

ROUNDED SLATE VALLEYS

Brent Ulisky

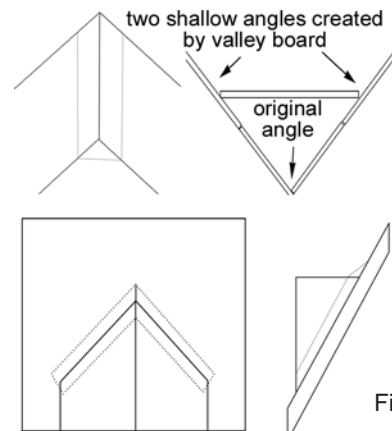
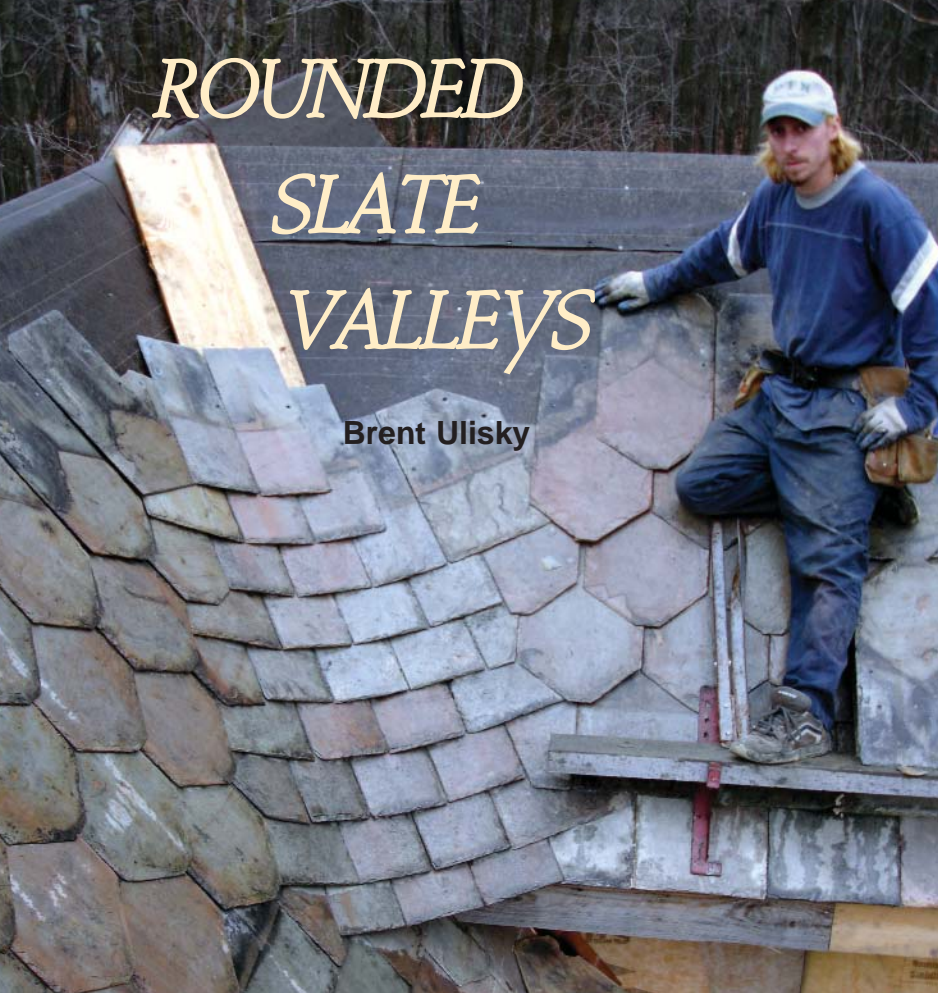


Figure 1

be covered by forming a piece of copper or cutting a board to fit.

The next step is to chalk vertical lines running the length of the valley board. The first line needs to be chalked down the center. The other two lines depend on the width of valley slates to be used. I found using slates six to eight inches wide works the best. For example, if you're using six inch wide valley slates, the other two lines need to be chalked parallel to the center line three inches out on both sides.

After the lines are chalked, the valley is ready to be slated. If you're slating a valley on a dormer that is part way up the roof you may need to adjust the dormer field slates so the bottom of the first valley slates meet up with the bottom of the main roof field slates. The valley slates should be longer than the field slates to get maximum head lap* and the nail holes need to be punched higher than normal.

Next run the dormer starter slates up to the valley and install a starter slate on the valley board. [See Traditional Roofing #5 at traditionalroofing.com for an article on starter slates.] Continue by placing a valley slate (i.e. slate that lies in the valley) in the center of the valley board with the bottom edge flush with the bottom of the starter slate. Install two more valley slates, one on each side of the center slate. Some of the outer valley slates may need their top corners trimmed to help them

THE FIRST TIME I SAW A ROUNDED VALLEY I was in awe. The beauty of the slate appearing to bend around the valley was to me a work of art. Then I had the opportunity to see some rounded valleys being installed at the International Federation for the Roofing Trades World Championship for Young Roofers in Edinburgh, Scotland. Since then I have installed six rounded valleys, four on my own house. Here is what I have learned so far.

The rounded slate valley style shown at bottom, right, is the style described in this article. It typically requires a strip of valley flashing underneath each course of valley slates. There are many styles of rounded slate valleys, some of which are illustrated in the Slate Roof Bible. The rounded valleys shown in the photo above and below were installed by Ulisky on his own home with no valley flashing strips or even underlayment in order to test the watertightness of this system. This style utilizes two courses of valley slates for every course of field slates and therefore should not require valley flashing. The valleys have tested to be leakproof in rainy western Pennsylvania.

