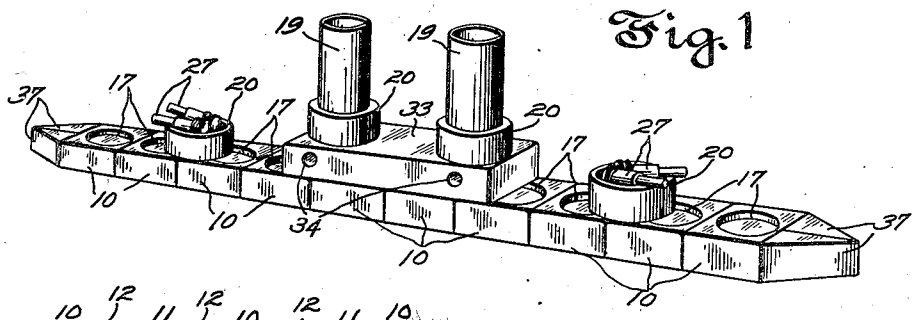
April 9, 1946. A. C. GILBERT 2,398,223

CONSTRUCTIONAL TOY WITH MENAGERIE BLOCKS

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Fig. 1



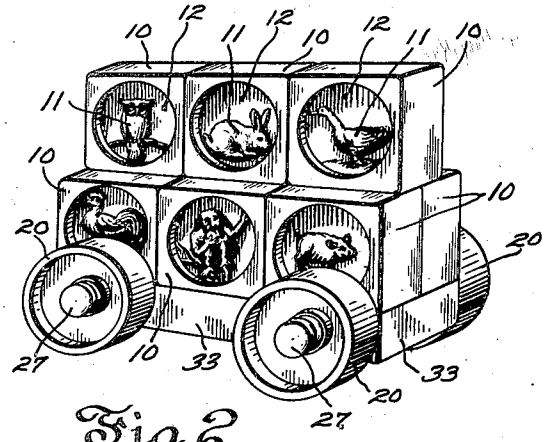


Fig. 2

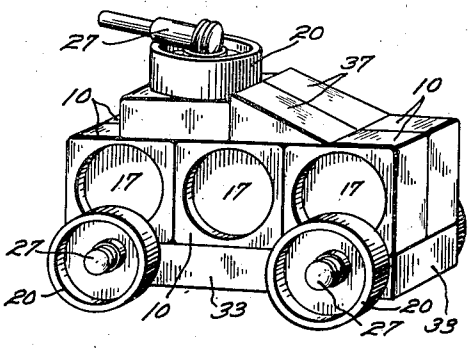


Fig. 3

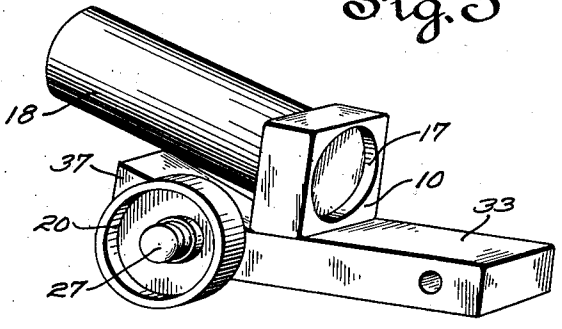


Fig. 4

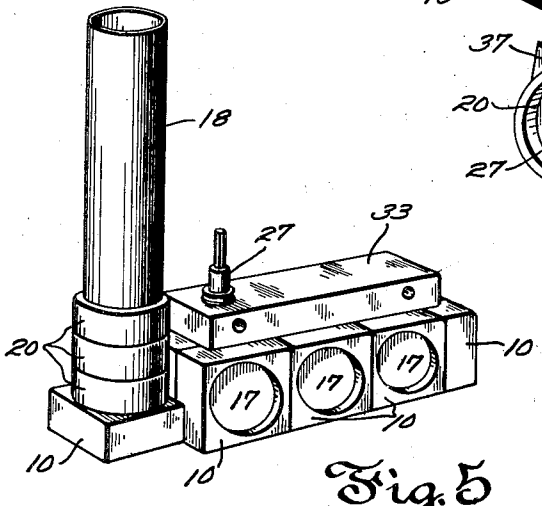


Fig. 5

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Fig. 6

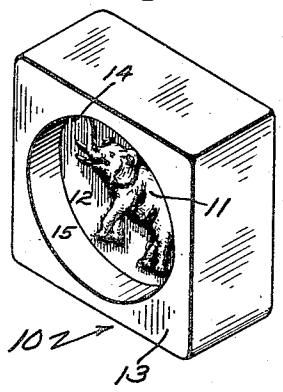


