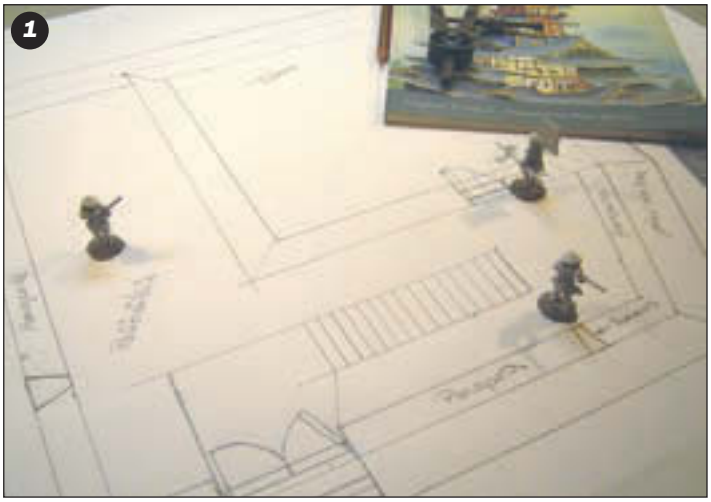
SHOGUN I

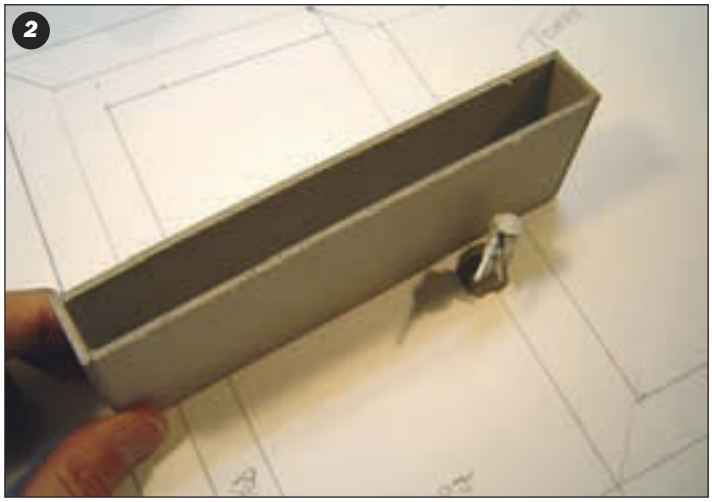
This article kicks off a series on how to build a typical Japanese XVI-century castle. During this period, defensive systems underwent a notable evolution in Japan. The arrival of the first Europeans (mainly the Portuguese), the incorporation of firearms and the implementation of more disciplined organisation systems in the armies required the Japanese to re-devise their fortresses.

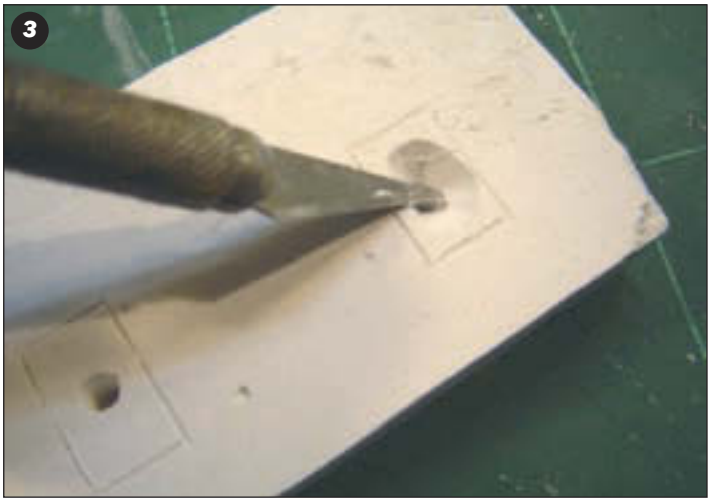
The castles were made sturdier, mainly by covering the foundation of the buildings with stones. Basically, the entire compound was made up of the main tower or keep and various peripheral buildings that were all joined by walls. We'll begin with the central structure or the main tower to which we can add any other types of building that we wish. As a reference we'll use the concentric system called *Rinkaku*. We'll base our model on the great castle *Azuchi* built by Oda Nobunaga in 1576. Unfortunately, the castle was destroyed six years after Nobunaga was killed and its exact location is unknown (*Japanese Castles 1540-1640.* Fortress-5. Osprey Publishing). We'll simplify the model and stick to making a three-storey castle and eliminating the structure on top.

