ABSTRACT: This assembly toy set comprises baseboards having a plurality of arranged holes in one planar surface thereof and fittings such as rail, signal, house, tree and the like which fittings are provided with many protuberances adapted to be snugly received in said holes.
ASSEMBLY TOY SET

BACKGROUND OF THE INVENTION

This invention relates to an improvement in an assembly toy set in which rails and the other fittings are rigidly mounted on the baseboard. Heretofore, rail toys or other assembly toy sets of this kind have been usually assembled by directly connecting the assembly sets, so that the rails or the other fittings once assembled are likely to disengage on the displacement from the original place where said rails or the fittings have been assembled to the other place.

SUMMARY OF THE INVENTION

Generally, therefore, it is an object of the invention to obviate the above and other disadvantages and difficulties and to provide a novel assembly toy set which has certain structural and functional features and advantages over the similar assembly toy sets of the prior art. Another object of the present invention is to provide an assembly toy set which is both economical to manufacture and simple to construct.

A principal object of the invention is to provide toy set which comprises baseboard which is provided at its periphery with flanges having snap grooves to be engaged with those of the other porous baseboard, and fittings which are provided with one or more protuberances which mate with holes provided on the surface of the said baseboard.

Another object of the invention is to provide a new locomotive toy having wheels of curved inner face which is suitable to slide along the rail road constructed according to the invention.

These and other objects of the present invention will become apparent as the following description proceeds.

BRIEF DESCRIPTION OF THE DRAWINGS

For a fuller understanding of nature and object of the invention a reference should be had to following detailed description taken in connection with the accompanying drawings, in which the same reference numerals designate the same or similar parts through out the drawings.

FIG. 1 is a perspective view in partially sectioned of the baseboard according to the invention;

FIG. 2 is a fragmentarily enlarged sectional view of the baseboard of FIG. 1;

FIG. 3a is a perspective view of the rectangular fitting of one embodiment according to the invention;

FIG. 3b is a longitudinally sectioned view of FIG. 3a;

FIG. 4a is a perspective view of the circular fitting of another embodiment according to the invention;

FIG. 4b is a longitudinally sectioned view of FIG. 4a;

FIG. 5a is a perspective view of the sleeve fitting of further embodiment according to the invention;

FIG. 5b is a longitudinally sectioned view of FIG. 5a;

FIG. 6a to 6c are perspective views of the fittings of another embodiments of the invention;

FIG. 7 is a fragmentarily enlarged sectional view of the assembled toy sets;

FIG. 8 is a partial cross section of a vehicle wheel associated with the track of the present invention; and

FIG. 9 to 11 show pictorial views of the assembled toy sets according to the invention.

As illustrated by way of example in the drawings, the characteristic feature of the invention comprises a baseboard which is provided at its periphery with flanges having snap grooves to be engaged with those of the other porous baseboards, and fitting holes provided on the surface of the said baseboard.

In FIGS. 1 to 7, the reference numeral 1 designates the baseboard which is formed of plastic material such as hard vinyl chloride. The baseboard 1 at its periphery is provided with the flange 2 which in conjunction with the peripheral wall of the baseboard defines a channel snap groove 3 for association with the snap groove or inner locking means of an adjacent baseboard. The reference numeral 4 denotes numerous fitting holes which are regularly arranged on the surface of the baseboard 1. These fitting holes 4 may be provided simultaneously with forming the baseboard 1 and the spacing from the peripheral edge of the baseboard 1 to the adjacent fitting holes is of a half size of the normal spacing between the fitting holes so that when two baseboards are coupled with each other through the flange 2, the spacing between the fitting holes adjacent to the terminal of the baseboard becomes equivalent to the normal spacing between the fitting holes.

Referring to FIG. 7, the holes 4 provided in the surface of the baseboard may have a downwardly extending protuberance 6 associated with the terminal wall 5 of such hole. The bottom of the protuberance 6 is coplanar with the bottom of the peripheral walls of the baseboard to thereby provide additional support for the baseboard as shown in FIG. 1. The diameter of the protuberance 6 is the same as the diameter of the protuberance 8 to thereby facilitate its association and reception in hole 9 provided in fitting 11. Thus the baseboard can be elevated above the floor by members 11 or may be superimposed on another baseboard as shown in FIG. 9.

