CRIBPOST SYSTEM

What the innovation is:
The innovation is a system designed to raise the existing roof of industrial and commercial buildings. With the use of hydraulics, any type or size of roof can be lifted to any reasonable height. Lifting is done using a patented lifting post called CribPosts. Each CribPost has a stand-alone capacity of 25-tons. The system utilizes a method to synchronously lift the structure, allowing all CribPosts to operate in unison and maintain the integrity of the roof or structure. The CribPost system has also been used to lift space frames, bridges, and houses along with various unique shoring operations.

Why it is innovative:
The CribPost system is innovative in that it has virtually opened a new market for the construction industry. The system has created a way for buildings with low clear heights to increase their marketability. Many older buildings located in urban areas have an ideal location for warehousing or distribution but are unsuitable for the high racking, storage and distribution methods used in today’s industry. By expanding upward companies can utilize their existing property or take advantage of one in a better location.

What has it changed or replaced:
Previously to the introduction of the CribPost system, roofs that were too low were taken apart and rebuilt at a higher level. Some roofs were taken apart and replaced with a new roof. With the CribPost system a roof that would take two to three months to rebuild can now be lifted in two to three weeks for about half the cost. Reduction in downtime is very beneficial to commercial and industrial enterprises. Roof lifting is also environmentally friendly in that it eliminates the need to dispose of a roof that would have been taken apart and replaced.

Where and when it originated, has been used, and is expected to be used in the future:
The CribPost system was originally designed in 1992 and has gone through various stages of improvement since then. It was designed and patented by Peter M. Vanderklaauw, President of Liftplate International, Inc. in Miami, Florida. The CribPost system has been used to raise almost forty roofs in the past seven years. It has opened a market throughout the country that many businesses are taking advantage of. The demand for lifting roofs has been growing at a rate of 40% per year and projections show that increase to continue well into the future.

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Wachovia Corporation, 16th largest bank in the country, purchased an abandoned tobacco processing plant near downtown Winston-Salem, NC from R.J. Reynolds with the intent to convert the building into an 600-employee office. The 50-foot tall building, built in 1962, had a 37,000 SF floor at mid-level. We converted the two-story building into three stories by raising the existing floor and building an additional one below it.

Most projects require the an even lift to avoid cracking or stressing the structure. Using Lifplate's patented synch24 control system, all lifting points are synchronized with a high degree of accuracy.

This portion of an existing mall in Spokane, WA was in need of a tenant until the owners of Future Shop decided to occupy the space. However, for the electronics retailer to make efficient use of the building they had to raise the existing roof. In order for Future Shop to implement its warehouse style of retail they needed an extra 10 feet of ceiling clearance.

The owner of this building, Delta Marine, is a manufacturer of large yachts in Seattle, WA. At 30 feet the ceiling clearance was adequate to fulfill most of their customer orders. However, the potential to take on bigger projects was clearly there. But in order to do so the owner needed the ceiling height to be at 50 feet instead of 30. They decided that the cost of improving their existing structure was inexpensive compared to the amount of income a higher roof could bring to their business.

Twenty-five-ton-capacity CribPosts are used to lift roofs to any desired height. A hydraulic jack mounted in a loading frame pushes up the post. After two strokes of the jack, workers insert a new crib and bolt it to the bottom of the CribPost. Crib have precision machined ends to ensure the post is perfectly straight.

A unique feature of the CribPost is that it has continuous fall-back protection. If there is a loss in hydraulic pressure, the post is supported mechanically by suspender rods. This also allows the CribPost to be locked-off at any elevation during lifting for the removal or replacement of the hydraulic jack.