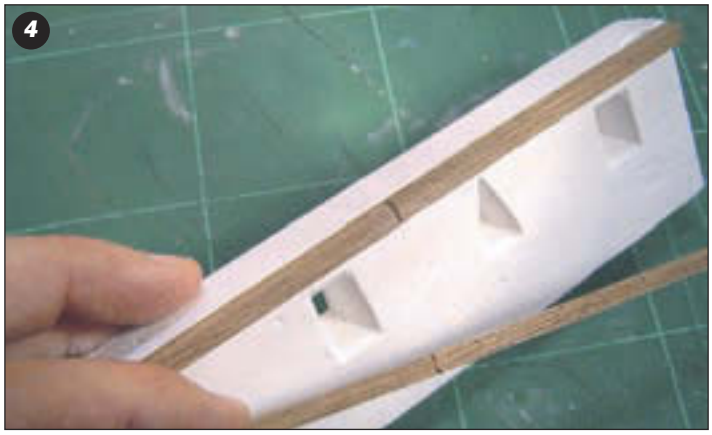
PLANNING

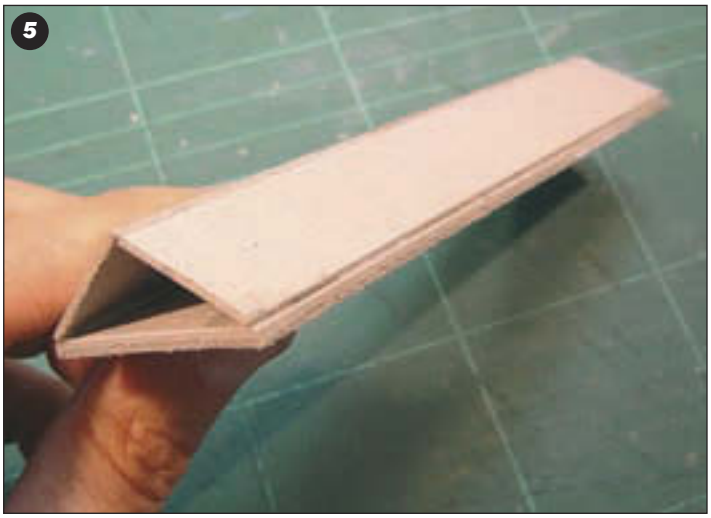
Instead of jumping straight into putting our model together, we should take the time to write down a step-by-step list to help us work our way through the construction process. In order not to pelt you with a barrage of measurements I'm only going to give you those that are essential. This way you'll be able











to vary the shape and size of the structure so that it matches your tastes.

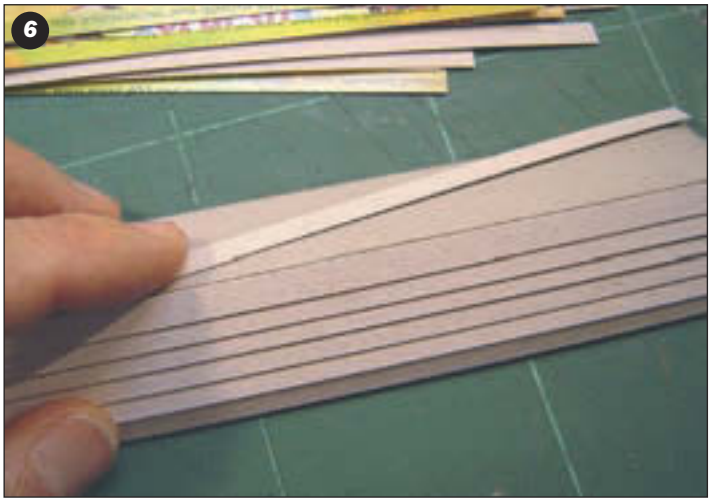
I recommend using the following method:

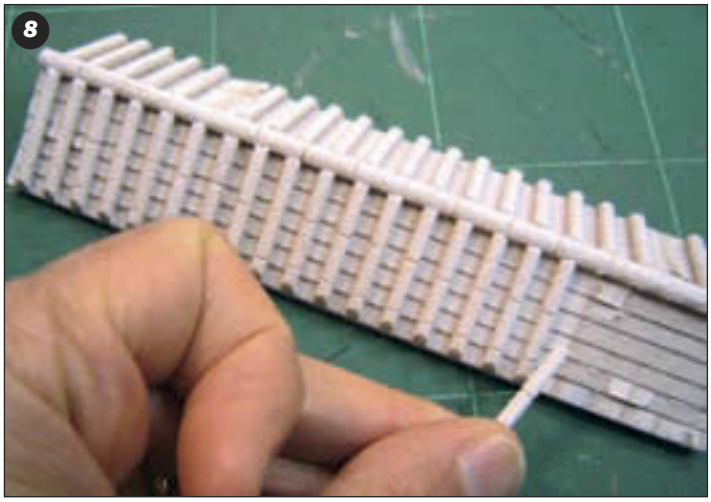
- Get a piece of white paper that's big enough for you to mark out the layout of the entire compound.

- As a reference use a figure that corresponds to the scale you've chosen for the model. This will help you obtain the correct measurements for the doors, windows or walls.

- Sketch as much of the castle layout as you need until it's clear how the final model is going to look. (Photo 1)

This step is very important and will aid you in designing and making your own projects in the future.





