National College of Art and Design,
Craft, Ceramics

THE AGE OF STREAM

Examples of Streamline Design in the Twentieth Century

by

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THE AGE OF STREAM

Examples of Streamline-Influenced Design in the Twentieth Century

ACKNOWLEDGEMENT

I would like to thank Dr. Paul O'Brien for his help with this study.

CONTENTS

LIST OF PLATES

Figure

INTRODUCTION

Streamline

1. Design (cars, aircraft, etc.) in a smooth narrow shape to give minimum air resistance.
2. Remove inefficient areas from an operation or process.

Streamform

The tear-shape ideal speed forms applied to products which simply did not need to be able to cut through the air with greater efficiency (*Minster English Dictionary*).

Mankind has always been obsessed with speed. We strive for the ideal alliance of harmony and dynamics. The dolphin is a perfect example of this ideal, where functions determined from inside and outside synthesise into a greater whole.

The scientific definition of streamline is as follows: "Streamlines are lines whose local direction corresponds with local speed-flow". This definition was eventually carried through to the field of design. As with any given body, the streamline runs over the surface or, if hollow, through it. The notion of a streamlined body is one that gives lowest resistance to the stream. Thus this basic principle became the brief for designers in the early twentieth century with the development of motorised vehicles. Streamlining symbolised the future and progression.

This shape that formed the basis for submarines and airships continued through to the design of cars, trains and aeroplanes. Soon this efficient design moved into the home and the workplace in the form of appliances and domestic gadgets. A

war-weary world was hungry for progress, production and leisure.

Today, in the 1990s, we have returned to the ideal streamline form, not only in our cars or moving forms, but in our static domestic appliances, our cosmetics packaging, kitchen gadgets and vessels and stereo systems. The Italian design group Alessi recently commissioned artists to co-design kettles, toasters and coffee-making appliances with the notion of bringing poetry into the kitchen. The finished forms were egg-like shells in pastel shades that enclosed the functioning unit. The pieces are aesthetically pleasing to both the eye and touch and also carry out their necessary functions. This project was much needed at this time because, according to Alberto Alessi:

> We are experiencing a pivotal change in the ecology of the human species: people are surrounded not so much by other people, but by multitude of soulless, pseudomorphic objects, even though mankind, as never before, has become aware of an unquenchable thirst for art experience.
>
> (Alessi, 1994, p. 1)

The 1920s saw the advent of the consultant industrial designer. The people who influenced this new concept were Raymond Loewy, Normal Bel Geddes, Walter Darwin Teague, Henry Dreyfuss and Russel Wright, all of whom helped to discipline, modernise and streamline most consumer goods. Raymond Loewy (the French-American designer) saw the egg as the archetype of streamlining. Loewy oversaw the design and production of the advertised Automotivestyling, Coldspot refrigerator. This was a hallmark in initiation of the streamline-moving form into the stationary kitchen appliance, using curved edges as a metaphor for progress. The production of these large

items had to be managed by factories for car manufacturing where the facilities to manipulate large sheet metal were housed, thus perhaps dictating the forms to be used. From this we may conceive that this streamform styling accidentally seeped into the design of other motionless consumer goods. American housewares of the thirties were really the first mass-produced items that carried designer labels. Advertising and consumerism were rapidly growing, pushing the cult of materialism, the desire for the most modern and stylish designer goods, in order to have domestic bliss. The streamform was so fashionable at this time that even a cartoon in the 1934 issue of *Fortune* featured a board meeting of well-fed, cigar-smoking businessmen agreeing with the chairperson as he says: "Gentlemen, I am convinced that our next biscuit must be styled by Normal Bel Geddes".

Throughout the following study I would like to discuss the streamline styling method: which became so popular and is still in use today.

Is the design retrospective or forwardly advancing? Our 90s culture seems to be one of revival of past styles. Is this the tradition that Alessi has just followed with its kitchen gadgets, or is this something new and unique? Perhaps the streamline-form used today is reflective of today's disposable culture, the ideal philosophy of simplicity, to rid oneself of excess baggage, to be at one with oneself.

CHAPTER 1

THE DEVELOPMENT OF STREAMLINING

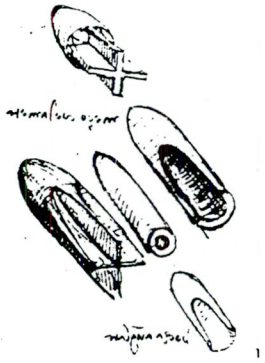
No one designer or country can be credited with the invention of streamlining; it always existed. It is a development that occurred through nature as a means for survival. We can see from early designs or inventions for space travel that the streamform was already a factor of the style. This drawing from Leonardo da Vinci dated 1500 verifies this. It shows torpedo-like forms with stabilising wings; an invention for air travel (Fig. 1.1).

Streamlining in the design sense is rooted in pseudo-scientific notions based on research of wind tunnels and ice flow in the sea.

To decide upon which item wore this aerodynamic suit is difficult, but the use of the streamline style began with the development of the automobile.

> For conveyance to and from business and for coaching and pleasure riding, the automobile is far superior to the old carriage. It is not necessary that anyone should travel at the rate of 70 miles an hour. The sensation is most exhilarating - like that as flying as I imagine - and there are no ill-effects.
>
> (Fournier, Henri 1901, Section 0, 06)

The early pioneers of the automobile or car produced basic functioning units. They were mechanics and engineers and concerned themselves only with problems of transportation. These self-motorised inventions did not look appealing and they fit the term horseless carriage appropriately. They looked as though a raised hansom-cab had just replaced its pulling horses at the front with a black box attachment to the rear instead. All



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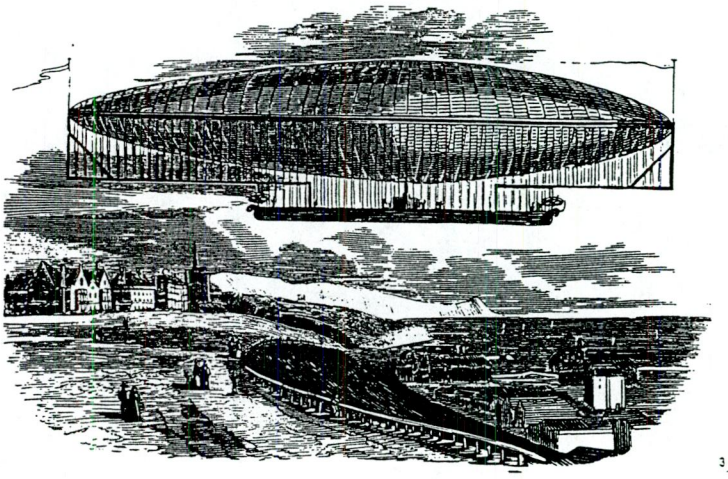

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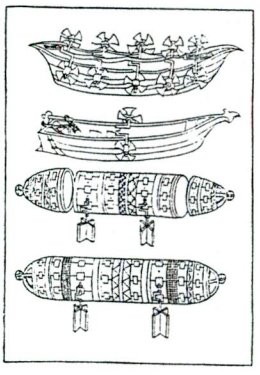

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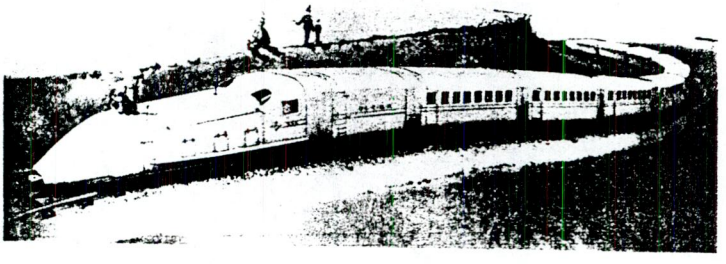
1 Leonardo da Vinci: designs for projectiles with stabilizing wings, c.1500 (from Gibbs-Smith: 'Leonardo da Vinci's Inventions').

2 Robert Valturio: designs for submersibles, 1532 (from 'De re militari').

3 James Nye: 3 airship using the recoil principle, USA 1852.

4/5 Reverend Samuel R. Calthrop: 'Air resisting train', patent drawing and graphic representation, USA 1865.



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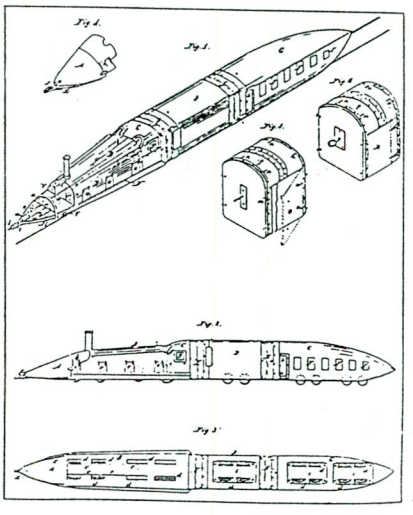

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Fig. 1.1 Early forms of streamlining

of the cars between 1885 and 1905 had a sense of disorganisation about them. The eye had to absorb a conglomeration of contrasting shapes, from hand brakes, axles, frames and tool boxes to disjointed body panels and protrusions on the surface, each serving a different function. All of these non-relating shapes were too busy for the eye and lay far from aesthetic harmony. One reason for the lack of smooth styling on early cars was that the fascination with the technology in the motor meant people wanted to see these mechanics at work. Thus the workings were exposed. Many cars were designed with a separate area for the owners to be seated comfortably while the chauffeur had a primitive second cab. Both cabs differed greatly in design and in furnishings. The comfortable cab had delicately curving lines and rich fabrics contrasting a box-like cab lacking windows and over-crowded with motor controls. The smooth curves in design in the owner's cab immediately smacked of superiority and wealth in comparison with the chauffeur's dull and cramped box.

Until the 1930s, the design for motor cars usually lacked consideration for aerodynamic styling. The basic problems of function were the priorities of the design. When research showed that moving bodies in space caused aerofoils or pathways of airflow over the body's surface, the thinking of automobile design changed, adopting this consideration. Following these rules, designers could experiment not only with interior engine improvements but also with the shell-form, striving for ideal performance.

