

Frank Gehry with his "hockey inspired" cross-check chair grew up in Toronto - the hockey capital of the world.



Apple bushell pine basket - the starting idea for his furniture



Inspired by the qualities of the bushell baskets on which he had played as a child in Toronto, Frank Gehry had been thinking for almost a decade prior to the creation of his new Knoll furniture pieces about making lightweight wood furniture.

Early sketches illustrate his concept of organically weaving the material together to overcome the artificial separation of support structure and seat that had characterized much laminated furniture.

Gehry's ideas, based on his belief that the lighter a piece is, the easier it is to make and that by cutting it to its essence, the structure is at its ultimate, failed to find the support of furniture manufacturers.

Without a means to verify his concept in full-scale, these ideas went nowhere until the spring of 1989, when Knoll visited Gehry to discuss the creation of a new line of furniture.

120 prototypes were produced over the next two years, culminating in the development of

**Hat Trick,
High Sticking,
Cross Check,
Power Play,
King
Offside chairs
and the
Face Off table,**

All were first introduced during the spring of 1992.



Gehry was 40 years old in 1969 when he began his first improvisations with corrugated cardboard as a furniture material.

He had founded his own architectural firm in Santa Monica in 1962 and his ties with the Los Angeles avant-garde art world were well established.

He had created cardboard furniture for department store window displays, but had not thought of these pieces in a more permanent context.

While participating in a NASA-sponsored symposium on art and technology held in the artist Robert Irwin's studio, Gehry reconfigured the space using partitions, floors, and furniture of stacked cardboard.

Inspired by the built-up corrugated layers of contoured site models, he had the idea that multiple layers of cardboard, glued together and worked by jigsaw as if it were plywood, would yield strong, light, and comfortable and affordable forms.

Gehry said "I could design a shape and build it in the same day. Test it. Refine it. And the next day build another one.... My intention was to design the ultimate inexpensive furniture, something that could be sold cheaply and be acceptable to a mass market."

But when Gehry's corrugated cardboard Easy Edges line scored a major popular success upon its commercial introduction in 1972, the architect went into a panic. "Continuing that way was going to be too ruinous to how I saw my life," he later said.

Accordingly, after only three months Gehry suspended production.

Despite its quick withdrawal, enough Easy Edges furniture (17 different designs) - were manufactured for it to make a significant impact.

Like Aalto's plywood furniture in the 1930s, it was retailed in department stores and thus was presented to the general public without the aura of art furniture.

One reason for Gehry's reluctance in 1972 to be regarded as a furniture designer was the fact that he had not yet resolved his anxieties about being an architect.

The 1970s were the crucial decade in his transformation from an exceptionally competent practitioner geared toward problem-solving for clients, into an artist using the spatial and formal qualities of architecture in ways directly analogous to those employed by his painter and sculptor friends.

Furniture, especially furniture that attracted more attention than any building he had ever designed, was an unwelcome diversion from the path he had set out for himself.

But beginning with his astonishing architectural projects of the mid-1970s - especially the unexecuted Familian and Wagner houses of 1978 and his own house of 1977-78 in Santa Monica it was evident that he had at last pushed himself into a radically new phase of his career.

It was recognized as such with surprising speed by the professional press, the critical praise of his difficult, uncompromising architecture began to make it easier for him to return to furniture design once again.

His Experimental Edges series, begun in 1979, represented a very different attitude toward laminated corrugated cardboard than Easy Edges did.

Loose, shaggy forms similar to Gehry's new architectural aesthetic replaced the tight, smooth contours of the earlier pieces.

Up until 1986, Gehry designed a stunning array of Experimental Edges chaises lounges and armchairs of bold proportions and huge dimensions.

Because New City Editions manufactured them in downtown Los Angeles at a considerable distance from the architect's office in Santa Monica, the design process was slow, ultimately causing the new pieces to be sold - and priced - like art furniture. Whereas an Easy Edges chair went for \$37 in 1972, an Experimental Edges chaise of the 1980s cost over \$4,000.