Fig. 7

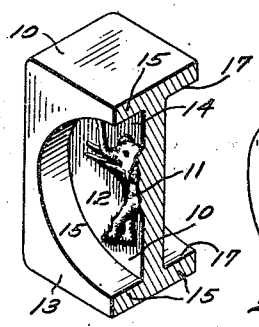


Fig. 8

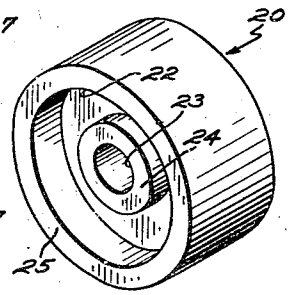


Fig. 9

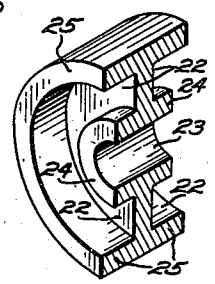


Fig. 17

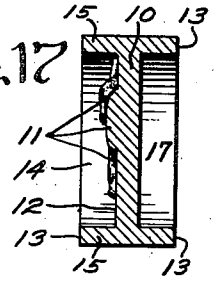


Fig. 10

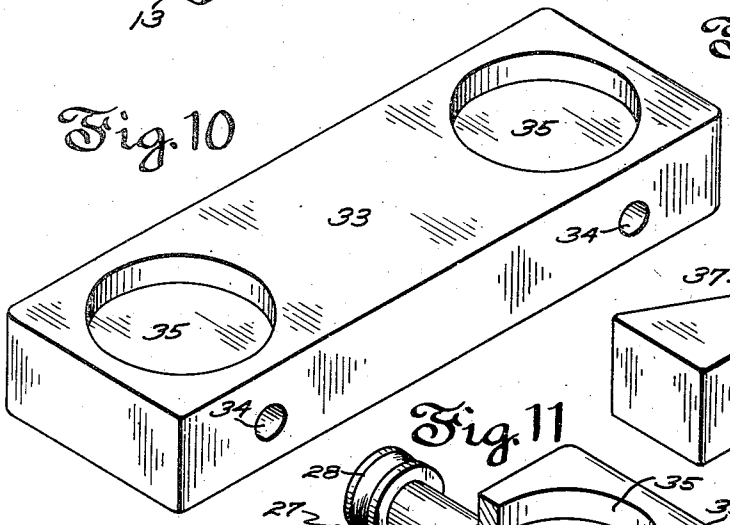


Fig. 15

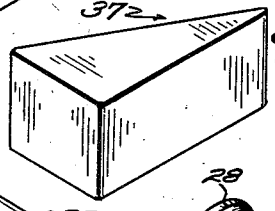


Fig. 11

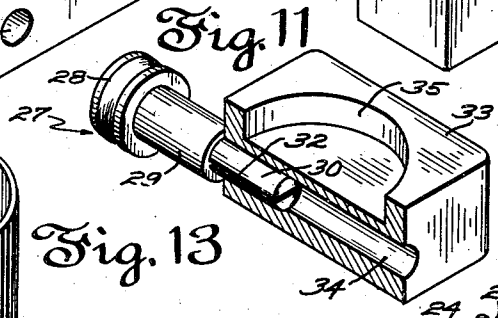


Fig. 12

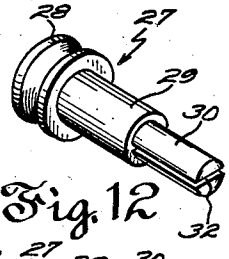
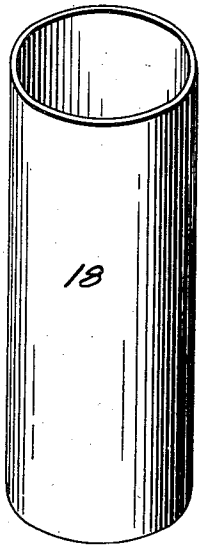