Prior to the 1930s aerodynamic developments, some attempts at streamform styling in cars had been made. The

Belgian racing driver, Jeantaud, modified his Jeantaud Electric Vehicle and re-styled in the form of a marine torpedo. However, by his regard for streamlining, he left no comfort for the driver who had to insert himself into the driving section and take control under cramped conditions. In 1913, County Marco Ricotti commissioned the car company, Alpha Romeo, and a coach-builder, Castagna, to produce a fast-moving vehicle to hold six people. This motor car was also torpedo-shaped and had four doors with a curved large windscreen (Fig. 1.2). The Tropfenwagon (droplet car) (Fig. 1.3) derives its name from the best shape for movement through air in nature: the free-falling waterdrop. The front is rounded and the rear tapers to a point. Rumpler, the German designer, studied aeroplane design and reached the decision that the tear shape was superior to any other body form. Rumpler also enclosed the wheels of the vehicle in his efficient reasoning, in true aerodynamic style. He reduced the headlights to one light in the centre of the nose and the mudguards became horizontal fins. This car, deemed good design, was in limited production over a few years. Paul Jaray saw the tear form as the antidote to the brick and produced a car that looked two tear drops, one on top of the other (Fig. 1.4). Being proud of his work he patented the shape by copyright. People found his car to look so ridiculous that they would not dream of imitating it. It was not until the later 1930s that other car designers say Jaray's direction as progressive.

In 1924, the Italians designed the first motorway: no pedestrians, no speed limits, no sharp bends. This efficient route revolutionised driving. Suddenly designers stopped thinking only of their cars' functions but began to look at the

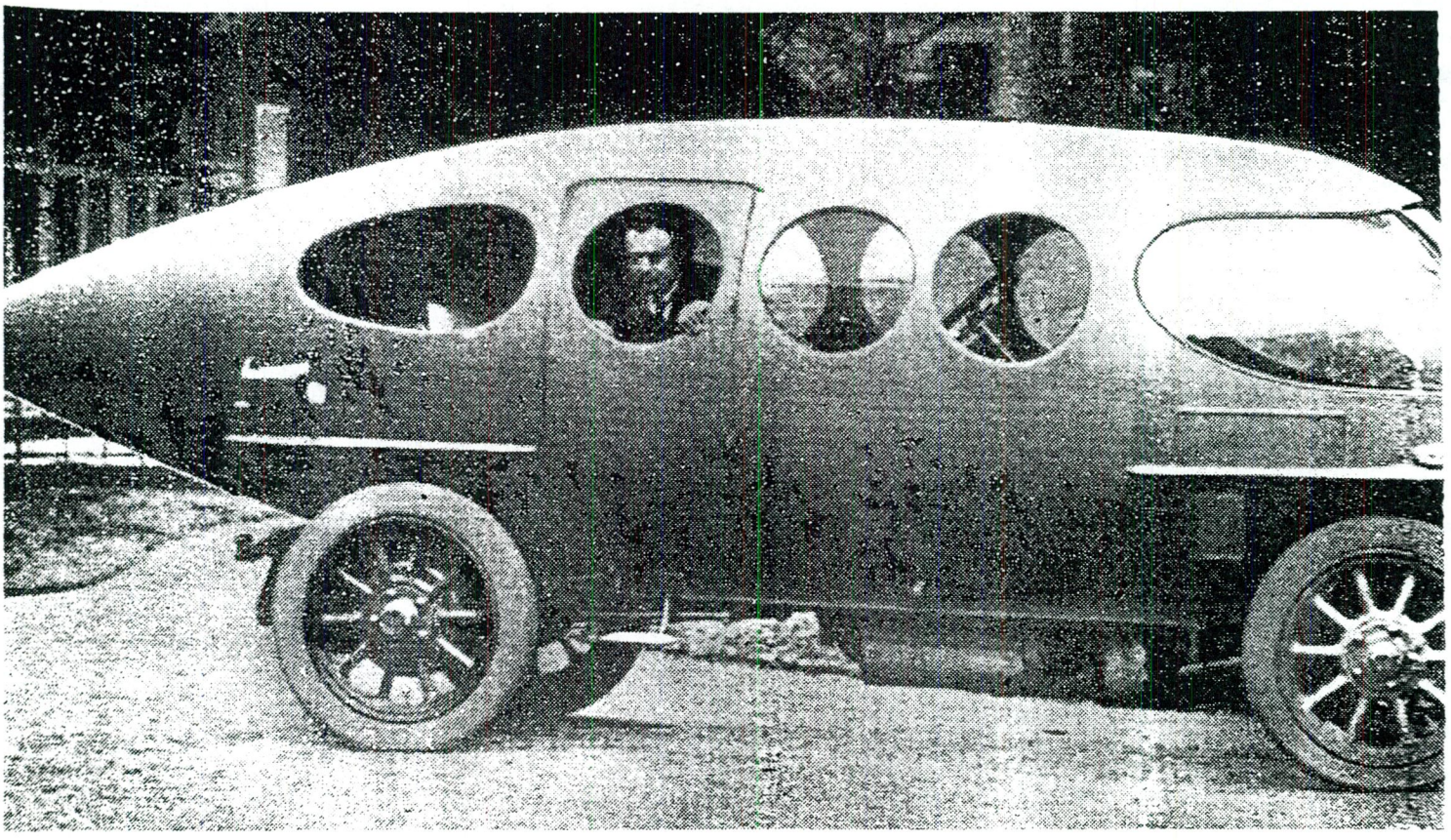
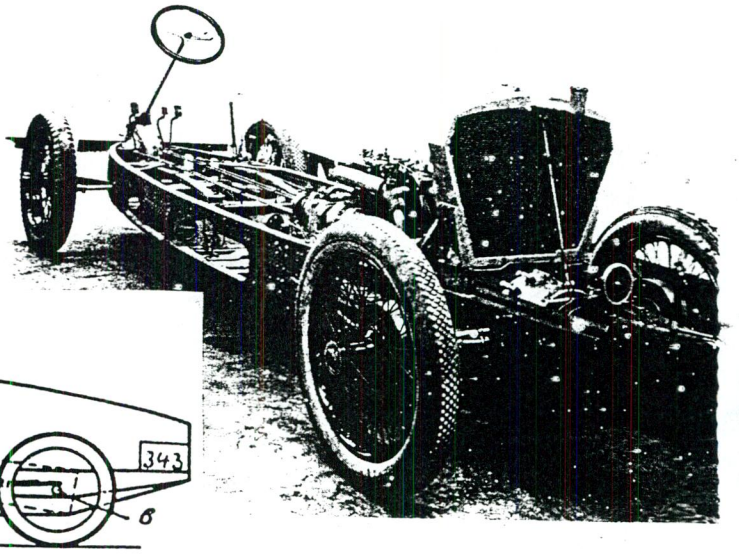


Fig. 1.2 Alpha Romeo



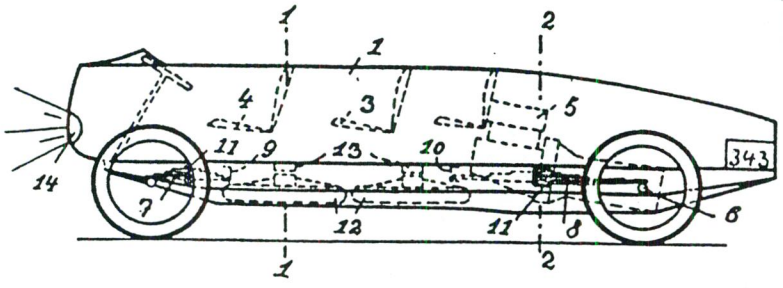


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Fig. 1.3 Tropenwagen

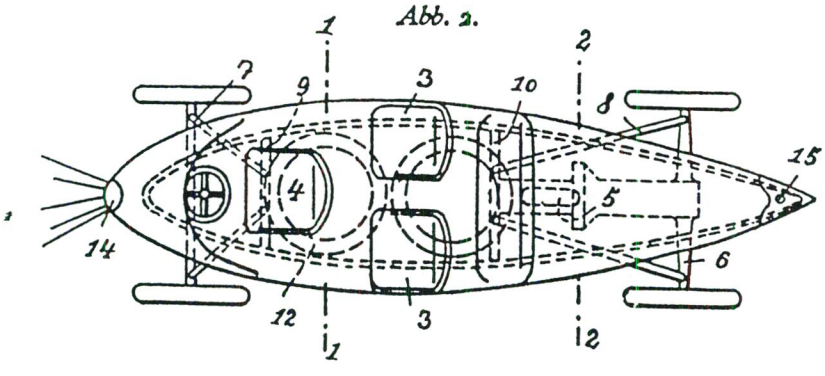
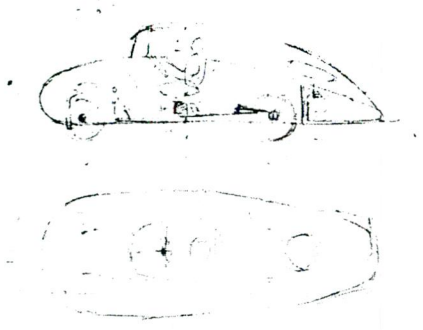


Fig. 1.4 Jaray's Teardrop Car



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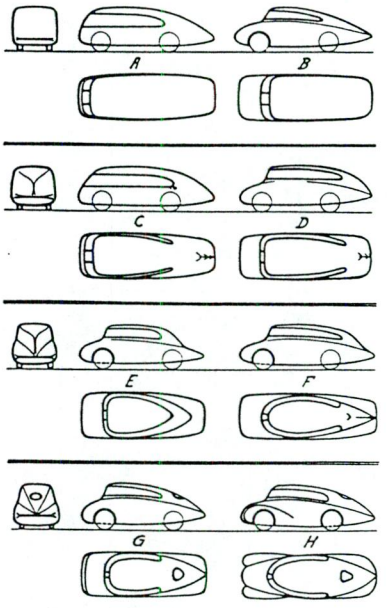

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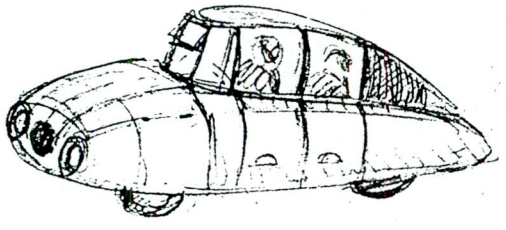
1 Paul Jaray: sketch for a streamlined motor car with two seats arranged one behind the other, pencil in an octavo notebook. Drawn during Jaray's exhibitions in the Luftschiffbau Zeppelin GmbH, February 1921. Basis for Jaray's 1921 master patent.

