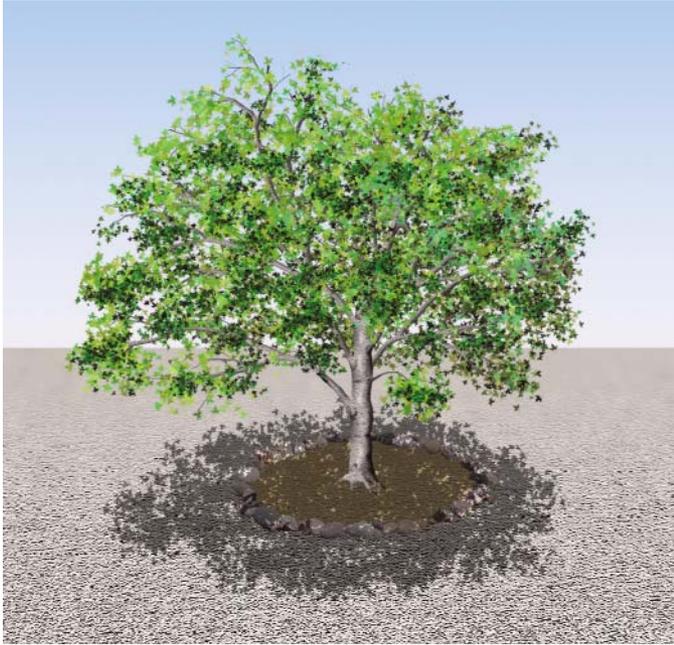


Lights and Shadows

I love the play of light on objects. Trying to re-create that interaction is always an enjoyable challenge. California gives me new insight into the effects of lights and shadows. The California sun is very bright and clear. It tends to overly saturate the colors of a scene. It also casts very sharp shadows.

Artificial light is also striking. It has competing light sources that illuminate a scene from different angles. This creates a myriad of shadows that clash and compete for prominence. Artificial light also comes in colors. Colored light sources create colored shadows.

Shadows add life and dimension to an image. Without them, an object appears flat. Shading a scene properly gives it the illusion that it has a third dimension. Lights and shadows determine the relationship of one object to another and their place in the total scene. The position and strength of the lights and shadows also set the overall mood of the image.



1 The noontime sun is directly above the tree, which causes the shadow to fall directly below the tree.

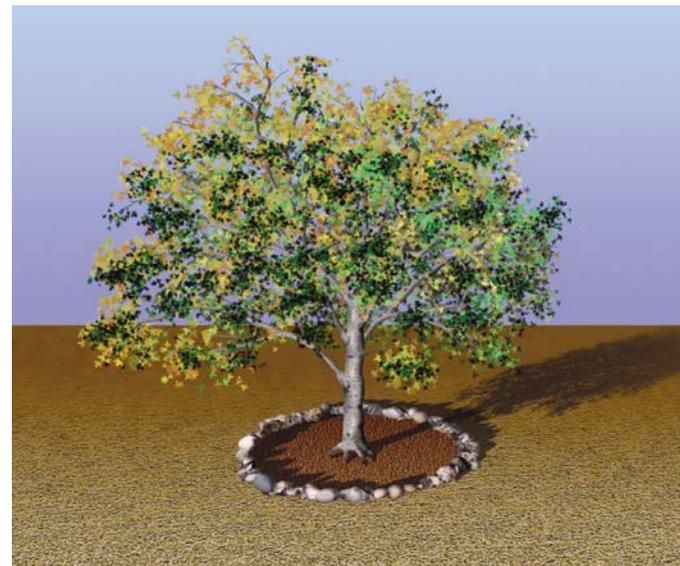


2 The afternoon sun is off to the left, causing the shadow to fall behind the tree and to the right of it.

Photoshop is a two-dimensional program. Photoshop's files are configurations of pixels that are placed across the width and down the height of an image. There is no depth, as one would find in a 3D program. The illusion of a third dimension is created through the use of shading and perspective.

The image on the cover of this book is called "late afternoon." The angle and color of the light streaming in through the window identifies the time of day for the scene. The sun is low on the horizon. The late afternoon sun is turning to that orange color of a sun that is setting.

The position of shadows in an outdoor scene automatically establishes the time of day. Figure 1 shows a tree in a field at noon. How do we know it is noon? The shadow is directly below the tree, which means the sun is directly above the tree, as it would be at the noon hour. Figure 2 shows a scene that represents a time that is a little later in the day. The sun has moved from directly above the tree, and the shadow streams away from the tree. Figure 3 shows a scene that is set late in the day. The sun is low, causing the shadow to lengthen.

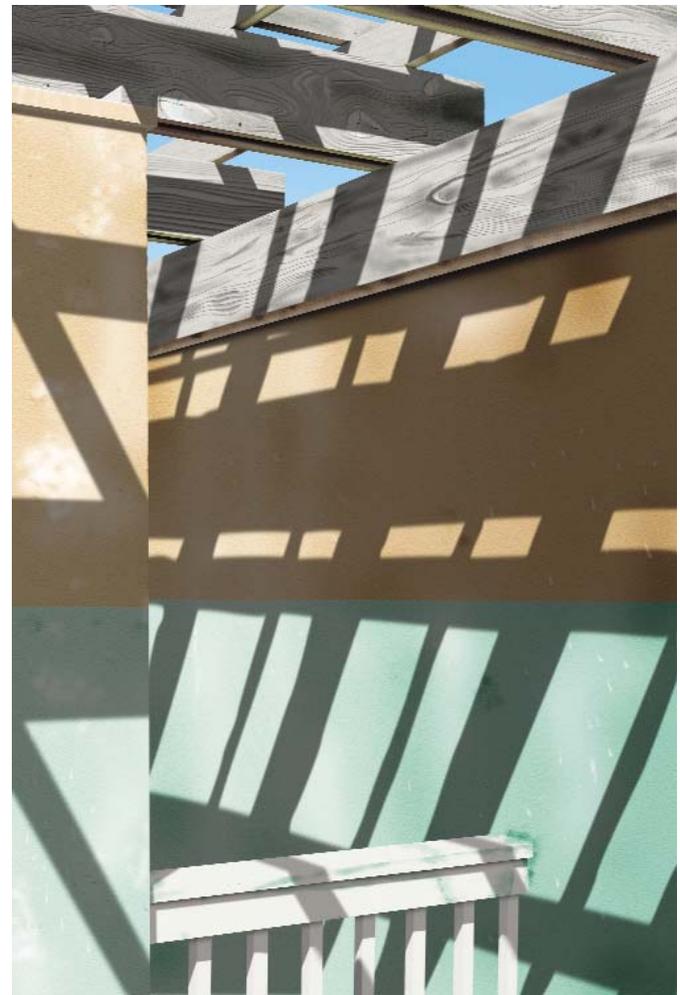


3 The evening sun is low on the horizon, which results in a longer shadow. The setting sun also casts a warmer color over the scene.



4 The painting, "Bodega shadows," uses a shadow as the central focus.

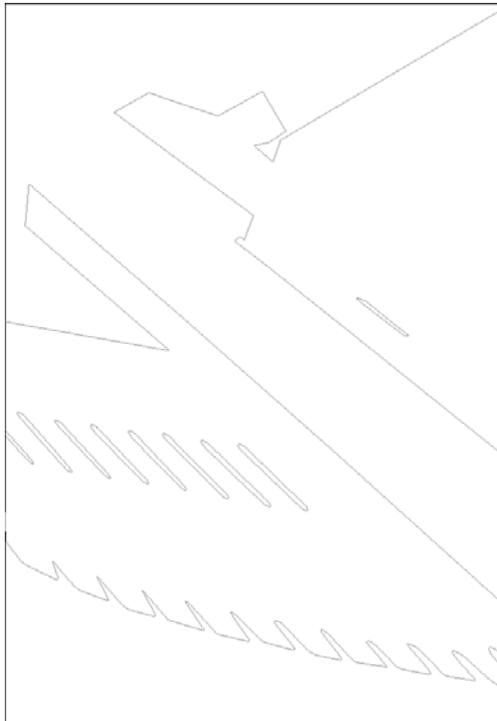
Shadows are often the focus in some of my paintings. "Bodega shadows" and "shadowplay" are two very good examples of how shadows play a main role in some of my paintings (Figures 4 and 5).



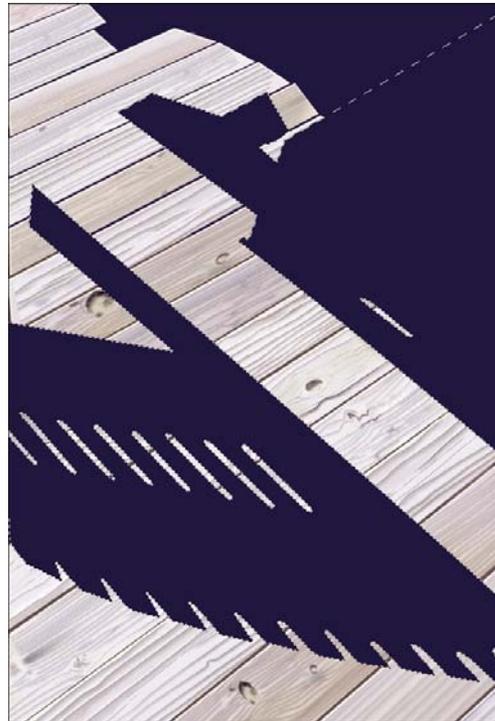
5 In the "shadowplay" painting, the shadow is the subject.

The shadow starts as a shape that is outlined with the Pen tool. Figure 6 shows the paths created for the shadow shapes in Bodega shadows. In Figure 7, the path is turned into a selection and filled with a dark blue color.

The final touches are illustrated in Figure 8. Note that the opacity was lowered in this illustration. The layer was also blurred with the Gaussian Blur filter (Filter>Blur>Gaussian Blur).