Fig. 13



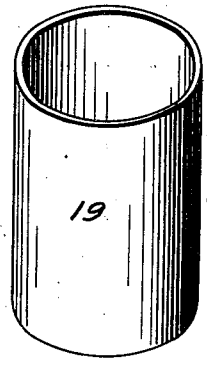


Fig. 14

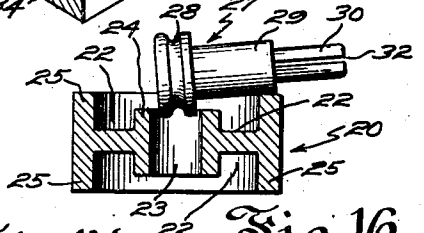


Fig. 16

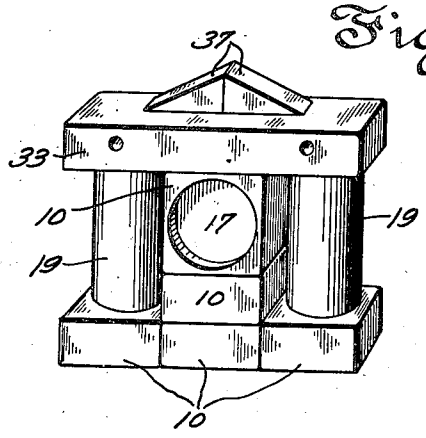
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CONSTRUCTIONAL TOY WITH MENAGERIE BLOCKS

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Fig. 18



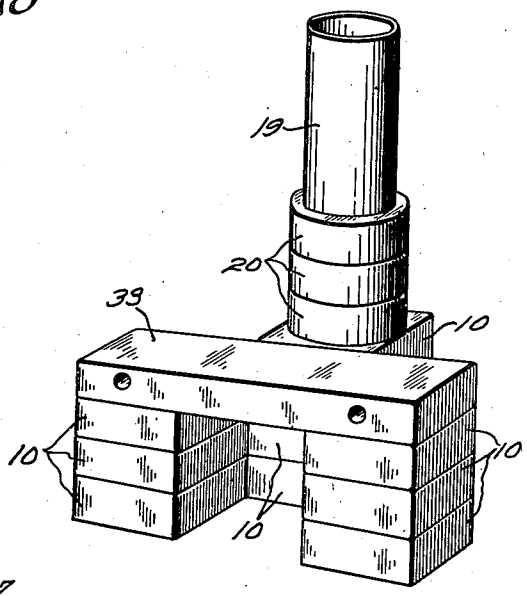
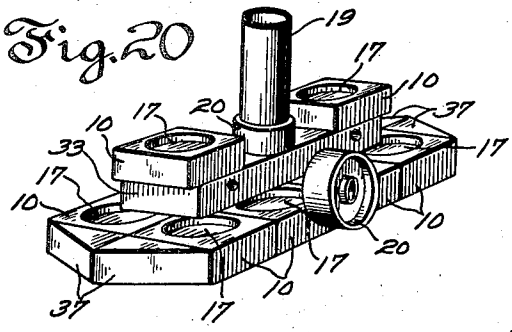


Fig. 19

Fig. 20



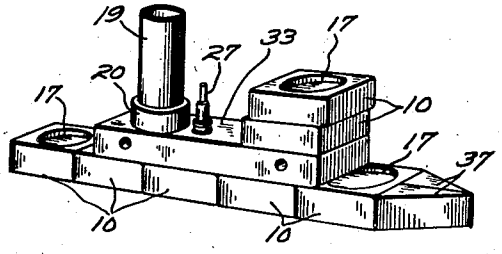


Fig. 22

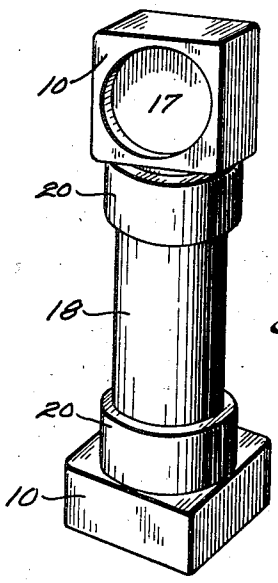


Fig. 21

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Patented Apr. 9, 1946

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UNITED STATES PATENT OFFICE

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CONSTRUCTIONAL TOY WITH MENAGERIE BLOCKS

Alfred C. Gilbert, Hamden, Conn., assignor to A. C. Gilbert Company, New Haven, Conn., a corporation of Maryland

Application August 17, 1942, Serial No. 455,064

4 Claims. (Cl. 46—16)

This invention relates to sets of toy play pieces particularly of the building block variety which are designed merely to be placed in face-to-face contact beside one another or on top of one another thereby to be easy of manipulation by very young children.

Such building blocks have heretofore assumed quite conventional and uniform characteristics. A typical set has consisted of wooden cubes usually brightly colored with markings or other configuration sometimes printed, embossed or impressed on the surface consisting usually of educational marks such as letters of the alphabet, simple numerals, etc.

