A. C. RADER.

TOY BUILDING BLOCK.

APPLICATION FILED APR. 12, 1920.

1,420,748.

Patented June 27, 1922.

2 SHEETS—SHEET 1.

Fig. 1.

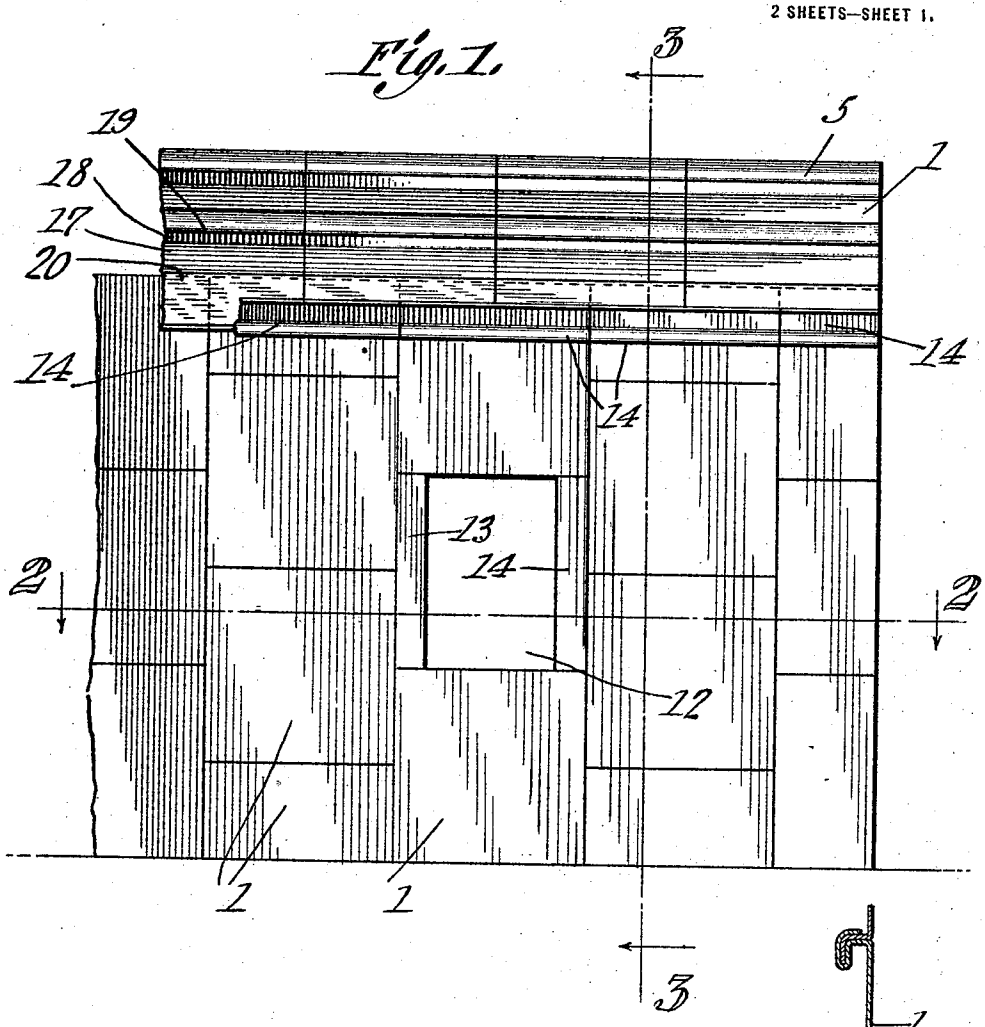
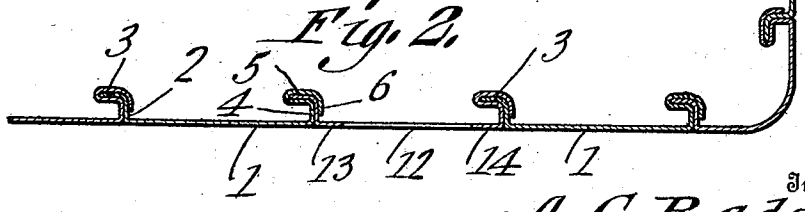


Fig. 2.



