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1,933,253

BLANK FOR AND METHOD OF MAKING LOAD BEARING MEMBERS

Filed Nov. 2, 1929

Fig. 1.

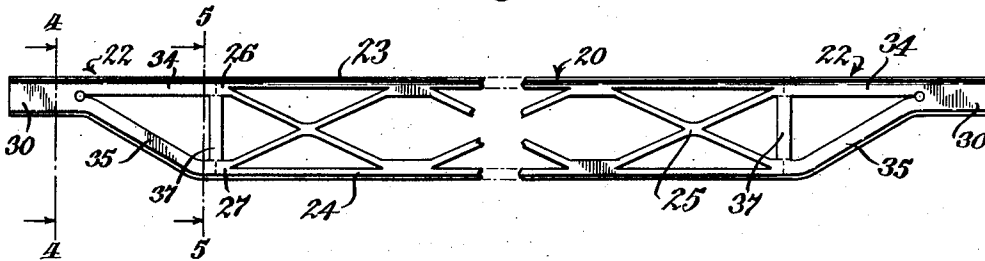


Fig. 2.

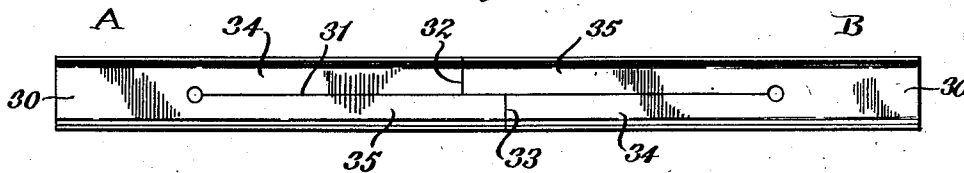


Fig. 3.

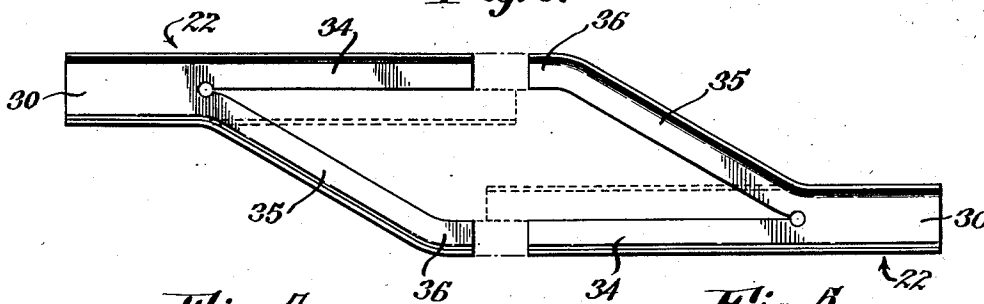


Fig. 4.

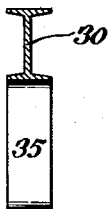
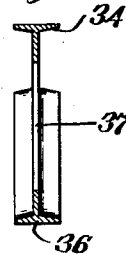


Fig. 5.



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UNITED STATES PATENT OFFICE

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BLANK FOR AND METHOD OF MAKING
LOAD BEARING MEMBERSHarvey M. Gersman, Noroton, Conn., assignor to
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3 Claims. (Cl. 29—155)

This invention relates to the manufacture of metallic load bearing members of the type which are characterized by trussed body portions and end supporting extensions of beam like form and the invention consists generally in improvements in the load bearing member, in the method of producing the same, and in the blank employed for the provision of the end supporting extensions.

In the production of load bearing members of the type described by a continuous method which produces an integral trussed body portion it has been the practice heretofore to provide the end supporting extensions by bending the terminal portions of the lower flange or chord toward the terminal portions of the upper flange or chord and uniting the two for a suitable distance by welding or other forms of connection. This has necessitated the cutting of some of the lattice work from the ends of the trussed portion and these operations have added to the labor and cost of manufacture, have involved loss of material, and have also made it difficult to produce a wide range of standard sizes.

The object of the present invention is to overcome the above disadvantages. That is to say, to enable the production of a load bearing member having an integral expanded trussed body portion in which the provision and connection to such body portion of the end supporting extensions does not require the cutting away of the lattice work of the trussed body portion and is accomplished in a simple practical and economical manner. With this object in view the invention consists generally in the formation of the end supporting portions from an independent blank of a form such that both end supporting portions may be obtained without waste from a single piece of blank material; and the connection of said end supporting portions directly to the ends of the trussed body portions.

