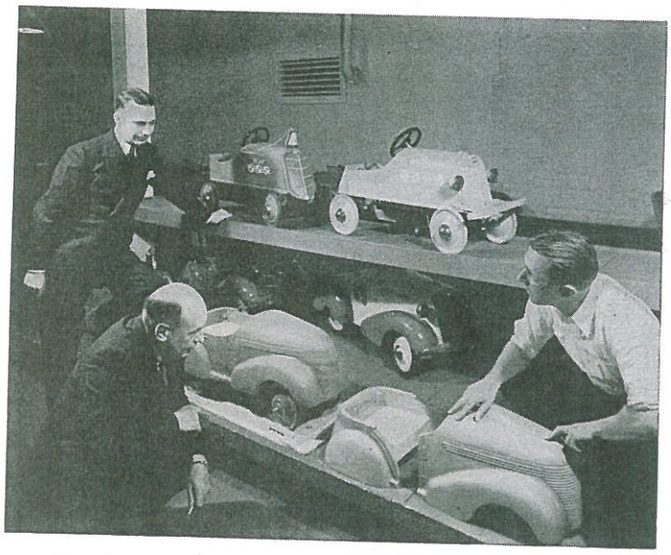

President Diemer and Sales Manager Smith, of the American National Co., Inspecting New Streamline Models

in the early '30's drove manufacturers to desperate measures to sell their wares. Those who turned to redesign in most cases were well rewarded.

Industrial design is not concerned, as some manufacturers believe, with extravagant visions of the future or unimportant surface embellishment. Properly practised, it is neither. It may be fascinating to contemplate the future and introduce some fantastic novelty, but unless that toy is properly designed, the basic novelty underlying it may fail dismally. Similarly, adding a few scrolls and turning under an edge here and there is not necessarily profitable.

Given two toys of equal merit, the more attractive and appropriate design always wins the sales market, providing price is competitive. A toy automobile with ugly fenders placed next to one with streamlined fenders and gleaming chromium grille simply won't sell as well, no matter how good it is in performance. On the other hand, no amount of external trimming can make up for manufacturing defects. Good service and good looks must go hand in hand.

EMPHASIZE FEATURES

In industrial design it is a cardinal principle to emphasize those features of a product which make it superior to its competitors. This requires on the designer's part not only a thorough knowledge of line, form and color, but an ability to grasp the fundamental principles involved and to stress them, not dodge them. Industrial designers must be practical, as well as artistic; they must be engineers as well as dreamers. Designs must be more than visionary; they must be practical enough to be put on the market—to sell the product.

To illustrate how a toy re-designing job is done, I should like to describe how certain toys were re-designed for clients of my organization. Perhaps a knowledge of the steps a designer goes through will be of value to other manufacturers.

In most cases the toy to be re-designed has a predecessor—a previous model which the designer is asked to revamp. Questions of mechanical and space limitations, of materials, and of the available tools immediately arise. The industrial designer works in close cooperation with the company engineers so that any new forms which might be evolved would embody and correctly interpret the function and use of the vehicle. The designer should not be hampered too much in the beginning stages of creation, as he needs latitude in order to develop an idea.

The article to be re-designed is first examined in great detail, to acquaint the designer thoroughly with its operation. Every particle of data that might influence the final design is gathered together at the outset through discussions with engineers, advertising executives, sales officials and others. All this is done before pencil is touched to paper.

At first the designer lets his imagination run riot. He sketches his wildest dreams; he tries to see how different he can be from the original. Then he becomes more practical, and finally takes a middle road. The fanciful changes veer to the more practical. Rough sketches are made first, and when one or more acceptable solutions is hit upon, a perspective drawing is prepared in crayon or chalk, sometimes in color, sometimes in black and white. These drawings are discussed with the client. If one of the general schemes is acceptable, a model or a finished air-brush drawing is prepared; sometimes both. Usually a model is made to scale or full size. Models are essential because they can be viewed from any angle. Further, they can be photographed to appear full size, and can be placed side by side with photographs of the existing vehicle. Models are usually built of plaster or wood or both. In the case of a wheeled toy, it often is customary to make the model life-size, showing the exact die contours from which sheet-metal stampings will have to be made.

By the time the models are being prepared, most of the mechanical details of production have been ironed out with company production heads and die-makers. Dimensions have been checked and scale drawings—mechanical drawings—prepared. Shop drawings are usually adapted later by the manufacturer from the dimensioned drawings, and the product is ready for tools.

With a new coaster-wagon model, for instance, we first rough-sketch it until the general contours are pretty well determined. We then model it one-quarter size, cast it in plaster, paint it, attach miniature wheels and gear, and submit it to the client. Some changes are usually indicated. Then comes a full-size model. A core, or "armature" as the sculptor calls it, is built from lumber and plywood. Full-sized wheels are attached. Then we begin a "mock up" with modelling clay, just the way an automobile manufacturer does. This is smoothed out, corrected, scraped and checked with many templates, cut at different points in the contour to be sure each side is symmetrical.

The finished model is presented to the executives and engineers and criticized from every point of view. A little too full at the front, maybe . . . change from a true seg-

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