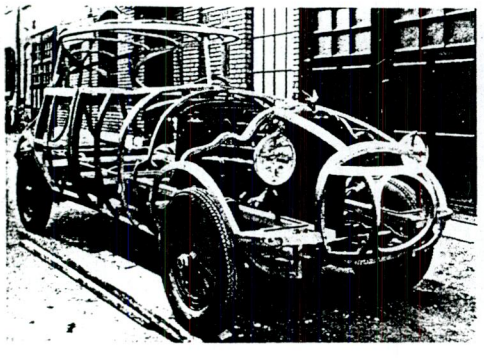
2 Paul Jaray: table summarizing motor car shapes patented by Jaray, c. 1935.

3 Stromlinien-Karosserie-Gesellschaft, Zurich (Paul Jaray and Paul Susmann): wooden frame for the Chrysler Type 72, photographed in the courtyard of the Haizer und Herrmann coachbuilding company in Zurich, 1927 or 1928.

4 Paul Jaray driving his car on a 'Ley' chassis, 1923.

5 Jaray's 'Ley' car, rear view, 1923.





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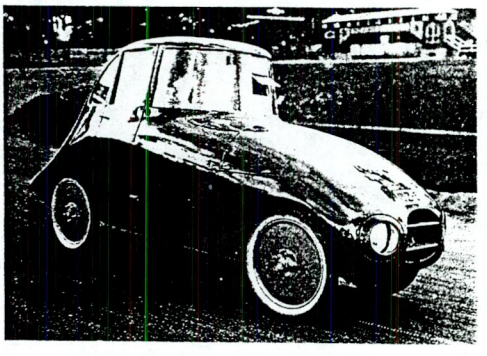

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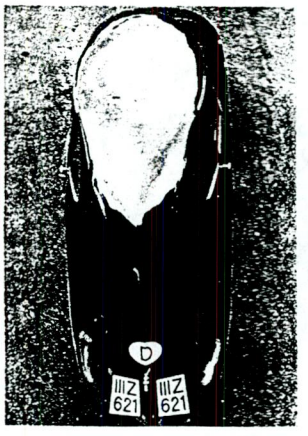

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body of the car. They wanted to show off their cars as aesthetically pleasing speed objects.

The streamline designers looked at natural shapes that implied movement for inspiration. Many design historians would agree that the Czechoslovakian designed Tatra 87 was the benchmark shape for all cars (Fig. 1.5). The Austrian designer Hans Ledwinka brought all the ideals of Jaray's experiments into account. It was the first time that designers actually looked at a car as a whole object. The first time they considered the shape of the wings and grille and integrated the front into one smooth sweep. The car looked as though it had been carved from the solid. Every part moulded into every other. It had an air of motion about it even when it was static. This car was hailed by all as the car of the future and three thousand versions were produced.

At the time of the celebrated Tatra, Germany was trying to gain some power and authority following the humiliation of World War I. Hitler loved the Tatra 87. It suggested the future and had potent imagery, but he despised the fact that it was a Czechoslovakian product. Reyer Kras, the design historian, summed up the next step of the streamline automobile when he said: "In Germany I think the streamline was a present given to the Nazi party" (from Channel 4's *Without Walls* programmes). Hitler demanded that German designers design a car similar in style to the Tatra, but one that could be flaunted as a German original (Fig. 1.6). This car, the Volkswagen (people's car) (Fig. 1.7), from 1938 was preceded by an improved Tatra design that was presented at the Berlin Motor Show. Hitler was outraged. Two weeks later he closed down the Tatra company in

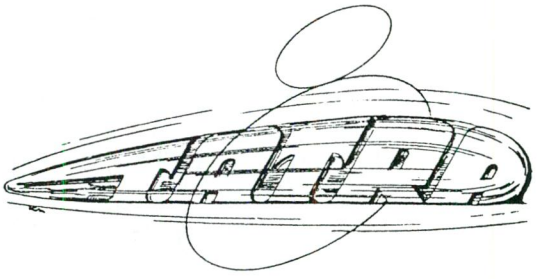


Fig. 1.5 Advertisement for the Tatra 87

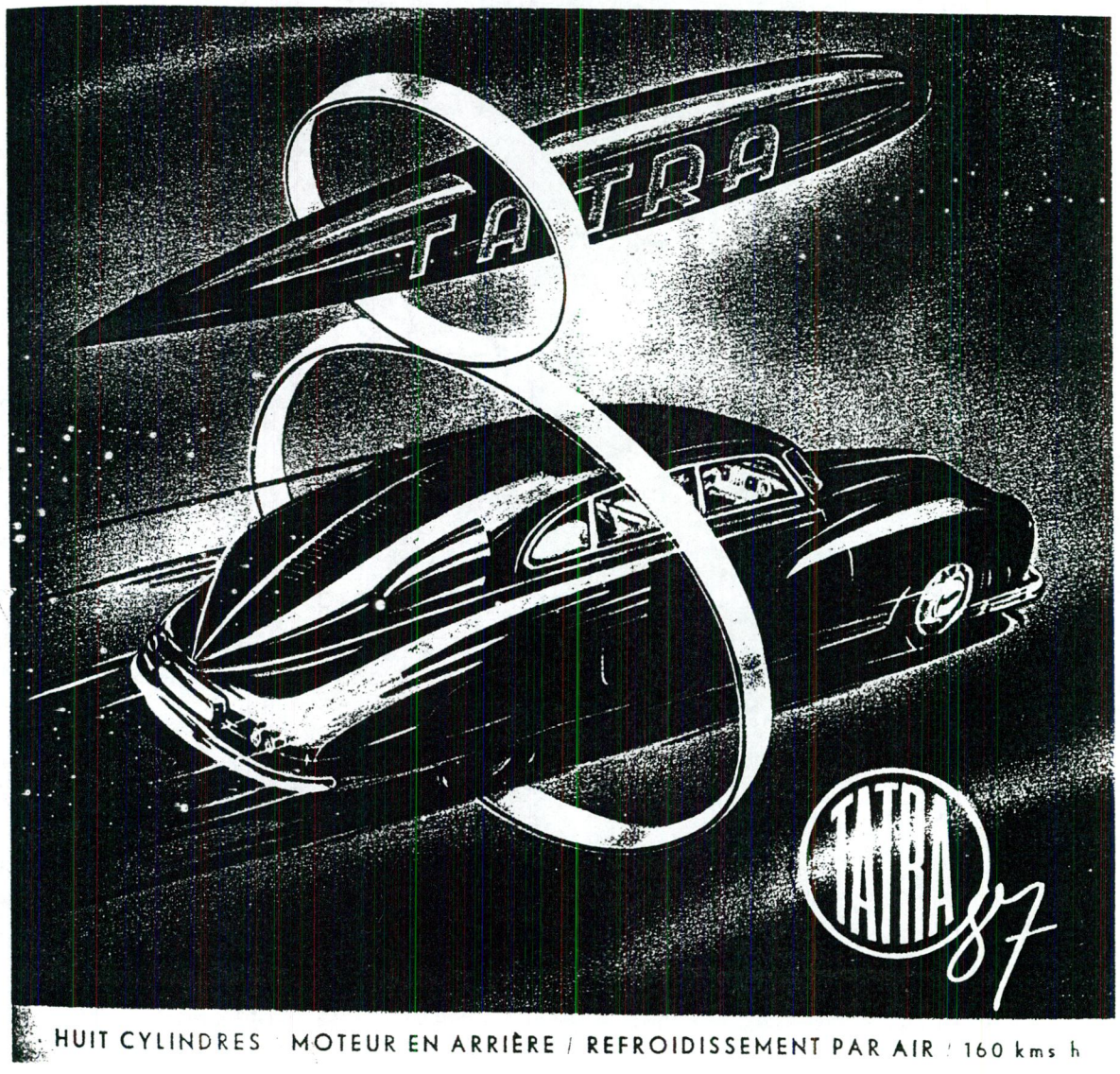
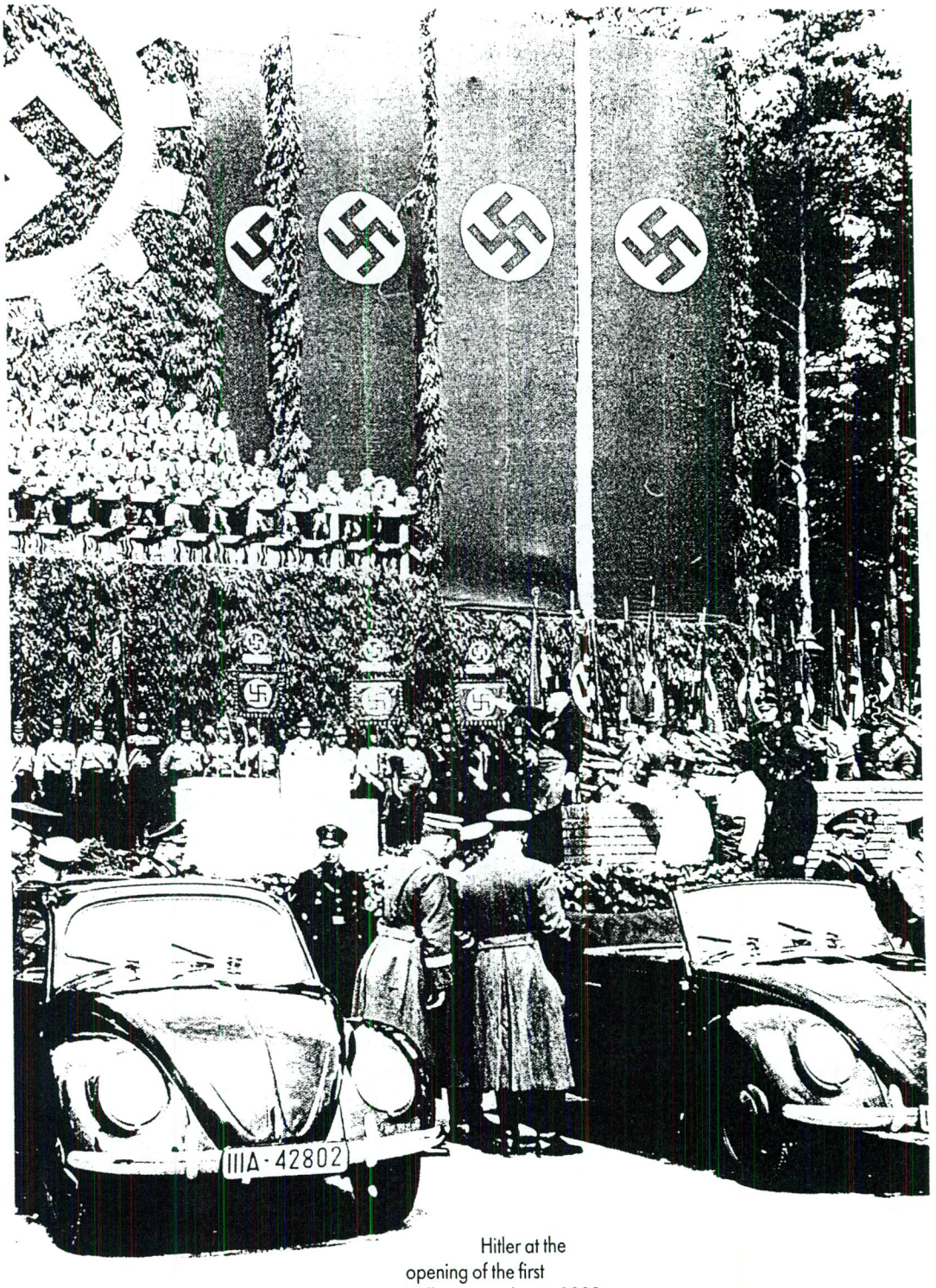