Although much of the architect-designed furniture that proliferated during that decade commanded similar prices, Gehry never lost his desire to produce a low-cost chair comparable to the classic plywood Eames chairs that were the emblem of progressive, democratic design values just as he was coming of age in Southern California.

In 1984, Gehry met Rolf Fehibaum, the director of Vitra, the German furniture company for which Gehry later designed the Vitra Design Museum of 1986-89. Fehibaum wanted to produce a chair that would be the equivalent of Gio Ponti's hugely successful Superleggera chair of 1955; a versatile, inexpensive, and enduring standard of the sort that every manufacturer dreams of introducing.



Prototype - cross weaving experiment



Clamping timber strips until glue bonds



Experimental chair form, 1989

Gehry immediately began thinking of woven wooden strips like the traditional bushel baskets used to bring produce to market, an example of the American vernacular designs tradition at its best.

Gehry had long been interested in woven effects, and even sees his use of chain-link fencing, one of his signature materials, as an expression of that.

Gehry's overriding desire was to make a chair incorporating "structure and finish all in one," and yet with the extraordinary lightness of the Superleggera, which Fehibaum commended to him as ideal at 3.9 pounds.

Gehry thought he had achieved a breakthrough in the small study models he presented to Vitra, but their production engineers deemed his scheme structurally unfeasible and the project was set aside.

Although Gehry has refined those original ideas considerably, the pieces he designed for Knoll are essentially the same in conception.

Approached in 1989 by Knoll, Gehry was very wary of undertaking another furniture project.

Much to his surprise, the conditions he stipulated - particularly a separate workshop adjacent to his architectural office and the employment of a full-time project designer and a professional prototype-maker to execute his schemes were accepted by Knoll without demur.

The company gave him no specific design brief, and in August 1989 he, Daniel Sachs, and Tom MacMichael began work in a second-floor loft space only steps from Frank.O.Gehry & Associates in Santa Monica.

Because of the studio's proximity to his office, Gehry was able to stop in on short notice when an opportunity in his architectural workday permitted.

For all his past anxieties about furniture design, it is still an activity very close to Gehry's heart. As he later said of the aborted Easy Edges project, "The 2 or 3 years I spent doing that were some of the most rewarding times of my life."

Gehry found that turning from architecture to furniture design was in fact a welcome change of creative pace that allowed him to accomplish more than if he had remained focused on one pursuit for an equivalent period.

Gehry's preoccupation with lightness and, therefore, using as few elements as possible, resulted in a great deal of attention being paid to the component plywood strips themselves.

Gehry's collaborators, on the other hand, were concerned that the final pieces meet the stringent B.I.F.M.A standards for commercial products. While Gehry struggled to keep the plywood laminate as thin as practicable, the "thickies," as he half-jokingly referred to his durability-minded collaborators, moved in the opposite direction.

Finally settling on a mutually acceptable wood thickness of seven layers of maple of 1/32 of an inch each - sturdy enough to satisfy the "thickies" and light enough to please Gehry - the production team then concentrated on removing any unnecessary material from the finished product.

Gehry's concern as an architect for keeping the structure as simple as possible had the parallel effect of making the pieces more economical.

The earliest schemes Gehry developed in this series used the laminated plywood strips only at right angles to each other. Gehry felt that until he moved away from the perpendicular and began placing elements diagonally, he could not realize the maximum strength through lightness that he had been constantly struggling for.

Some components of an already completed design were bent off-axis to form acute angles. The pieces held and it became clear that the new configuration required fewer parts to achieve the same level of support.

Furthermore, triangulation stabilized the chairs without sacrificing springiness, and as a result the final schemes are at once extraordinarily strong and exceptionally comfortable.

