Publication Classification

(51) Int. Cl. A63H 33/00 (2006.01)
(52) U.S. Cl. ......................................................... 446/4
(57) ABSTRACT

A kit with toy tools for cutting a foam surface is described. The kit includes at least one foam piece for constructing an item and a plurality of fasteners (e.g., plastic nails and plastic screws) for fastening foam pieces together. Each foam piece can include markings that provide a cut-pattern for a user to cut the foam piece into a plurality of foam pieces. At least one tool is included for cutting the foam pieces. An example of such a tool is a curved-blade saw with a curved blade edge. The foam piece is a foam board or boards and a foam dowel. Collectively, the foam pieces comprise a plurality of foam pieces that, when assembled, are operable for constructing a desired item. The foam board can be formed to include a wood grain pattern and pine scent to simulate an appearance and smell of wood.
FIG. 15
TOY TOOLS AND CUTTING SURFACE

PRIORITY CLAIM

[0001] The present application is a Non-Provisional Utility Patent Application of U.S. Provisional Application No. 61/214,802, filed on Apr. 27, 2009, entitled, “TOY TOOLS AND CUTTING SURFACE.”

BACKGROUND OF THE INVENTION

[0002] (1) Field of Invention
[0003] The present invention relates to a toy tools and a corresponding cutting surface and, more particularly, to a kit that includes toy tools and foam cutting surfaces that can be safely cut with the toy tools to build an item.

[0004] (2) Description of Related Art
[0005] Toy tools have long been known in the art. Such toy tools are typically plastic toys and tool sets that simulate the look of real tools, albeit made safe through the use of plastic and smooth edges. Traditional toy tools allow a child to “pretend” to construct various items through role play and imagination.

[0006] Often such toy tools include screw drivers and various plates that allow children to screw the plates together. Although toy tool sets may include a saw, the saw is rendered inoperable for actually cutting an item due to the dangers posed by a real saw. Thus, while operable for role play, toy saws and toy tool kits do not allow a child to actually cut items into the desired shape.

[0007] Thus, a continuing need exists for a kit with toy tools and a cutting surface that can safely be cut by a child without posing a cutting danger to the child.

SUMMARY OF INVENTION

[0008] While considering the failure of others to make use of all of the above components in this technology space, the inventor unexpectedly realized that a kit with toy tools and foam boards and dowels can be used to allow a child to safely cut a surface and build an item without posing a cutting danger to the child. Thus, present invention relates to toy tools and a corresponding cutting surface and, more particularly, to a kit having toy tools and foam cutting surfaces that can be safely cut with the toy tools.

[0009] The kit includes at least one foam piece for constructing an item and a plurality of fasteners (e.g., plastic nails and plastic screws) for fastening foam pieces together. Each foam piece can include markings that provide a cut-pattern for a user to cut the foam piece into a plurality of foam pieces. At least one tool is included for cutting the foam pieces. An example of such a tool is a curved-blade saw with a curved blade edge. The foam piece is a foam board or boards and a foam dowel. Collectively, the foam pieces comprise a plurality of foam pieces that, when assembled, are operable for constructing a desired item. The foam board can be formed to include a wood grain pattern and pine scent to simulate an appearance and smell of wood.

[0010] Finally, as can be appreciated by one in the art, the present invention also comprises a method for forming and using the toy tools and cutting surfaces described herein.

BRIEF DESCRIPTION OF THE DRAWINGS

[0011] The objects, features and advantages of the present invention will be apparent from the following detailed descriptions of the various aspects of the invention in conjunction with reference to the following drawings, where:

[0012] FIG. 1 is an illustration of a kit according to the present invention;
[0013] FIG. 2 is an illustration depicting use of the kit according to the present invention;
[0014] FIG. 3A is an illustration of a hammer that can be included with the kit;
[0015] FIG. 3B is an illustration of a chisel that can be included with the kit;
[0016] FIG. 3C is an illustration of a small saw that can be included with the kit;
[0017] FIG. 4 is an illustration of a driver that can be included with the kit;
[0018] FIG. 5 is an illustration a saw with a curved blade that can be included with the kit;
[0019] FIG. 6 is an illustration of a mallet that can be included with the kit;
[0020] FIG. 7 is an illustration of a miter box that can be included with the kit;
[0021] FIG. 8 is an illustration a miter saw that can be included with the kit;
[0022] FIG. 9 is an illustration of a screwdriver that can be included with the kit;
[0023] FIG. 10 is an illustration of a square that can be included with the kit;
[0024] FIG. 11 is an illustration a tape measure that can be included with the kit;
[0025] FIG. 12 is an illustration of a carrying case that can be included with the kit;
[0026] FIG. 13A is an illustration of a screw that can be included with the kit;
[0027] FIG. 13B is an illustration a nail that can be included with the kit;
[0028] FIG. 14 is an illustration of a kit for building a foam airplane;
[0029] FIG. 15 is an illustration of a kit for building a foam birdhouse;
[0030] FIG. 16 is an illustration of a kit for building a foam car;
[0031] FIG. 17 is an illustration of a kit for building a foam sailboat;
[0032] FIG. 18 is an illustration of a kit for building a foam sailboat, and
[0033] FIG. 19 is an illustration of a kit for building a foam toolbox.

DETAILED DESCRIPTION

[0034] The present invention relates to a toy tools and a corresponding cutting surface, and more particularly to a kit having toy tools and foam cutting surfaces that can be safely cut with the toy tools. The following description is presented to enable one of ordinary skill in the art to make and use the invention and to incorporate it in the context of particular applications. Various modifications, as well as a variety of uses in different applications will be readily apparent to those skilled in the art, and the general principles defined herein may be applied to a wide range of embodiments. Thus, the present invention is not intended to be limited to the embodiments presented, but is to be accorded the widest scope consistent with the principles and novel features disclosed herein.

[0035] In the following detailed description, numerous specific details are set forth in order to provide a more thorough understanding of the present invention. However, it will be
The reader’s attention is directed to all papers and documents which are filed concurrently with this specification and which are open to public inspection with this specification, and the contents of all such papers and documents are incorporated herein by reference. All the features disclosed in this specification, including any accompanying claims, abstract, and drawings may be replaced by alternative features serving the same, equivalent or similar purpose, unless expressly stated otherwise. Thus, unless expressly stated otherwise, each feature disclosed is only one example of a generic series of equivalent or similar features.

Furthermore, any element in a claim that does not explicitly state “means for” performing a specified function, or “step for” performing a specific function, is not to be interpreted as a “means” or “step” clause as specified in 35 U.S.C. Section 112, Paragraph 6. In particular, the use of “step of” or “act of” in the claims herein is not intended to invoke the provisions of 35 U.S.C. 112, Paragraph 6.

Please note, if used, the labels left, right, front, back, top, bottom, forward, reverse, clockwise and counter clockwise have been used for convenience purposes only and are not intended to imply any particular fixed direction. Instead, they are used to reflect relative locations and/or directions between various portions of an object.

(1) Description

The present invention is directed to a children’s line of hand tools and power tools intended to be used with foam materials, to mimic the use of “real” tools with “real” materials. More specifically, the present invention is a kit having toy tools and foam boards (i.e., cutting surfaces) or pieces that can be safely cut with the toy tools. The tools are designed with safe edges such that they can easily and safely cut through the foam but not damage other materials or hurt the children in the case that they are misused. The foam is any suitable foam or soft item that can be easily cut with toy tools (e.g., plastic saw), a non-limiting example of such foam is Styrofoam and/or the foam that is currently used to form the Funnoolet® pool toy, which is formed of Expanded Polyethylene (EPE). This allows the child to simulate using the tools and materials “adults” use in construction and building.

To add realism to the play affect, patterns and scents can be added to the foam. For example and as depicted in FIG. 1, a wood grain pattern 103 can be burned (such as heat pressed), drawn, or otherwise formed into the foam. Additionally, the foam can be dyed to simulate the real product. For example, if the foam board is intended to simulate wood, it can be dyed brown with a wood grain pattern 103 formed in it. Additionally, scent 105 can be added. The scent 105 can be added while making the foam so that it is integrally a part of the foam. A non-limiting example of such a scent is a pine scent. Alternatively, the scent can be applied after the formation of the foam board or piece, such as by being sprayed on.