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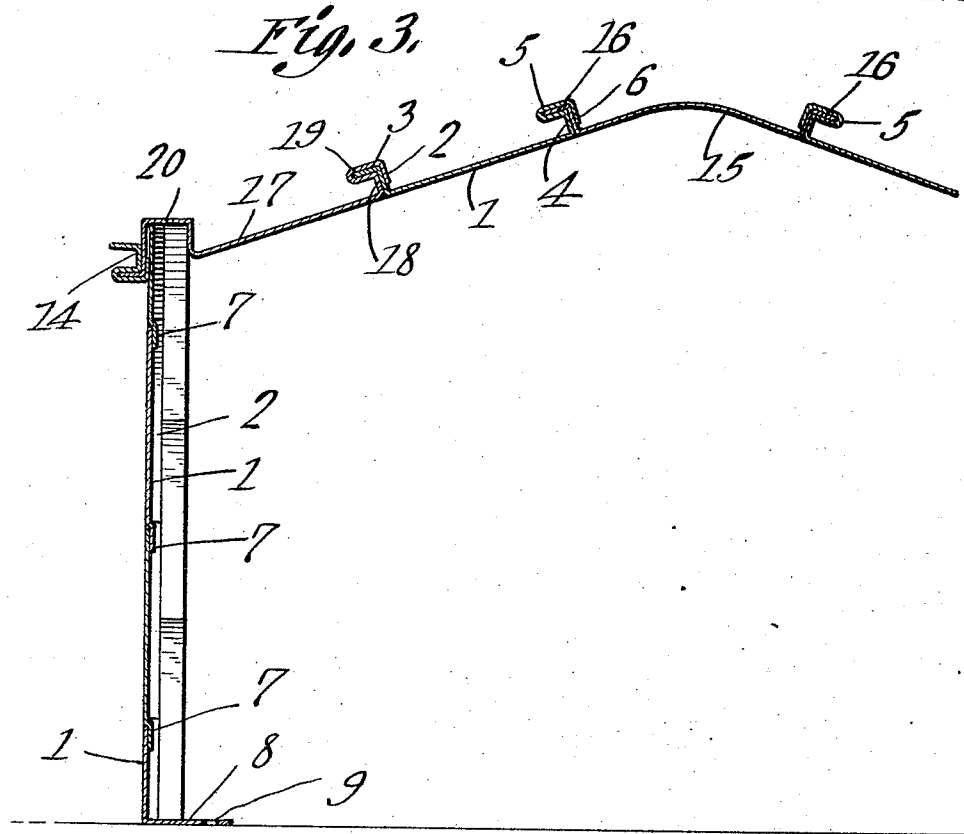
2 SHEETS—SHEET 2.

Fig. 3.



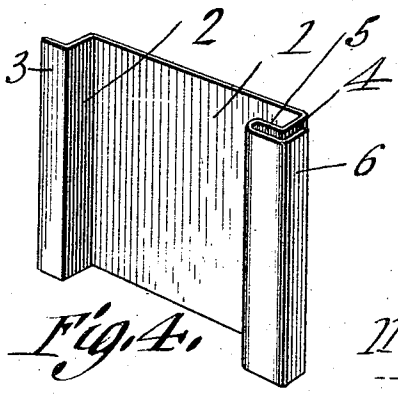


Fig. 4.

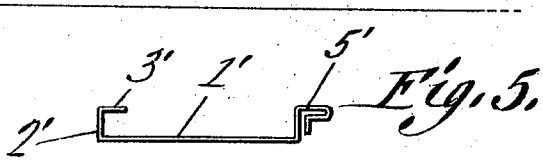


Fig. 5.

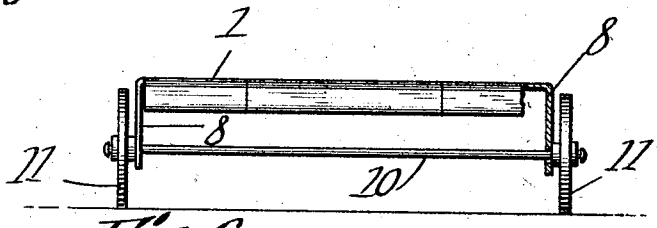


Fig. 6.

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UNITED STATES PATENT OFFICE.

AUGUST C. RADER, OF READING, MASSACHUSETTS.

TOY BUILDING BLOCK.

1,420,748. Specification of Letters Patent. Patented June 27, 1922.

Application filed April 12, 1920. Serial No. 373,206.

To all whom it may concern:

Be it known that I, AUGUST C. RADER, a citizen of the United States, residing at Reading, in the county of Middlesex and State of Massachusetts, have invented new and useful Toy Building Blocks, of which the following is a specification.

This invention relates to toy building blocks, one of its objects being to provide blocks of this character which can be made out of scrap metal properly shaped so as to interlock and be held together without the use of bolts, nuts or other like fastening devices.

A further object is to provide blocks of this character which can be utilized for constructing toy buildings, vehicles, and other articles.

Another object is to provide blocks which will be held together by interlocking and which are not dependent upon friction to hold them properly assembled.

With the foregoing and other objects in view, which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that, within the scope of what is claimed, changes in the precise embodiment of the invention shown can be made without departing from the spirit of the invention.

In the accompanying drawings the preferred form of the invention has been shown.

In said drawings

Figure 1 is an elevation of a portion of a toy building constructed of blocks such as constitute the present invention.

Figure 2 is a section on line 2—2, Figure 1.

Figure 3 is a section on line 3—3, Figure 1.