CURTAIN WALL

A protective wall that linked all the castle's buildings and formed an integrated structure enclosed the whole fortified compound and kept out any undesired intruders. They also built battlements atop earthen banks or stone walls that had embrasures for muskets.

On the inside these walls were made out of a wooden frame that was covered with bamboo intertwined with rope. To protect it from fire, the outside of the structure had a coating of plaster that was painted white.

BUILDING THE MODEL

Materials: grey cardboard, plaster, modelling wood and white glue.

We're going to make the wall out of plaster so that we'll be able to carve out the embrasures for the muskets.

The Main Structure

We make a mould with the following dimensions out of grey cardboard for the plaster: 15cm (wide) x 4.5cm (high) x 1.5cm (deep). (Photo 2)

We'll want to seal the inside of the plaster mould with *Alkil* (white glue). Once that's dry, we dust the inside with talcum powder to help when removing the plaster.

Then we prepare the plaster mixture and pour it in the mould.

After letting the plaster dry completely, we take it out of the mould and carve out the embrasures. The most usual openings were square and rectangular, although triangular and round ones were also common. (Photo 3) Remember that the inside of the opening is wider than the outside. This design gave the shooters more mobility and prevented projectiles from entering.

We'll put on some strips of modelling wood that resemble the beams that held up the small tiled roof. (Photo 4)

Tile Roof: This covering was used to protect the soldiers from the rain. Making these smaller roofs is similar to making bigger wooden roofs covered with clay tiles.

We cut out one piece of grey cardboard at 15cm x 4cm, two at 15cm x 2.5cm and two triangular pieces for the ends. We put these pieces together with white glue. (Photo 5)

For the roof surface over which the tiles are placed, we cut out strips of thin cardboard (cereal boxes are perfect). Overlap the strips when gluing them on as shown in the picture. (Photo 6)

Since the tiles that go over this base are round, we'll use wooden rods with a 3-mm diameter to make them.

We cut a piece that is 15cm long that we'll use to cap the roof. We need to use our scissors to make grooves a centimetre apart from each other to imitate the joint where the tiles meet. (Photo 7)

Next we cut pieces that are 2.5cm long and we make grooves in them just as we did on the previous piece. Then every 3 or 4 mm we glue these pieces on the roof. (Photo 8)

During conflicts or sieges, they usually added a wooden structure to these walls that acted like a scaffold. This would allow another row of shooters to fire over the roof.

For our model we'll use it as the parapet for the first floor and we'll put it on top of the stone base. (Photo 9)

In the next article we'll show you how to make the stone foundation and the first floor that was also stone.

So, start thinking about hiring killer ninjas to attack the fortress.

Author and photography: Adolfo Ramos

SHOGUN II

The first fortresses that we know of were built on hills or geographical features that played a defensive role. Over time these ramparts were reinforced with stones.

Before delving into to this month's article, I'd like to make a clarification. Our aim is to make our modelling articles as varied as possible and to offer readers high-quality and spectacular-looking models that are easy to construct. To do this, we're going to try to alternate easy projects with bigger and more complicated ones (don't be alarmed when you see how huge the Japanese castle were making is). Remember that all the techniques we teach you here can be used for any type of project, whether it's big or small.

In the last article we started by making the curtain wall around the fortress that we're also going to use as part of the main tower.

The first fortresses that we know of were built on hills or geographical features that played a defensive role. Over time these ramparts were reinforced with stones.

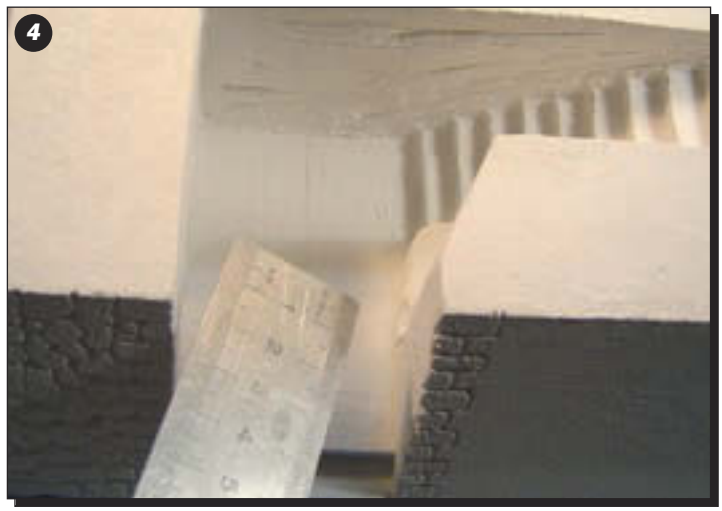
MAKING THE STONE FOUNDATION

To make the base and the first floor (which are both stone) we're going to use plaster since it's the best medium to sculpt with and since it most resembles the texture of stone. As it's one big piece it will weigh quite a bit when it's dry. To lighten it we can make the piece hollow. If you want to make the plaster harder you can add a bit of white glue to the water; bear in mind though that this makes it harder to carve out the blocks of stone.

