

1916

SPRING

NUMBER

Nursery
and
Greenhouse

DESIGN Quarterly

Garden
and
Orchard

MAGAZINE



DESIGN Quarterly

Number 155

SPRING 1992

Architecture

DONALD HOFFMANN

2 / Dismembering Frank Lloyd Wright

Landscape Design

PAULA DEITZ

6 / Recultivating the Tuileries

Furniture Design

MARTIN FILLER

13 / Sticks and Stains

FRANK GEHRY

17 / Up Everest in a Volkswagen

Product Design

GEORGE RANALLI

20 / Getting a Handle

Industrial Design

ADAM GOODHEART

24 / The Machine of the Myth

Graphic Design

D. J. R. BRUCKNER

29 / On Our Good (and Bad) Books

Exhibition Design

DENNIS P. DOORDAN

34 / Nature on Display

Getting a Handle



by George Ranalli



Examining the objects produced by a culture is a potentially overwhelming experience, but designing a utilitarian object is a serious challenge. The invitation to produce a new form sparks an investigation into the relationship between use and beauty and is an opportunity to stretch the limits of our understanding. The transformation of an existing category of object may be accomplished with one new form, and that new form can change our perception of use and greatly enlarge our appreciation of beauty. The design of architectural hardware requires a particular kind of research into form and material. The Union Company of Osaka, Japan sought the design of a line of door handles suitable for the beginning of the twenty-first century. The company's standard line of items is a wide range of lever handles and push-plate/pull-bars. The president of Union, Junzo Tateno, was interested in developing some distinctive pieces that would approach the subject in a novel way. The company's motive was not merely to produce more handles, but rather to branch out and make a striking departure from their usual production. Mr. Tateno requested a design that would transcend the time of its fabrication.

The first meeting with the Union Company took place in my New York City studio, with espresso and conversation between several officers of the company and me. This was the beginning of many exceptional interactions. Each member of the group watched as the president, a charming and direct man, explained his vision. The idea was not the outcome of the action of a committee, but the direct impetus of the president. Contract negotiations were elaborate, and many points needed to be ironed out before the design work could begin, six months after our first discussion. Several ideas were simultaneously projected. Three objects appeared to belong to the same family of forms, and the relationship among these three pieces seemed to provide a continuity of experience and expression at both the visual and tactile levels. Since the hand is the first part of the body to make physical contact with a building, the experience should be sensual, and it should somehow communicate the intensity of the spaces, colors, and forms to follow. Each of the three handles was thought to represent a different element of a building. The size and scale of the largest, a push-plate/pull-bar handle, were to accommodate the mass of a large building without neglecting the hand. Two different lever handles were intended for a variety of interior doors.

Above: George Ranalli, large lever handle, 1991 (detail), 8 3/4 in. long. *Opposite:* George Ranalli, push-plate/pull-bar, 1991 (detail), 23 1/2 in. long; plate 4 1/2 in. wide, pencil and colored pencil on vellum, Union Company, Osaka, Japan

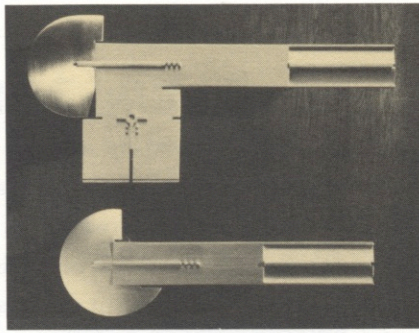


The ideas for the designs were first expressed in sketches to convey the three-dimensional quality of the handles. These were quickly followed by a series of orthographic projection drawings. The complexities of the forms were coordinated into a series of views that could be calibrated and measured. Details were then discovered in the making of the drawing. At this microscale, the intimate depth of a reveal and the size of a raised element can be studied. Precision is best expressed and examined in drawing, but this was only the beginning of the investigation. Concurrently, model studies began. The first of a series of models were made in cardboard and plaster. Flat planes and curvilinear shapes were joined to achieve the desired sensual response for the user. The curved pieces were made of poured plaster, and they were joined to straight shapes of cardboard. More sketches followed. After careful consideration and some adjustments, a set of wooden models was begun. These models were more precise, and they were made with right- and left-hand variations. This symmetry made the study of both views possible, and it would present the opportunity to examine the paired handle sets as if they were sitting on double doors.

At that point, Mr. Tateno requested that some of the drawings be sent to Japan for his inspection before our next meeting in New York. Meanwhile, my assistants and I worked to finish the wooden models as a surprise for the president. When he arrived, following the requisite espresso — a ritual similar to the Japanese green-tea ceremony — our wooden models were unveiled. At the same time, Mr. Tateno opened a package he had brought. It contained mock-ups made by the craftsmen at the factory in Osaka: beautiful, white plastic models of the handles that had been prepared as a surprise for us. Ironically, we made the right hand of the series, and they made the left, enabling the serendipitous examination of a complete unit resulting from our collaboration. Some minor changes needed to be made, and this opened a dialogue about the manufacturing process. No doubt this would be a great challenge, but the company's models revealed a refreshing sensitivity to the design and ensured our trust in their ability to develop it at the factory. There was some discussion about the complexity of the forms, and we all wondered whether the design could be produced. We asked if the details were too fine for mass production. Hampered by cumbersome translations, we persevered. After lengthy discussions, I offered to modify the design in order to accommodate some of the concerns expressed about the precision possible in fabricating the raised elements and line cuts on the surface of the handles. Mr. Tateno would not permit it. He suggested that instead he meet with the craftsmen at the factory to try to work out the problem.