Fig. 1.6 Hitler at the opening of the Volkswagen launch

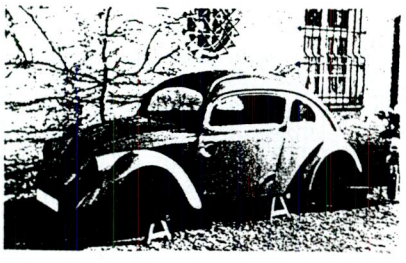


Hitler at the opening of the first Volkswagen plant in 1938. The 'people's car' was built to run on the newly constructed *Autobahns*. Both were symptomatic of the change in the fortunes of Germany under Hitler's uncompromising rule.

Fig. 1.7 The Volkswagen

VOLKSWAGEN

1934 Ferdinand Porsche



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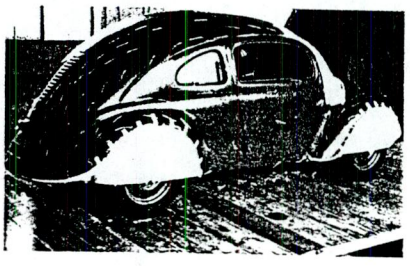

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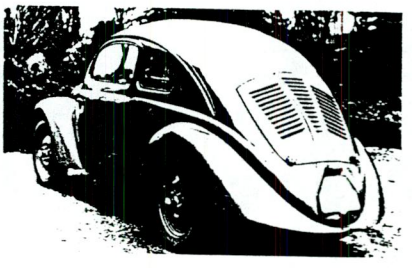

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4

1934 Volkswagen

Nesseldorf. He wanted to be the godfather of the New World progression in industry and technology. The Germans came to the forefront in race-car design (Fig. 1.8). Hitler liked to win. The tear drop forms referred to more than just the beauty of nature.

The French, being rivals of the Germans, also claimed to have invented the streamline car. In 1938 the Peugeot 202 had all the marks of the spirit of streamlining. Like all other cars at this time, the Peugeot had an ectoplasmic-like surface which hid handles, mirrors and any other projections. The body styling made references to human anatomy. Stuart Evans, senior lecturer in Central St. Martin's School of Art and Design, London, remarked:

> You can either have the tightly engineered panels which give the feeling of the muscular torso, or you can suggest the curved, taut, framework of the wings which suggest the limbs and you can have the elongated bonnet at the front, suggesting the throbbing horsepower, the potency of the engines.
>
> (from *Without Walls*)

Evans concludes:

> Streamline aesthetic was about adventure, individualism, it wasn't about aerodynamic efficiency in the 1939s, it wasn't approached pragmatically by the eye, what it was about was making the car look like a dynamic object rather than a static one.

America, the home of consumerism, had some difficulty in selling their streamline cars. The Chrysler Airflow (Fig. 1.9), 1934, was marked as a safe car. The advertisements for the car tried to ease people's fear of a car by running the Chrysler through a series of crash tests to show its strength in the event of an accident. This marketing only served to deter the

AUTO-UNION

1938 Rekordwagen

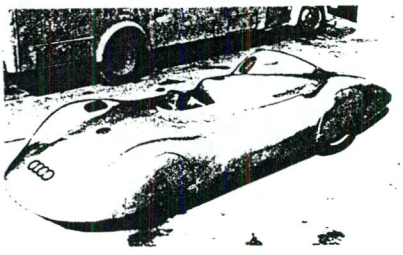


Fig. 1.8 German Race Cars

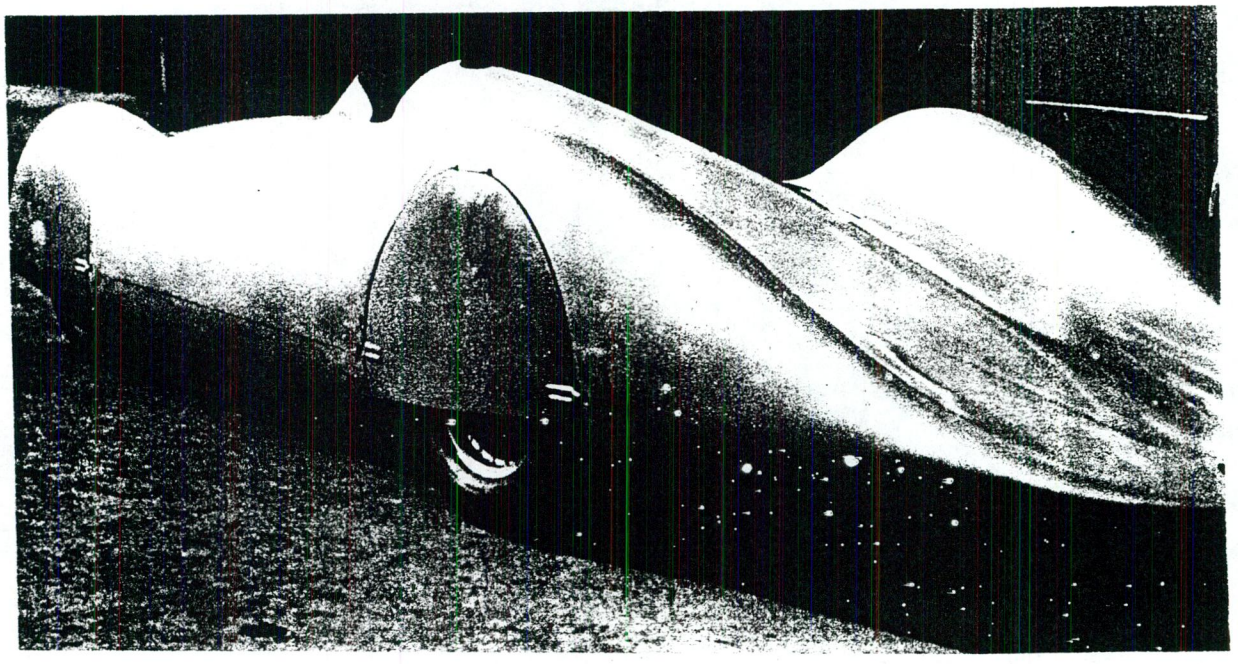
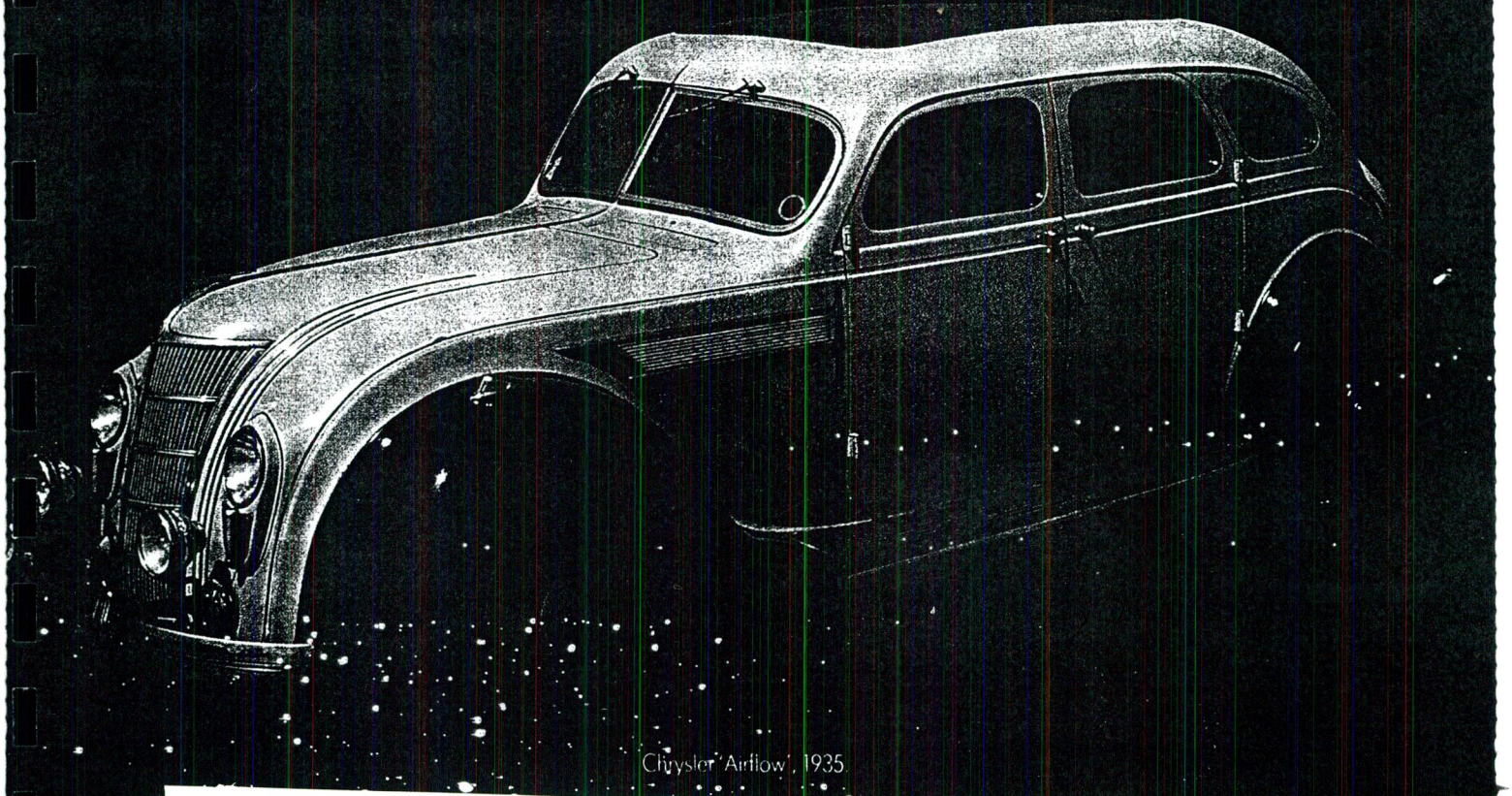
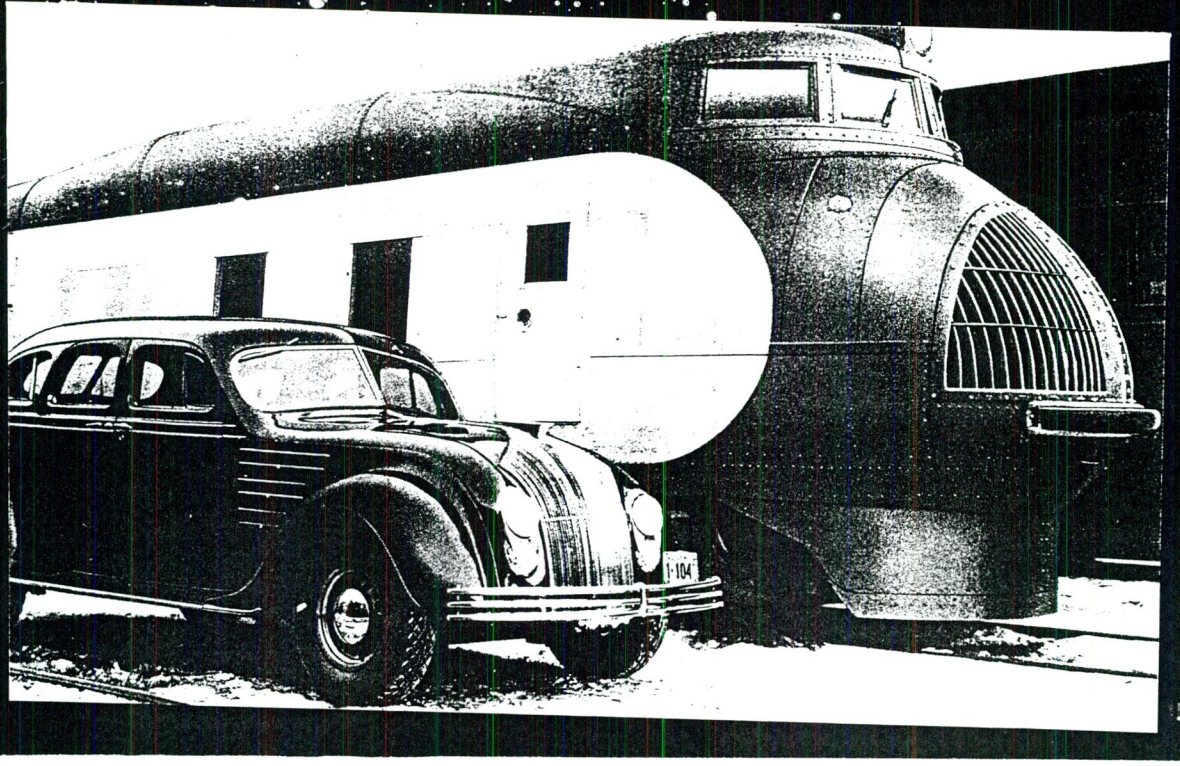