6 The paths for the shadow shapes.

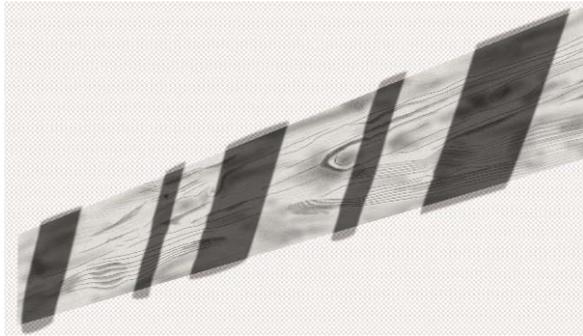


7 The path is selected and filled with the color for the shadow.

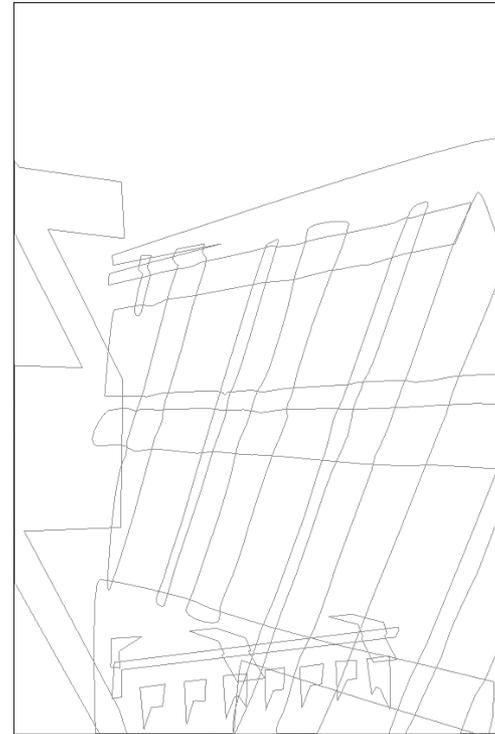


8 The layer of the shadow is blurred and reduced in opacity.

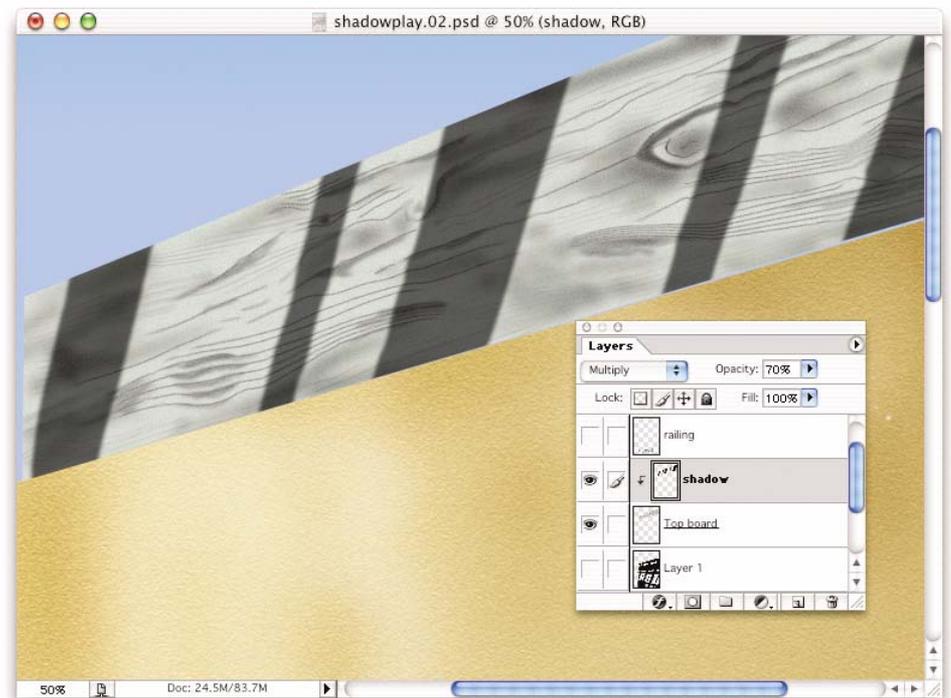
Figure 9 shows the paths for the shadows in shadowplay. These shadows hint at the structure that isn't in view in the image. The paths are filled with black, and they are blurred. This is a similar procedure as the one used in the previous Bodega shadows example. The difference here is that the area where the shadows are cast is made up of uneven surfaces, opposed to a flat surface. The shadows are made larger than the area they will cover, and they are clipped with the layer that contains the surface shape. Figure 10 shows the shadows that are cast onto the wooden board along the top of the scene. Figure 11 shows the clipped shadow. Refer to Chapter 1, "Off to a Good Start," for more information on creating a clipping group.



10 The shadow cast on the wooden board is put in a layer over the layer of the board.



9 The paths for the shadows in the shadowplay example.

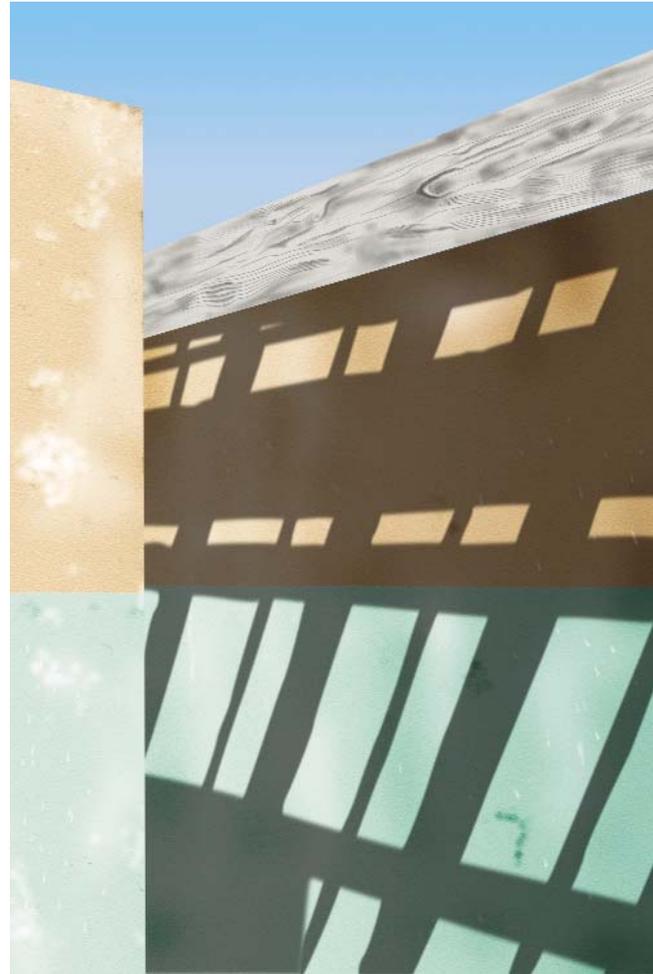


11 The shadow is clipped by the layer of the wooden board.

Figure 12 shows the larger shadow that is cast over the main part of the wall. Figure 13 shows the detail of the fence at the bottom of the image. Notice the shapes that the shadows take as they travel over and around the banister.



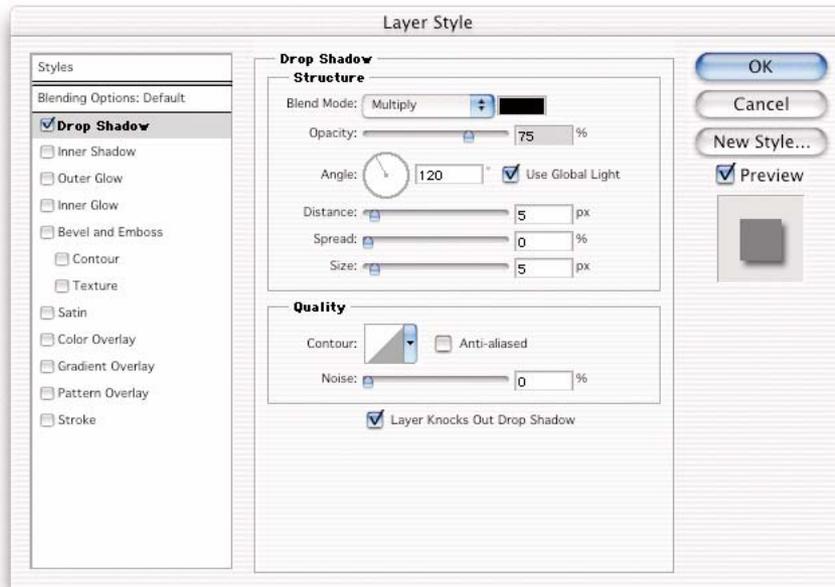
12 The large shadow over the main wall.



13 The shadow that is cast over the railing has to conform to the various angles that make up the construction of the railing.



14 The drop shadow is a commonly used design element.



15 The Drop Shadow blending option controls in the Layer Style dialog box.

Shadows with Layer Style

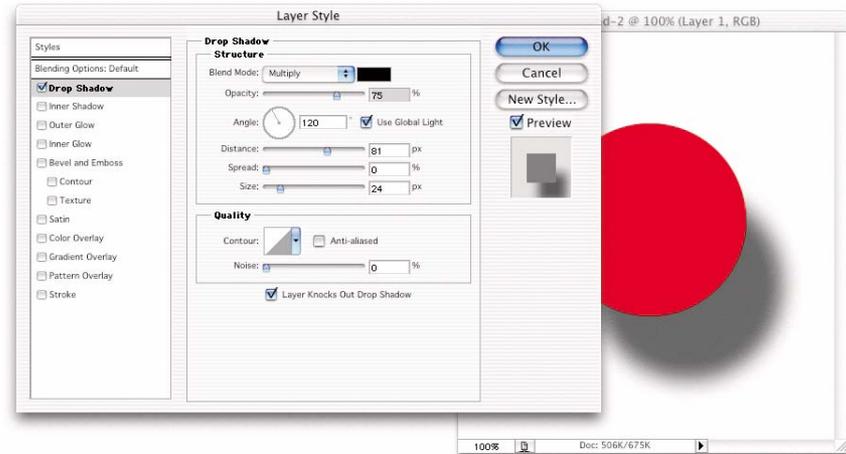
Up to this point, the shadows are created as separate shapes. Each is unrelated to the shapes in the scene and only hint at the shape of the objects casting them. There are times when the object casting the shadow is completely visible in the scene.

