raffaele (1863–1934), who was four years younger. Both showed a great talent for music and learned to play the mandolin already in childhood. They also soon began to join in their father's work. When Antonio died in 1876, they took over the business. Nicola, who tended more towards music than manual crafts, was 17 years old at the time and Raffaele a mere 13. Whether the workshop also had older employees is not known, though likely. As the older of the brothers, Nicola presumably bore most of the responsibility.³

Not much is known about Antonio's instruments. The form and design of his mandolins resembled that of the Vinaccias', which were popular at the time. In their early days, Nicola and Raffaele continued to build their father's models, which included simple but neatly crafted instruments. A mandolin from 1880 serves as an example: It has a bowl consisting of 15 ribs, a fingerboard with 17 frets and no markings, a soundboard with plain binding, a scratchplate that is recessed into the soundboard and a soundhole rosette with small mother-of-pearl decorations. The concealed tuning machine is recessed into the solid headstock from behind.

They also built elaborately crafted mandolins with a large number of fluted rosewood ribs with metal spacers and tulipwood edges, with tortoiseshell-veneered headstock and neck, with engraved, concealed tuning machines and with ample decorative mother-of-pearl inlays. Some of the Calace brothers' early mandolins featured slotted headstocks with side-mounted tuning machines; later, they used only solid headstocks with rear-mounted tuning machines.



Fig. 2-31. Brothers Calace, 1886. An exquisitely decorated mandolin in the traditional Neapolitan style.

(Photo courtesy of Hans Tschirren)



Raffaele Calace, Naples, 1917; Classico A luxury version

Only a few of this luxury version of the Classico A were ever built. Floral motives adorn its scratchplate and it has mother-of-pearl purfling and a decorated Bakelite armrest. The elegantly curved carved headstock ends in a side-facing scroll. The tuning machines are recessed from behind and covered with a tortoiseshell plate. Each of the four fretboard extensions has thin, raised maple supports. The extension for the E-string ends just short of the opposite soundhole edge

(Photos courtesy of Hans Tschirren)