It is an object of the present invention to provide a set of play pieces usable in a manner comparable with conventional play blocks that will present more appeal and attractiveness to very young minds and sustain the interest of a child longer than do conventional so-called building blocks.

A general object is to capture the spirit of overall appearance of various real objects and live subjects and to provide play blocks of kindergarten simplicity containing the basic elements of such overall appearance so that a recognizable representation of the real object or live subject may be made through the handling of very few individual pieces by a very young child.

A related object is to provide a set of multi-purpose blocks wherein different positioning and varied combinations of the same blocks recognizably represent entirely different real objects.

A particular object is to impart to a play piece in the nature of a toy building block a new attractiveness arising from faithfully sculptured representations of pets, or various domestic and wild animals, or other figures associated with structural features of the block.

Another object is to enhance the realism of such sculptured figures by subjecting them to modulated play of light and shade. This effect is augmented by placing the sculptured figure within a shadow casting niche sunken into some face of the building block. An impression is thereby produced that the sculptured figure is housed even more deeply within the block than is the case.

A further object in so sinking the sculptured figure below the face of the block is to protect it from the blows and rubbing of a companion block or play piece.

A further object is to equip a given block with a vacant niche on one side and a corresponding niche on another side occupied by a sculptured figure of the nature described, so that mysticism arises from the diversity of appearance when the same block is turned side-for-side. To the inexperienced child mind the sculptured figure thus seems to appear and disappear from the niche and curiosity is aroused stimulating further interest in the handling of the toy blocks.

Another object is to combine with play blocks containing sunken figures modeled in relief, other kinds of play pieces so shaped and related to said blocks as to constitute a recognizable imitation of various real objects when assembled with such play blocks.

Another object is to make use of the niche in the block, whether or not containing a sculptured figure, to perform mechanical locating engagement with a tube-like or tubular ended form of play piece. If cylindrical, such tubular play piece may recognizably resemble a variety of objects such as a gun barrel, a factory chimney, an architectural column, the smoke stack of a boat, stanchions, etc.

A still further object is to combine with blocks containing sunken figures in relief, play pieces capable of assemblage to form a wheeled vehicle carrying and displaying the niche-contained sculptured animal figures in a manner to resemble a circus wagon or menagerie.

A further object is to provide removable axle pieces for the wheels of such a vehicle comprising cylindrical members shouldered and proportioned recognizably to resemble familiar objects such as a factory whistle, a naval gun, or the like when placed in suitable relation to other pieces of the toy building set.

A still further object is to provide wheel-shaped blocks containing an annular recess and a central axle hole which latter, when the block is laid flat, will serve as a nest for supporting the butt ends of the above mentioned axle pieces so that the shanks of the latter may project at an incline over the edges of the axle piece to imitate the barrel of a cannon mounted on a turret and thus recognizaly represent naval or military ordnance.

The foregoing and other objects will appear in greater detail from the following description of a typical set of constructional toy pieces incorporating the present improvements, in which description reference is had to the accompanying drawings wherein:

Figs. 1 to 5, inclusive, show toy pieces embodying the invention selected from the same set and arranged to represent respectively, a battleship,

a circus wagon or menagerie, a military tank, a howitzer, and a factory power plant.

Figs. 6 and 7 are, respectively, full and fragmentary isometric views of one of the menagerie blocks.

Figs. 8 and 9 are respectively full and fragmentary isometric views of one of the wheel blocks.

Figs. 10 and 11 are respectively a full and fragmentary view of a slab-like body block, the latter view including an axle piece assembled in place.

Fig. 12 is a perspective view of one of the removable axle pieces.

Figs. 13 and 14 are perspective views of hollow cylindrical pieces of differing lengths.

Fig. 15 is a perspective view of one of the prismatic pieces of the play set.

Fig. 16 is a view of an axle piece differently assembled with a wheel piece to represent a turret gun.

Fig. 17 shows a transverse section cut squarely through the block of Fig. 6.

Figs. 18 to 22, inclusive, show toy pieces embodying the invention selected from the same set and arranged to represent respectively, a mantle clock, an outdoor fireplace, a side wheel ferry boat, a grandfather's clock, and a tug boat.

There may first be described the component parts of the constructional toy which may be used in various combinations and subcombinations and in different positional relationships in building different toy representations of actual objects.