The rectangular fitting 7 is adapted to constitute a linear rail or track section which at its rear side is provided with one or more protuberances 8 which is inserted into the fitting hole 4 provided in the surface of the baseboard 1, while the upper surface of the said fitting 7 at the position corresponding to the protuberance 8 is provided with a fitting hole 9. In case more than two protuberances 8 are provided in the fitting 7, the spacing between the said protuberances must be in accord with the spacing between the fitting holes 4 provided on the surface of the baseboard 1. The spacing from the fitting hole 9 to the terminal of the fitting 7 is a half size of the spacing between the fitting holes 9 so that more than two fittings may be mounted on the baseboard 1 in series without being superposed with each other.

The circular fitting 10 is used for constituting a crossing of rails and its diameter is substantially the same as the width of the rectangular fitting 7.

The reference numeral 11 designates a hollow sleeve fitting which is adapted to serve as a pile for supporting the superposed baseboard as shown in FIG. 9 and is provided at its one end with a protuberance 8 adapted to be inserted into the fitting hole 2 of the baseboard 1. The curved fitting 12 having the width of approximately the same as that of the rectangular fitting 7 is employed to constitute a curvature of a track member and is provided at its upper surface with more than two fitting holes 9 and at its rear side with more than two protuberances 8. In this case the positions of the protuberances 8 and the spacing therebetween should be determined in such a way that the curved fitting 12 is rigidly secured to the baseboard while the two ends of such fitting abuttingly engage the ends of the associated individual fittings.

A discal fitting 13 and a tetragonal fitting 14 may be used as building members as shown in FIGS. 11 and 12.

In FIG. 7 the protuberances 8 of the fittings are rigidly inserted into the fitting holes of the baseboards 1 which are interconnected with each other through the flange 2 having the snap groove 3. The end to end abutting relationship of the individual track sections 7 is also shown in FIG. 7.

The locomotive toy 15 is driven by an energy of battery loaded on a coal wagon or passenger car 16. The wheels 17 of the locomotive toy 15 or the passenger car 16 have spherical inner faces 18 which facilitate smooth travel of the wheels along the rail and is more effective when running along the curved track sections.

As illustrated above according to the invention, the fittings are rigidly mounted on the baseboards by associating protuberances integrally provided on the fittings with the fitting holes provided in the baseboards, so that the assembly is carried positively on the surface of the baseboard.
While certain preferred embodiments of the invention have been illustrated by way of example in the drawings and particularly described, it will be understood that modifications may be made in the constructions and that the invention is no way limited to the embodiments shown.

1. An assembly toy set comprising, in combination, a baseboard having a plurality of predeterminately spaced holes of like diameter in the top surface thereof, said baseboard being formed on each side thereof with locking flange means adapted to mate and lock with complementary flange means formed on the mating end of an adjacent baseboard to permit a series of such boards to be joined together, certain of said holes having bottom portions which terminate above the bottoms of said flange means, with certain other of said holes having bottom portions which terminate in the plane of the bottom of said flange means to provide further support for said baseboard when supported on a flat surface, the bottom portions of said other holes being shaped in the form of protuberances the diameters of which correspond to the diameters of said holes, and a plurality of individual fittings juxtaposed on the surface of said baseboard to form a track, each of said fittings being formed with holes terminating in downwardly extending protuberances having outside diameters corresponding to the diameters of said holes in said baseboard for securely mounting said fittings thereon.

2. The assembly toy set of claim 1 wherein certain of said fittings are straight while others are curved whereby said fittings may be associated in an endless track loop of desired configuration.

3. The assembly toy set of claim 1 further including hollow sleeve fittings for supporting a pair of baseboards in vertically spaced relation, each hollow sleeve fitting being formed with a protuberance at one end thereof the diameter of which corresponds to the diameter of said holes in said baseboard for securely mounting said sleeve fittings thereon, the opposite end of said sleeve fittings having an inside diameter corresponding to the protuberances forming the bottom of said holes in said baseboard thereby to snugly receive the same for elevated support.