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TOY BOAT AND ITS MANUFACTURE

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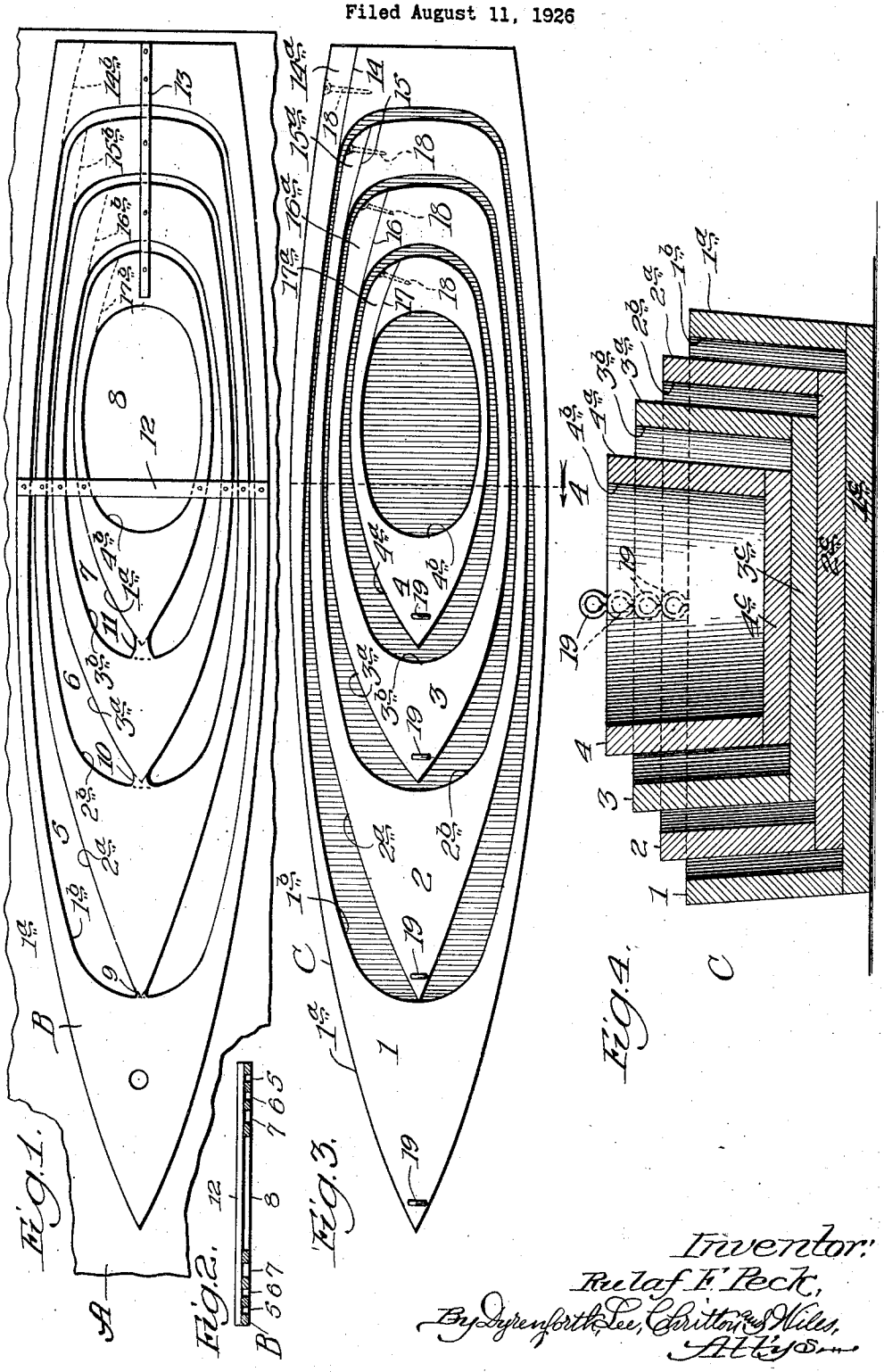


Fig. 1.

Fig. 2.

Fig. 3.

Fig. 4.

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TOY BOAT AND ITS MANUFACTURE.

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This invention relates particularly to the manufacture of small toy boats, the primary object being to enable such boats to be manufactured more cheaply than possible by known methods.

In accordance with the present invention, a plurality of nested patterns are marked, or outlined, on a stock-strip, preferably a thick strip of wood; and a band-saw is employed to saw the stock as indicated by patterns and thus form the sides and ends of the boat-hulls. In the sawing operation, the band-saw is caused to cut its way through an end-portion of a hull in entering the stock to effect the cutting of the outline of the inner wall of the hull. This procedure is followed in cutting the inner contour of each hull, it being understood that a shell is cut from the strip each time the inner contour of a hull is formed.

The boat patterns may be formed upon the stock-strip by means of a pencil following the outlines of slots and curves provided in a suitable templet. Some of these curves mark the inner contours of the boat-hulls, and some of them mark the outer contours of the boat-hulls.

The invention is illustrated in a preferred embodiment in the accompanying drawing, in which—

Fig. 1 is a plan view of a templet employed for practicing the improved process, the templet being shown superposed upon a stock-strip (shown broken); Fig. 2, a transverse sectional view of the templet; Fig. 3, a plan view of a plurality of boats formed from a single stock-strip; and Fig. 4, a transverse vertical section taken as indicated at line 4 of Fig. 3.

In the illustration given, A designates a stock-strip; B, a templet; and C, a plurality of nested boats whose hulls (excepting the bottoms) are formed from a single stock-strip.