One of the pieces 10 is a one-piece block which may be termed a menagerie block since it is characterized by the distinctive feature of a sculptured animal or other figure 11 upstanding in high enough relief from a surface 12 of a web wall of the block sunken below the exterior or contacting face 13 of the solid border portion of block 10 to cast a shadow on surface 12 beside the relief figure. Surface 12 is sunken preferably to a greater depth below face 13 than the distance to which the sculptured figure upstands from the sunken surface 12. This forms a niche or compartment 14 bordered by side walls 15. While the block and the niche may have various shapes, it adds an appeal of simplicity to make the block square in outline, and if desired somewhat thinner in depth than a cube and to make the niche 14 circular. A similar niche 17 may be sunken in the opposite exterior or contacting face of block 10 and may be left either vacant and devoid of any sculptured ornament, or provided with some bas relief or half relief or high relief figure differing from that in niche 14, so that in turning the otherwise symmetrical block side-for-side a difference of appearance with respect to the figure contents of the niche becomes readily detectable by the child. If young enough, the child may thus be mystified at what appears at first to be the appearance and then the disappearance of the figure in what the child mistakenly assumes to be the same niche.

As any play of light upon the menagerie block is usually at some oblique angle, the fact that an abrupt shadow will be cast by the niche-bordering wall 15 upon the sunken surface 12 and upon the figure 11 itself so that such shadow will partly commingle with the highlights and shadows on the sculptured contours of the raised figure 11 creates a visual impression that the sculptured figure is housed rather deeply within the block even when the niche 14 is actually shallow. The illusive effect of depth is still further increased if the figure in relief upstands to a less distance from the surface 12 than is the depth of the niche 14. A relatively sunken position of the raised figure in relation to the outside or contacting face 13 of the block also serves to protect the sculptured figure from being chipped or damaged by the bumps and rubbing it would otherwise receive from an adjoining piece of the constructional toy as handled by children. Figs. 2 and 6 show that the shadow cast by rim wall 13 extends over such portion of the sunken surface of the cross wall as to darken the background adjacent the most highlighted portions of the relief figure thereby strengthening the contrast in light and shade between the relief figure and its background.

An all tubular, or tubular ended, piece 18 is provided having an outside diameter to fit freely within the niche 14 in telescopic relation to this cylindrical wall 15 and to seat upon the sunken surface 12, thus surrounding the sculptured figure 11 without touching it. A shorter tube 19 of the same character is also provided.

20 indicates a multiple purpose, wheel-like piece having the annular recess 22 and the central bearing hole 23. Recess 22 is bordered by the hub rim 24 and by the peripheral rim 25. 27 is an axle piece composed of a grooved head or butt 28 for retaining the wheel block 20, a pintle shank 29 for rotation permitting engagement with the wheel block, and a mounting shank 30 which may contain a longitudinal split 32 to permit the mounting shank, which preferably is made of springy material, to be shoved retainingly into an undersized socket such as 34 by squeezing together the two sides of the split shank thereby to set up a friction hold, retaining the axle piece removably in its undersized socket.

33 indicates a slab-like body block having two such sockets formed by holes bored edgewise therethrough to receive the mounting shanks 30 of axle pieces 27. Body block 33 is also provided with two circular niches 35 similar to niches 14 adapted to seat and steady one end of tube 18 or 19.

The prismatic pieces 37 serve chiefly as finishing or filling elements to increase the realism with which the other assembled parts resemble whatever real object they are selected to represent.

Examples of a few, out of a great many possible object imitations that may be made by a very young child, appear in Figs. 1 to 5 inclusive. In each of these figures, the identity of each of the pieces shown in Figs. 6 to 15 inclusive is made clear by the use of the same reference numerals to designate them.

In Fig. 1 attention is called to the use of tubes 19 as "smoke stacks" of a "warship" and to the use of axle pieces 27 and wheel blocks 20 as representative of gunnery mounted on turrets. The tapering bow and stern of the boat is effectively represented by prismatic blocks 37 while the axle sockets 34 in body block 33 appear as portholes and the niches 17 give to the superstructure of the ship a fabricated appearance suggestive of hatchways.

In Fig. 2 the body block 33, wheel pieces 20, and axle pieces 27 are assembled to form an actual wheeled vehicle capable of rolling along the floor and carrying menagerie blocks 10 arranged to exhibit sculptured figures of a variety of ani-

mals. Figures of wild animals so displayed are realistically imitative of a circus wagon.

Fig. 3 shows the same wheeled vehicle carrying blocks 10 disposed with their vacant niches on the outside so as to be suggestive of steel fabrication and to resemble realistically the overall body of a military tank with a "turret gun" 20, 27 mounted atop the tank body.

