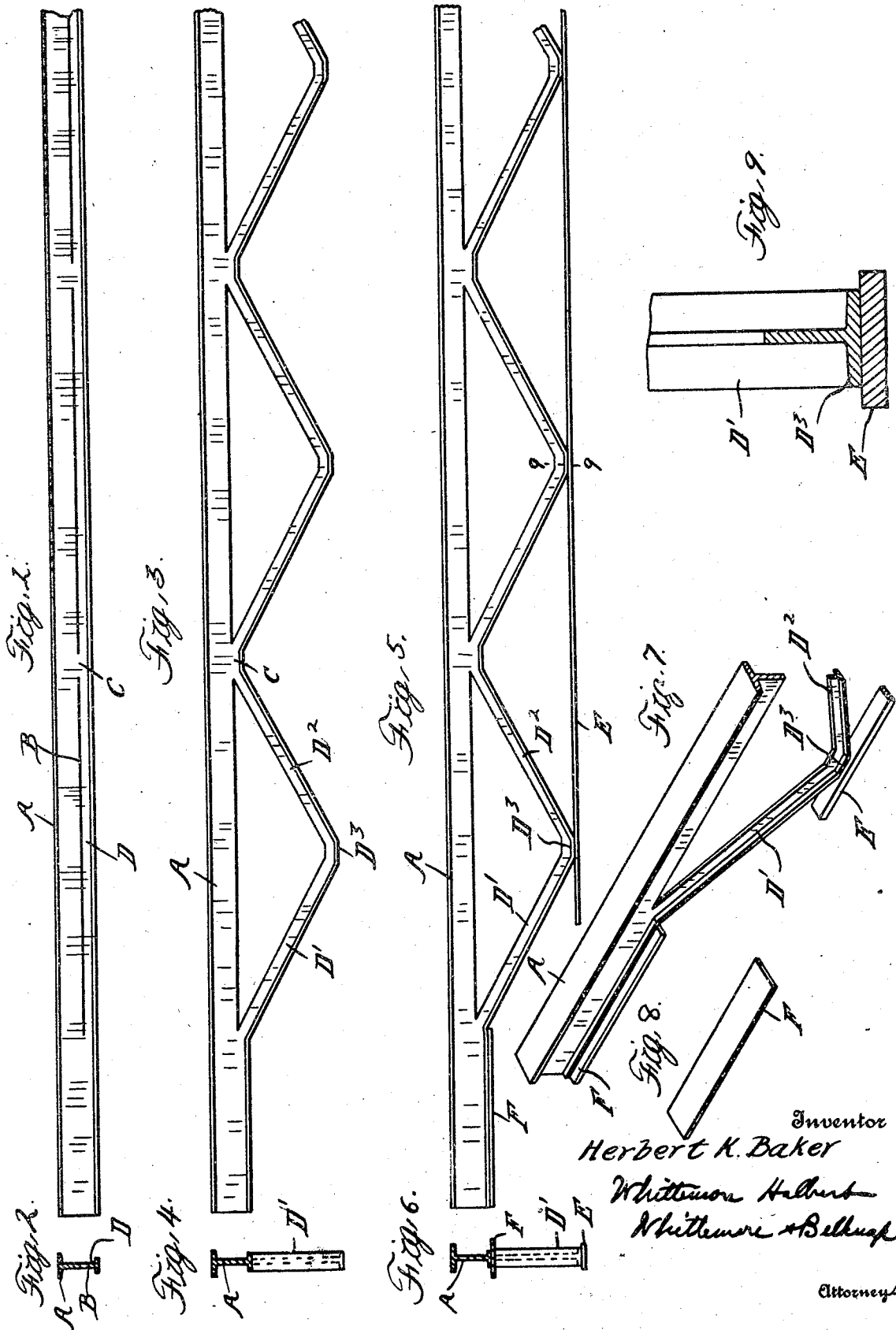


Jan. 8, 1929.

1,698,081

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METALLIC FLOOR JOIST

Filed Oct. 25, 1926



UNITED STATES PATENT OFFICE.

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METALLIC FLOOR JOIST.

Application filed October 25, 1926. Serial No. 144,062.

The invention relates to trussed metallic beams which are designed to keep within the dimensions of wooden floor joists and to be a substitute therefor. It is the object of the invention to obtain a construction of advantageous design which may be manufactured at relatively low cost and to this end the invention consists in the construction as hereinafter set forth.

In the drawings;
Figure 1 is a side elevation of the beam or structural member which forms an element of my improved construction.

Figure 2 is a cross section thereof.
Figures 3 and 4 are similar views to 1 and 2, showing the expanded member.

Figures 5 and 6 are similar views showing the expanded member combined with the lower chord member to form the completed joist.

Figure 7 is a perspective view of a portion of this member.

Figure 8 is a perspective view of a supplementary member used in connection with the main member.

Figure 9 is an enlarged cross section on line 9—9 of Figure 5.

My improved construction comprises essentially a main member A formed of a rolled structural shape preferably an I-beam in which the lower head of the I is less in width than the upper head. This member is first slitted preferably in a plane below the neutral axis, the slits B being distributed along the length of the bar and separated from each other by unslit portions C. The bar is then expanded by the use of any suitable machine or apparatus (not shown) to stretch out the portion D below the slit and to form thereof two oppositely inclined portions D' and D". A lower chord member E preferably formed of a flat bar is then secured to each of the points D' preferably by welding and a flat bar F is welded or otherwise secured to the under side of the end portion of the bar A extending beyond the first slit.

The construction as described can be cheaply manufactured as the operations of slitting and expanding the main member are easily performed. Also on account of the fact that the area of the wall is quite limited the members E and F may be easily mounted

with the main member A. When completed the expanded portions D', D", D" form the webbing of the truss, the upper chord member of which is formed by the portion of the bar A above the slits and the lower chord member by the bar E. The bar F by reinforcing the end portion of the main member, provides additional strength for said portion between the supporting wall and the first bend of the truss.

What I claim as my invention is:

1. A metallic floor joist comprising a member formed of a rolled structural shape having unequal head portions and an intermediate web portion, the latter having a series of longitudinal slits therein separated by unslit portions, the portions below the slit being expanded to form oppositely inclined portions, and a lower chord member formed of a straight bar rigidly connected to the lowermost points of each of said expanded portions.

2. A metallic floor joist comprising a main member formed of a rolled I-beam having the lower head thereof less in width than the upper head, said beam having the web portion thereof longitudinally slit in a plane below the neutral axis to form a series of bars, said bars being expanded to form portions on opposite sides of the center thereof oppositely inclined, a lower chord member formed of a straight bar rigidly connected to the lowermost points of said expanded bars, and a reinforcing member secured to the lower head of the I-beam in the portion of said main member extending beyond the end of the first of said slits.

3. A metallic floor joist comprising a member formed of a rolled structural shape having opposite head portions and an intermediate web portion, said web portion having a series of longitudinal slits therein separated by unslit portions, the portion of said bar above said slits forming a complete straight chord member and the portion below said slits being expanded to form oppositely inclined members of a web system, and a straight bar rigidly attached to the lowermost points of said expanded portion constituting the other chord of the truss.

In testimony whereof I affix my signature.
HERBERT K. BAKER.