The first step to a rounded valley installation is installing a valley board. A valley board is 1 inch in thickness and from 9-12 inches wide and runs up the center of the valley. The purpose of this board is to convert one deep angle into two shallow angles. If the rounded valley is to be installed on a dormer, the boards must be cut to meet each other at the dormer top. This will cause the top of the boards to angle up the roof (Figure 1). After the valley board is installed, there will be a void under the valley, creating a hole at the bottom. This can

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Brent Ulisky at the 2007 SRCA Conference

All photos this page and facing page by Joseph Jenkins

lie flat. It may also be necessary to use longer nails on the valley slates.

After that course of valley slates is installed, you can run the field slate up to them. Cut the field slates as needed to meet the valley slates. Install a strip of 16 or 20 ounce copper or terne-coated stainless steel step flashing before the next course of slates are nailed down. The copper should cover the top, unexposed portion of the valley slates, extending the width of the valley slates, and extend up the valley slates the distance of the exposure measurement plus 4" (see Figure 2). The bottom edge of the copper strip will just be covered by the bottom edge of the overlying valley slates. No copper will be visible after the overlying slates are installed.

The next course of valley slates will need four slates. Start by placing a slate on each side of the center line. Then place one more slate on each side of these slates. Make sure the bottom outer corners of the valley slates meet up with the bottom of that course of field slates. Continue up the valley using these steps till you reach the top. At the top it will be necessary to cut the valley slates to meet one another causing them to sweep up the main roof. Use flashing as needed.

The slope of a slated valley should be no lower than (7:12). The steeper the slope the better. It is not recommended to slate a rounded valley over twenty feet long. 

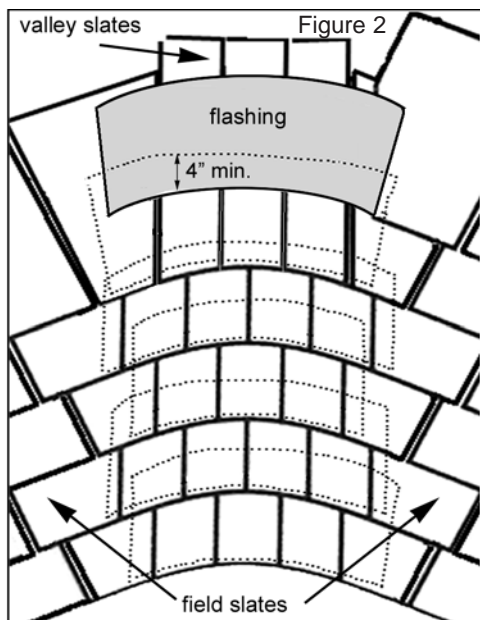
Brent Ulisky is slate roof mechanic foreman at Joseph Jenkins, Inc.

* [Editor's Note:

Traditionally, the valley slates were long enough to have a double headlap so that the head of the valley slate was overlapped by the second course above, as is normally done, but also by the third course above by an inch or two. (See the article on headlap in this issue for more information about overlap.) To calculate double headlap, triple the field slate exposure measurement, then add the 2nd headlap measurement. For example, if you're using an 18" long field slate, the exposure with a standard 3" headlap in the roof field would be 7.5". Therefore the valley slates would be 3 X 7.5" or 22.5" plus 1.5" headlap on the third course above, requiring a 24" long valley slate. Valley slates longer than 24" are often impractical, so the field slates must be limited in length to 18" or else flashing must be installed between each course. If flashing is used, the length of the valley slates is not critical.



Photo by Joseph Jenkins



From our Historical Archives

The Manufacturer and Builder.

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Statistics of Slate Production in the United States.

From the advance bulletins issued by the Census Bureau, we are enabled to give the following statistical information respecting the production of slate in the United States. The work of collecting the data relating to this industry was done by Dr. William C. Day, under the direction of Dr. David T. Day. The more important of these facts and figures are given herewith:

Production.—The total value of all slate produced in the United States in 1889, as shown by the following table, is \$3,444,863. Of this amount, \$2,775,271 is the value of 828,990 squares of roofing slate, and \$669,592 is the value of slate for all other purposes besides roofing.

As compared with the statements of the tenth census report of 1880 on stone, the roofing slate product of 1889 is nearly twice as great in number of squares and in value. A consideration of the slate used for purposes other than roofing, appears to have been omitted from the tenth census report. The total value of all slate produced in 1889 is more than twice as great as that considered in the tenth census.

Distribution of the Quarries.—Twelve States at present produce slate. A line drawn on the map from Piscataquis county, Maine, to Polk county, Georgia, and approximately following the coast outline, passes through all the important slate-producing localities. According to amount and value of product, the most important States are, in the order named, Pennsylvania, Vermont, Maine, New York, Maryland and Virginia. In the remaining six States productive operations are of limited extent, and in the case of Arkansas, California and Utah of very recent date.

The twelve States referred to do not include all those in which merchantable slate is known to exist, since discoveries promising good results for the future have been made in a number of other States, among which may be specially mentioned Tennessee, where operations of production are beginning.

PRODUCTION BY STATES FOR THE YEAR 1889.

STATES.	Number of Quarries.	Number of Squares of Roofing Slate.	Total Value of all Slate Produced.
Arkansas.....	1	60	\$240
California.....	2	2,504	13,889
Georgia.....	4	3,050	15,330
Maine.....	4	43,500	214,000
Maryland.....	5	23,100	110,008
Michigan.....	1	3,000	15,000
New Jersey.....	5	2,700	10,925
New York.....	16	17,167	130,603
Pennsylvania.....	104	474,602	2,011,776
Utah.....	1		
Vermont.....	60	235,850	838,013
Virginia.....	3	23,457	85,079
Total.....	206	828,990	\$3,444,863