Fig. 1.9 Chrysler Airflow



Chrysler 'Airflow', 1935.

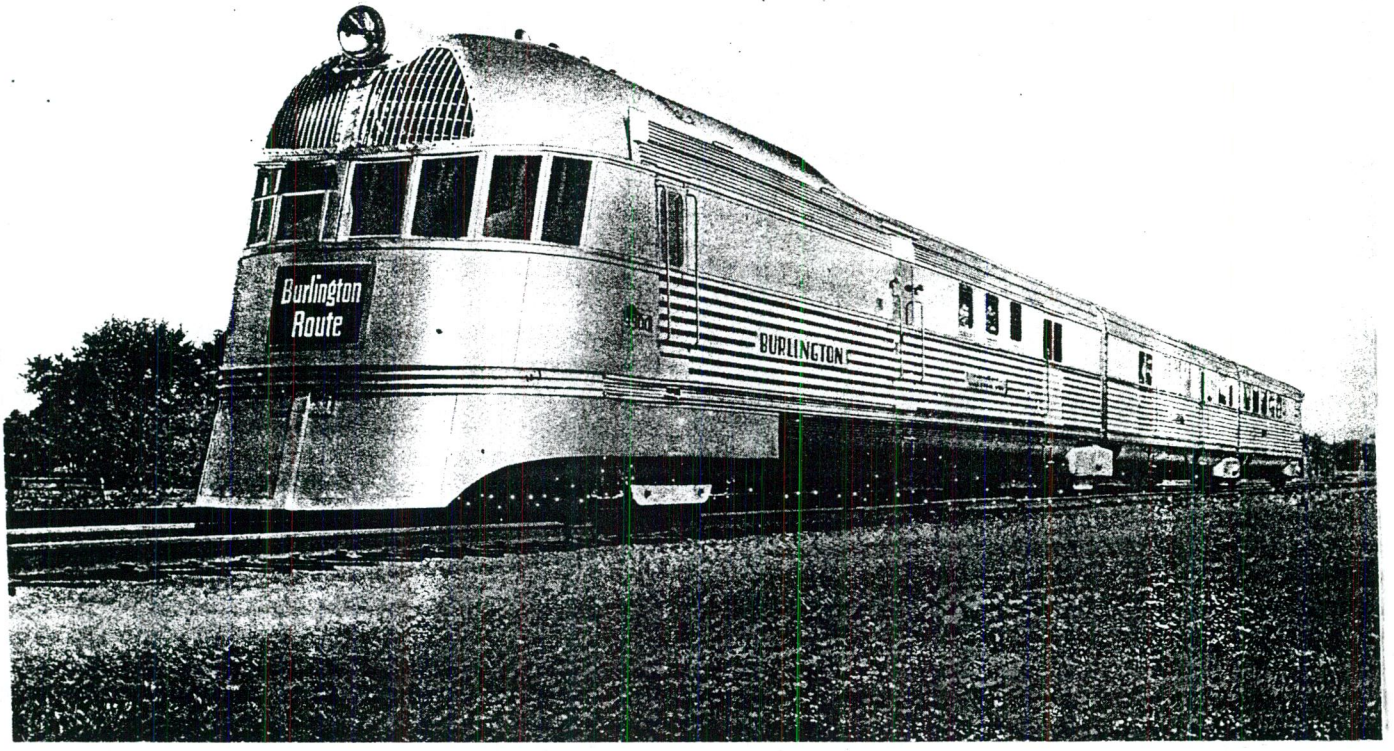


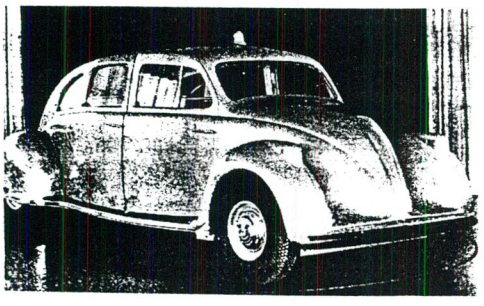
customers even more. The style of the car had been influenced by the Bauhaus Movement. There was a detailed ornamentation using tubular steel and curved window panes, with art-nouveau decoration. The sales target for the car was 300,000. The sales reached 30,000, the American public was not the best consumer of avant-garde design. Where the Chrysler made mistakes the Lincoln Zephyr V12 triumphed (Fig. 1.10). These 1936 Coupe and Sedan models were robust, solid, roomy and above all conventional, and were streamlined. The marketing procedure was very different from what Chrysler had tried. It was advertised as "Revolutionary not radical". It was named after the 1934 train, the Burlington Zephyr (Fig. 10), which had travelled from Denver to Chicago, 1,000 miles, non-stop, at an average of over 120 kph. This record breaking journey marked the start of the second year of the World Fair, "A Century of Progress", and also popularised the modern furnishing of streamline. People were comfortable with trains as they were with the Ford Lincoln Zephyr car.

Form Versus Function

Norman Bel Geddes, Raymond Loewy and Henry Dreyfuss were the godfathers of product design. These men headed the profession of the industrial designer. Bel Geddes and Loewy were both showmen and raised the status of design to equal that of art. Both men designed for the theatre and so brought the glamour of Hollywood to all their product drawings and every-day commodities. The media followed all their movements and were easily manipulated by these designer superstars.