With regards to the tools, the line of tools can be extensive and relates to the specific line of work that is being performed. Objects that can be created will be of any scale, ranging from small hand held pieces, robots, planes, all the way up to life-size forts and rafts, etc. The possibilities are only limited by the child’s creativity. This provides for a safe environment in which the child can play and create.

To assist the child in building such objects, the present invention can be formatted as a kit. As shown in FIG. 1, the kit 100 includes a variety of items for use in constructing a variety of items. For example, the kit 100 can include foam pieces 101 of varying sizes and thickness, such as a first foam board 102 and a second 104, thicker foam board. The foam boards can come in any suitable sizes and in any suitable number. As a non-limiting example, the first foam board 102 includes the dimensions of 0.25 inches x 5.75 inches x 10.25 inches, while the second foam board 104 includes the dimensions of 0.75 inches x 5.75 inches x 10.25 inches. Other examples of foam pieces 101 include foam dowels or cylinders. Again, the foam can come in any suitable form and size. As a non-limiting example, a first foam cylinder 106 includes the dimensions of 0.75 inches in diameter x 10.25 inches in length, while a second foam cylinder 108 includes the dimensions of 1.5 inches in diameter by 10.25 inches in length.

For cutting such foam pieces 101, the kit 100 includes at least one tool. As can be appreciated, any suitable type and number of tools can be used. As a non-limiting example, the kit 100 includes a small saw 110, a hammer 112, and fasteners, such as a small nail 114 and a large nail 116. To hold the tools and fasteners (and foam), the kit 100 can include a tool box 118 or carrying case (as depicted in FIG. 12).

As described in further detail below, the fasteners can come in a variety of shapes and sizes. As a non-limiting example, the small nail 114 is a plastic nail fastener that is one inch long, while the large nail 116 is a plastic nail fastener that is 1.5 inches long.

Additionally, any of the foam pieces, such as the second foam board 104, can include score marks and/or markings 118 to provide a cut-pattern for the user. Thus, through the markings 118, the user can easily cut a pattern out of the foam pieces to assemble a desired item.

For further illustration, FIG. 2 depicts a user using the kit. For example, depicted is a hammer 200 that is being used to drive a fastener 202 into a first foam piece 204 and a second foam piece 206, thereby affixing the two components together. Also depicted is a saw 208 that can be used to cut a foam board 210. Finally, a claw end of the hammer 200 can be used to pull the fastener 202 from the foam.

As noted above, a number of tools can be incorporated into the kit of the present invention. For example and as depicted in FIGS. 3A, 3B, and 3C, respectively, are the hammer 200, a chisel 300, and the small saw 208. To enhance safety features, the tools can be formed of materials that decrease the likelihood of injury. As a non-limiting example, the tools are made of plastic. For example, the small saw 208 is a saw that includes a plastic blade. The blade is dull so that it will not cut skin, yet sharp enough to cut through foam. Due to the serration of the blade, the blade will actually dig through and separate the foam, thereby simulating a cutting action while separating the foam particles.

Additional tools include the driver 400, as depicted in FIG. 4. The driver 400 includes a handle 402 and connection base 404, at which a variety of utensils can be selectively attached/detached. For example, the connection base 404 includes a hexagonal female receptacle that matingly engages with a corresponding hexagonal male part on one of the utensils. Examples of such utensils include a screwdriver 406 and a hole bore 408. Although depicted as being connected at the same time, as can be appreciated by one skilled in the art, a single utensil is connected at a time.
Another unique tool is the curved-blade saw 500, as depicted in FIG. 5. When properly using a saw blade and positioning the blade at the edge of the surface, the force of the moving blade is focused at a single point, thereby increasing the efficiency of the blade. However, because children are not accustomed to cutting boards and other items at an angle, they often place the saw blade flat upon the surface to be cut. In other words, children often position the entire length of the saw blade upon the surface to be cut, which spreads the point of friction across the entire blade. Thus, to increase the cutting efficiency of the present invention, the curved-blade saw 500 includes a curved blade edge 502. For comparison, a straight line 504 is drawn and positioned against the curved blade edge 502. As can be seen, the curved blade edge 502, due to its curvature, would touch the straight line or any other flat surface at a reduced portion 506 of the blade edge (such as a single point). Thus, through the curved blade edge 502, an inexperienced user (such as a child using the saw) can easily focus the force of the saw 500 to a reduced portion 506 or single point and thereby engage with and cut the item to be cut.

