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TOY PIANO

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2 Sheets-Sheet 1

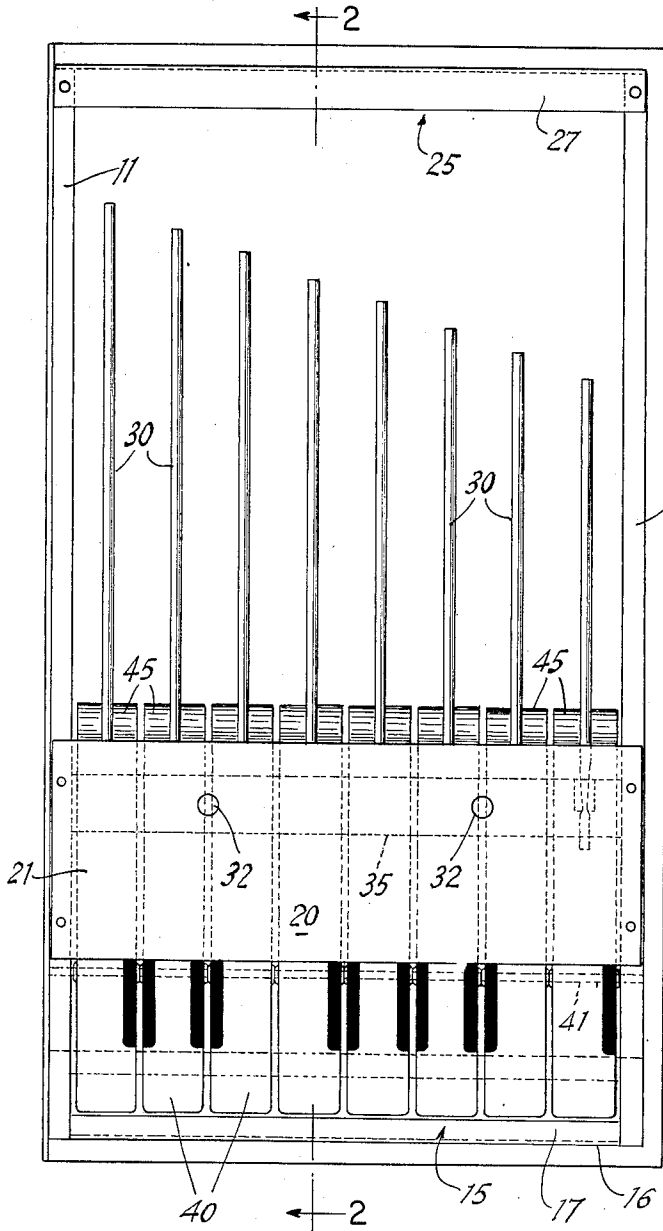


FIG. 1

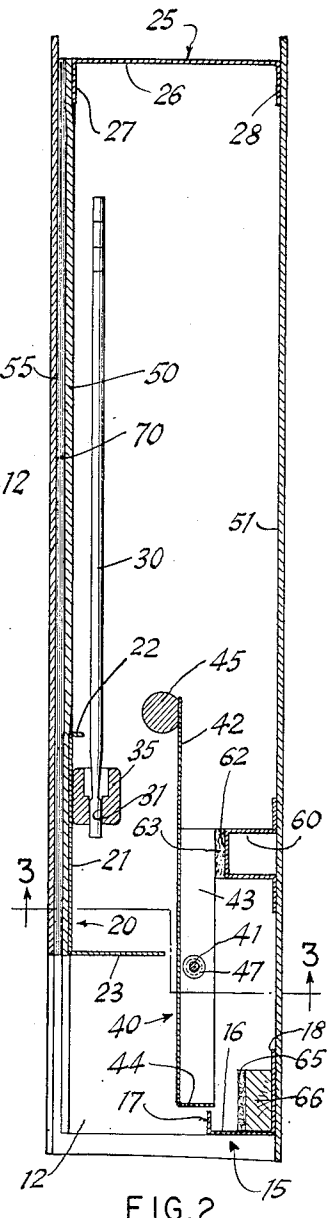


FIG. 2

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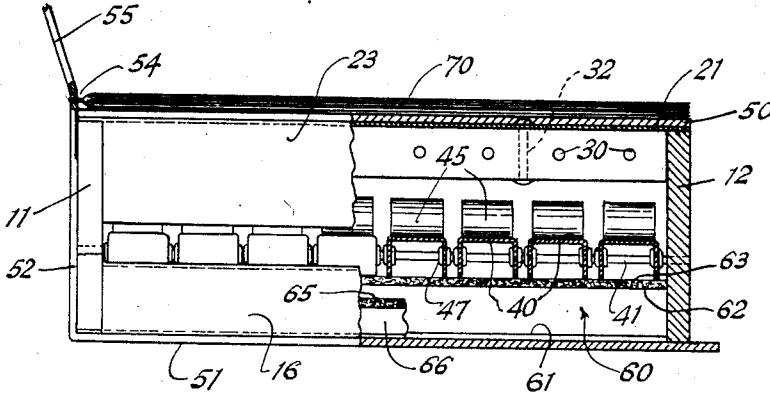


FIG. 3

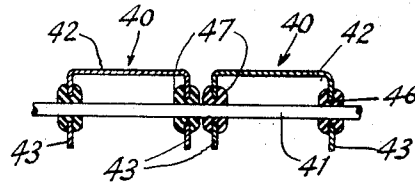


FIG. 4