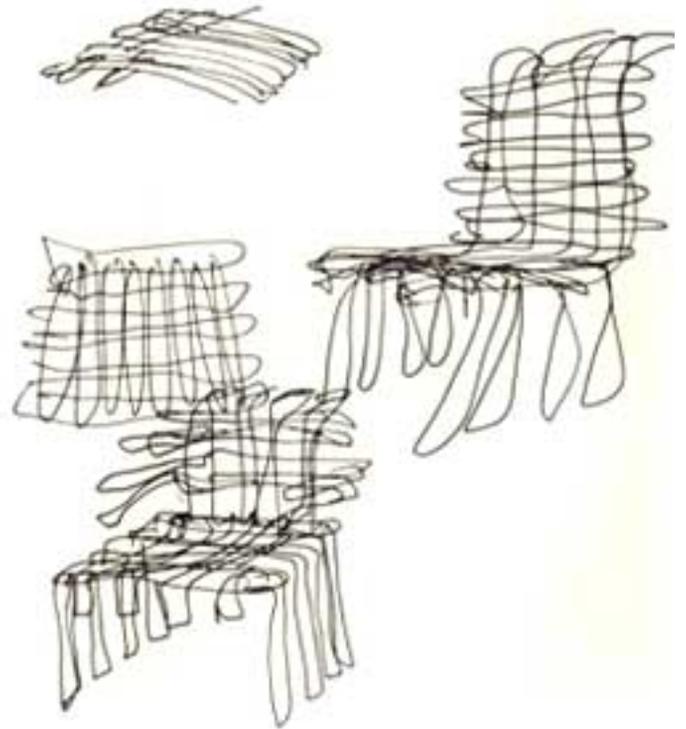
The "hands-on" working method that is basic to Gehry's development of his architectural designs is equally successful for furniture making. An extension of this approach is Gehry's scorn for what he ironically calls "dee-sign" - an excessive concern with the way a thing looks rather than its more immediate physical qualities.

For Gehry, a work-in-progress is there to be fiddled with, subjected to small but continuous manipulations in which resides his key to the creative process. Gehry thinks about his work as much as any other architect, but does so in a non-intellectualised manner closer to the intuitive, experiential approach of other artists.

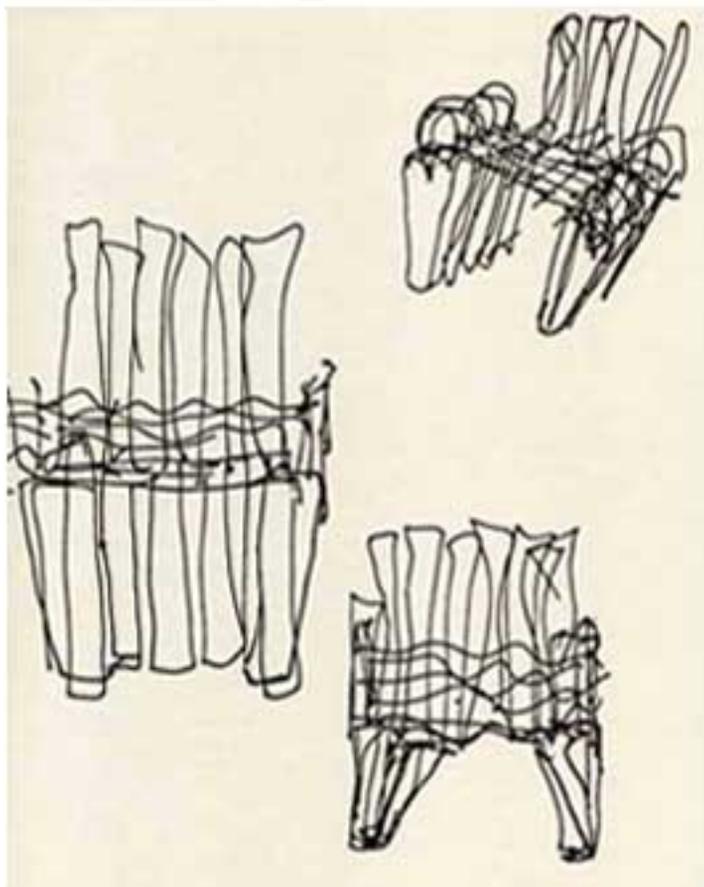
For example, Gehry produced some 30 different table bases before settling on the one introduced in this collection for Knoll, an indication of the extraordinary extent to which he relies on testing and developing his designs in three dimensions, rather than on paper.



