NEW DORMER? RAISING THE ROOF GETS JOB DONE

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Moving up instead of moving out has always been a popular method of gaining living space. Building a dormer under the roof of a Cape Cod-style house or the third floor of a bigger house is probably the most popular way of moving up.

Robert Terenzoni of Medford has been installing dormers for some years now and has come up with a method of doing it quicker and less expensively than the conventional method. In fact, he has obtained a patent for his method, which involves opening the roof and jacking it up into position to form the new dormer, using special hinges and jacks.

In the former method, the roof was taken off and thrown away, which was a waste of materials, and costly just to get rid of the debris. With Terenzoni's method, the roof, rafters and roof shingles can be saved and used.

Terenzoni's method uses jacks and a series of big hinges to raise the roofs of houses he puts dormers in.

He took a wooden model of his hinge to an engineer friend to devise it of steel. It is made of 1/4-inch steel, and is U-shaped, 3 1/2 inches wide, enough to accommodate doubled rafters.

Here is how Terenzoni's method works. The ridge board inside the attic is shored up with extra supports, and every other rafter inside the roof is doubled, on both sides of the ridge board.

A hinge is bolted onto a pair of doubled rafters every 4 feet. The extra rafters nailed onto the originals are cut with the proper angle at the ridge board, and each rafter, old and new, has a new bird's mouth cut in it. The bird's mouth is a wedge-shaped notch that allows the rafter to seat properly on the new dormer wall. The roof is cut in the right places, and a pie-shaped cut is made at the rafters near the ridge board to prevent binding when the rafters are raised.

A jack is placed under each doubled rafter, and the raising begins. Terenzoni said the original method provided a 2 x 6 as a base for the jacks, but later he devised a track system that is lag screwed to the floor joists. The jacks move in the track as they raise the roof, keeping at a 90 degree angle to the roof.

The first jacks Terenzoni used raised the roof only 5 inches at a time before they had to be reset. New jacks allow a raising of 36 inches at a time, speeding up the job.

Once the roof is in position, Terenzoni and his four-man crew install a prefabbed stud wall to support the roof; then they stud in the sides -- and the dormer is there to stay. The workmen finish up with sheathing plywood, windows, flashing and siding.

Usually Terenzoni installs two dormers in a house, one on each side of the roof ridge. He also installs a ridge vent and soffit vents to allow proper ventilation when the job is done.

Terenzoni's first roof-raising was a special job -- on his own house. But since his house had a slate roof, adding a lot of extra weight, the project was a critical one. Everything went well, and Terenzoni was able to save the roof slate.

A house must have a roof that is high enough to accommodate any kind of dormer, Terenzoni says. And, if the new roof slant is too shallow, shingles must be removed and new roofing put on.

If the roof is not high enough, or there is not enough room inside the attic for a dormer, other methods can be used to make space, such as lifting the entire roof and creating a second story.

But most of the time, Terenzoni is able to save rafters, roof and shingles.

He figures the cost is about one-third less than the standard method of adding a dormer, mainly because it takes fewer men and considerably less time.

Terenzoni has formed High Tech Dormer Corp., to specialize in raising roofs for dormers. He operates out of his house in Medford.

Terenzoni says he plans to sell his process to other contractors.

A dormer from a raised roof costs about $8,600 "to the weather" -- that is, with everything finished outside, including siding, windows, flashing and roofing.