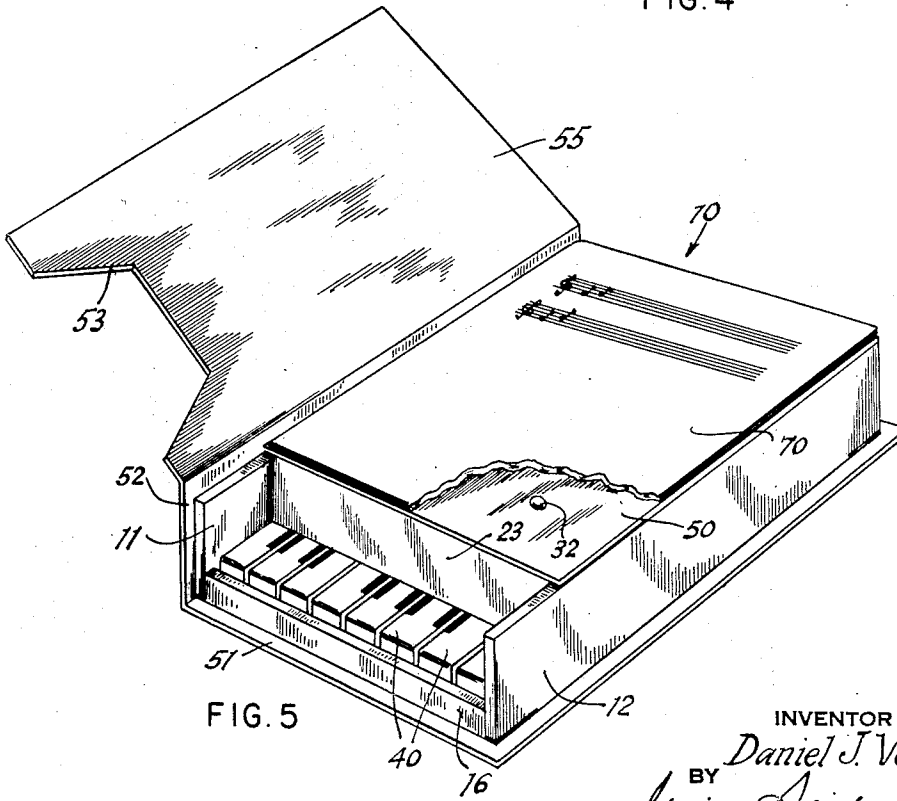


FIG. 5

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3 Claims. (Cl. 84-404)

This invention relates to toy pianos and, more particularly, to a novel toy piano construction involving inexpensive materials, a novel and simple action, and a simplified assembly procedure whereby the piano can be produced to sell at a substantially reduced price.