Fig. 1.10 Lincoln Zephyr





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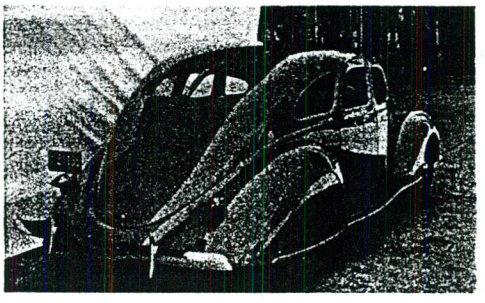

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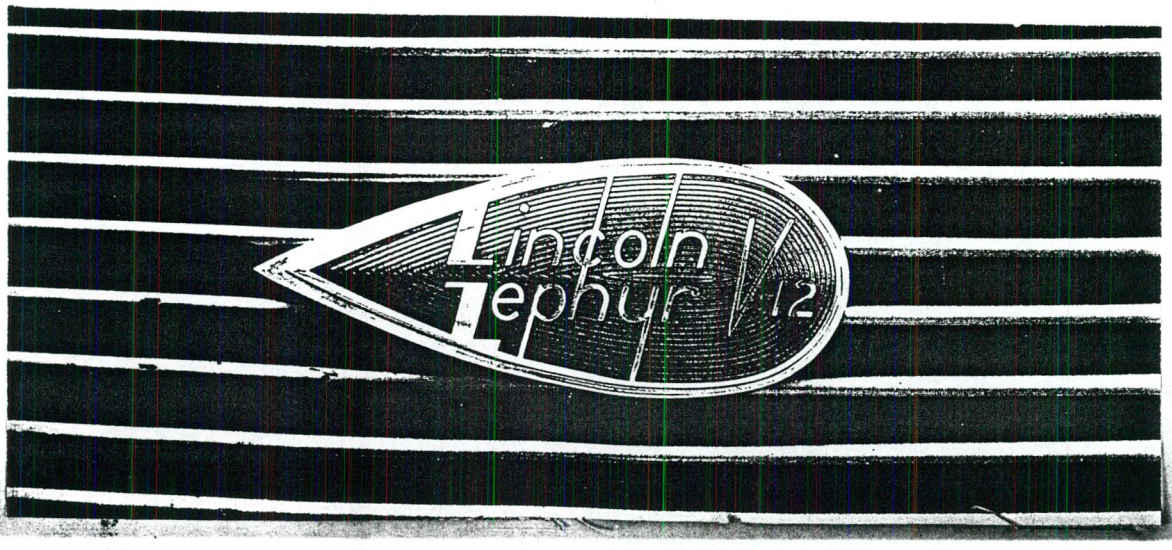


Bel Geddes (Fig. 1.11), 1893-1958, although mostly remembered for his huge contribution to industrial design, had talents in other areas, such as set design, painter, illustrator, graphic artist, exhibition organiser and architect. He was a man who enjoyed publicity and had many actor friends. His 1932 book, *Horizons*, was an instant best-seller. It allowed people to have a glimpse into the future, or what the future might be, imagined by Bel Geddes. Designs for buses and automobiles in this book were styled in the tear shape form, which he believed the be the ideal form in which to create speed and motion, using man-made forms and natural phenomena. This theory of aerodynamic that Bel Geddes trusted was based on an experiment by the aircraft engineer Glenn Curtiss. Curtiss demonstrated that drag could be reduced by placing a traditional body on its chassis, turned 180^{o} by shortening the rear end. Following this Bel Geddes developed a car with a bulbous compact bonnet and a tapered rear end. It contained eight seats and the engine was in the rear. It also had eight wheels and the headlamps were adjustable for convenience sake.

Although Bel Geddes' main body of work was still for the theatre he was asked to be the architectural advisor in 1939 for the General Motor New York World Fair. This was a celebration of a streamlining. Bel Geddes created his Futurama, a masterpiece model of urbanism and future design using theatrical means. Until World War II, Bel Geddes' streamline automotives featured throughout design in the Western World. Once again war dulled the desire for experimental developments.

Raymond Loewy, Bel Geddes' contemporary, also adopted the tear-shape style. Loewy recognised that cars were seen as

NORMAN BEL GEDDES

1893–1958

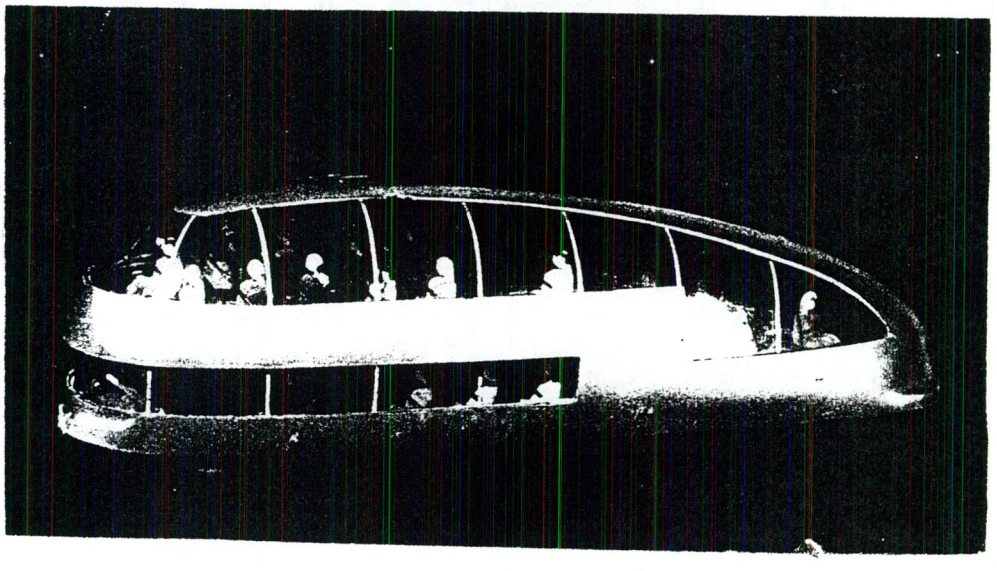


Fig. 1.11 Norman Bel Geddes and his Futurama Bus

symbols of progress. People wanted to be surrounded by the new and discard the old. The two world wars had generated change in the society of the Western World considerably. War meant efficiency. Women cut their hair, drove cars and discarded petticoats. There was less time for grooming, a new style of dress sense had begun; it was a style of practicality and comfort for a more dynamic life. This sparked off a fashion trend for moneyed people and the aristocracy. Fashion designers unconsciously sought simpler lines in the cut of their fabrics and omitted any superfluous embellishments. Women had to step into the role men had previously occupied in the workforce in order to keep the economy going. Industrialisation was growing. The motor car, aeroplane and ship usage was rapidly developing. In keeping with this busy environment, people were streamlining their lifestyles to suit this progressive movement. Loewy adapted the tear shape to surface design that housed and hid inner components. As with the early cars which were made up of a ridiculous assemblage of separate parts not relating to each other, so were the early household appliances. Homogeneous covering which crept in around 1930 brought with it the need for fewer elements. Larger units were being produced with more efficient functions. The sheet metal that was used for the larger appliances such as Loewy's 'Coldspot' (Fig. 1.12) refrigerator, was shaped by simultaneous pressing in several directions. This was faster and cheaper than the previously beaten panels and soldered-seam production method. Moulding was the way forward. At this time plastics were being developed and improved and consequently suited the press-moulding methods that were known.

● **BELOW** 'Coldspot' refrigerator, Raymond Loewy Studio, 1935.
One of the most successful styling exercises for domestic products.

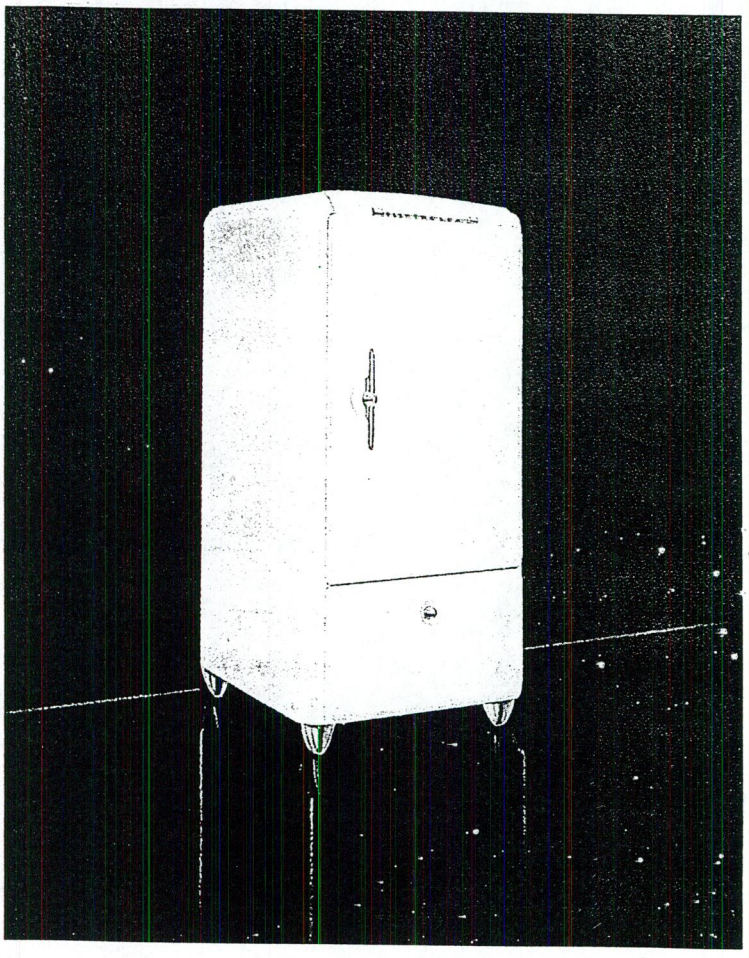


Fig. 1.12 The " Coldspot"

From the popularity of Loewy's 'Coldspot' fridge, the designed found himself to be in great demand. He re-designed the steam engine into the streamlined train, modelled on the form of a bullet. The Loewy locomotives introduced the airflow lines that wrapped around the curved surfaces to give the train a sense of speed. It was not faster than what had gone before but what was important was that it looked to be up to date, modern and progressive. Loewy was the designer responsible for the Burlington Zephyr (Fig. 1.10) train of 1936, which was designed at a time when air travel was in huge competition with ground travel. The Zephyr was cleverly marketed by magazine advertisements showing Anita Foley smiling down from inside the driver's compartment. Travel by train once again became the glamorous way to go places.

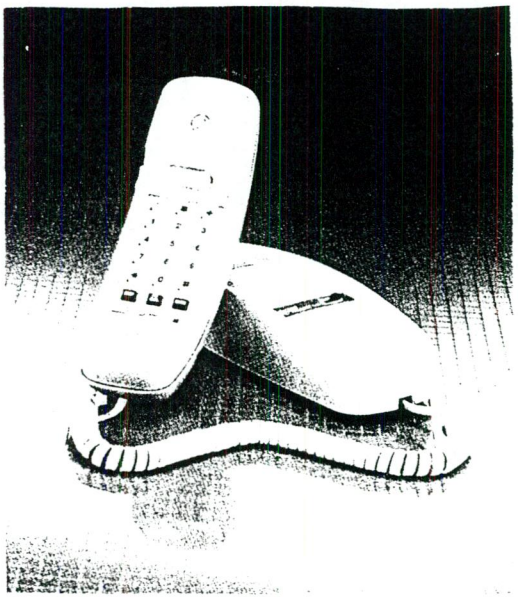
Henry Dreyfuss, on the other hand, was not so much in the limelight as Bel Geddes and Loewy, although he was a major contributor to design improvement at the time. Where Geddes and Loewy used streamlining as a styling tool that identified with modernity, Dreyfuss preferred the notion of 'Cleanlining', which meant he wanted compact efficiency without excess styling. Dreyfuss was known as the Man in the Brown Suit, an image which he cultivated so as to appear approachable by any of the more conservative industries. Dreyfuss had a huge interest in safety design; he approached every project with his priorities being in the interest of consumer-friendliness. In 1934, General Electric commissioned him to re-design its refrigerator. What had looked like a basic box on legs, with a crude handle and a motor sitting on top, was revolutionised. Dreyfuss decided to set the unit directly on the floor, thus avoiding the dirt-trap created

by having it stand on legs. Although this design was produced a year previous to Loewy's Coldspot fridge, it was not a success. Raymond Loewy used his particular design idea later with the Coldspot commission from Sears Roebuck and issued the statement "Ugly doesn't sell" (see Fig. 1.12). This Dreyfuss imitation had more streamline styling and Sears Roebuck had an increase in sales one hundred-fold per annum. It seemed that the more aerodynamic an object the more popular it became.

