



garage doors

As a door expert witness, I'm called upon often times annually to gauge garage door injuries. Garage doors can be found in many shapes and sizes. Their functions vary from basic security of an area to cosmetic concealment. Most doors can be broken on to a couple of basic styles or categories. Typical modern garage doors for residential applications are generally predominantly of the overhead sectional variety. That design of door will come in many configurations, materials, degrees of insulation, and a wide variety of appearance possibilities. They're available as a prefabricated kit, or built as a custom design to complement the decor of any building. Commercial warehouse type installations often dictate higher security requirements. A good choice because of this security form of door is the "roll-up" style that resembles a move top desk form of door. This door can be manufactured with many different materials that is often as strong because the adjacent walls, making forced entry through this opening very difficult. Other common commercial installations include light weight aluminum single or sectional panel doors. These doors function more for closing off an already secured area than for assuring point security. [wayne dalton garage doors](#)

In the past, the largest concern with operating an overhead garage door was the potential risks associated with the springs useful for balancing the entranceway weight. Pre mid 1960's garage door installations typically relied upon a pair of stretched (tensioned) springs to aid the operation of the garage door pivoting hinges. These springs became loaded (tensioned) as the entranceway was moved in to the closed position. Unloading (releasing) of the stored spring energy occurred as the entranceway was opened to the horizontal overhead position. One of the most dangerous aspects of these spring systems was that after a period of time, often without the maintenance or inspection, the points of attachment of those springs would rust or become weak. This weakening of the springs or points of attachment would often lead to an inadvertent explosive failure flinging the broken spring components over the garage, embedding the spring or steel components in to the garage walls, cars or other items in the road of travel. Unfortunately, sometimes individuals were in the road of travel of those explosive occurrences. As these springs failed, being an attempted safeguard, some manufacturers devised a "caging" system for the springs. These cages were retrofitted onto the stretched springs in an effort to recapture the parts that could release if a failure occurred. While these caging devices were helpful, they were not completely effective. Several of those spring devices are still being used today. Whenever this problem exists or the quality of garage components is questionable, a qualified professional service technician must certainly

be consulted. [garage door opener system](#)

In a reaction to the inherently dangerous traditional style garage spring issues as above, a more recent and safer system for opening the overhead garage door was created. The idea was to transfer the load or weight of the entranceway using a cable and pulley system to a vertical rod now equipped with a torsion (twisted) spring. This kind of spring is installed with specialty hardware and bolts to a fixed plate at one end, while the whole spring is installed around a horizontal pipe. This load balancing device is usually installed directly within the header of the garage opening. Using appropriate cables, connectors and pulleys, the weight of the garage door is transferred in to the torsion spring system. The difference involving the traditional style stretched spring and the newer torsion spring is just how that the spring energy is stored. With the traditional style stretched spring, the vitality is stored and released by pulling on the spring or returning the spring to its un-stretched condition. With a torsion form of spring, the vitality is imparted or removed by rotating the spring clockwise or counter clockwise dependant on the direction of usage. With professional installation, the entire loading of the torsion spring is controlled by the garage installer, and is decided by the weight and size of the garage door that it is operating. When this kind of torsion spring fails, it remains attached and intact to the location on the horizontal control rod where it absolutely was mounted. I haven't heard about or seen any torsion spring fly across a garage, creating injury from failed components much like the stretched older style garage door springs. This is not saying that injuries haven't occurred with the torsion style spring. The installation of this kind of spring is generally safe when left to a trained garage door installation professional. Severe and serious injuries have occurred when untrained, unqualified individuals have attempted to install or service this kind of spring.