Figure 4 is a detail view of one of the building blocks.

Figure 5 is a detail view of a modified form of block.

Figure 6 is a detail view of a toy vehicle constructed of blocks such as constitute the present invention.

Referring to the figures by characters of reference 1 designates a building block preferably a rectangular plate and provided along one edge with a flange 2 extending at right angles therefrom and terminating in a lip 3 extending longitudinally of the flange and disposed in a plane which is parallel to the plate 1. Along the opposite edge of the plate 1 is another flange 4 perpendicular to the plate and having a longitudinally channeled lip 5 extending at right angles therefrom and in planes parallel with the plate 1, the free edge of the lip being bent to form a longitudinal guard 6 which is spaced from but parallel with the flange 4. In the structure shown in Figure 4 the lip 3 is extended laterally beyond the plate 1 while the lip 5 laps said plate. It is to be understood, however, that, if preferred, these lips can be extended in the opposite direction, the lip 3′ in Figure 5 lapping the plate 1′ while the channeled lip 5′ is extended laterally beyond the plate. In both structures, however, the channel in the lip 5 or 5′ is in the form of a right angle, in cross section and the flange 2 and its lip 3 or the flange 2′ and its lip 3′ are so shaped as to snugly fit into a channel such as formed at the opposite side of the plate.

Some of the blocks can be larger than others and as shown in Figure 3 certain of the plates 1 are provided with aprons 7 adapted to lap the adjoining blocks when the parts are assembled to form a structure. Some of the blocks may be formed with extensions or ears 8 projecting at right angles therefrom and provided with perforations 9. These extensions or ears, as shown in Figure 3, can constitute bases for resting on the floor or other structure on which the blocks are erected and can be fastened to the structure by driving a tack through the opening 9. Or, if desired, these ears 8 can be extended downwardly when the blocks are assembled to form a vehicle platform in which event the ears will provide bearings for wires 10 constituting axles on which supporting wheels 11 may be mounted. Such a vehicle body may be constructed as shown in Figure 6.

In erecting the wall of a toy building the blocks are erected in vertical courses, the blocks of each course being staggered relative to the adjoining courses so that the lips 3 on two blocks of one course will enter the angular channel in the lip 5 on one block of the next adjoining course. Such an arrangement will be obvious by referring to Figure 1. Some of the blocks of certain of the courses can be spaced apart to provide window openings as shown at 12 and the sides of these openings can be finished by means of narrow strips 13 corresponding with the two side portions of one of the blocks or plates

1. For example, and as shown in Figure 2, the block 13 is in the form of a narrow strip having oppositely extending flanges along the two edges thereof one of which is seated in the channled lip 5 of the adjacent plate 1 while the other flange constitutes the side wall of the opening 12. The other block 14 is in the form of a channeled lip corresponding with the lip 5 and engages the adjacent lip 3 of one of the blocks or plates 1, the said block 14 forming the other wall of the window opening. As the various blocks are placed or disposed in staggered relation it will be obvious that when they are arranged in vertical courses, the blocks of each course will act as connecting members for the blocks of the adjoining courses so that all of the blocks will be held properly assembled without the use of bolts or other fastening means.

The roof of the toy building can be made up of blocks or plates 1 similar to those hereinbefore described together with central plates 15 which are bowed transversely or of any other desired transverse contour and are formed, along their side edges with angular flanges 16 corresponding with the flanges 2 and links 3. These flanges are adapted to engage the channeled lips 5 of the adjacent blocks or plates 1. In addition to these parts making up the roof structure, blocks 17 are employed adjacent the wall of the structure. Each of these blocks has a flange 18 along one side thereof provided with a channeled lip 19 corresponding with the lip 5 for engaging the lip 3 on the plate 1. The other side of each plate or block 17 has a broad channel 20 in its lower face formed by striking the member upwardly, the channel being of sufficient width to receive the upper portion of the wall of the structure. The various plates 17 are placed side by side upon the wall and, to prevent them from lifting upwardly independently of each other, a series of blocks such as shown at 14 in Figure 2 are placed along the outer depending portion of the channel 20 so as to extend across the meeting edges of the channels 20 of the different blocks or plates 17, thus holding said plates together and preventing them from becoming displaced relative to each other.

It is to be understood of course that various changes may be made in the contours of the blocks or plates and that these various elements can be assembled in innumerable combinations for the purpose of producing structures of different kinds.

What is claimed is:

A building block formed of sheet metal and provided, along opposite edges with flanges extending at right angles therefrom, a lip extending at right angles from each of the flanges, one of the lips being extended laterally beyond the block and the other lip being disposed in lapped relation to the block, one of said lips being formed with a longitudinal channel, an extension upon the channeled lip and spaced from but parallel with the flange, and an apertured extension projecting from one edge of the block.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

AUGUST C. RADER

Witnesses:

HERBERT D. LAWSON,

IVY E. SIMPSON.