A feature of the present invention is, the provision of novel sub-assemblies of keys and piano "wires" simply and inexpensively assembled in an enclosing casing or cabinet constructed chiefly of relatively stiff cardboard stapled to wood framing members, surfaces subject to the greatest wear being formed of light gauge sheet metal stampings. The cardboard cabinet includes a hinged cover overlying an instruction book adhesively secured to the cardboard top of the piano and stapled to the hinge connection of the cover to the cabinet.

The piano "wires" comprise various length metal rods mounted in laterally spaced, substantially parallel relation through openings in a cast metal support member supported by fasteners from the cardboard top and a sheet metal member partially underlying the top and forming a wall behind the keys. The keys comprise inverted channels stamped from sheet metal and having rearwardly elongated bases on the rear ends of which are wooden nocks or strikers. The channel flanges have aligned holes through which extends a metal rod for pivotally supporting the key group, the rod being mounted in the wood side frame members. Rubber grommets are slipped onto this rod and snapped into the holes in the flanges to form bearings for the keys on the rod.

A sheet metal front face is mounted on the cardboard base and extends above the bottom edge of each key, being formed with an inturned ledge. The rear portions of the key flanges rest on a felt strip on an inverted cardboard channel having lips engaging the cardboard base and secured thereto. A wood bar extending across the front of the base has secured thereto a felt strip acting as a striking cushion when the keys are depressed.

For an understanding of the invention principles, reference is made to the following description of a typical embodiment thereof as illustrated in the accompanying drawing. In the drawing:

Fig. 1 is a plan view of the piano with the cover and cabinet top removed;

Fig. 2 is a sectional view on the line 2-2 of Fig. 1;

Fig. 3 is a sectional view on the line 3-3 of Fig. 2;

Fig. 4 is a transverse sectional view through a pair of keys showing their mounting on the support rod; and

Fig. 5 is a perspective view of the complete piano and book unit with the cover open.

Referring to the drawings, the toy piano 10 comprises a cardboard cabinet enclosing a wood and sheet metal inner frame. The inner frame comprises a pair of wooden side members 11, 12, with member 12 forming one outer side of the cabinet. The bottom forward ends of members 11, 12 are interconnected by a sheet metal front face member 15 having a vertical face member 16 extending between members 11, 12, an inturned horizontal ledge 17 at the upper edge of face 16, and a relatively

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wide base 18. The latter is longer than face 16 and ledge 17 so as to underlie members 11, 12 at each end, and is tacked or otherwise secured to the wooden side members. Member 15 is die formed from sheet metal, such as 30 gage steel for example.

Somewhat inwardly from their front ends, side members 11, 12, are interconnected by a sheet metal support member 20 die formed from suitable sheet metal, such as 30 gage steel. Member 20 includes a top wall 21 overlying and tacked or otherwise secured to side members 11, 12, a short rear flange 22, and a deeper front flange 23 forming a vertical wall behind the striking surfaces of keys 40. Top wall 21 has a pair of holes therein for a purpose to be described.

The rear ends of members 11, 12 are interconnected by a channel shape rear wall member 25 having a vertical base 26 and horizontal flanges 27, 28. This member embraces the rear ends of the wooden side members and is tacked or otherwise secured thereto. Member 25 is die formed of thin sheet metal such as 30 gage steel.

The piano "wires" comprise various length steel pins or rods 30 corresponding in number to and aligned with keys 40. Rods 30 are secured in parallel, laterally spaced relation by mounting through holes 31 in a cast metal support bar 35 secured by rivets 32 in the holes in wall 21 of member 20. The rods 30 are force fitted in holes 31.

