May 19, 1931. P. J. DE GRUYTER 1,806,522

METAL DOWEL FOR WOODEN BEAMS

Filed June 17, 1929

Fig. 1.

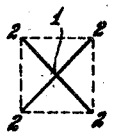


Fig. 2.

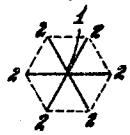


Fig. 3

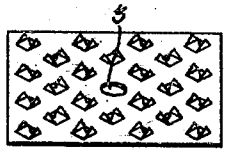


Fig. 4.

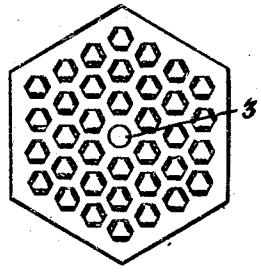


Fig. 5.

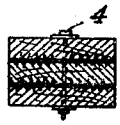
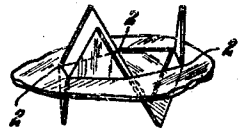


Fig. 6.



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Patented May 19, 1931

1,806,522

UNITED STATES PATENT OFFICE

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METAL DOWEL FOR WOODEN BEAMS

Application filed June 17, 1929, Serial No. 371,661, and in the Netherlands June 20, 1928.

The invention relates to a metal dowel for wooden beams, having triangular fangs placed in groups and projecting from the plane of the plate, each group being made by radial incisions in the plate.

With the known dowels of this kind all fangs of each group were either bent to one or to the other side of the plate. The drawback of this construction was that such a dowel, when being driven into both beams which should be joined by it, had the tendency to corrugate and consequently was unfit for practical use.

According to the invention the fangs of each group are alternately projecting from one and from the other side of the plate.

Due to the construction of the fangs the dowel remains absolutely flat when being driven into the beams.

Bending triangular fangs alternately to one and to the other side of the plate is known in itself with plates having fangs which are not arranged in groups but one next to the other along the edges of the plate. In order to obtain a long length of the edges, for making as many fangs as possible, it is necessary to make indentations in these dowels.

The advantage of the dowels according to the invention over the last mentioned construction is that no indentations are wanted, so that it is possible to arrange a larger quantity of fangs per unity of the surface within the periphery of a plate and consequently the force to be transmitted is increased, whereas there is moreover less waste material.

The invention is illustrated in the drawings by some examples.

Figs. 1 and 2 show two manners in which the incisions for one group of fangs may be made.

Figs. 3 and 4 are a perspective view and a top view of various dowels.

Fig. 5 is a section of a joint of three wooden beams.

Fig. 6 shows in perspective a group of fangs in their bent position.

These figures need little elucidation.

In Figures 1 and 2 the incisions 1—2 are made in the plate from the points 1. The triangular fangs obtained in this way are bent along the base-lines 2—2 alternately upward and downward, as illustrated in Figs. 3, 4 and 6.

Fig. 3 shows a square and Fig. 4 a hexagonal dowel.

In the first case four, and in the second case six fangs are united into one group. One of the groups of fangs of the latter sort is illustrated in Fig. 6 on a larger scale. The holes 3 serve for letting pass a central connecting bolt 4 (see Fig. 5).

I claim:—

A metal dowel for wooden beams comprising a plate having a plurality of groups of triangular fangs projecting from the plane of the plate, each group being formed by means of radial incisions in the plate in such a way that the triangles of each group have a common apex whereas the base lines form an uninterrupted line, the fangs of each group alternately projecting from each side of the plate.

In testimony whereof I affix my signature.

PAUL JOHAN DE GRUYTER.