The traditional drop shadow is one of these instances in which the object casting the shadow is visible. The drop shadow is commonplace in today's design circles. Figure 14 shows a traditional drop shadow effect.

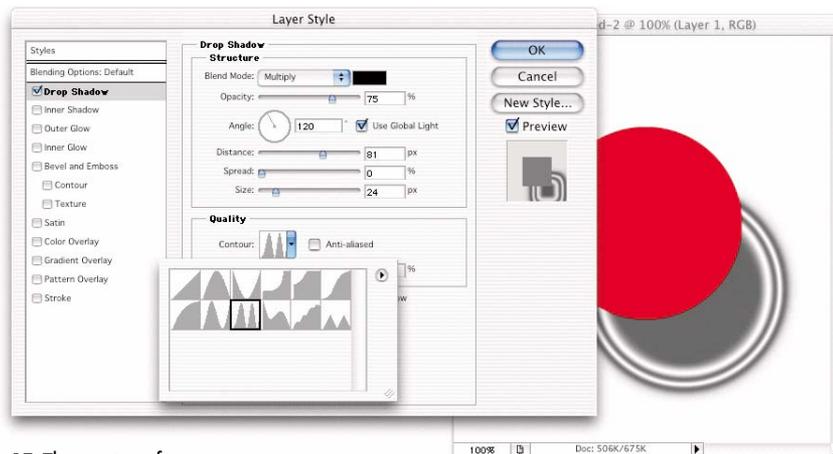
The drop shadow has the identical shape of the object casting it. The distance from one object to another object and the direction of the light source determine the position of the shadow. Layer Styles enable you to add a drop shadow to layers. The shadow is controlled in many ways. Figure 15 shows the Layer Style for the Drop Shadow blending option.

The position of the shadow is established by adjusting the Angle field's value in the Structure area of the dialog box. The distance determines how far the shadow falls from the object casting it. The Spread field works like the Hardness feature of the brushes—the higher the percentage, the harder the edge. The Size field allows you to control the size of the shadow.

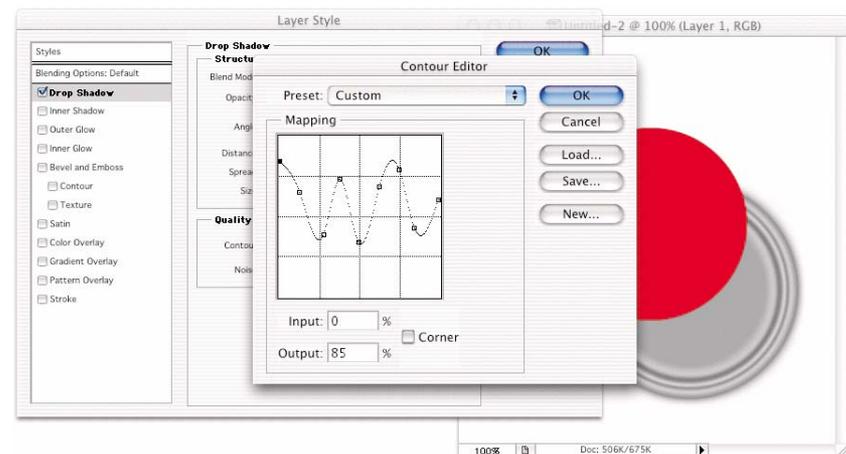
The Quality section of the dialog box includes a Contour field that allows you to set parameters to control the shape of your shadow. In Figure 16, you see a drop shadow applied to a red circle. The Distance value is increased to add separation to clearly view what happens with the Contour control. In Figure 17, a contour is chosen (not the default contour) by clicking on the arrow bar located to the right of the Contour icon. Note the shape of the drop shadow. You are not bound by these presets. Clicking the Contour icon brings up the Contour Editor in which you can set your own parameters (Figure 18).



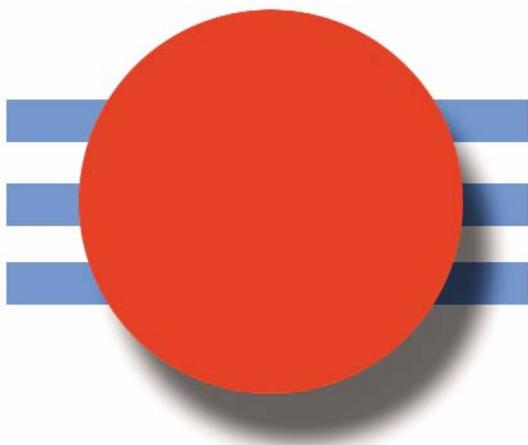
16 A drop shadow is applied to a layer in the Layer Style dialog box.



17 The contour for the drop shadow is changed.



18 The Contour Editor enables you to modify the contour effects on the drop shadow.

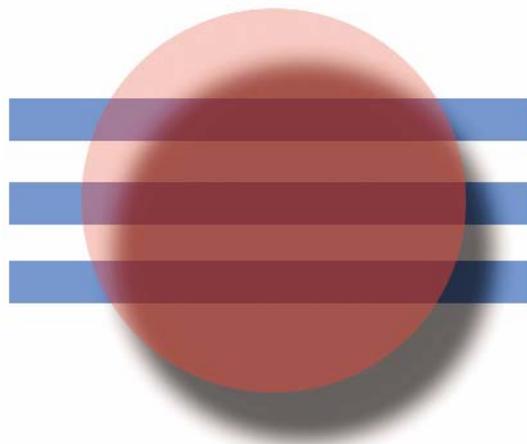
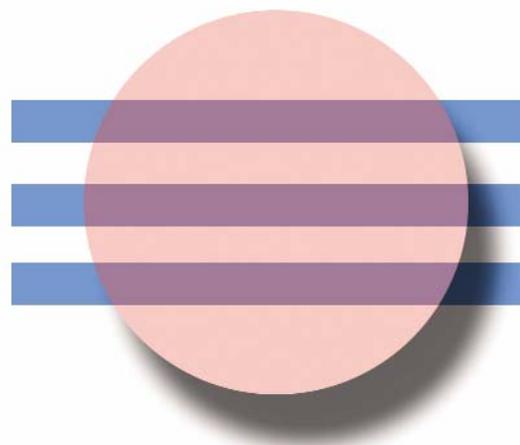


19 The solid red ball casts a drop shadow.

The Noise field enables you to set a noise level for the shadow, which aids in the prevention of banding. If you use the Add Noise filter, it applies the noise to the entire layer. In the Layer Style dialog box, the noise is applied to the shadow only.

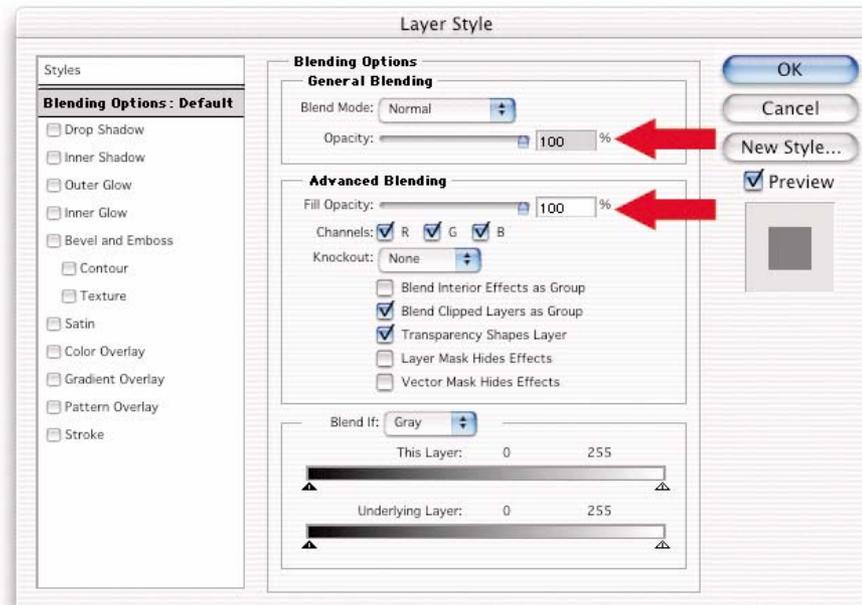
The command at the bottom of the Drop Shadow dialog box, Layer Knocks Out Drop Shadow, sets the shadow's visibility when the object casting it is transparent. Figure 19 shows the red ball casting a shadow. In Figure 20, the Fill Opacity for the red ball is reduced to 40%. The drop shadow remains hidden behind the ball. In Figure 21, the Layer Knocks Out Drop Shadow button is deselected, which makes the shadow visible through the transparent ball.

20 The opacity for the red ball is lowered. The shadow remains dark, but is not visible through the ball.

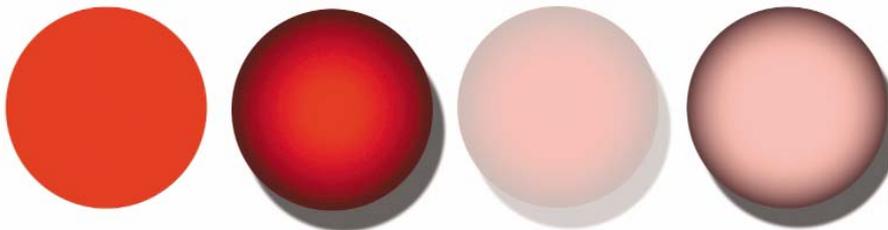


21 With the Layer Knocks Out Drop Shadow option turned off in the Layer Style dialog box, you can now see the shadow through the transparent red ball.

In the Layer Style dialog box, there is a section for Blending Options. Here, you control General Blending and Advanced Blending options (Figure 22). In the General Blending section, you see the Opacity setting. You can set the opacity for the entire layer's content. In the Advanced Blending section, you see the Fill Opacity setting. This setting lets you lower the opacity of an object in the layer without changing the style effects (Figure 23).