BUILDING STEPS

Materials: Grey cardboard (2mm thick), plaster and white glue.

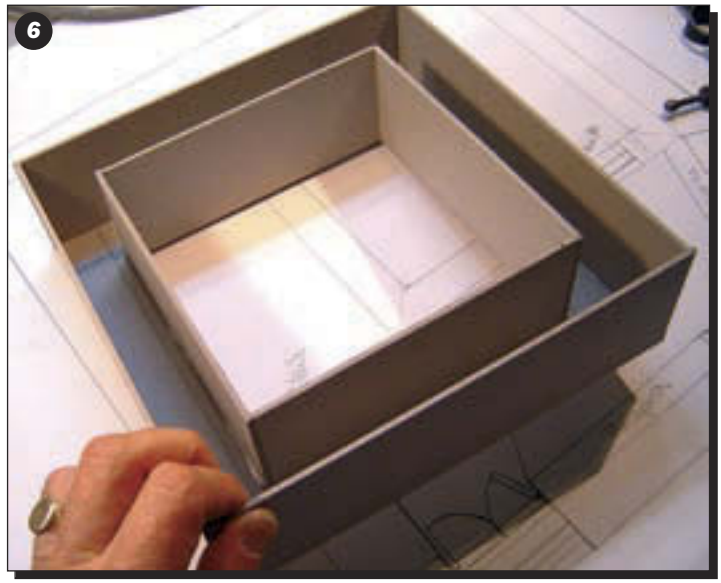
Making the Base: First we need to make a mould for the plaster out of cardboard with the base smaller than the top. Remember that in reality you'll be pouring the plaster into the bottom of the mould and that we'll flip it over once it has

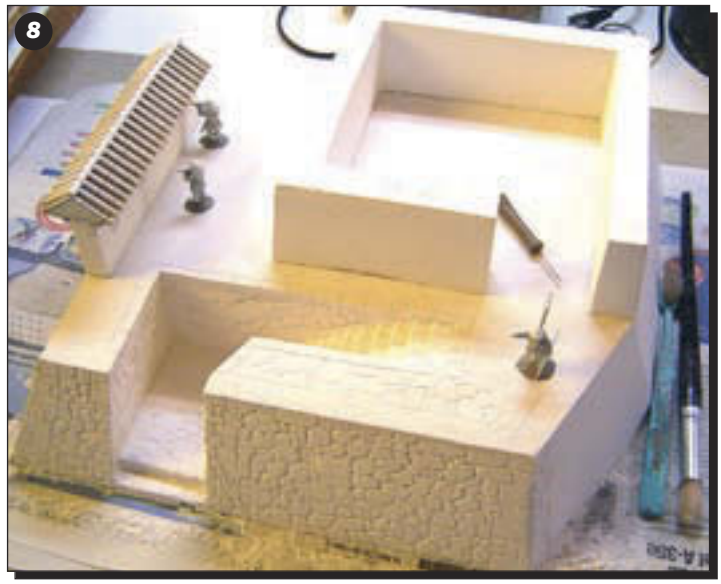


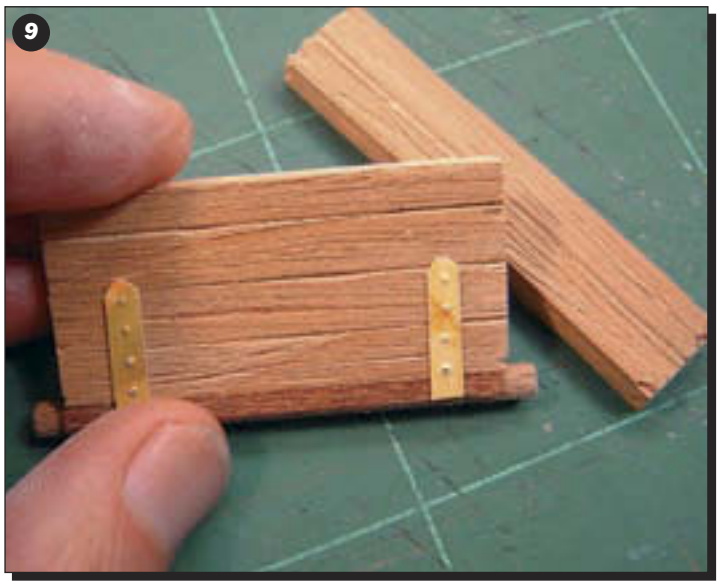
dried. This means that the base of the final piece will be wider than the top. Basically, the shape of the base will be a square with one of the corners cut off.