One month later, a fax arrived stating that the Union Company had found a way to fabricate the handles. It would be accomplished through a composite process of casting, milling, and assembling. The company planned to send new models that illustrated the few necessary changes. The carton arrived with machined nylon models. All the new decisions relative to the thickness of the metal and the details were in keeping with the direction of the original investigation. Then, yet another set of models was made based on my examination, and we were finally at the moment of the first castings. It was time to choose the material, always a difficult decision. Governed by

George Ranalli
Small and large lever handles 1991
Stainless steel, brass, milled and
cast metal
7 1/4 in. long
Union Company, Osaka, Japan



economics, most options for finishes are predetermined. We suggested that some of the pieces be made in brass, but brass is expensive. Mr. Tateno asked me to think of another metal that could be used more prudently. Some research by the factory indicated that we could work more economically in aluminum. We then thought about combining materials, but composite material selection is risky, as it is easy to overdesign or pair materials that do not blend well. We concluded that the two lever handles would be made available in either brass or aluminum. Two materials would have required an unrealistic amount of hand finishing. Consequently, the single-material selection proved pragmatic in terms of production while allowing a primary expression of form. The large push-plate/pull-bar would be made of composite materials. The push-plate itself would be milled and cast in brushed brass, while the pole of the push-plate would be fabricated in brushed stainless steel with all the ring details in brass.

The Union Company's investigation into the different production processes determined how the molds would be made. Some procedures could not accommodate the form of the intended designs. However, one of the craftsmen suggested sand casting. The push-plate/pull-bar would be cast, milled, and fastened. The two small levers would be sand cast. They would all be polished before shipment. This process enabled the design to be executed with very little variation from the initial proposal. Subtle changes in thickness and angles made it possible to complete the mold. Because these issues could not be worked out in drawings alone, resolution was achieved through a dialogue with the craftsmen. Working directly with the fabricators has been, for me, the best method for creating an excellent product. The craftsmen have a substantial body of knowledge about materials and the processes of production. A close working relationship with them seemed not only advisable but also essential. Drawings were faxed back and forth continuously to adjust the smallest details, and in this case, sketches were invaluable in eliminating the difficulties of distance and language. Slowly, we reached the point of the first production castings, but even the last two-material castings were rough and unfinished. After another month, the box with the production castings arrived. They were precise, exacting, and extraordinary, far superior to the previous models.

Working with foreign fabricators differs greatly from everyday practice. Every step in the process illuminates both cultural diversity and common ground. However, craftsmen in every culture seem to be concerned with the same primary issue: the excellence of the artifact. Collaboration allowed for process and technique to interact with the design, and all were then inextricably fused into a single entity. The objects were carefully attended to until the

The handles were also meant to be icons: as symbolic form, they celebrate entry and exit

satisfactory outcome was achieved. The Union Company seemed to be particularly dedicated to this pursuit. Each step produced a better model, and it seemed as if the company had been able to anticipate the next design intervention. On my trips to Japan, the same sensitivity to design was revealed to me in everyday life through beautifully arranged gardens and elegantly presented food. In fact, every aspect of life seemed to be aimed at beauty, sensuousness, and tranquility. Even in the busy modern life of Japan this has survived. The Union Company embodied this sensibility: the group we collaborated with were enthusiastic, supportive, and wise regarding change and refinement. In essence, they were truly patrons of design. And perhaps most importantly, they understood that one of the prime requisites for quality is time.

I have continued to examine the final product. Designing the handles seems to have been an exercise in fusing form and material as well as an essay on utility. Their shapes were somewhat influenced by the idea of rotation; the introduction of a large circular element in the lever handles serves to suggest movement around a fixed point. In addition, the stem of the handle has a flat face, like the door, but it is parabolic at the back. The rounded back provides a place for the fingers as they grip the end of the lever. It was also intended that the raised elements produce a sensation in the hand so that a conscious awareness could be stimulated by the user's sensory system. The large push-plate/pull-bar handle has similar elements on the surface of the plate that also awaken the senses. The plate's thickness is further augmented by a parabolic element at the edge so the plate can accommodate equally hands that push or pull. Connected below, through an intricate set of fasteners, the pull-bar is made in stainless steel. Its ring details accentuate the position of the plate while providing a joint for points of assembly. Each of the three handles is composed in architectonic form with an emphasis on the solidity and firmness desirable in primary contact. The handles are also meant to be icons on the doors. As symbolic form, they celebrate entry and exit.

In the recent past we have experienced several periods of form-making, but both history and deconstruction have failed to help us to reimagine and transform our existence, and such intellectualization only isolates us from our sensory imperatives. Form is first perceived through the senses, and then analyzed by the mind. Expanding our consciousness while performing the utilitarian functions of everyday routines makes a strong and important contribution to our lives. Creating a thing of beauty is elusive and difficult to define and achieve. Redrawing, modeling, reevaluating, looking, and feeling are our primary methods. Finally, the elements of use, beauty, and design must be integrated into an object intended to please the senses. The Union Company handles are objects in space that also make space. They are intended to evoke feeling from form. The transformation of an artifact into a new conception of utility and beauty was an essential goal, so that for a person's split second of contact with these objects, an awakening of the pleasure in pure form can be appreciated.