22 General Blending and Advanced Blending are two of the sections of the Layer Style dialog box.

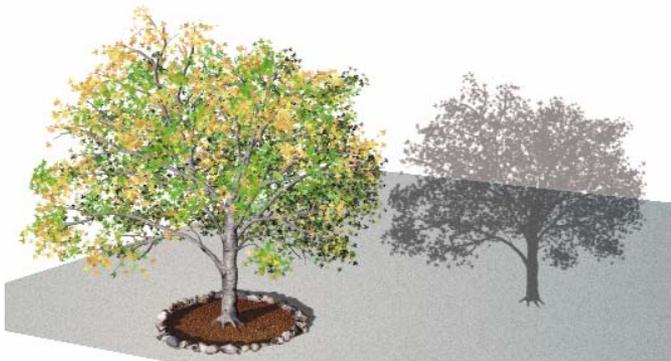
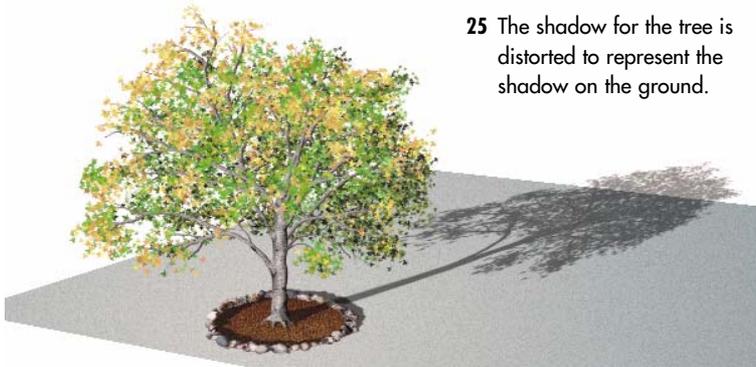


23 The first ball on the left is the original object. The second is the one that has Layer Styles applied to it. The third is the ball that has an Opacity setting of 50%. The fourth ball has an Opacity setting of 100%, and the Fill Opacity setting is lowered to 50%.

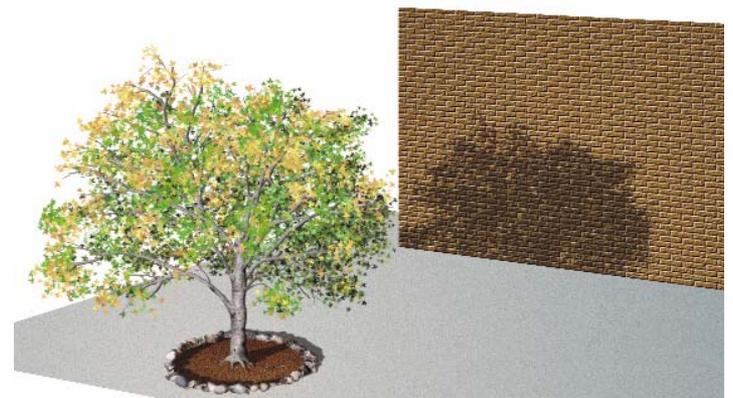
24 The tree casts a shadow that travels across the ground and up the wall.



25 The shadow for the tree is distorted to represent the shadow on the ground.



26 A duplicate layer with the tree shadow is reduced in size to simulate distance, and it's placed so that its top half overlaps the base of the wall.



27 The layer of the wall clips the duplicate layer with the tree shadow.

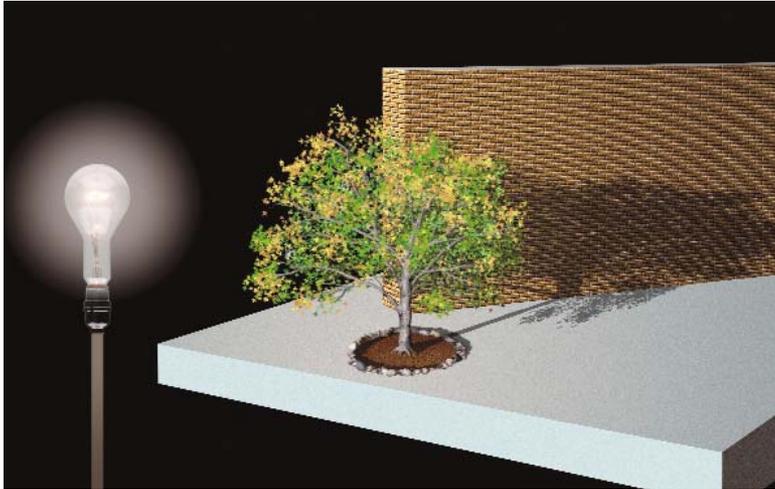
Distorted Shadows

Often, a shadow is distorted to such an extent that Layer Styles do not work. In such cases, the shadow has to be generated directly from the casting object and modified by hand. In Figure 24, the tree's shadow, if it is to look realistic, has to bend sharply where it meets the background wall.

To create this effect, the layer with the tree is duplicated. The Preserve Transparency option is turned on for the layer, and then it is filled with black. The black tree is then distorted (Edit>Transform>Distort). The distorted shape resembles the shadow traveling on the ground (Figure 25).

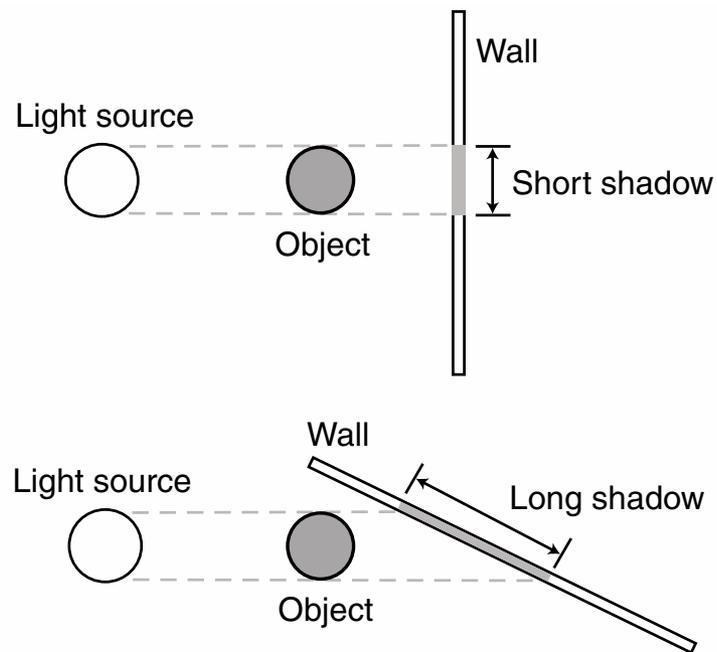
A second layer with another black-filled tree is placed in position where the shadow falls on the wall (Figure 26). It is reduced in size to simulate the effect of distance. Things appear smaller as they get farther away from the viewer. In Figure 27, you see the smaller black tree clipped by the layer of the wall.

The layer for the shadow created in Figure 25 is placed behind the layer with the wall. As a result, the wall hides the part of the shadow that is to be replaced by the shadow against the wall in Figure 27. It takes two shadows to create the illusion of a single shadow being cast on to two surfaces.



In Figure 28, a new ingredient is thrown into the mix—the wall is angled with respect to the tree and light source. This creates the effect of a lengthened shadow. The diagram in Figure 29 demonstrates the physics at work here.

28 Because the wall is positioned at an angle from the light source, the tree's shadow is elongated.



29 This diagram shows what happens to a shadow when it hits a surface that is straight, as opposed to one that is at an angle.

Creating Shadows

In the painting titled “Cedar,” one of the more difficult effects that I tried to create was the shadow of a tree sweeping across the wall (Figure 30). The shadow is long because the light source is the setting sun, which is low on the horizon.

The tree itself is used to create the shadow. The tree trunk and the leaves are created in multiple layers that are merged together into a single layer once the tree is completed. This procedure is outlined in further detail in Chapter 3, “A Greener World: Creating Foliage,” on creating foliage.

30 In the “Cedar” image, one of the more difficult effects that I tried to create was the shadow of the tree sweeping across the wall.



The layer that contains the merged tree is duplicated by dragging it over the Make New Layer icon at the bottom of the Layer's palette (Figure 31).

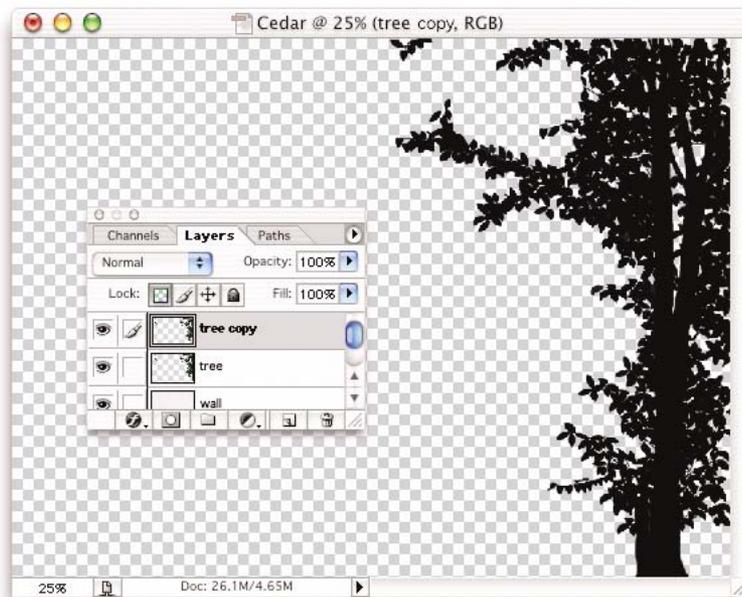
With Preserve Transparency turned on for the layer, fill it with black. Because the tree exists on a transparent layer, with Preserve Transparency turned on, when you select Edit>Fill, only the tree is filled. This black fill serves as the basis of the shadow (Figure 32).