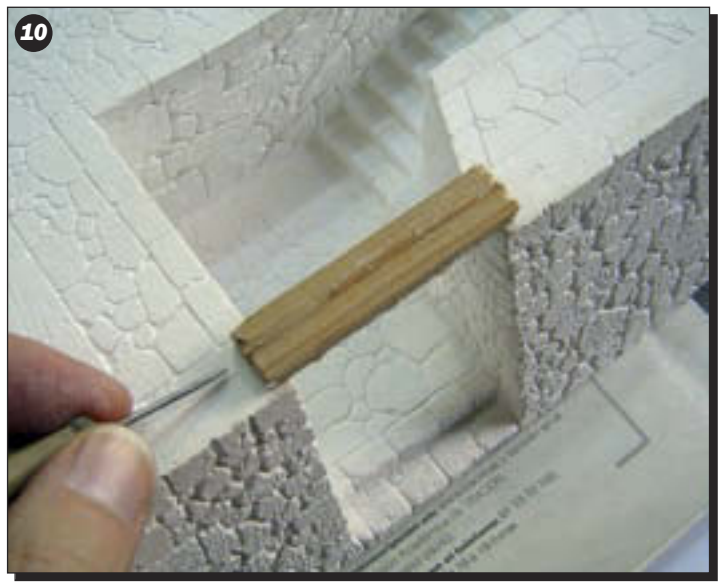
For this mould you'll need to cut out the base piece of cardboard at 25 x 30 x 30 x 20 x 11cm and the remaining pieces at 13 x 8 x 10.5 x 8cm, 23 x 8 x 20 x 8cm, 35 x 8 x 30 x 8cm and 35 x 8 x 30 x 8cm. As you can see from the measurements, the mould is not your normal square. Since the sides are slanted, you have to move them around until all the pieces fit together when you're assembling it. (Photo 1)

Next we want to seal the inside of the mould with white glue (Alkil) so that the moisture from the plaster doesn't damage the cardboard. (Photo 2)









To get the plaster mix we want to add the correct amount of water to the bowl first. Then we carefully pour in the plaster until it just breaks the surface of the water and mix it with our hand.

Before we pour the plaster mixture into the mould, it's a good idea to use something heavy to support the sides; that way the mould won't bust open due to the weight of the plaster. (Photo 3)

To make the inside hollow, we can use a container or box; if you decide to do this, make sure it doesn't touch the bottom of the mould.

Allow to dry.

Once dry, we can mark and carve out the staircase leading up to the first floor (I've used a metal ruler to do this). Look at photos 4 and 4b to see how I did it.

We sculpt the entire outer part of the piece so that it resembles blocks of stone. First we do the cornerstones by carving out square- or rectangular-shaped stones on the corners and the doorframe and then we do the rest of the masonry work using stones of different shapes and sizes.

Making the First Floor: The first floor is also made out of stone, which means we'll be using plaster again. For the mould, we'll need cardboard pieces with the following measurements: 20 x 20 x 5.5cm with a hollow inside of 15 x 15 x 5.5cm. (Photo 6)

Prepare the plaster mixture as we did above and seal the inside with white glue (Alkil).

Pour the plaster in the mould and wait for it to dry completely.

We take the mould apart and cut out the door on one of the sides –make it 5cm wide, just like the door on the base.

First we'll use a metal ruler to put a bevelled edge on the outside part, i.e. leaving the outside part of the wall slightly sloping inwards (Photo 8). After that, we do the masonry work. (Photo 7)

General view of the model built so far. (Photo 8)

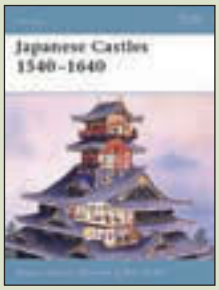
Making the Wooden Door: With modelling wood we make a door with two leaves that are 2.5cm x 5cm and a wooden lintel (horizontal support beam) that is 6 x 0.5cm. We can also add metal supports and nails to the doors. (Photo 9) The lintel must fit inside the stone which means we have to carve out the slots for it. (Photo 10) To get the door to pivot, we have to make the corresponding holes in the floor and the lintel. (Photo 11)

In the next article, we'll finish off this series on Japanese castles by showing you how to make the top floors and the roof.

Author: Adolfo Ramos
Photographs: Adolfo Ramos

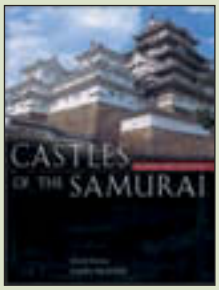
BIBLIOGRAPHY

There are not too many books commercially available in English on this subject. The most useful that we have found for this project are.



JAPANESE CASTLES 1540-1640 (FORTRESS)

Author: Stephen Turnbull
Illustrator: Peter Dennis
Published by Osprey Publishing. 2003
This is an useful book if taken as an introduction to Japanese castles. It has all the problems typical in Osprey's books, i.e. it doesn't delve too deep in most of the topics presented. On the plus side the illustrations are very good and the information provided is more than enough to begin with.



CASTLES OF THE SAMURAI: POWER AND BEAUTY

Author: Jennifer Mitchellhill
Photographs: David Green
Published by Kodansha International
This book has more than 50 well done photographs of Japanese castles. The text is informative, but in less a 'wargamer' way than Turnbull's.