Fig. 4 shows an even simpler assemblage consisting of a two-wheeled carriage 33 mounting the large "gun barrel" 18 with its "breech" 10 to constitute a "howitzer."

Fig. 5 is readily recognizable as the "power plant" of a factory through the presence of the "smoke stack" 18 and the "factory whistle" 27.

Figs. 18 and 21 represent unmistakably a mantle clock and a grandfather clock, the empty circular recess in the square face of one of the menagerie blocks perfecting this imitation.

In Fig. 19 the vehicle body block spans two tiers of square menagerie blocks and the whole is backed by a chimney structure which suggests at once an outdoor fireplace of finished construction.

The pointed bows of the low lying flat bodies in Figs. 20 and 22 at once acclaim that these objects are both "boats." The end-for-end symmetry, even including like "pilot houses," shows that Fig. 20 is a side wheel ferry boat, while the sturdy and doughty set-up of the structure in Fig. 22, emphasized by the presence of a conspicuous "whistle," and a flat "stern," clearly marks this as a "tug boat."

It will be recognized from the foregoing illustrations that the few simple play pieces of Figs. 6 to 16 possess the capacity to be assembled in ways to imitate realistically scores of familiar actual objects and that this capacity results not from chance but from a studied analysis of the basic elements of general appearance of many such objects as viewed at a distance. The incorporation of these basic elements in shapes and proportions of toy building blocks of such simple nature and ease of assemblage that a very young child can assemble them and recognize the results will lead to an increased interest of children of kintergarten age in building blocks. This improved set of blocks orients a child's imagination by tying it in with certain familiar actualities of life as distinguished from the meaningless abstractions of mere conventional play pieces such as alphabet blocks and arbitrary geometrical blocks. For these reasons toys featured by these improvements can contribute materially to the education of a child in the very early stages of learning.

The appended claims are directed to and intended to cover all variations of, and obvious alternatives and substitutes for, the particular parts and arrangements of parts herein disclosed which come fairly within the spirit of this invention and within the terms of the claims.

I claim:

1. A set of child's play pieces adapted to be placed in face-to-face contact for building fanciful representations of real objects, including at least one block-like body containing a niche sunken from the contacting face of said body and containing a figure upstanding in relief, said niche being bordered by a perimetric side wall surrounding and spaced from said figure, and a companion building piece having a tubular end of size and shape to seat within said niche in telescopic relation to said side wall and to surround and clear said upstanding figure within the niche.

2. A set of child's play pieces adapted to be placed in random relationships for building fanciful representations of industrial or military units, including pieces resembling vehicle wheels, a piece resembling a vehicle body having laterally opening sockets, and axle-pieces removably insertable in both said wheel pieces and said sockets, said axles comprising a multi-stepped cylindrical body having at least three substantially differing diameters along its length thereby to bear a recognizable resemblance to the outlet stem, intermediate shank and base butt respectively of an industrial factory whistle when standing vertically upright and wholly exposed atop said body block and to bear a recognizable resemblance to a cannon or similar piece of military ordnance when resting wholly exposed at an incline.

3. In a set of constructional play pieces, multiple purpose unit members including a thick disc-like wheel member having a central hole and an annular recess in its side face bordered by a peripheral rim, and a stepped cylindrical axle member having a head butt of relatively large diameter at one end and an elongated shank of smaller diameter projecting axially from said head butt of size fittingly to occupy said wheel hole, said axle member being long enough to extend radially across said annular wheel recess and project like a gun beyond said wheel rim, and said head butt of the axle member being of a size fittingly to nest in one end of said wheel hole when the wheel is lying down.

4. A set of constructional play pieces composed of multiple purpose unit members including, blocks recessed on respectively opposite sides to form niches therein suggestive of fabricated structure, animal-like figures sculptured in relief occupying less than the full size of said niches thereby to cause the figure containing niches to resemble caged animals or the like, tubular ended members shaped to be received into said niches in a manner to resemble a smokestack or gun barrel or the like, wheel-like members having a recessed side, an elongated body member adapted to support said blocks and said tubular ended members and provided with axle sockets, and axle pieces removably insertable both in said wheel-like members and in said sockets for building a wheeled vehicle carrying said blocks in a manner to resemble a circus wagon, said axle pieces being adapted alternatively to rest at an incline in and to project over the recessed sides of said wheel-like members and said wheel members being adapted to rest on said body member in a manner recognizably resembling a turret gun on a tank or ship or the like.

ALFRED C. GILBERT.