NOTE Preserve Transparency allows you to modify only the pixels in the layer that are active. The transparent area of the layer retains its transparency.

31 The layer that contains the merged tree is duplicated.



32 With Preserve Transparency turned on for the layer, it is filled with black.



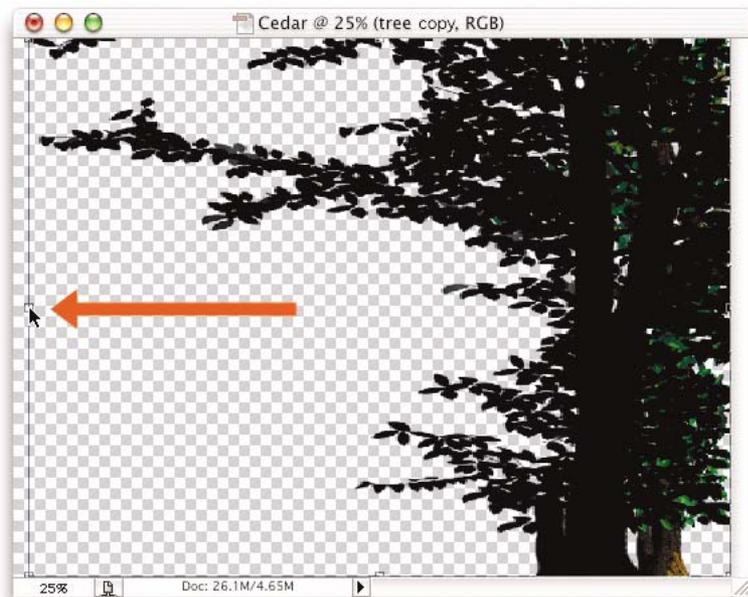
Preserve Transparency is turned off to apply a Blur filter to soften the shadow.

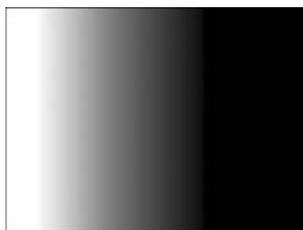
NOTE The Blur filters create their effect inward and outward from the edge of the object being blurred. A Gaussian Blur of 10 softens the edge by 5 pixels inward and by 5 pixels outward. If Preserve Transparency is turned on, the outward effect is disabled. This looks very unnatural.

Use the Scale tool (Edit>Transform>Scale) to stretch the black tree to the width of the entire image (Figure 33). This achieves an effect of a long shadow across the wall.

The shadow is supposed to darken the underlying layers. To achieve this effect, the mode for the layer is changed to Multiply. This mode actually multiplies the brightness values of the pixels with the pixels under it. This considerably darkens the layers underneath the shadow. Finally, the Opacity was lowered so that the shadow would soften.

33 Using the Scale tool, the black tree is stretched to the width of the entire canvas.



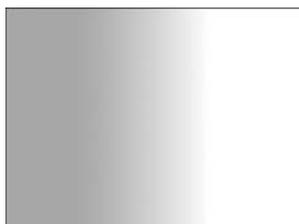


34 An alpha channel is created with a horizontal gradient from white to black.

35 The effect of the Motion Blur filter softens and stretches the shadow as it gets further away from the tree.



36 A gradient is created in the layer mask that went from gray to white.



Because the shadow is long and casts against a wall at an angle, the shadow must blur out more at the outer edges than the area immediately behind the tree. It also appears to stretch as it gets further away from the source. To help achieve this effect, an alpha channel is created with a horizontal gradient from white to black (Figure 34).

The alpha channel is then loaded as a selection. In this way, the left side of the image is fully selected, but the selection becomes weaker as it moves closer to the right side. A Motion Blur filter is applied to the layer of the shadow, as shown in Figure 35. Thanks to the selection, the more distance from the tree, the stronger the effect. The result is the desired effect—a stretched and blurred shadow that is cast by the tree across the wall. Deselect the gradient before proceeding.

As a shadow moves away from its source, it gets lighter. To achieve this effect here, a layer mask with a gradient is applied.

In a layer mask, black hides the contents of the layer; white makes them visible. I did not want the shadow to completely disappear, so I created a gray to white gradient in the layer mask rather than a black to white gradient, as shown in Figure 36. This gradually lightens the shadow as it moves to the left.

The painting “handles” also has long shadows that bend to the contours of the objects they are cast onto (Figure 37). The same procedure that used two shadows to simulate one is used here.



37 The painting “handles” has shadows that travel down the face of the cabinet and then bend onto the floor.

Double Your Pleasure

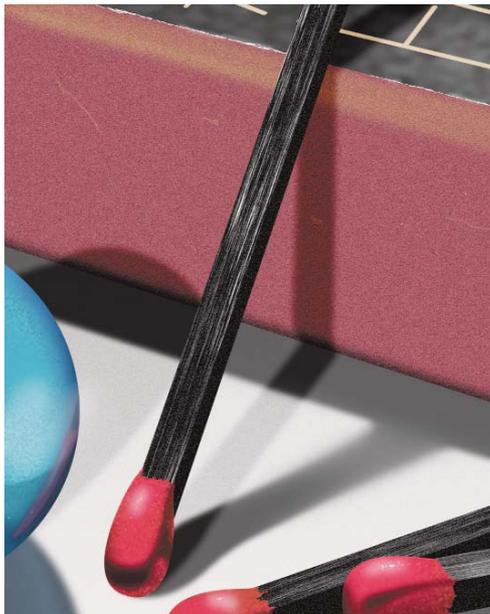
The “marble and matches” image introduces a new interaction of light and shadow—two light sources (Figure 38). This is evident by the shadow of the match that is leaning against the matchbox.

38 The “marble and matches” image introduces a new interaction of light and shadow—two light sources.

The first light source shines from above, just slightly to the rear of the objects. It is the stronger of the two light sources. The second light is coming from the front and to the left of the set of objects. This one casts a softer, lighter shadow. The two shadows actually intersect at the lower-front edge of the matchbox. The area where they intersect is darker.



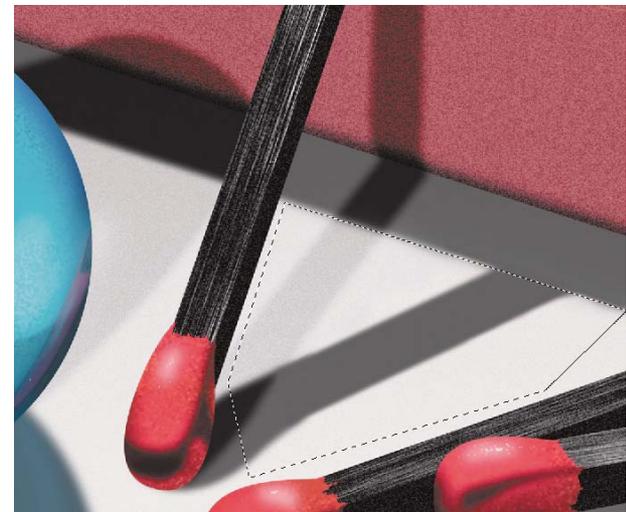
The shadow of the matchstick that is leaning against the matchbox goes through an additional transformation. Because it leans away from the surface, the shadow is softer as it moves further away from the matchstick (Figure 39). This is the same behavior that you saw in the shadow of the tree in the beginning of this chapter.



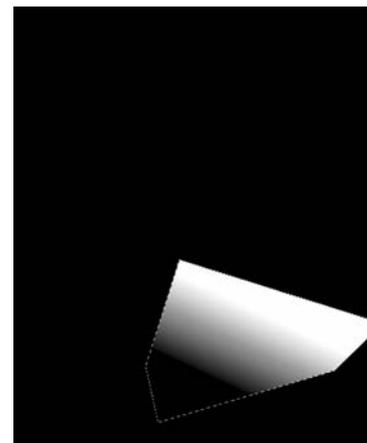
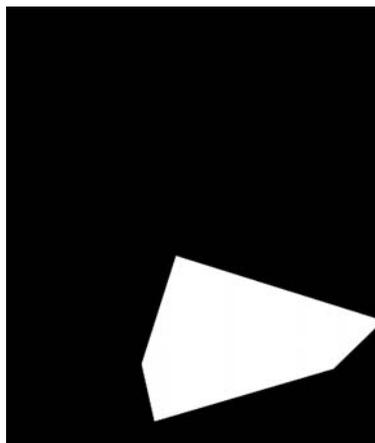
39 The shadow of the matchstick that is leaning against the matchbox requires additional work. Because of the lean in its position, the shadow gets softer as it moves further away from the matchstick.

The area where the shadow falls was selected (Figure 40). I saved the selection to an alpha channel, as shown in Figure 41. In this new channel, I filled the selected area with a gradient that is white to give it a stronger effect at the points that are further away from the match (Figure 42). Then, I deselected the area, returned to the color document, and loaded the alpha channel as a selection. I then applied a blur that, thanks to the selection, diverted focus from the shadow as it moved away from the match.

40 The area where the shadow falls is selected.



41 The selection is then saved to an alpha channel.



42 In the alpha channel, a gradient is laid down to give the strongest effect at the point in the shadow that is furthest away from the light source.

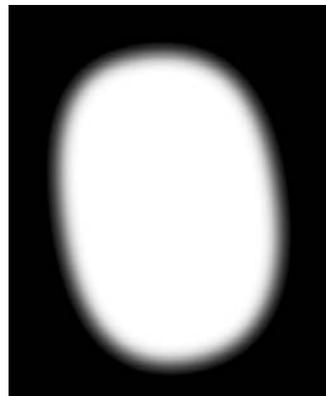
A Shadow from Glass

The marble in the “marble and matches” image requires additional effects for its shadow. The marble is made of transparent blue glass that allows light to pass through it. The density of the material, however, holds back some transference of the light. The color of the marble also affects the color of its shadow.

The main shadow is first. Using the Elliptical Marquee tool, on a new layer, I drew an oval with a slight feather to soften the edges (Figure 43). It was filled with a dark blue color.