WEBSITES OF INTEREST

The best Internet sites on Japanese castles are, regretfully if naturally, in Japanese. However some of them have English versions available. The most interesting site we have found is: www.shirofan.com/english.html It has hundredths of photographs of Japanese castles and traditional houses. And the site layout is really nice!

SHOGUN III

This article wraps up the series on how to build a Japanese castle. Although our model doesn't represent any construction in particular, it is based on buildings dating from the mid XVI century to the mid XVII century.

INTRODUCTION

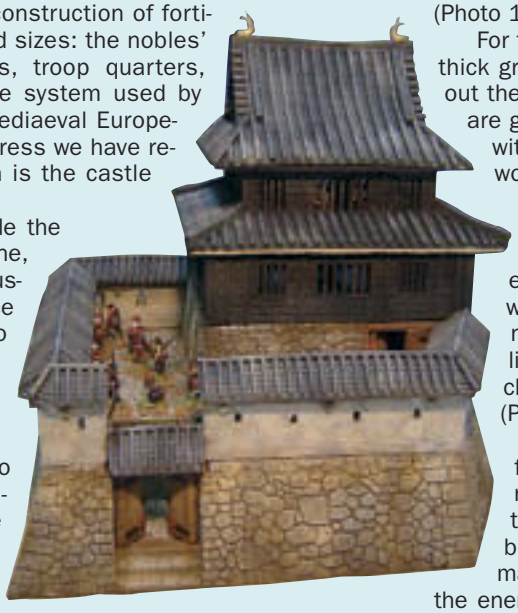
During the Sengoku Jidai period (1467-1615) a long era of wars took place in Japan between the existing states and clans which gave way to the construction of fortified places of different shapes and sizes: the nobles' mansion, administrative buildings, troop quarters, stables etc. In many aspects, the system used by the Japanese is reminiscent of mediaeval European castles. The section of the fortress we have reproduced for this month's section is the castle keep or donjon.

In the first two articles we made the stone base, the first floor, also stone, the walls with embrasures for muskets and the fortress's two entrance doors. This month we are going to show you how to make the second and third floors as well as the roof.

THE SECOND FLOOR

To make the second floor we need to start by cutting out a piece of 2mm-thick grey cardboard for the base that is 17.5 x 17.5cm.

We then cut out a 3.5 x 3.5cm square in the middle which will be the opening for the stairway leading up to this floor. Lastly, we'll use a modelling knife to score 8mm strips on this piece for the floor boarding. If you're up to it, you can make the floor out of small wooden strips. (Photo 1)