A further advantage obtained by the invention is that the end supporting portions may be varied in length as desired without in any way adding to the labor cost of the production of the load bearing members or increasing the time required for such production.

Thus the invention makes possible an increased output of load bearing members of the type described and with proportionately reduced costs of production.

The invention is illustrated in the accompanying drawing in which:—

Figure 1 is a side elevation of a trussed joist having the end supporting extensions attached thereto.

Figure 2 is a side elevation of the blank from which the end supporting extensions are formed, the blank being divided into two similar parts by longitudinal and transverse slits.

Figure 3 is a similar view in which the bending of the longer leg of each such part has been completed.

Figure 4 is a cross section on the line 4—4 of Figure 1.

Figure 5 is a cross section on the line 5—5 of Figure 1.

The improved joists includes an integral expanded trussed body portion 20 and end supporting extensions 22 attached thereto. The body portion 20 consists of an upper chord 23, a lower chord 24, and intermediate struts 25. The upper and lower chords have short extensions 26 and 27 respectively which project beyond the lattice section 25. One method of producing such an expanded beam is described in the application of Maurice D. Brody, Serial No. 183,224, filed April 12, 1927.

The end supporting extensions 22 consist of initially independent units, each having legs 34 and 35 converging into a support 30 of beam-like form.

The supporting extensions 22 are preferably formed from blanks such as illustrated by Fig. 2 and which resemble the usual I beam in structure. This blank is first slit longitudinally as at 31, the said slit terminating suitably short of each end of the blank. The blank is then divided into two similar parts A and B by the transverse slits 32 and 33 which meet the slit 31 and are in relative staggered relation, each part having a support 30 of beam-like form and parallel legs 34 and 35 of unequal length extending from said support, the legs 34 being shorter than the legs 35.

The specific characteristics of each blank such as its length, the length of the longitudinal slit, and the distance between the transverse slits depend upon the specific characteristics of the joist for which the supporting extensions are to be formed, it being obvious that suitable supporting extensions may be formed for various sizes of joists merely by varying the length of the blank and the arrangement of the slits.

In the formation of an end supporting extension from one of the similar parts of the divided blank, the longer leg 35 of such half is bent at an angle to its companion shorter leg 34 until the spacing between the end of it and the end of the shorter leg 34 is equal to the spacing between the ends 26 and 27 of the chords 23 and 24 respectively of the joist for which the supporting extension

sions are designed. During this bending operation, a portion 36 of the longer leg 35 is bent at such an angle with respect to the remainder of the leg 35 as to be parallel with the shorter leg 34 when the bending of the longer leg 35 has been completed. In order to facilitate the bending of the leg 35 and at the same time prevent the lengthening of the longitudinal slit 31 by the tearing of the web portion of the blank, suitable holes 38 may be formed at the extremities of the longitudinal slit 31.

When the two halves A and B of the blank have been formed into the shape desired one of them is attached to each end of the joist. This is done preferably by butt welding the legs 34 and 35 of the supporting extensions 22 to the short extensions 25 and 26 of the upper and lower chords respectively, the shorter legs 34 being preferably welded to the upper extensions 25 and the longer legs 35 to the lower extensions 26. The joist may be further reinforced by the transverse bracing members 37, the ends of which may be welded to the legs of the end supporting extensions at the points where they join the upper and lower chords of the joist.

Having fully described my invention I claim:

1. The method of making a load bearing member which consists in suitably producing an integral expanded body portion providing a truss and having upper and lower bars providing chords,

forming supporting extensions independently of said body portion having angularly extending unstretched legs of different length and supports of beam-like form from which said legs extend, the spacing between the ends of said legs being equal to the spacing between the upper and lower bars of the expanded body portion, and welding the ends of the legs of said supporting extensions to the ends of the bars on corresponding ends of the body portion.

2. The method of making end supporting extensions from a blank which consists in dividing the blank by longitudinal and transverse slits into two similar independent parts each having on the sides of the longitudinal slit parallel legs of different lengths and bending the longer leg of each part at an angle to its companion shorter leg without stretching until the spacing between the end of it and the end of the said shorter leg is equal to the spacing between the ends of the bars of the joist to which the said supporting extensions are to be welded.

3. An end supporting extension blank having a continuous longitudinal slit terminating short of the ends of the blank and transverse slits in staggered relation meeting said longitudinal slit so as to divide the blank and thereby produce blanks for end supporting extensions having parallel legs.

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