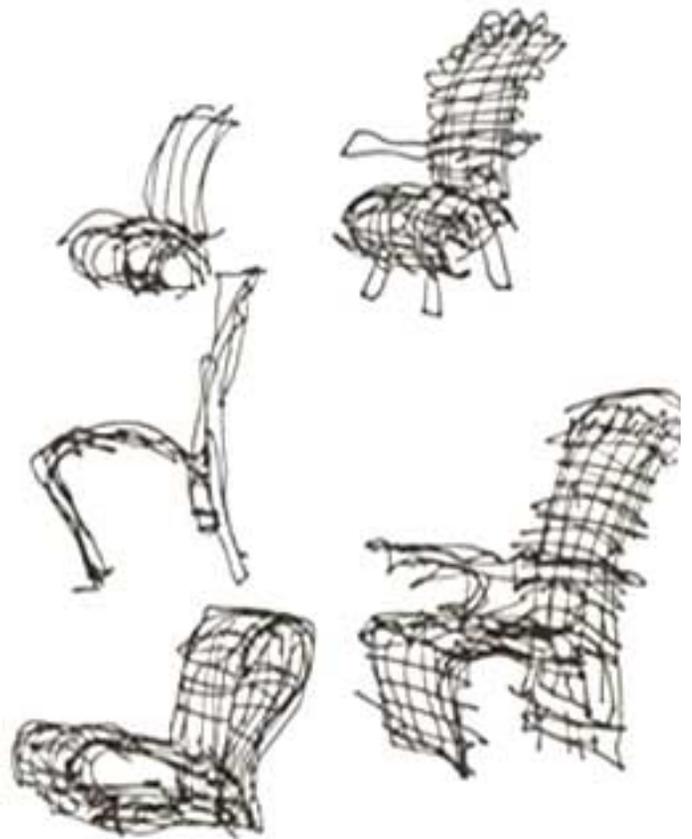
Study for high sticking side chair, 1989



Study for chair, 1981



Study for chair, 1990



Study for chair, 1989



Cross - Check chair



High Sticking chair



Power Play armchair



At no point during the 2 year developmental phase would he accept anyone's claim that an idea would or would not work without first putting it to the physical test. In this regard he showed many similarities with Eero Saarinen's approach to product design .

That pragmatic attitude also led Gehry to avoid the bolts and screws used by Thonet and the Eameses; extraneous hardware ran counter to his desire for the complete integration of structure and finish.

The bonding properties of present-day glues allowed him to dispense with all hardware, only one part of a reductive impulse that was by no means the reflection of a minimalist aesthetic.

His final pieces capture several qualities that mark them as the first great furniture designs of the 1990s, not least in their embodiment of values antithetical to those of the 1980s.

The fate of Gehry's Experimental Edges furniture of the 1980s disappointed him greatly, and he was determined to return to his long-cherished ideal of making his work valuable not through exclusivity and rarity, but, conversely, through availability and inherent quality.

Furthermore, the growing concern about ecology was anticipated years ago by his choice of materials and techniques that are not harmful to the environment: For example, Gehry's use of wood treated with water-based stains recalls his earlier preference for wood-based cardboard when plastics and chromium finishes were favored by other architects in the 1960s and 1970s.

Normally he is content to let his eloquent designs speak for themselves, and with his Gehry Collection of 1989-92 he extends the vocabulary of contemporary design through the mastery of a true poet of form.



Cover of book " Frank Gehry ; New Bentwood Furniture Designs" The Montreal Museum of Modern Arts coinciding with Knoll Gehry exhibition 1992



Chiat Day building, Los Angeles



Gehry house, California



Guggenheim museum, Bilbao Spain.



National Nederlands Building, Prague.



Vitra design museum, Germany