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J. A. COZZONE
TOY CONSTRUCTION ROD
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2,583,474

Fig. 1

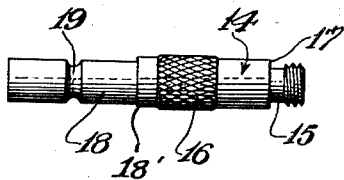


Fig. 4

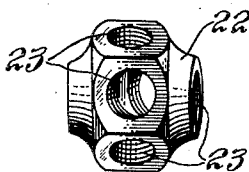


Fig. 2

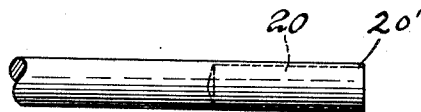
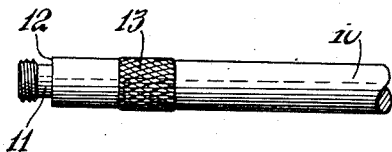


Fig. 3

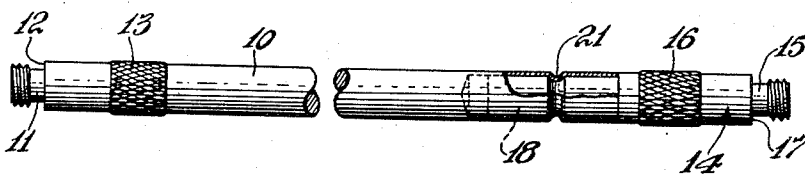
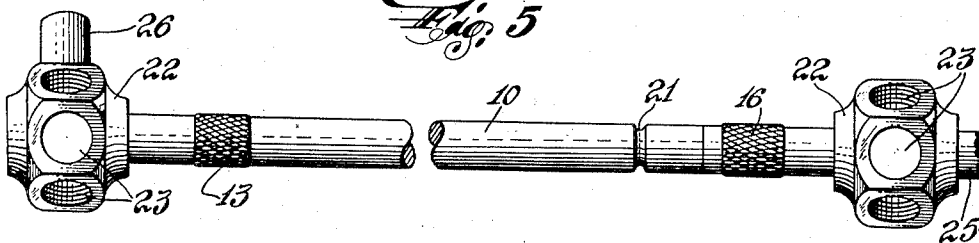


Fig. 5



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TOY CONSTRUCTION ROD

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2 Claims. (Cl. 46-28)

1.

This invention relates to construction units such as are particularly adapted for use by children. The construction unit of my invention embodies unique features enabling the same to be used conveniently in multiples for the construction of objects in realistic simulation of their full-scale original counterparts.

A further object of the invention is to provide a construction unit which may be used in the building of objects without necessitating the exertion of any substantial amount of physical effort, without requiring the use of tools.

A further object of the invention is to provide a construction unit which is rugged and practically fool-proof in operation and embodies novel features of the construction, which teach the user the fundamentals of fabrication and construction, in a novel manner.

These and other advantageous objects, which will appear from the drawings, and from the description hereinafter, are accomplished by the structure of my invention, of which an embodiment is illustrated in the drawings. It will be apparent, from a consideration of said drawings and the following description, that the invention may be embodied in other forms suggested thereby, and such other forms as come within the appended claims are to be considered within the scope and purview of the instant invention.

In the drawings:

Fig. 1 is a plan view of a pin member adapted to be used in carrying out my invention.

Fig. 2 is a plan view, partly fragmentary, of a rod member used in a construction unit of my invention, said rod member being adapted to have the pin member positioned in a recess at one end thereof, in the process of manufacturing the device.

Fig. 3 is a plan view of said rod member, with the pin member shown rotatably secured in the recessed end of the rod member.

Fig. 4 is a perspective view of an end cap element adapted to receive the end of a rod member, and

Fig. 5 is a plan view of the rod member with end cap elements secured to the ends thereof, and showing, fragmentarily, other members also secured to said end cap elements.