The other objects in this painting are opaque. They block light, and therefore, they cast neutral shadows. In creating them, I used a black fill. The marble, however, is partially transparent. It allows some blue light to pass through it, which alters the color of the shadow. That is why the dark blue fill is needed.

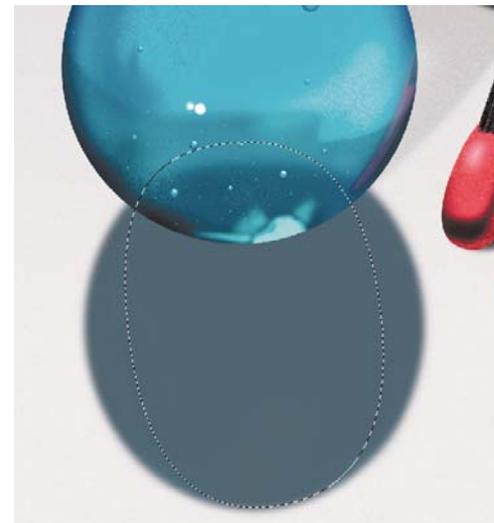
The blue haze caused by the refracted light is created next. I created a narrower oval in the area of the marble’s shadow and saved it into an alpha channel (Figure 44). Next, I created another narrower oval, which I saved into a second alpha channel (Figure 45). Then, the oval is heavily blurred (Figure 46). Using the Calculations command, the blurred channel is then subtracted from the original alpha channel, as shown in Figure 47. This gives a mask, which is saved into a third alpha channel to increase the softness of the effect at the center of the oval (Figure 48). This mask channel is then blurred again to soften the overall effect, as shown in Figure 49.



45 The selected oval is saved as a selection into an alpha channel, and then it is blurred.

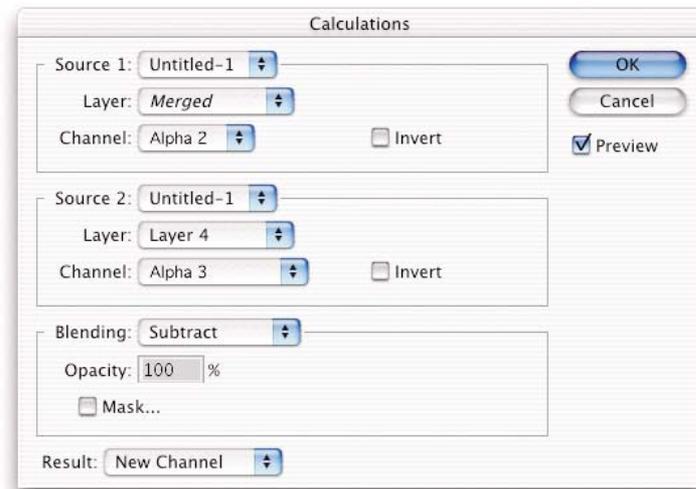
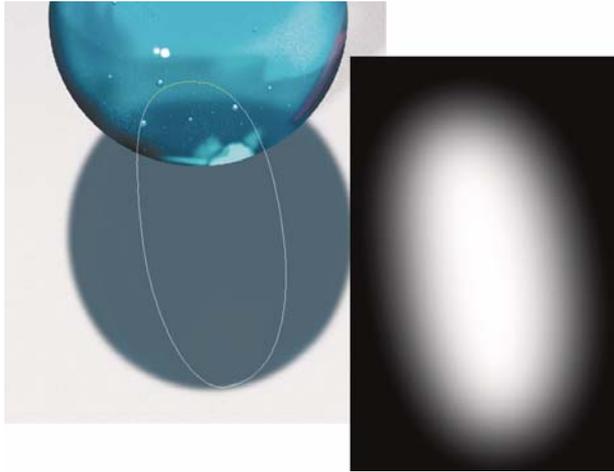


43 In a new layer, an oval is selected with a slight feather to the edges.

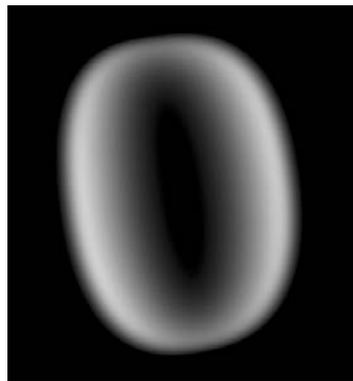


44 A narrow oval is selected in the area of the marble’s shadow.

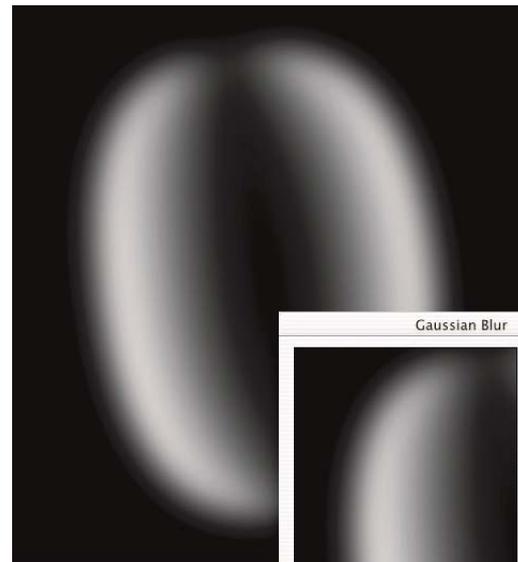
- 46 Another narrower oval is created, saved to an alpha channel, and then heavily blurred.



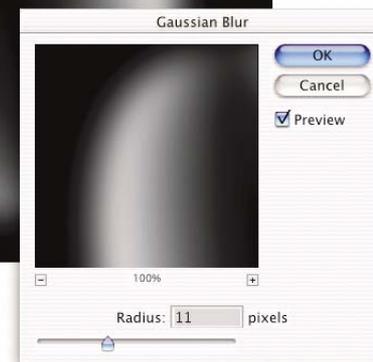
- 47 Using the Calculations command, the narrowest, heavily blurred channel is subtracted from the original, narrow alpha channel. The results are sent to a new channel.



- 48 The Calculations command result gives a mask that increases the softness of the effect at the center of the oval.

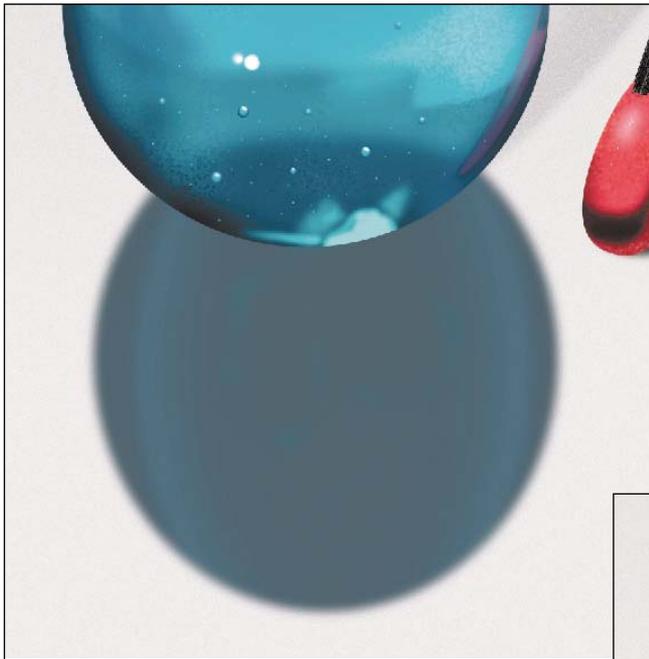


- 49 The final channel is then blurred to soften the overall effect.



In the RGB channels, a new layer is created. The mask channel is loaded as a selection and filled with a blue color that is lighter than the previously used one (Figure 50). This superimposes a light blue highlight on the shadow underneath it.

As a final touch, the highlights visible within the shadow are created with a soft-edged paintbrush, which uses various shades of light blue and white.



50 The channel is converted into a selection and filled with a blue color that is lighter than the one previously used to create the shadow.

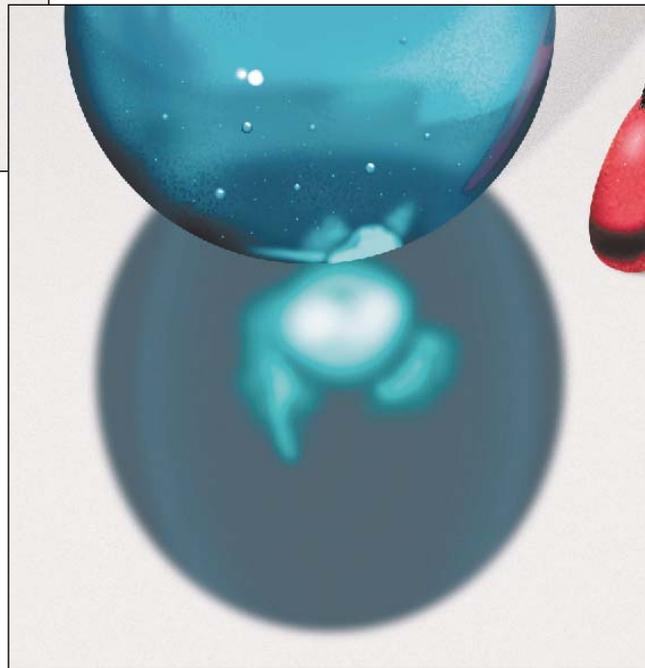
Another example of light that travels through transparent objects is reflected in the image named ointment (Figure 52). In this image, the shadow of the glass applicator runs across the cork (Figure 53). The applicator is made of clear glass, so colorization of the shadow is not necessary.

In this case, the applicator acts as a magnifying glass that concentrates the light in a bright streak.

To create this effect, I employed the Paintbrush tool. I set the brush to fade out (run out of paint) at a specified time (Figure 54). In a new layer, a fade-out stroke is created using a yellow color. The fade distance is decreased and white is used to create a second streak. This completes the effect.