10. Making the neck



Fig. 10-3. Sawing out the neck blank on a band saw



Fig. 10-4. Finished blank with separated heel

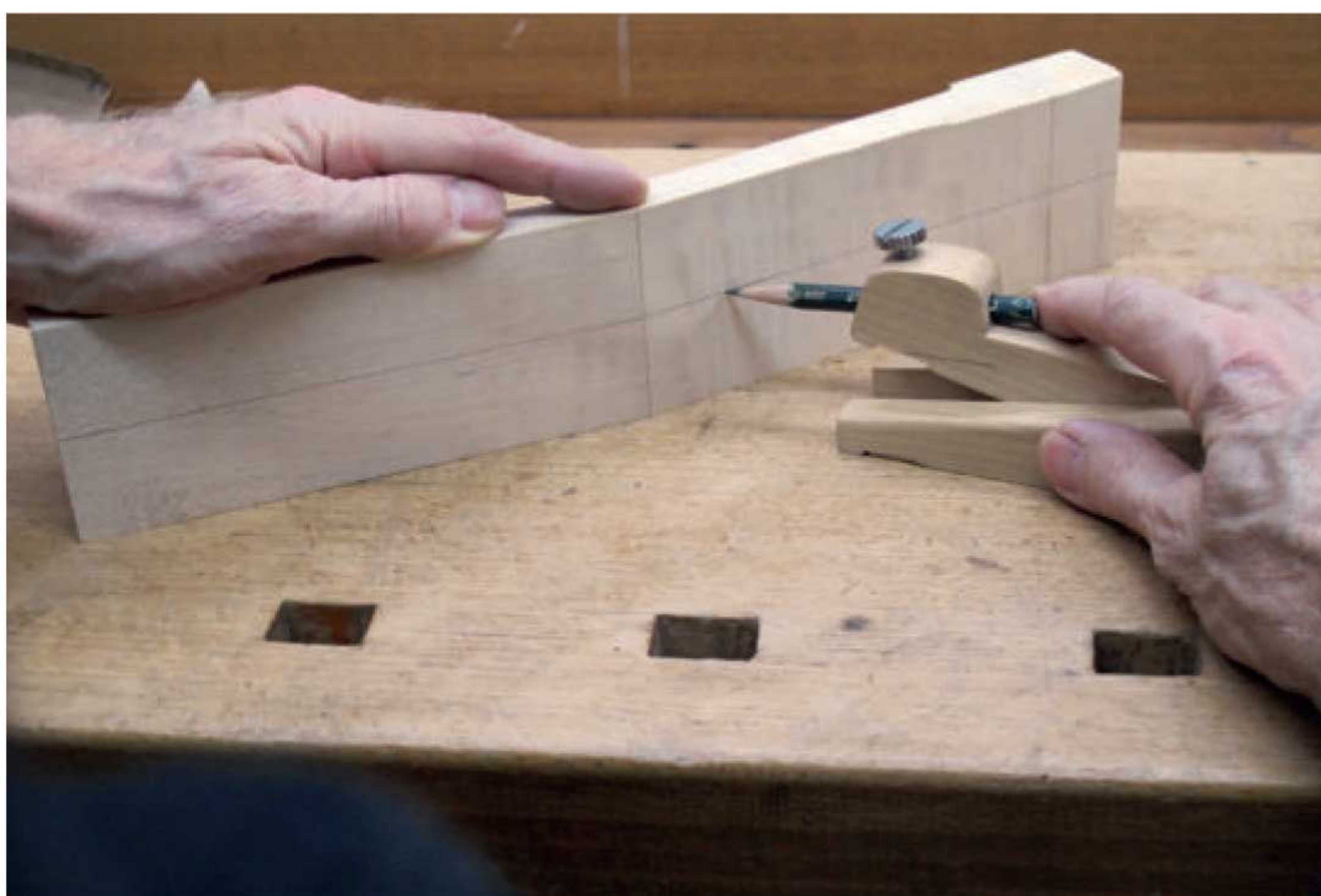


Fig. 10-5. Scribing the centre line of the neck



Fig. 10-6. Headstock and veneers with positioning holes

the construction drawing or using a template (Fig. 10-2) and then saw it out with a band saw (Fig. 10-3). Dress the front of the headstock.

Cut off half of the heel and mark the position of the sawn-off heel block against the neck. Once the neck has been set into the neck block, it will be glued back onto the neck in its original position (Fig. 10-4). Plane the new saw-cut surface parallel to the surface of the neck. Then saw off the end of the neck at right angles. This is best done with a table saw. The reference point for all measurements is the cant where the neck and headstock meet. Using a marking gauge, draw a line around the neck

at the position of the tenth fret and mark the centre line on the front and the heel (Fig. 10-5).

The next step is to cut the headstock overlay veneers. For a mahogany neck, I place a sheet of maple veneer between the rosewood overlay and the headstock, which creates a nicely contrasting edging. For a maple neck, I underlay the maple veneer with an additional sheet of, black stained veneer. With the aid of a plexiglass template, select your overlay veneer such as to show its grain to best effect. To make sure that the veneers do not slip out of place when gluing them, you can pin them to the headstock with two small wooden

nails. To do this, use the template to mark two points on the headstock and the veneers in the areas where the slots will later be and drill two small holes there (Fig. 10-6). You can carve the wooden nails from two rosewood splinters.

Now apply glue to the front face of the headstock and to the veneers (Fig. 10-7), align the veneers with the holes in the headstock and insert and tap in the wooden nails. Pare the wooden nails flush with the veneer. With a board and several bar clamps, firmly press the veneers into place. Once the glue has dried, trim the overhang of the veneers flush with the headstock on the sides.

Alfred Woll
 Model: „Seiffert“ (NM 4)
 -Neck and Fingerboard-

