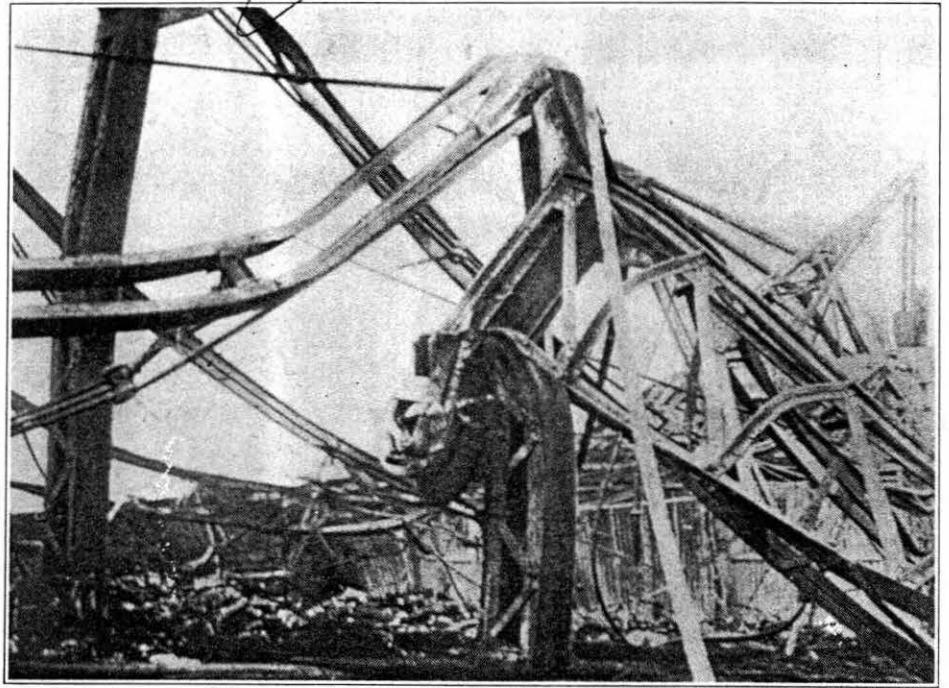
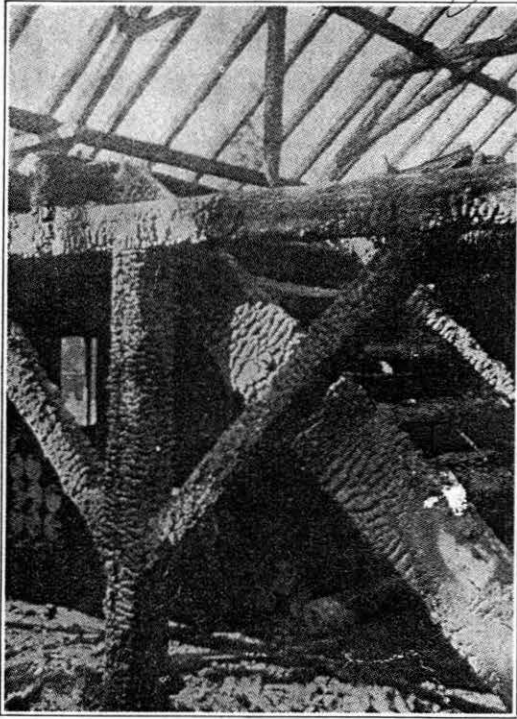


# GRAPHICAL PROOF OF A WELL KNOWN FACT



## A Comparison of the Behavior of WOOD and STEEL Under Fire

**WOOD** does not lose in strength when exposed to heat.

**WOOD** weakens only when in direct contact with a continuous, hot, open flame, through a gradual reduction of its cross sectional area.

**WOOD** eliminates the hazards due to expansion since its thermal conductivity is  $1/200$  that of steel and its coefficient of expansion only  $1/10$  that of steel.

**WOOD** as fires have repeatedly shown, was still in a position to act as a support after its section was reduced to  $1/3$  of its original size. The possibility of sudden collapse is eliminated.

**STEEL** weakens under heat, losing its strength at  $700^{\circ}$  F. Since ordinary fires reach temperatures of  $2000^{\circ}$  F., steel structures collapse at early stages of the fire.

**STEEL** is a good conductor of heat, therefore will readily distribute high temperatures, which in combination with its high coefficient of expansion will cause a considerable increase in its length. In case of steel trusses, sidewalls often are bulged out, causing complete destruction of the building and great damage to its contents.

**STEEL** collapses quickly. Flash fires have caused total failure of such structures. Extra expense in clearing away the tangled mass of wreckage adds to the already sustained loss.

**"UNIT" STRUCTURES** also afford better fire protection than other wood roof construction, since they replace the large number of scattered members by one solid timber.

The fire insurance rates for buildings where "Unit Structures" are used are equal to those of exposed steel.

**"UNIT" STRUCTURES INC.,**

**PESHTIGO, WIS.**