The stock-strip A may be of any desired thickness. Usually, a thickness of about two inches is preferred. The boats in the nest C are designated 1, 2, 3 and 4.

The outer contour 1^a of the boat 1 corresponds with the outer contour 1^a of the templet B, and the inner contour 1^b of the boat 1 corresponds with the curve 1^b of the templet; the outer contour 2^a of the next boat corresponds with the curve 2^a of the templet, and the inner contour 2^b of this boat corresponds with the curve 2^b of the templet; the outer contour 3^a of the next boat corresponds with the curve 3^a of the templet, and the inner contour 3^b of this boat corresponds with the curve 3^b of the templet; and the outer contour 4^a of the smallest boat corresponds with the curve 4^a of the templet and the inner contour 4^b corresponds with the curve 4^b of the templet.

The slots which are cut through the templet form the curve-lines mentioned and are designated 5, 6, 7 and 8, respectively. The walls of these slots outline respectively the inner and outer walls of the hulls. The stock of the templet is not cut away at the points 9, 10 and 11, but serves to unite the parts of the templet at points corresponding with the prows of the boats. A transverse strip 12 is secured to the templet at about its middle portion; and a longitudinal strip 13 is secured to the templet at a point corresponding with the sterns of the boats. Thus, the parts of the templet are properly secured together.

The templet is applied to the upper surface of the stock-strip A, and a pencil is employed to mark upon the stock-strip the outlines formed by the curves of the templet which have been mentioned. At the points 9, 10, and 11, and at the points where the strips 12 and 13 close the slots of the templet, the markings of the pencil are interrupted. This constitutes no objection, however, as it is easily possible to follow the outlines in effecting the sawing.

In the sawing operation, the outer surface of the outer boat 1 is first sawed; the saw then cuts its way through the stern of the outer boat at the line 14 and then continues and cuts the inner outline of the outer hull at the contour 1^d. In this manner, the shell of the outer boat is formed. The remaining block of wood is then sawed to form the outline 2^a, that is, the outer wall of the next smaller boat. The operator then causes the band-saw to cut its way through the stern of the boat 2 along the line 15, and the sawing operation is continued to form the inner contour 2^b of the second boat. In this manner, the shell of the second boat is formed. In like manner, the next succeeding smaller boat 3 is formed, and, finally, the inner boat 4 is formed.

In cutting out the interior of these boats, the saw cuts its way through the ends of the

hulls along the lines 16 and 17, respectively.

Ordinarily, the stock-strip will be mounted on a suitable jig to enable it to be tilted about its longitudinal axis and thus enable the band-saw to produce the flaring walls of the boats.

After the shells of the several boats have been formed, the strips 14^a, 15^a, etc. are secured to adjacent portions of the hulls by means of nails 18. The bottoms 1^c, 2^c, 3^c and 4^c are then nailed to the shells of the hulls and the boats are painted. This makes the boats water-proof and practically covers the kerfs cut by the saw through the ends of the hulls.

In the illustration given, the boats are shown provided with eye-bolts 19 for receiving a cord, or chain.

By the improved method, it is possible to saw from a strip of wood a plurality of boats of successively reduced sizes, by means of a band-saw, the work being very quickly and economically performed. This enables boats to be produced from a strip of material in a very inexpensive manner. As indicated, after the boats have been painted, the joints practically disappear and the boats are water-tight.

The dotted lines 14^b—17^b shown in Fig. 1 indicate the positions at which the kerfs will be cut through the sterns of the hulls as the hulls are being formed. It is to be understood, however, that it is not necessary to cut slots through the templet at these points.

The foregoing detailed description has been given for clearness of understanding only, and no unnecessary limitations should be understood therefrom.

What I regard as new, and desire to secure by Letters Patent, is:

1. A method of forming toy boats which comprises: marking upon a stock-strip a plurality of boat-patterns of graduated sizes and arranged one within another; and sawing the stock-strip in accordance with a pattern to form the hulls of the several boats, the saw entering each hull by cutting through an end thereof.

2. A method of forming toy boats which comprises employing a band-saw to cut from a stock-strip a plurality of successively reduced hulls, the band-saw being caused to cut its way through the end of each hull in entering to effect the sawing of the inner contour of said hull.

3. The method of forming toy boats which comprises employing a band-saw to cut from a stock-strip a plurality of successively reduced hulls, the band-saw being caused to cut its way through the end of each hull in entering to effect the sawing of the inner contour of said hull, the saw being then employed to cut the outer contour of the next smaller hull.

4. A boat-hull comprising prow, stern and side-walls in integral formation, the stern having a slot cut therethrough which forms a continuation of the inner contour line at one side of the hull.

5. A boat-hull comprising prow, stern and side-walls in integral formation, the stern having a slot cut therethrough which forms a continuation of the inner contour line at one side of the hull, and means securing the severed strip adjacent said slot to the main portion of the stern.

6. The method of forming a boat-hull from a stock-strip which comprises causing a band-saw to cut its way through an end of the hull and then continue the cut to form the inner contour of the hull.

7. The method of forming a boat-hull from a stock-strip which comprises causing a band-saw to cut its way through an end of the hull and then continue the cut to form the inner contour of the hull; and securing the strip adjacent the slot to the adjacent portion of the hull.

8. A templet comprising a plate having an outer contour corresponding with the outer contour of the boat and having a series of nested slots, each slot being bounded by contour lines corresponding with the inner contour of a boat of one size and with the outer contour of a boat of smaller size.

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