With the Shift key down, I clicked with the Paintbrush tool at the base where the highlight began and then again at the other end of the top of the cork following the direction of the shadow. The result was light shining through the glass applicator.

NOTE If you press the Shift key while using a tool, you achieve a straight line from click to click.



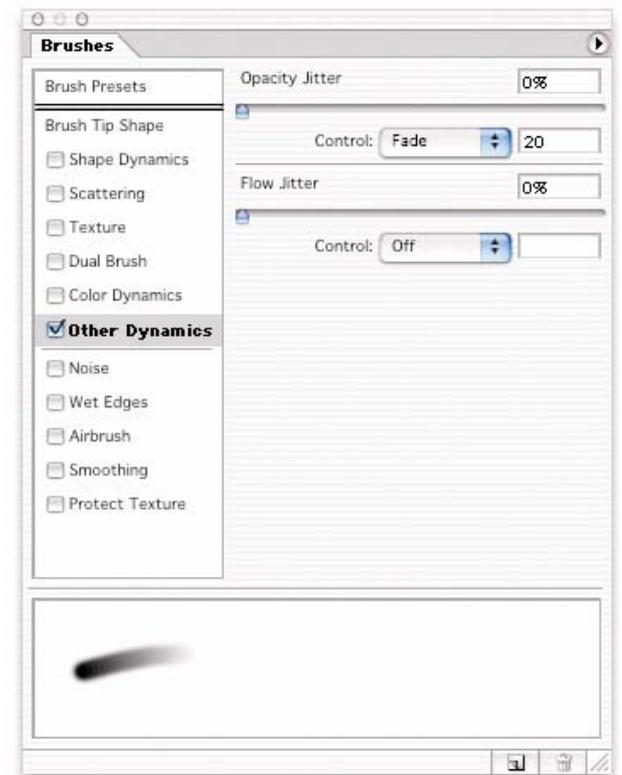
51 The highlights visible within the shadow are created with the Airbrush tool, which uses various shades of light blue and white.



54 In the Brushes palette, I set the brush to Fade (run out of paint).

52 This picture shows another example of light that travels through transparent objects. Here, the shadow of the glass applicator runs across the cork.

53 This close-up shows the shadow that is cast over the cork.



Shadows on Angled Surfaces

Shadows that fall on angled surfaces distort to follow the angles. Earlier in this chapter, the distortion of a tree casts a shadow across the ground and up a wall. The “Rendez-vous” image has a shadow that applies this technique to many surfaces simultaneously (Figure 55).

If you zoom in to the sign on the sidewalk, you see the play of shadows resulting from the chain (Figure 56).

As with the layer of the tree in the previous example, the layer of the chain is duplicated and filled with black to serve as the Shadow layer. This Shadow layer is duplicated several times because the shadow falls on different elements in the image. Each new element has its own angle.

The first angle requires the Shadow layer to be skewed downward, as shown in Figure 57.

It is then scaled down (Edit>Transform>Scale) horizontally to make it thinner. The fact that the wooden post, on which the shadow is cast, is at an angle to the light source causes the shadow to shrink. To see the shadow in the area of the wooden post only, the layer of the shadow and the sign are made into a clipping group.



55 The “Rendez-vous” image has a series of shadows that add drama and give a sense of the time of day.

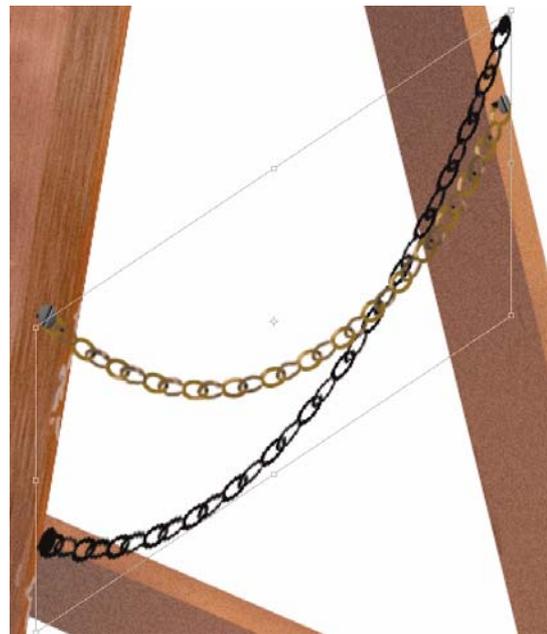


56 The shadow that is cast by the chain is broken as it passes over various surfaces.

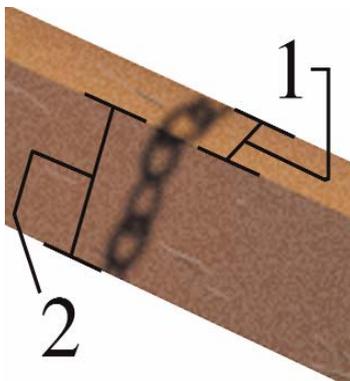
On the lower support bar of the sign, two shadows are added. The first follows the angle of the chain as it is cast on for the upper edge of the board. The angle is similar to the angle of the ground. The second goes through the same transformation as the one on the upper post (Figure 58).

The final shadow on the sidewalk is simply scaled down to make it smaller. A slight Blur filter is applied to soften it, as shown in Figure 59.

id

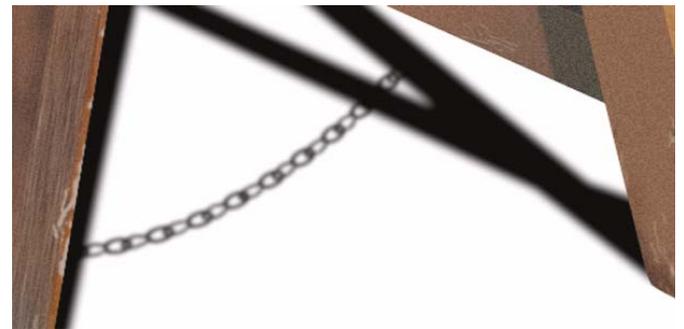


57 The Shadow layer is skewed downward.



58 On the lower support bar of the sign, two shadows are added. The first is straight on for the upper edge of the board. The second one goes through the same transformation as the one on the upper post.

59 The shadow on the sidewalk is scaled down to make it smaller, and a Blur filter is applied to soften it.



Let There be Light

Until now, you have learned about shadows, but the title of this chapter is “Lights and Shadows.” What about the lights? There are times when the light source is in the image. Other times, it is outside of the viewing area, but makes a cameo appearance somewhere in the image. The painting on the cover is a good example of the latter.

The image on the cover of the book depicts a scene that is lit by the late afternoon sun. The sun is the light source. It is located outside of the window, way off on the horizon. If you look closely at the edges of the mirror, you see the sun reflected on one of the angles (Figures 4.60 and 4.61).

60 The sun is visible on the edges of the mirror.



61 Darkening the other layers makes the sun easier to see.



Creating that tiny reflection of light (the sun) is an easy task. Two clicks with the Paintbrush tool is all it takes. The first click is the large brush with a soft edge. This creates the glare effect. The second click is the smaller, hard-edged brush that represents the sun.

I use this technique in many of my paintings. Figure 62 shows the “Studio theater” painting, which utilizes this technique several times.

Have you ever attempted to take a picture of the sun? It’s a bit hard on the film. Likewise, I tend to stay away from including the sun in the painting. The moon, on the other hand, is a great light source because it can be placed directly in view without blinding the viewer. The moon also has different reactions to the atmosphere, creating some cool effects.

62 The sun’s light is visible in several places in this painting.





63 The “Moonlight at Shasta Gate” painting shows the moon just above the treetops.

In the “Moonlight at Shasta Gate” painting, the moon is visible above the treetops (Figure 63). It is a clear night, and the shadows that are cast over the road are crisp. Note the tiny reflections of the moon on the shiny leaves of the bushes next to the road (Figure 64).



64 The bushes next to the road have shiny leaves that reflect the moon.

65 The “night walk” painting has a halo around the moon.



In the “night walk” painting, there is a halo around the moon, as shown in Figure 65. High in the atmosphere, under certain conditions, ice crystals form—millions of them. As the light of the moon passes through these crystals, it is refracted, hence the halo. I was stunned the first time I saw this!

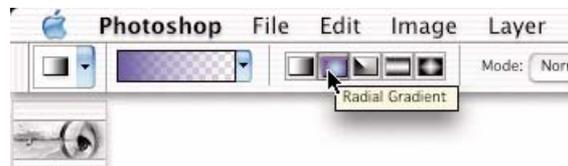
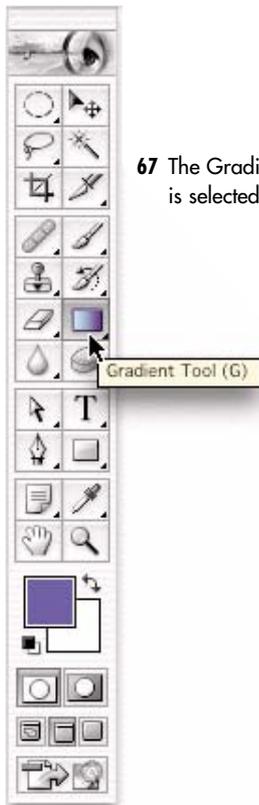
The moon is placed in a layer above the layer that contains a deep blue gradient for the sky (Figure 66).

A bright blue color is selected for the Foreground color. Using the Gradient tool (Figure 67), in Radial Gradient mode (Figure 68), set the gradient for Foreground to Transparent (Figure 69).

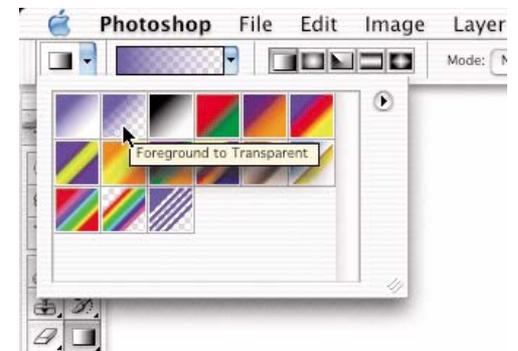
66 The moon is placed in a layer above the layer with the blue gradient for the sky.



