PATENT SPECIFICATION 823,786

DRAWINGS ATTACHED.

Inventor:—DEMETRIUS COMINO.

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Index at Acceptance:—**Class 20(2), F3A.**

International Classification:—E04b.

COMPLETE SPECIFICATION.

Improvements relating to Slotted Constructional Elements.

We, DEXION LIMITED, of 65 Maygrove Road, London, N.W.6, a Company incorporated under the laws of Great Britain, do hereby declare the invention, for which we pray that a patent may be granted to us, and the method by which it is to be performed, to be particularly described in and by the following statement:—

This invention concerns improvements relating to constructional elements of the kind consisting of metal bars of L-section having lines of holes in their flanges for the insertion of bolts.

The invention seeks to provide an effective but inexpensive element which has a relatively small section and is suitable, in particular, for non-industrial, domestic or other purposes not requiring a large section. A further object of the invention is to provide an element of this nature which can be used not only in structures composed solely of elements of the said small section but also in structures embodying other elements, including known elements of larger section, as hereinafter more fully explained.

In accordance with the invention, in an L-section element with flanges of equal width, each flange has a line of holes extending longitudinally of the flange and consisting of short elongated holes spaced at equal intervals and extending alternately longitudinally and transversely of the flange, the pitch interval between consecutive transversely elongated holes being equal to the pitch interval between consecutive longitudinally elongated holes, and the outer ends of the transversely extending holes in a flange do not extend outwardly beyond a line through the outer edges of the longitudinally extending holes in that flange.

Such an element is simple and versatile in use and adequately strong, having regard to its intended fields of employment.

One embodiment of the invention will now be more fully described by way of example and with reference to the accompanying drawing, in which:—

Figure 1 is a developed plan view of an element; and

Figure 2 is a cross section thereof.

In this example, the element has an L-section, with equal and identical flanges 1, 2 suitably possessing a width w of 1.43″. If the element is made of steel, a thickness of 0.07″ is appropriate. Each flange has the same pattern of holes and the patterns in the two flanges are transversely aligned, i.e. like holes are opposite to each other. Each line of holes consists of short holes 4,5 disposed alternately longitudinally and transversely of the flange. Suitably, the overall lengths of the holes 4, 5 are 0.56″ and 0.48″ respectively and their width is 0.34″. The pitch interval between like holes is 1½″. The outer ends of the transversely elongated holes 5 do not extend outwardly beyond a line through the outer edges of the longitudinally elongated holes 4. The centre line of the line of holes 4 is set in by 0.55″ from the outer edge of the flange.

Elements of this kind can be easily built up into a wide variety of structures, no special skill or tools being required. Connections between the elements are made by bolts (suitably $^5/_{16}$″ bolts) passed through the holes 4, 5. Such elements can be connected together in a wide variety of ways at right angles and at angles other than a right angle. They can also be spliced together in one line.

Furthermore, elements such as have been described above can conveniently be used

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in conjunction with elements such as have been described and illustrated in the Specifications of our Patent Nos. 620,696 and 763,045. The holes 4, 5 in the former elements have been dimensioned and pitched so that they will co-operate effectively with the holes or groups of holes of the latter elements. Indeed, the flanges are similar in appearance to, although not identical with, flanges illustrated in the second-named Specification. Consequently, not only can the elements be used systematically and effectively together, but also they have a consistent appearance.

Elements in accordance with the invention can be used with advantage in light shelving structures, for example.

Cutting marks 6 are provided to facilitate accurate cutting of the elements.

WHAT WE CLAIM IS:—

1. A constructional element of L-section with flanges of equal width, wherein each flange has a line of holes extending longitudinally of the flange and consisting of short elongated holes spaced at equal intervals and extending alternately longitudinally and transversely of the flange, the pitch interval between consecutive transversely elongated holes being equal to the pitch interval between consecutive longitudinally elongated holes, and wherein the outer ends of the transversely extending holes in a flange do not extend outwardly beyond a line through the outer edges of the longitudinally extending holes in that flange.

2. An element as claimed in Claim 1, wherein like holes in the two flanges are located transversely opposite to each other.

3. A constructional element substantially as hereinbefore described with reference to the accompanying drawing.

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PROVISIONAL SPECIFICATION.

Improvements relating to Slotted Constructional Elements.

