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The definition of a truss is any of various structural frames based on the geometric rigidity of the triangle and composed of straight members subject only to longitudinal compression, tension, or both: functions as a beam or cantilever to support bridges, roofs, etc.

Trusses are the most commonly used structural device used in architecture today. Trusses are used in almost every thing they are in your attic, barns, buildings, and bridges. A truss is used in architecture and engineering, it is a supporting structure made of beams, girders, or rods usually made of steel or wood. A truss usually takes the form of a triangle or combination of triangles, this design is capable of carrying large amounts of weight. Trusses are used for large spans and heavy loads, especially in bridges and roofs. Their open construction is lighter than a beam structured platform but is just as strong. The parts of a truss are the tie-beams, posts, rafters, and struts; the distance over which the truss extends is called the span. A truss is formed by connecting the ends of straight pieces of metal or wood to form a series of triangles lying in a single plane.

A truss is based on the fact that a triangle is a configuration that cannot collapse or change its shape unless the length of one of the sides is changed. The two most commonly used truss designs are the Howe and Warren trusses. In 1806 the first patented bridge system, the Burr arch truss was used in the US.

The Town truss was invented in 1820, in 1840 the Howe truss was invented, and in 1841 the bowstring was invented it was a breakthrough in engineering design. The Pratt and Warren trusses were invented between 1838 and 1844.

The first trusses were made of wood and used for building homes and roofs. During the 18th and early 19th centuries cast and wrought iron were used, mostly in the construction of railroad bridges. Later in the 19th century steel became the most used truss material. Trusses are used also for the construction of iron-frame industrial buildings and in roof and floor systems. They are also used in the construction of certain industrial machines, such as cranes, lifts, and in the design of aircraft and automobile frames.

Two types of trusses are the Howe and Warren trusses, Warren trusses are more efficient than Howe trusses in carrying a load considering the weight of material used in the construction of the truss. The optimum ratio of height to span length is anywhere between 0.23 and 0.41 for Howe trusses, and 0.16 and 0.

0.39 for Warren trusses. The Pratt and the Warren were simple skeletal forms that adapted well to iron and eventually to steel that is why they are two of the most popular trusses used today. Trusses are very important in today's world they help us cross huge bodies of water, they hold the roof up over our heads, and they allow cranes to be able to support huge amounts of weight when building giant skyscrapers. The fact is the invention of the truss is just as important as the invention of the wheel. Life would be very difficult without trusses. Architecture