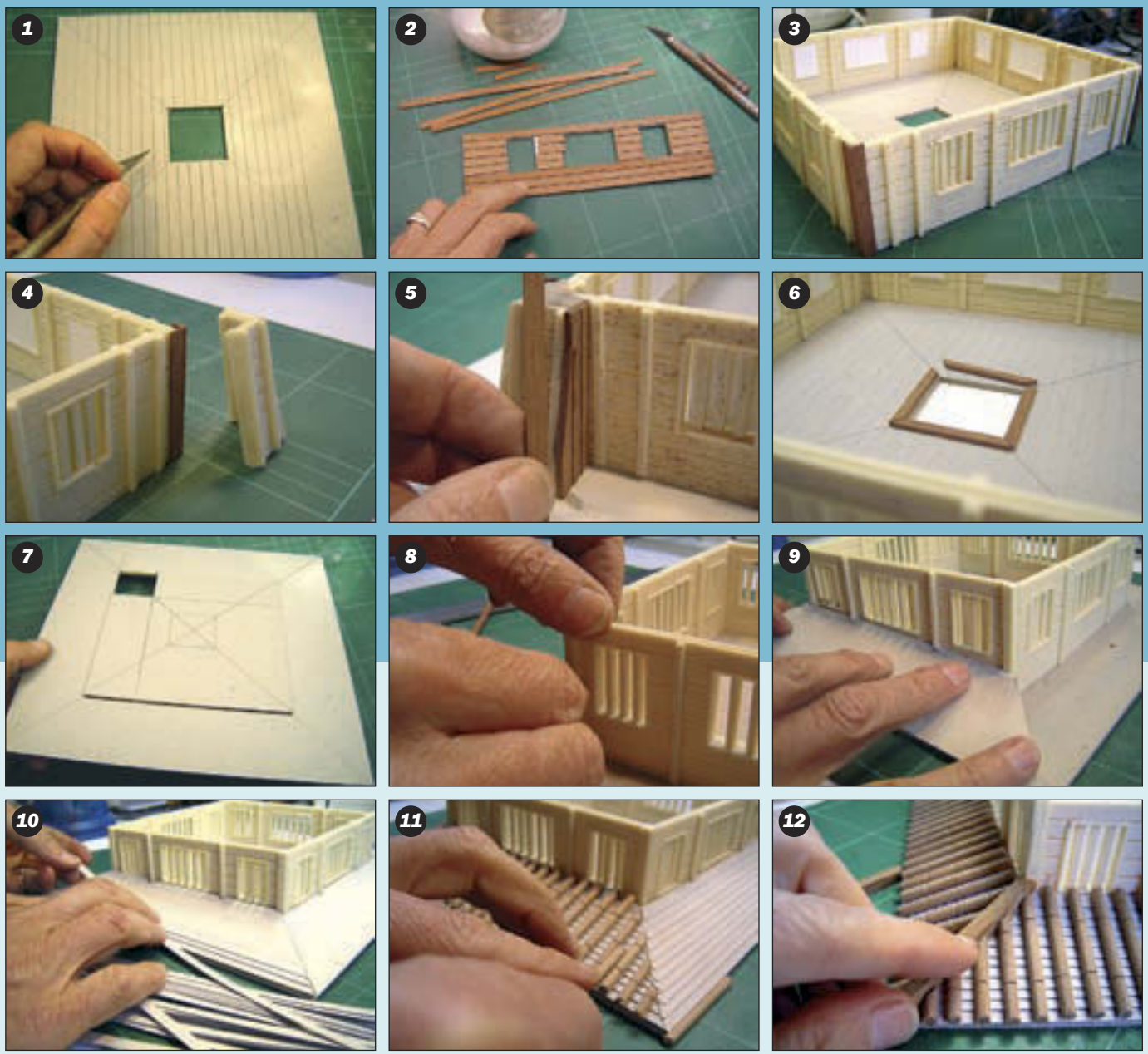


For the walls, we need to cut a piece of 2mm-thick grey cardboard that is 17.5 x 5cm and cut out the windows with a knife. For this model, we are going to cover both the inside and outside with wooden strips so that it resembles a wooden wall. (Photo 2)

We make a frame for each window and put wooden strips in vertically like bars.

We make 4 identical pieces, one for each wall, and glue them in place, adding a wooden reinforcement on each corner to finish it off. For this model, we've made a silicon mould to save time. - (in the next article, we will show you how to make moulds). (Photo 3)

During fortress sieges, the assaulting forces would try to climb the stone base to reach the upper floors. To defend against these types of attacks, structures were built that stuck out over the walls. These matacanes allowed the defenders to fight the enemy as they were climbing up. On this model, we've placed one on the outside corner. Using wooden



strips, we make a bell-shaped structure with the top narrower than the bottom and fit it to the corner. (Photos 4 and 5)

Lastly, we finish off the floor by putting some wooden strips around the opening for the stairs. (Photo 6)

THE THIRD FLOOR

We begin by cutting out two pieces of 2mm-thick cardboard, one at 24 x 24cm and the other at 13 x 13cm, and we glue the smaller piece in the centre of the bigger one. Next we need to cut out a 3.5 x 3.5 cm square in one of the corners of the small piece to make the opening for the stairs. (Photo 7) With a modelling knife, we make the floorboards just like we did on the other floor.

Using the small cardboard as a reference, we position and glue the wooden walls like we did in the previous section. (Photo 8)

We cut out four pieces of 1-mm thick grey cardboard at 22 x 4.5 cm, trim them down until the angles coincide and glue them to the base and wooden wall. (Photo 9)

Next we cut out 0.5cm-wide strips of grey card and glue them on the top for the base of the roof, slightly overlapping each one. (Photo 10)

With wooden strips we make the next piece. Using a pair of scissors, we add notches on each rod to represent the joints between the tiles. Then we flatten one of the sides a bit and glue that side on the roof. We want to leave a space of 4mm between each wooden strip. We will use the same system we showed you in the first article to make the roofs of the walls with the musket embrasures. (Photo 11)

In the corners, we put a square piece of wood that is 0.5cm thick and 6.5 cm long, having previously cut out the opening for this piece with a small saw. (Photo 12)

Next we cut out another piece like the previous one and sand one of the sides. We want to concentrate our sanding more in the centre than on the ends so that the piece looks curved. When done, we glue it on top of the previous piece. (Photo 13)

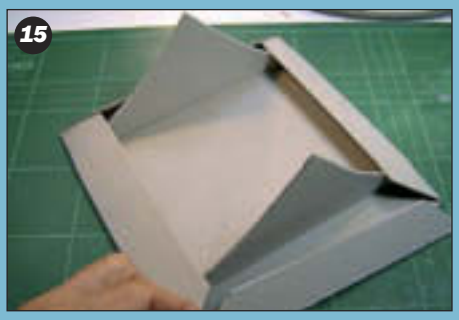
With two small strips of wood we make the frame for the stair opening just as we did on the second floor.