We, DEXION LIMITED, of 65 Maygrove Road, London, N.W.6, a Company incorporated under the laws of Great Britain, do hereby declare this invention to be described in the following statement:—

This invention concerns improvements relating to constructional elements consisting of metal bars of angular section, preferably of L-section, having lines of holes in their flanges for the insertion of bolts.

The invention seeks to provide an effective but inexpensive element which has a relatively small section and is suitable, in particular, for non-industrial, domestic or other purposes not requiring a large section. A further object of the invention is to provide an element of this nature which can be used not only in structures composed solely of elements of the said small section but also in structures embodying known elements of larger section, as hereinafter more fully explained.

In accordance with the invention, a flange of such an element, preferably an L-section element with flanges of equal width, comprises a line of holes, extending longitudinally of the flange, in which short elongated holes extend alternately longitudinally and transversely of the flange.

An embodiment of the invention will now be more fully described by way of example.

In this example, the element has an L-section with equal and identical flanges suitably possessing a nominal width of $1\frac{3}{8}$". Each flange has the same pattern of holes and the patterns in the two flanges are transversely aligned. Each line of holes consists of short holes disposed alternately longitudinally and transversely of the flange. Suitably these holes are $\frac{1}{2}$" and $\frac{3}{8}$" long respectively and of a width to take a $^{5}/_{16}$" bolt. The pitch interval between like holes is $1\frac{1}{2}$". The outer ends of the transversely elongated holes do not extend outwardly beyond a line through the outer edges of the longitudinally elongated holes. The centre line of the holes is set in about $^{9}/_{16}$" from the outer edge of the flange.

Elements of this kind can be easily built up into a wide variety of structures, no special skill or tools being required. The elements can be connected together at angles other than a right angle and can be splined together in one line.

Furthermore, elements such as have been described above can conveniently be used in conjunction with elements such as have been described and illustrated in our Patents No. 620,696 and No. 763,045. The holes in the former elements are dimensioned and pitched so that they will co-operate with the holes or groups of holes of the latter elements. Indeed, the flanges are similar to, although not identical with, the narrower flanges of the said latter elements. Consequently, not only can the elements be used systematically and effectively together,

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in conjunction with elements such as have been described and illustrated in the Specifications of our Patent Nos. 620,696 and 763,045. The holes 4, 5 in the former elements have been dimensioned and pitched so that they will co-operate effectively with the holes or groups of holes of the latter elements. Indeed, the flanges are similar in appearance to, although not identical with, flanges illustrated in the second-named Specification. Consequently, not only can the elements be used systematically and effectively together, but also they have a consistent appearance.

Elements in accordance with the invention can be used with advantage in light shelving structures, for example.

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WHAT WE CLAIM IS:—

1. A constructional element of L-section with flanges of equal width, wherein each flange has a line of holes extending longitudinally of the flange and consisting of short elongated holes spaced at equal intervals and extending alternately longitudinally and transversely of the flange, the pitch interval between consecutive transversely elongated holes being equal to the pitch interval between consecutive longitudinally elongated holes, and wherein the outer ends of the transversely extending holes in a flange do not extend outwardly beyond a line through the outer edges of the longitudinally extending holes in that flange.

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In accordance with the invention, a flange of such an element, preferably an L-section element with flanges of equal width, comprises a line of holes, extending longitudinally of the flange, in which short elongated holes extend alternately longitudinally and transversely of the flange.

An embodiment of the invention will now be more fully described by way of example.

In this example, the element has an L-section with equal and identical flanges suitably possessing a nominal width of $1\frac{1}{8}$". Each flange has the same pattern of holes and the patterns in the two flanges are transversely aligned. Each line of holes consists of short holes disposed alternately longitudinally and transversely of the flange. Suitably these holes are $\frac{1}{2}$" and $\frac{3}{8}$" long respectively and of a width to take a $^{5}/_{16}$" bolt. The pitch interval between like holes is $1\frac{1}{2}$". The outer ends of the transversely elongated holes do not extend outwardly beyond a line through the outer edges of the longitudinally elongated holes. The centre line of the holes is set in about $^{9}/_{16}$" from the outer edge of the flange.

Elements of this kind can be easily built up into a wide variety of structures, no special skill or tools being required. The elements can be connected together at angles other than a right angle and can be splined together in one line.

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but also they have a consistent appearance.

Elements in accordance with the invention can further be used with shelving and shelving structures.

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