In 1936 Dreyfuss played his part in locomotive design. New York Central Railroad (Fig 1.13) wanted a more enticing train for the Cleveland line. Dreyfuss took his work very seriously. Taking into consideration the menus in the dining carriage, the safety of bunk beds, to the exterior shell, he re-designed a train that was conservative in all manner yet streamlined without the gimmicky airflow symbols. He wanted people to feel at ease and it worked. This train even featured in the famous Hitchcock film *North by Northwest*.

Dreyfuss became a very well-respected designer and large companies engaged his talents on many occasions, such as AT&T, American Telephone and Telegraph Company for which he changed the upright separate handset and mouth piece into the new recognisable combined ear and mouthpiece dial phone, the 300 series (Fig. 1.13). Later the Henry Dreyfuss Associates, using Dreyfuss functionalist philosophy, designed the Trimline Touchtone 1300 (Fig. 1.13). This was the first modern telephone to reunite microphone, earpiece and dialling mechanism in one compact sculptural unit. When not in use the only revealing feature is the cord.

The Trimline Touchtone 1300



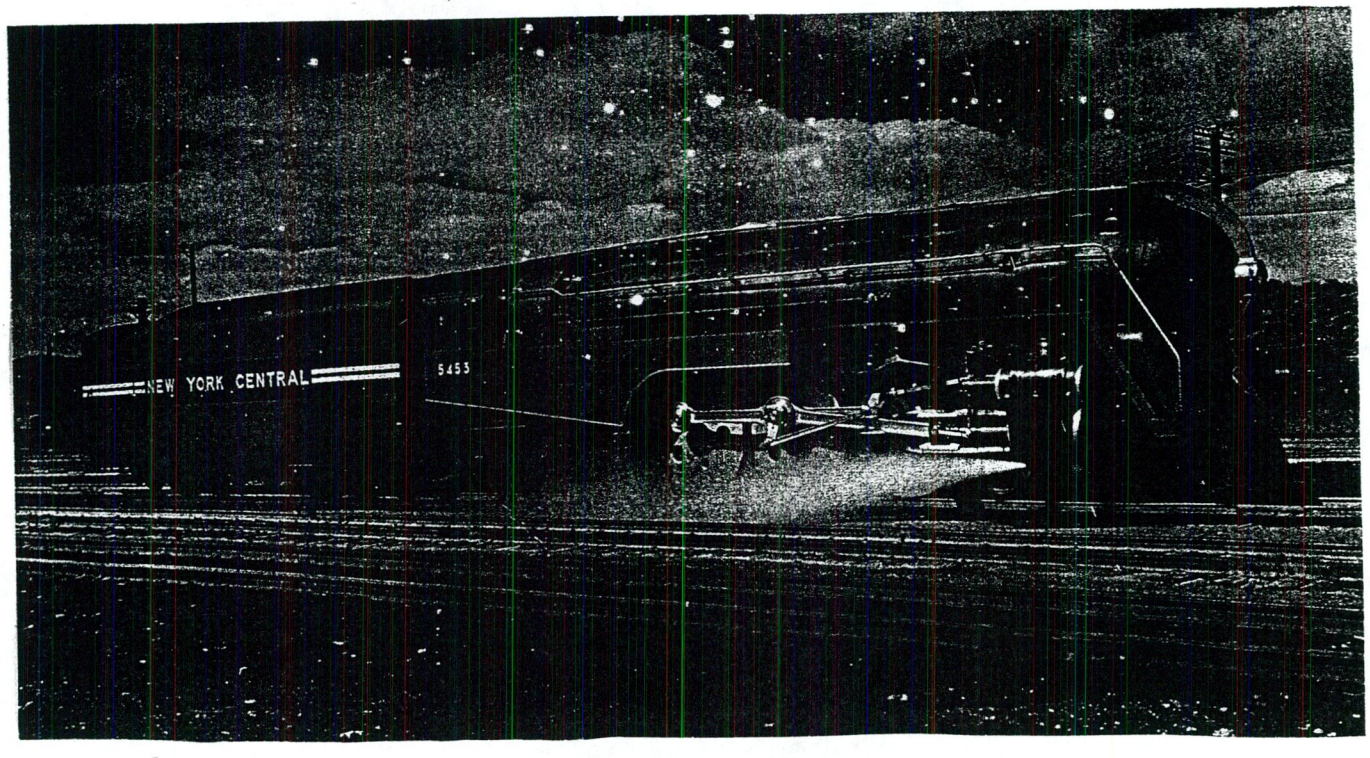
1937 Bell Telephone

The functional and quietly stylish 1937 Bell telephone was often described as a timeless design, benefiting from a long hiatus in technological development

The Trimline Touchtone 1300; the Trimline was the first modern telephone to reunite microphone, earpiece and dialling mechanism in one neat sculptural unit

● **BELOW** Hudson 4-6-4 locomotive.
This streamlined engine was designed by Henry Dreyfuss in 1938 for pulling the 'Twentieth Century Limited'.

Fig. 1.13 The New York Central Train by Dreyfuss

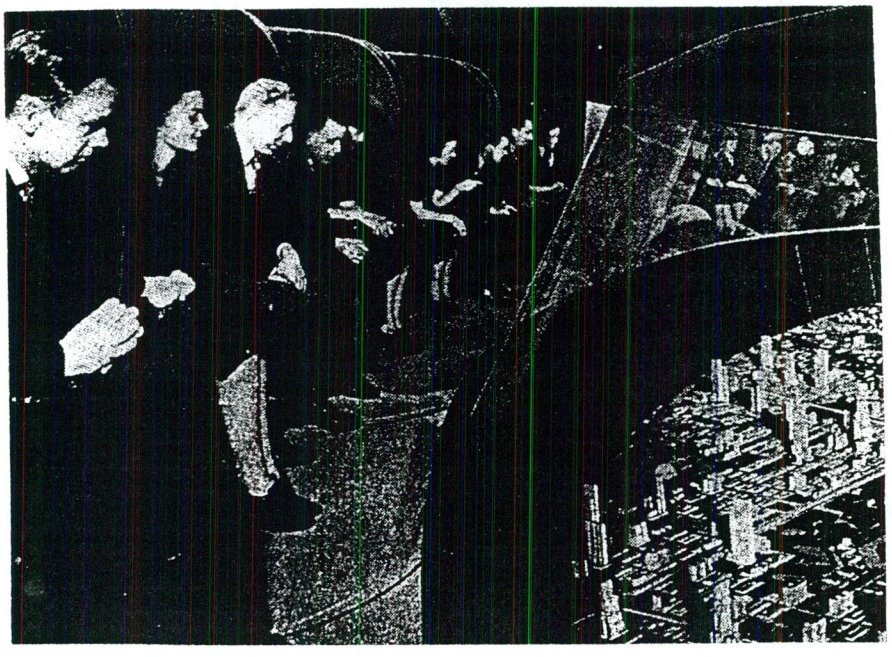


The designers who made the New York World Fair (Figure 1.14) in 1939 possible excluded Bel Geddes and Dreyfuss. They described a future where nuclear power existed, through their highly imaginative images and space-aged influenced shapes. Although many of their dream-like and futuristic creations do not exist today, the fair was a huge success as it excited visitors and influenced the thinking of future design which had been prophesied as being driven by a technological force. The lure of the future was the popular craze in America. This phenomenon was most apparent in post-war times when people were more affluent and comfort and safety were symbolised in designs for tomorrow's better world.

Streamlining or streamstyling was so fashionable that painted airflows and tearforms filtered into every commodity imaginable: cigarette lighters became easel-shaped, irons looked like ships, the famous Parker ball-point pen looked like a torpedo. All these forms were new, forward-looking, safe to use and appealed to the eye and the touch (Fig. 1.15).

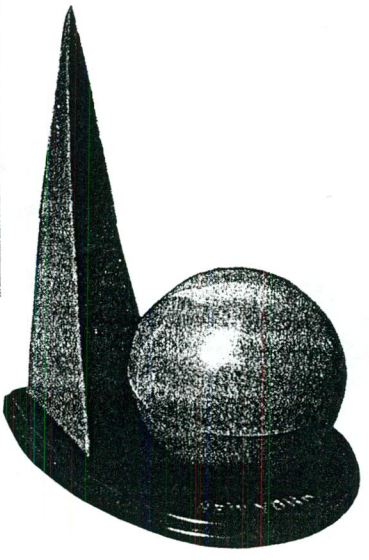
In Britain in 1950, futuristic design predictions were also common. One example is that of the Kolster Brandes FB10C radio (Fig. 1.16). The form or casing has a definite streamline approach. The designers drew their influence from Universal Studios' space-age spaceship, piloted by the daring super-hero, Flash Gordon. At the time it was successful as a stylistic development for radio design because its customer was futuristically motivated.

● **RIGHT** Trylon and Perisphere, New York World's Fair, 1939.
The New York World's Fair site from the air, showing Trylon and Perisphere and giving some idea of the scale of the exhibition.

