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COMPLETE SPECIFICATION.

Toy Construction Sets.

We, VEREINIGTE SPIELWAREN-FABRIKEN ANDREAS FÖRTNER & J. HAFFNER'S NACHFOLGER GESELLSCHAFT MIT BESCHRÄNKTER HAFTUNG, of 15, Kobergerstrasse, Nuremberg, Germany, a Company registered under the Laws of Germany, and SIEGFRIED KAHN, of the same address, German Subject, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

This invention relates to that class of toy constructional sets set forth in our previous British Patent Application No. 363,547.

The subject of the above mentioned patent application is toy construction sets employing flat iron strips, and bent structural members made from such strips containing three offset rows of circular holes of uniform size. The present invention consists in replacing the circular holes by openings of other shapes, whilst retaining the reticular arrangement of the centres of the holes or by connecting the holes or some of the holes in the centre row to the holes or some of the holes in the outer row or rows by slots.

The openings may accordingly be square, triangular, polygonal, oval or otherwise shaped holes, provided the same be of such form that their edges tangentially surround the circle of the holes hitherto employed. Alternatively, the openings may be connected by oblique or angular slots disposed in such a manner that the ends of said slots coincide with the contemplated circular or otherwise shaped holes. The provision of slots or slots and holes further increases the possibilities of the structural members in respect of attachment and application. Furthermore, the sightliness of the models constructed from the structural members is also substantially improved especially through the provision of angular slots.

The present invention will be clearly understood from the following description aided by the accompanying drawings in which: Figure 1 shows the flat, iron

strips with three rows of circular holes of uniform size which forms the subject of our prior patent application No. 363,547. Figures 2 to 5 show portions of flat, iron strips with holes of other than circular form, the tangented circle of the hole being indicated by broken lines. Figures 6—9 represent flat, iron strips in which the arrangement of the holes and slots is derived from the triple-row system according to Figure 1.

In the strips according to Figure 1, the circular holes are indicated by the reference numerals 1 to 12. The middle row of holes 1, 4, 7, 10 is offset in relation to the two outer rows 2, 5, 8, 11 and 3, 6, 9, 12.

The strip according to Figure 2 displays square holes, that according to Figure 3 triangular holes, that according to Figure 4 hexagonal holes and that according to Figure 5 oval holes. The circle of the hole according to Figure 1 is inscribed as a broken line, in one of each of these different holes in order to show that the holes are adapted to accommodate the screwbolts or shafts, accompanying the building set in the same manner as in the case of the circular holes according to Figure 1. The inscribed circle therefore touches the sides of the variously shaped holes according to Figures 2—5. The relative positions of the holes may, of course be other than those adopted in the typical embodiments shown.

On the basis of the triple-row system according to Figure 1, the following system of holes and slots is employed in the strip according to Figure 6. The holes 2, 6, 8, 12 are retained, but on the other hand the holes 1, 3 are connected by a slot 13, the holes 4, 5 by the slot 45, the holes 7, 9 by the slot 79, the holes 10, 11 by the slot 1011, and so on. These relatively oblique slots assure the same possibility of attachment at their ends as with the former holes, and, so far as their longitudinal course is concerned any number of possible attachments that may be desired. Two rows of holes, in which circular holes alternate with oblique slits are obtained.

In the strip according to Figure 7, the

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former holes 2, 4, 5 are combined into an annular slot 245, the holes 6, 7, 9 to an angular slot 679 facing in the opposite direction, and the holes 8, 10, 11 to an angular slot 81011, thus forming two relatively offset rows of angular slots with their apices turned inwards and imparting the appearance of a lattice to the structural member.

10 In the strip according to Figure 8, the outer rows of holes 2, 5, 11, etc. and 6, 9, 12 etc. are retained, whilst the groups 1, 3, 4 and 7, 8, 10 of holes are transformed into angular slots 134 and 15 7810.

In the strip according to Figure 9, the outer row of holes 2, 5, 8, 11 is retained whilst the groups of holes 3, 4, 6, 7 and 9, 10 are transformed into oblique strips 20 34, 67 and 910.

Of course still further arrangements of slots, with or without retention of holes can also be devised.

25 The relative position of the holes in Figures 2 and 4 is such that in those cases also, slots and angular slots with a width corresponding to the diameter of the holes, can be formed.

Having now particularly described and

ascertained the nature of our said invention, and in what manner the same is to be performed, we declare that what we claim is:— 30

1. In constructional toy sets as set forth in our British Patent Application No. 363,547, replacing the circular holes of uniform size by openings of other geometrical form (square, triangular, hexagonal, polygonal, oval and the like), which surround the circle of the hole tangentially. 35 40

2. Structural member for metal building sets of the class set forth, in the form of a flat strip of iron provided with holes and slots, or slots alone, characterised in that the ends of the slots or angular slots coincide with the contemplated circular or otherwise shaped holes of the triple-row system according to Patent Application No. 363,547, so that the width of the slots corresponds with the diameter of the circle of the holes. 45 50

Dated this 14th day of December, 1931.

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Agents for the said Applicants.

[This Drawing is a reproduction of the Original on a reduced scale.]