Another notable feature of the saw 500 is that it includes a curved tip 508. When using a saw, children often jam the saw into the item to be cut. Many saws of the prior art include a sharp tip. However, the saw 500 according to the present invention includes a curved tip 508 that allows the saw to cut into and continue cutting the item as the saw 500 is pushed forward. In other words, instead of being jammed into the item via a sharp time, the curved tip 508 allows the saw to slide across the item to begin the cutting process.

As shown in FIGS. 6 through 12, additional tools that can be selectively included with the kit include a mallet 600, a miter box 700, a miter saw 800, a screwdriver 900, a square 1000, a tape measure 1100, and a carrying case 1200, respectively.

In addition to tools, a variety of fasteners can be used to affix the various foam pieces together. As depicted in FIGS. 13A and 13B, non-limiting examples of such fasteners 1300 include a screw 1302 and a nail 1304. The fasteners 1300 are formed of any suitable material that is safe and effective. As a non-limiting example, the fasteners 1300 are formed of plastic. Additionally, the nail 1304 includes a plurality of projections 1306. The projections 1306 are used to affix the nail 1304 with the foam once inserted therein. Further, as can be appreciated by one skilled in the art, the fasteners 1300 can be formed in a variety of sizes and shapes.

As noted above, the present invention includes a kit with toy tools and the cutting surfaces (e.g., foam). FIGS. 14 through 19 illustrate various foam sets that can be used to build a variety of items. It should be understood that the examples depicted in FIGS. 14 through 19 are for illustrative purposes only as the present invention is not intended to be limited thereto. As shown, FIGS. 14 through 19 depict a variety of foam pieces 101 and fasteners 1300 that can be used to construct a foam airplane 1400, a foam birdhouse 1500, a foam car 1600, a foam sailboat 1700, a foam small boat 1800, and a foam toolbox 1900, respectively.

In summary and as shown, the kits can include foam pieces 101 (to build a desired item) with corresponding fasteners 1300 and, optionally, the requisite tools as described herein. As can be understood by one skilled in the art, the kit can include foam pieces 101 that are precut to the requisite size and shape. Alternatively, the kit can include foam pieces 101 that need to be cut, as illustrated in FIGS. 1 and 2.

What is claimed is:

1. A children's kit for cutting surfaces, comprising:

   a. at least one foam piece for constructing an item; and

   b. a plurality of fasteners for fastening foam pieces together,

   whereby upon fastening foam pieces, a user can construct an item.

2. The kit according to claim 1, wherein the foam piece includes markings that provide a cut-pattern for a user to cut the foam piece into a plurality of foam pieces.

3. The kit according to claim 2, further comprising at least one tool for cutting the foam piece.

4. The kit according to claim 3, wherein the foam piece is a foam board and, further comprising a foam dowel and at least a second foam board, with foam boards and foam dowel collectively comprising a plurality of foam pieces that, when assembled, are operable for constructing a desired item.

5. The kit according to claim 4, wherein the fasteners are an item selected from a group consisting of plastic nails and plastic screws.

6. The kit according to claim 5, wherein the foam board includes a wood grain pattern to simulate an appearance of wood.

7. The kit according to claim 6, wherein the foam board includes a scent.

8. The kit according to claim 7, wherein the scent is a pine scent.

9. The kit according to claim 8, wherein the tool is a curved-blade saw with a curved blade edge.

10. The kit according to claim 9, further comprising at least one tool for cutting the foam piece.

11. The kit according to claim 10, wherein the tool is a curved-blade saw with a curved blade edge.

12. The kit according to claim 11, wherein the foam board includes a scent.

13. The kit according to claim 12, wherein the scent is a pine scent.

14. The kit according to claim 1, wherein the foam piece is a foam board and, further comprising a foam dowel and at least a second foam board, with foam boards and foam dowel collectively comprising a plurality of foam pieces that, when assembled, are operable for constructing a desired item.

15. The kit according to claim 1, wherein the fasteners are an item selected from a group consisting of plastic nails and plastic screws.

16. The kit according to claim 1, wherein the foam board includes a wood grain pattern to simulate an appearance of wood.