Keys 40 are assembled on a metal rod 41 set in aligned openings in wooden side members 11, 12. Each key is die formed from light sheet metal, such as .010 gage steel to provide a channel having a base 42, flanges 43, and a front closing lip 44. Base 42 extends rearwardly beyond flanges 43 and has tacked or otherwise secured to its end a wooden nock or striker 45. Flanges 43 have aligned holes 46 for receiving rubber grommets or washers 47 on rod 41. The keys and grommets are assembled on rod 41 and then the grommets are snapped into holes 46, the grommets acting as bearings for the keys and frictional lateral positioners therefor.

The top wall of the cabinet is formed by a die cut cardboard sheet 50 glued, tacked, stapled, or otherwise secured to the upper edges of members 11, 12 and having its front end aligned with wall 23. Another sheet of cardboard is die cut to form base 51, left side 52, and cover 55, these members generally extending beyond the inner framework. Cover 55, which has a front cutaway portion 53, is joined to wall 52 by a hinge portion 54. Base 51 is glued, stapled, tacked, or otherwise secured to members 11, 12, and an adhesive tape strip 56 joins the upper edge of side wall 52 to top 50 adjacent cover hinge portion 54.

An inverted channel 60, die cut from cardboard, has lips 61 glued or stapled to base 51. The upper surface 62 of channel 60 has secured thereto a felt strip 63. When at rest, keys 40 are horizontal and engage strip 63. When the keys are struck, their downward movement is limited by a felt strip 65 on a wood block 66 secured to bottom flange 18 of member 15.

The outer or exposed surfaces of the piano are suitably enameled, with the keys having black and white portions to simulate a regular keyboard.

A simplified instruction book 70 has its rear cover glued to wall 50, and book 70 is stapled to the hinge portion 54 of cover 55. Thus, when cover 55 is opened, book 70 is exposed and lies, when opened, on top wall 50 and cover 55.

While a specific embodiment of the invention has been shown and described in detail to illustrate the application of the invention principles, it will be understood that the invention may be embodied otherwise without departing from such principles.

What is claimed is:

1. A toy piano comprising, in combination, a frame including a pair of parallel wooden side wall members, and light gage sheet metal front and rear wall members inter-connecting the ends of said side wall members; a light gage sheet metal support member overlying and inter-connecting the upper edges of said side wall members intermediate the ends thereof; a pivot rod extending into and between said side wall members intermediate the ends thereof beneath said support member; a metal support bar secured to the underside of said support member to extend transversely of said frame, and formed with uniformly laterally spaced horizontal apertures; a plurality of various length piano wire metal rods each secured at its forward end in an aperture in said support bar and extending horizontally therefrom; a plurality of keys pivoted on said rod and having fingering portions extending forwardly therefrom; each key comprising an inverted channel of light gage sheet metal having aligned apertures in its flanges receiving said rod and a base extending rearwardly beyond said flanges and carrying a wooden striker engageable with a piano wire, and including grommets of deformable material in each flange opening and bearing on said rod; each striker being aligned beneath a piano wire rod; said support member having a depending front wall portion extending between the side wall members toward

the keys; a cardboard top wall overlying and secured to the upper edges of said side frame members; and a cardboard base, side wall, and cover member unit, said base and side wall enveloping and being secured to said frame to cooperate with said top wall in enclosing the piano wire and key assemblies except for the fingering portions of the key assembly; said cover member being hinged to the upper end of said side wall to overlie said top wall when closed; and an instruction book having its rear cover adhered to said cardboard top wall and stapled to the hinge portion of said cover member.

2. A toy piano as claimed in claim 1 in which said front wall member has a horizontal lip extending inwardly toward the keys, the keys having closed front ends.

3. A toy piano as claimed in claim 1 including a strip of tape adhesively connecting said cardboard side wall to said cardboard top wall.

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