67 The Gradient tool is selected.



68 Radial Gradient is chosen for the technique.



69 Foreground to Transparent is chosen for the type of gradient.

A small, circular gradient is created in a new layer that is behind the layer of the moon (Figure 70).

The opacity for the layer with the gradient is decreased to soften the effect (Figure 71).

Using the Elliptical Marquee tool, a large circle is selected around the moon. This circle is the basis for the halo that surrounds the moon in the painting, as shown in Figure 72.

The halo is a ring around the moon. The current selection is a big circle so it is necessary to modify the selection. Select Border from the Select menu (Select>Modify>Border), as shown in Figure 73. I set this at a high number, 40 pixels.



70 A gradient is created behind the moon.



71 The opacity is decreased for the layer with the gradient.



72 A large circle is selected around the moon to serve as the basis for the halo.



73 Choose Border from the Select menu to outline the selected area.



74 The selection is filled with a soft blue color.



75 The opacity is decreased to soften the halo.



NOTE Values entered in dialog boxes that are specified in pixels are dependent on the resolution of the image you are working on. For example, if you want an effect to occur over a half-inch area, then you should set your pixel dimension based on the resolution. 72 dpi requires a measurement of 36 pixels to achieve a half-inch; 300 dpi requires 150 pixels.

Apply a feathered edge to the selection to soften it (choose **Select>Feather**). I gave it a feather of 20, which is half the amount of the border size.

In a new layer, the selection is filled with a soft blue color, as shown in Figure 74.

The opacity is decreased for the layer of the halo to soften the glow, as shown in Figure 75.

Figure 76 shows the painting “view1.” In this picture, the moon is visible through the fog. The process is identical to the one shown in Figures 67–70. The moon itself has no detail and is simply a white circle. There is a small, dark glow around the moon, which is then surrounded by the larger, light-colored glow.

76 The “view1” painting shows the moon through the fog.

A Bright Spot

Artificial light is not as blinding as looking directly into the sun. This does not mean that I recommend you stare at a light bulb. The painting, “the gate,” uses the light source as the main focal point. In fact, without the light source, this particular scene is quite dark at night.

The light that is emitted from the lantern creates interesting effects as it cascades over the various surfaces surrounding it. Being true to these effects makes the scene realistic.

77 The painting, “the gate,” uses the light source as the main focal point.



First, look at the effect on the foliage. How the foliage is created is discussed in Chapter 3, “A Greener World: Creating Foliage.” Notice that the Redwood branches hanging over the light are both a light and dark green (Figure 78). The light green branches are the ones behind the light. The dark green branches are between you, the viewer, and the light source.

The dark needles on the branches in the front have a slightly lighter-colored edge to them. This results from the roundness at the edges of the needles. Because of this, the needles pick up a glow from the light around the edges.

Anti-aliasing is applied to the needles. This ensures that they appear smooth and unpixelated. In this case, the anti-aliasing makes it easy to achieve the effect of the edge’s glow. The layer of the dark leaves is duplicated. The layer in back is filled with a bright green. The bright green color bleeds through the anti-aliasing of the dark needles in the front layer.

Figure 79 shows the branch as it was originally created. Figure 80 shows the duplicated branch with the brighter colors. Figure 81 shows the darkened branch in the top layer. Figure 82 shows both layers with the bright layer in back bleeding through on the edges of the dark layer in front. If the effect of the lightened edges is not strong enough for your purposes, it can be enhanced. Make the topmost layer, or the darkest leaves, a selection. Use the Contract feature (Select>Modify>Contract) to shrink the selected area. Inverse the selection (Select>Inverse), and then press Delete to make the outside edges of the dark leaves smaller, allowing the brighter leaves to show through the darker ones.

78 The Redwood branches hanging over the lantern reflect the light based on their position to it.



79 The original branch in a layer.



80 The duplicated layer in back has brighter colors.



81 The top layer is darkened.



82 The two layers are visible.

The top of the gate is handled in a slightly different way. In Figure 83, you see how the top edges of the wooden boards pick up the light. You also see the bounce-back of the light from the cross-beam on the boards.

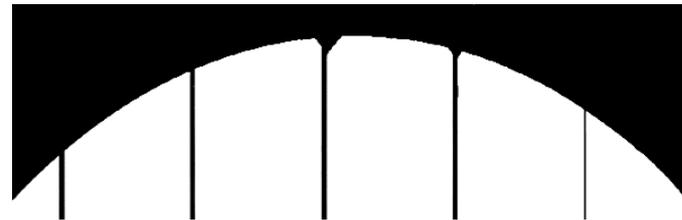
Creating the bright edges at the top of the boards requires a special mask. A layer style does not work in this case because the effect is not evenly distributed over the surface of the wooden boards.

Then, the boards are turned into a selection by Command-clicking (Control on PC) on them in the Layers palette. The selection is saved to an alpha channel (Select>Save Selection), as seen in Figure 84.

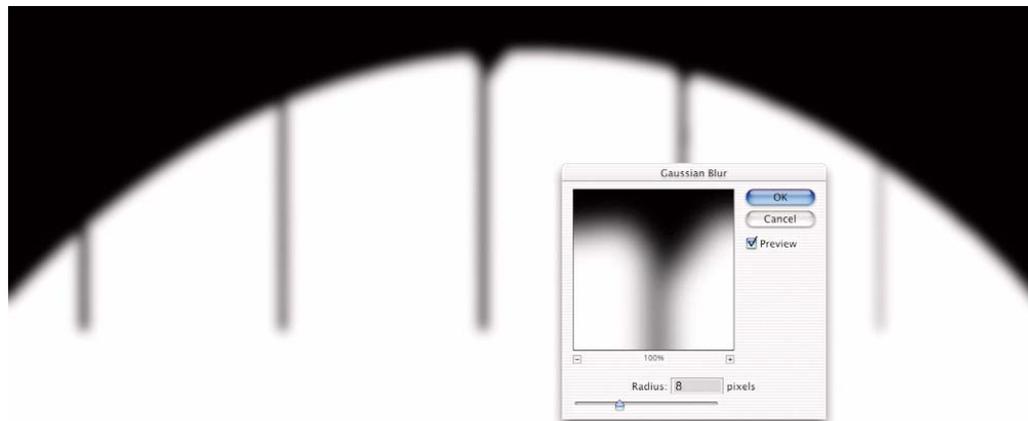


83 The close-up of the top of the gate reveals light being reflected on the wooden boards.

84 An alpha channel is created for the wooden boards.

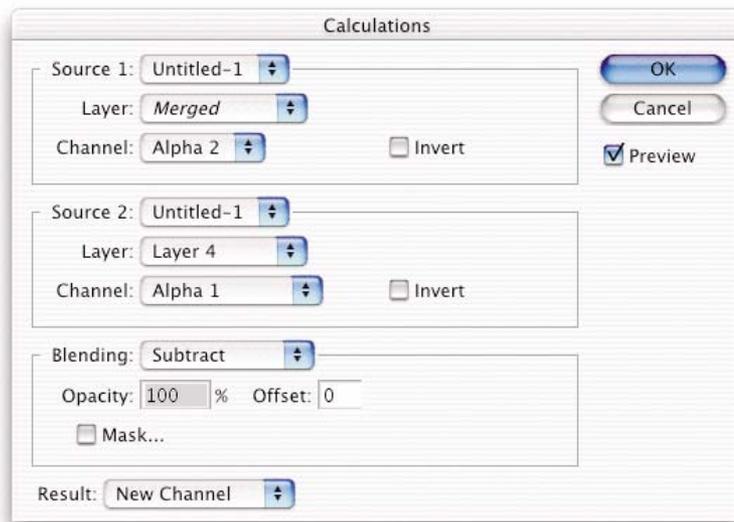


85 The alpha channel is duplicated and blurred.



The alpha channel is duplicated. The duplicate is given a Gaussian Blur (Filter>Blur>Gaussian Blur), as seen in Figure 85. With the Move tool, the blurred copy is positioned to create an overlap between it and the original sharp-edged alpha channel. The reason you blur the channel is to create a softer effect for the bottom edge.

With the Calculations command, subtract the sharp channel from the blurred channel, as seen in Figure 86. Figure 87 shows you the result—a mask that exposes the edges of the top of the boards, and that is saved as a third alpha channel. You can now apply this mask (Select>Load Selection), and lighten it or color it as much as you want.



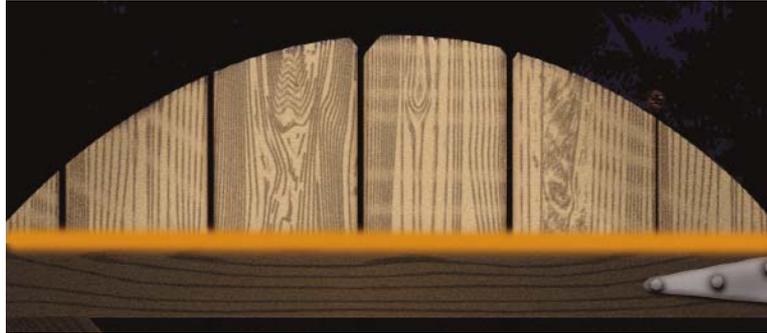
86 The Calculations command is used to subtract one alpha channel from another one to produce a mask.

87 The result of the Calculations command renders a mask that exposes the top lip of the boards.



The bounce-back of the light that is reflected on the boards from the crossbeam is a bit simpler. I chose an orange color similar to the one at the top of the boards in the last technique. Using a soft-edged brush, I painted a line straight across the edge of the board (Figure 88).

88 With a soft-edged brush, a line is drawn across the board.



The mode for the layer is changed to Overlay (Figure 89). Its Opacity setting is decreased. The layer is then moved between the layer of the boards and the layer of the crossbeam. The final result is what you saw in Figure 83.

89 The mode for the layer is changed to Overlay, which gives the stripe a glow.