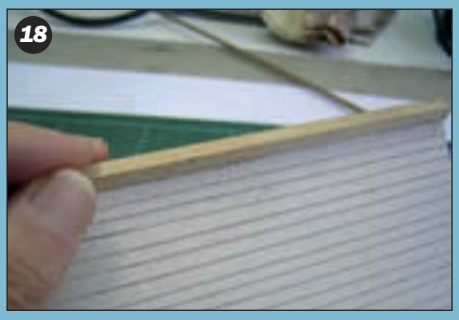
THE ROOF

We cut out a piece of 2mm-thick grey cardboard that is 18 x 18cm for the base of the roof. Then we cut out a piece that is 12 x 12cm and glue it in the centre of the previous one. Next we need to cut out two pieces at 18 x 8cm that we make into triangles (like a roof), giving them a slightly curved shape. (Photo 14)

We glue the two triangle pieces on lip of the sides of the 12 x 12cm piece.

Then we cut out four pieces at 18 x 3.5cm, make the angle and glue them on (Photo 15) as we did on the previous floor.





We cut out two pieces of 1mm-thick cardboard at 14 x 8cm and glue them on the roof to finish covering it.

We cut out strips of card that are 0.5 cm wide and cover the roof, overlapping each one, just like before. (Photo 16)

We add a piece of card to cover up the part that is left over on the front and back. (Photo 17)

We then cut out two strips of wood that are 0.5cm wide and 14cm long and glue them together, sanding the centre to give it a curved look.

Do not sand the ends. (Photo 18)

Next we cut out curved 0.4cm rods and make notches every 1cm with a pair of scissors (like before). Then we glue these on leaving 0.5cm between each one (Photo 19) on the sides, back and front, just as we did before.

We cut out a triangle that fits in the roof area (two pieces). (Photo 20)

Then we add a window to this triangle and fill in the rest with strips of wood. (Photo 21)

We sand down the edges until it fits (Photo 22) and glue each one in place with white glue, one on the front and one on the back. (Photo 23)

With all the tiles in place and the roof done, all we have left to do is the final detail: the shachi or golden dolphin that was placed on the top of the castle that warded off evil spirits and protected it against fires. With epoxy putty we make a fish with its tail lifted up over its head. (Photo 25) Whether your fish ends up looking like a dolphin or a sardine, don't worry because these were just icons and were not meant to be perfect replicas. We also must not forget the castle's uzumi or secret doors. I must admit I haven't found them yet. Give it a shot to see if you are luckier than I am.

This is what it looks like before being painted. (Photo 24)

Author and Photographs: Adolfo Ramos

The castle's lord prepares to set off for the war.

Samurai Castle

In previous issues of Wargames S&S our contributor Adolfo Ramos has written step-by-step articles on how to build a Japanese castle from the Warring States period. Here, we would like to show you the model that he gave to the Perry Brothers, photographed in action accompanied by figures from the twins' samurai range.

Preparing the defence.

The farewell.

Under siege.

The enemy approaches.

Introduction

It could be any castle, the defence of the local *daimyo-'s* lands and from where he watches over the territory that his lord gave him. It is from here that his tax collectors depart on their journey to take a portion of the peasants' crops as revenue.

The samurai train in its courtyards and the *ashigaru* learn the fundamental aspects of warfare. Their *yari* and arquebus will be invaluable when the war breaks out.

Prestige. Power. Strength. Control.

This is what a Japanese lord's castle stood for. However, it was also his means of survival. Without a castle, he would not be able to defend his lands against incursions led by the rival clans. Without his castle, he would be at the mercy of the bands of *ronin* and rebel

Winter.

peasants that wandered around Japan. Without a castle, he would be nothing, he would be nobody.

Just like the fortifications, ravelins, *fleches* and bastion of the *trace italienne* in Europe, fortresses were a fundamental strategic element during the *Sengoku Jidai* in Japan. Winning a battle was important: it attracted allies, gave the sensation of strength and provided the victor with glory and prestige. At the same time, however, it was a risk. The warlords went to battle only when the reward was worthwhile.

Taking a strategically located fortress was one such prize, even though they put their lives at risk. Takeda Shingen died during the siege on the Noda Castle (1573) due to wounds from an arquebus. The fact that the last operation of the wars which ended in the Tokuwaga Shogunate was the siege of the Osaka Castle is highly symbolic.

The Castle

Adolfo Ramos' model does not represent any castle in particular. It could be any of the hundreds of castles

that can still be seen today, perfectly preserved, scattered over the landscape of Japan.

It is a representation of the last bastion, which would be the equivalent to the *donjon* or castle keep in Europe. In Japan it was known as the *istenshu*.

It is built over a stone foundation (*ishi-otoshi*) to hinder enemy siege works.

This is an example of a small castle. The biggest ones had up to three, sometimes labyrinth-like, enclosures or courtyards that were used to delay and confuse the enemy if they were able to get over the outer wall. The upper floors are made out of wood. Normally they were coated with plaster to protect the structure from attacks with incendiary objects, but on this model they are bare wood.

Author: Wargames Editorial Staff
Photographs by Michael & Alan Perry
Castle by Adolfo Ramos
Figures from Perry Miniatures
From the Perry brothers' personal collection