The construction unit of my invention may be made of any desired or convenient size and of any desired or convenient material. A convenient form thereof is made on a smaller scale than that shown in the drawings. The rod members 10 may be made of various lengths, as may also the pin members 14. In practice, construction kits, containing rod members of various

2.

lengths, may be combined by the utilizing of the end cap elements, for construction, on a small scale, of replicas of toys, buildings, bridges and other objects. As shown in Fig. 2, the rod member of the construction unit of my invention is provided at one end with a reduced stem 11 terminating in a threaded end portion, said reduced stem portion and rod member defining a shoulder 12 adjacent which the rod member is provided with circumferentially knurled portion 13 to facilitate manual rotation of said rod member in building objects. The other end of the rod member is provided with a recessed portion 20 for reception of the reduced shank of pin 14. Said reduced shank 18 is provided with a circumferential recess 19.

In the manufacture of the device, the shank 18 of pin 14 is inserted in the recessed end 20 of rod 10, and then the rod 10 is simply spun in or otherwise provided with inwardly directed portions 21 for registry with the circumferential recess 19 of pin 14, as shown in Fig. 3. By this arrangement, the pin is secured in the rod against lateral displacement therefrom and, at the same time, may be readily rotated therein. The pin 14 is provided with a reduced, threaded terminal stem 15 and with a circumferentially knurled portion 16 adjacent the shoulder 17; upon the assembly of the parts, the shank shoulder 18 abuts against the marginal edge 20' of the recessed end of the rod 10. End cap elements 22 are provided (see Fig. 4) having apertures 23 which are preferably threaded for complementary threaded engagement (with the threaded ends of the stems 15 and 11 of the rod 10). By this arrangement, the rod 10 may have secured thereto the end cap elements 22 to connect the rod member to other rod members or objects 25-26, the latter being provided with threaded portions to be received in the end cap elements. It will be noted that if the stem 11 of one end of the rod 10 is connected to a cap element, the threaded stem 15 of the other end of said rod member may be rotated for engaging with another cap element 22 without rotating the threaded end 11 or otherwise jeopardizing its engaged position with the cap element to which it has been secured. This feature is made possible by the arrangement of the pin 14 rotatably in the rod member 10.

I have shown, in Fig. 2, only the right-hand end of the rod member as provided with the recessed portion 20 to rotatably receive the pin 14. If desired, both ends of the rod member may be provided with recessed portions to rotatably receive such pin. However, from a practical

3

standpoint and for economy of manufacture, the form shown in Fig. 2 is well suited to the purpose. The pin member 14, when secured to the rod portion 10, constitutes a part thereof being, as shown in Fig. 3, displaceably secured thereto. The knurled portions 13 and 16 of the rod member permit the threaded ends of said rod member to be rotated conveniently without necessitating the use of tools in the process of connecting the same to the cap elements 22.

In the use of the construction unit of my invention, the user is taught manual dexterity, and his imaginative, creative powers are enhanced.

The drawings illustrate the invention as embodying certain practical forms. It will be obvious therefrom that numerous modifications may be made within the purview and scope of the instant invention.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent is:

1. In a construction unit, a rod member having a threaded end for connection to a complementarily threaded member, and an opposite axially recessed end, a pin having a shank portion positioned in said recessed end, said shank portion having a circumferential recess, said recessed

4

end of the rod having a circumferentially inwardly directed portion registering with the circumferential recess of the pin to rotatably secure the same therein against axial displacement therefrom, a terminal stem on the pin, and means on the stem to engage a complementary member to secure the rod thereto.

2. In a construction unit, a rod member having a threaded end for connection to a complementarily threaded member, and an opposite axially recessed end, a pin having a shank portion positioned in said recessed end, said shank portion having a circumferential recess, said recessed end of the rod having a circumferentially inwardly directed portion registering with the circumferential recess of the pin to rotatably secure the same therein against axial displacement therefrom.

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The following references are of record in the file of this patent:

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