

Home Insurance Building, Chicago, Illinois & Ditherington/Shrewsbury Flax Mill Building, Shropshire, England

Skyscrapers Inquiry Unit

The **Home Insurance Building** completed in 1885 in Chicago, Illinois, rising 10 stories to 138 feet before additions, and supported inside by a matrix of cast and wrought iron.



"In the ordinary fireproof building, old style, the masonry walls carried the end of the beams and girders. To increase the area of their bearing on the walls, they rested on plates and were secured to the walls by T anchors...the walls must carry everything...In the skeleton construction each floor is carried independently on the columns, hence the outer walls have no other duties to perform than to fireproof the columns, to hold the window frames and act as a partition to protect the interior from weather."

"The Home Insurance Bldg was the first of the tall fireproof buildings to be erected in the West. There was no precedent...cast iron columns were used ... Wrought iron or steel columns at that time were far more expensive than cast iron; were not made as well....and had not been introduced into building construction. To add to the rigidity of the floors, clamps were hooked to the top flanges of the floor beams, and girders were passed through the columns and set up on the opposite side with a screw nut."

"This method of construction is purely engineering."

Iron and Steel (1896) by Jenney, William Le Baron
Ryerson and Burnham Libraries Book Collection [microfilm]; Elmer C. Jensen Papers [original] <http://digital-libraries.saic.edu/cdm/compoundobject/collection/mqc/id/63659/rec/10>

Recognized as one of the first tall buildings in the US to be supported by a hybrid steel-masonry skeleton.

Photo depicts primitive form of skeleton construction, taken during demolition



SOURCE: Home Insurance Building, demolition, 1931. Historic Architecture and Landscape Image Collection, Ryerson and Burnham Archives, The Art Institute of Chicago. Image file # 52540

Photo Source: Home Insurance Building, c.1920s. Historic Architecture and Landscape Image Collection, Ryerson and Burnham Archives, The Art Institute of Chicago. Image file # 52449

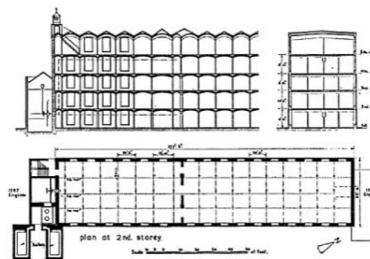
The **Ditherington Flax Mill**, or the **Shrewsbury Flax Mill**, built in 1797 in England, incorporated iron framing in its construction and was five stories high. Designed by local engineer Charles Bage for flax spinners John Marshall and Thomas and Benjamin Benyon, the building was the first of its kind to use an iron frame, a technique that was later developed to allow the construction of skyscrapers.

Recognized as the oldest iron framed building in the world.

Center row cast iron pillars with brackets, as seen below, supported shafting for the flax-spinning machinery.



Photo Source: Shropshire Archives



"Plan and section of Bage's Shrewsbury mul, 1796-97. It was the first multi-story building with an interior iron framework. The walls are of brick."

Structural Iron 1750-1850, R.J.M. Sutherland
Routledge, Dec 5, 2016, Accessed 17, Jan. 2019

Photo Source:
Shropshire Archives