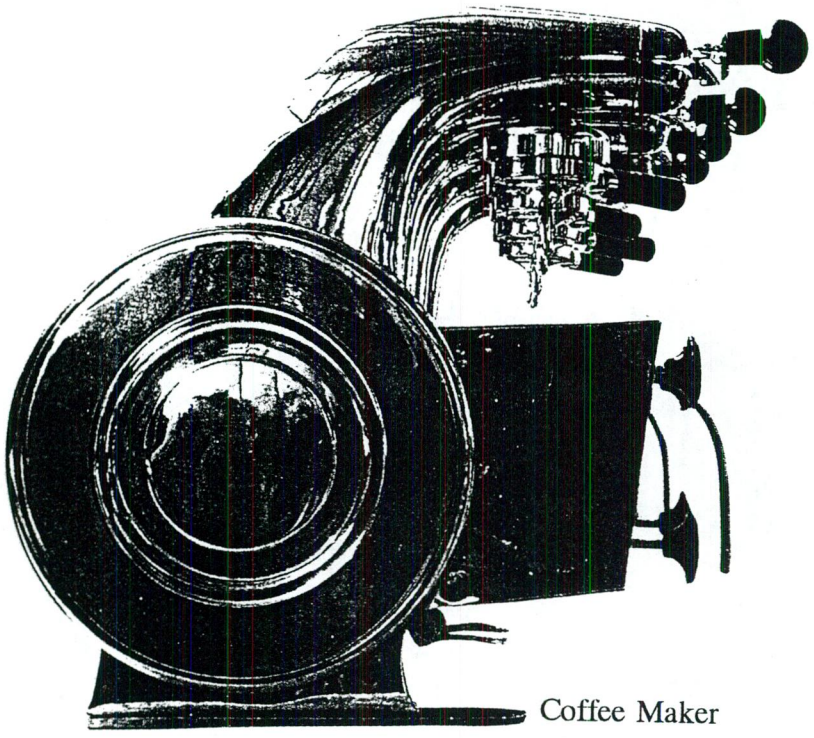


● **RIGHT** Spectators enjoying the pageant that was 'Futurama'.

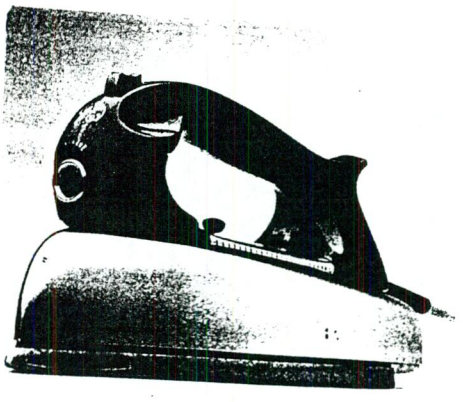
Fig. 1.14 New York Worlds Fair 1939

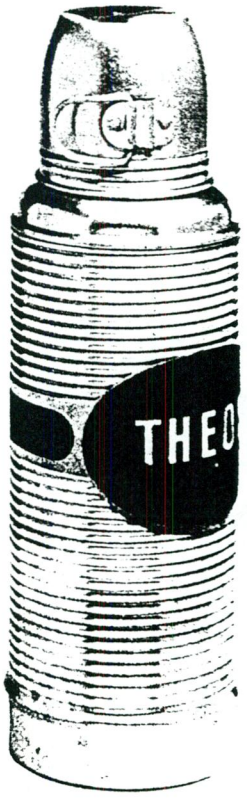


● **RIGHT** In contrast to the noble and lofty appearance of the Trylon and Perisphere surrounded by statuary, the symbols were also used in more mundane ways, as shown by these plastic salt and pepper shakers.

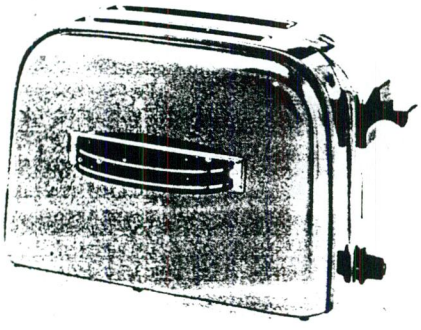


Coffee Maker



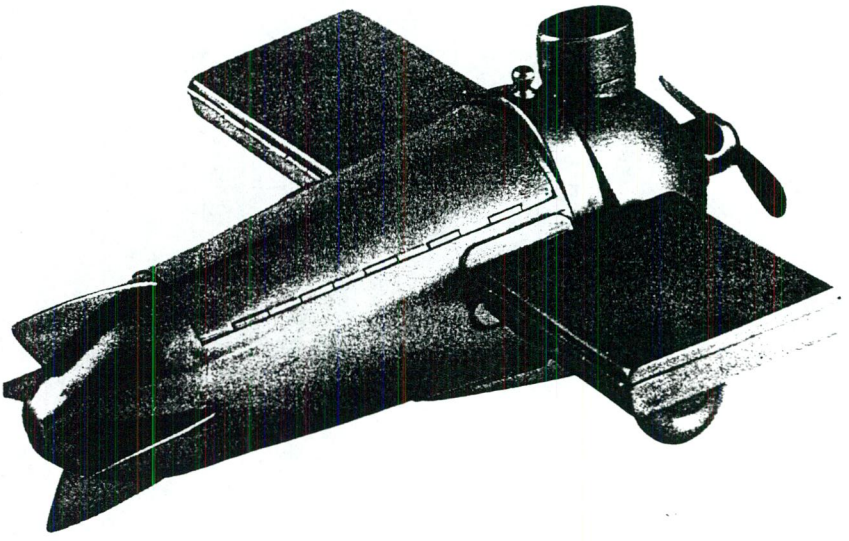


Toaster



● **BELOW** Novelty aeroplane cigarette lighter, 1930s. The spirit of the age is captured in the most mundane of objects.

Fig. 1.15 Selection of Items in Streamform Styling



Cover of a Popular Science Fiction Magazine

Above What started as a child's preoccupation quickly became an adult obsession when the first Sputnik was launched in 1957 and the space race got under way.

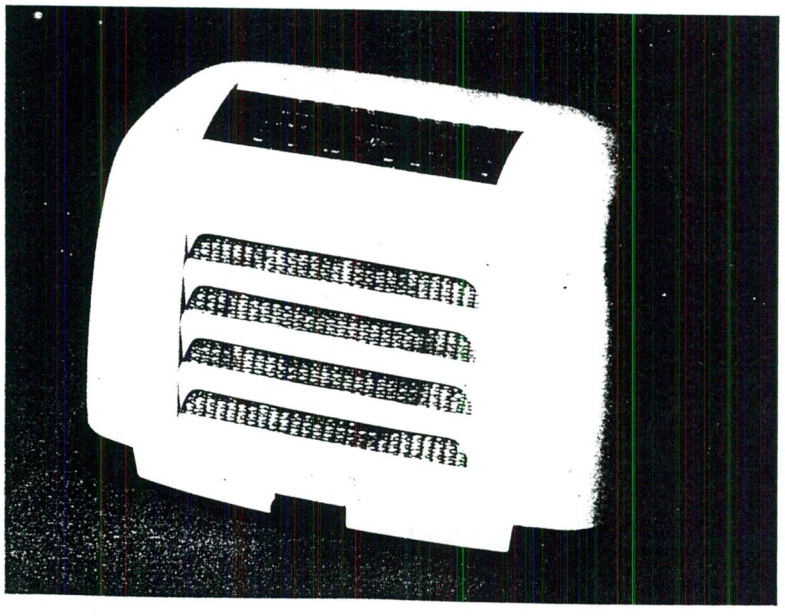


Fig. 1.16 The Kolster Brand

FBIOC Radio

The Kolster Brandes FB10C radio draws on the imagery of science fiction in an attempt to appear futuristic

CHAPTER 2

STREAMLINING : 1960s TO THE PRESENT DAY

From the 1920s to the 1950s streamlining was accepted as the direction for future design. The proceeding decades of the 1960s, 1970s and 1980s left behind that idea by discarding the basic simple designs. Perhaps it was because there was a glut of ideas and fashions in all walks of life that designs became more complicated and hampered the simplicity of the originals. Industry and commerce were directed by youth and their needs in the post-war years. Since the 1950s teenagers and young people were established as a generation to be catered for. As a result, a whole spectrum of design was introduced aiming at the young in the industries of fashion, cars, music and food. Teenagers had now a voice and an independence which brought the inevitable rebellion against any time-bound traditional institution. This was where the glut came about: young voices suddenly had a channel for expression which resulted in a melting pot of cultures, traditions, rebellion against traditions, and individual artistic statements.

This manifested itself in the hippie movement of the 1960s where freedom of love and expression became the mantra for the generation (Fig. 2.1). The 1970s grew from this with the previous generation becoming more aggressive and sticking two fingers up to the establishment. This was seen most clearly in the punk movement of anarchy which was cleverly manufactured by Vivienne Westwood (Fig. 2.2) and Malcolm McLaren, who saw the youth looking for an outlet to vocalise their anger. In this era forms in design were of a more dramatic nature. The popular

Fig. 2.1

1960 Peace Demonstration

Fig. 2.2

Vivienne Westwood

Vivienne Westwood

Westwood wearing her infamous 'Destroy' T-shirt, which was popularized by Sid Vicious and Johnny Rotten.

cult of anger was reflected in the clothes, music and other consumer goods available. Sharp forms, square forms, spikes, neon colours, mix-and-match clash themes were all outwardly expressed. Excessive styling lived well into the 1980s gradually shedding its offensive nature. Most of the product designs from these three decades were far removed from the ideal, efficient forms that had been expected for this time by the first industrial designers.

Streamline in the 1990s

Never before in history has such a rapid turnover of ideas occurred in such a short period than in our twentieth century. Now, in 1996, we swiftly advance with computerised technology. Our future looks to be so unlimited and stimulating that in order to come to terms with this progress we have stepped outside as observers of our time and draw inspiration from recent historical revolutions. At present most designed or styled commodities have a retrospective inspiration from this century. Many of these styles may have led such short lives that designers feel that they can be improved upon or developed in alliance with today's technology. We recycle the past but do away with the excesses that have gone before. Each time we select the best features of each era and adapt the style to suit the present. Some 1930s styling may look strange and superfluous to us. Today, in a sense, good designers follow the basic principle of an outward shell because it can be refined and made more enticing with the help of computer knowledge.

Streamlining is as important today as it was in the 1930s because it creates a style that is synonymous with progression

and advancement. We know that a basic product usually does not benefit in its function from steamlining but playing with this aerodynamic style sells. It appeals to the people.

The freelance journalist, Graham Vickers, who contributes to the *World of Design*, says of streamlining:

> For all its superficial claim to functionalism it was by definition an exaggeration of aerodynamic principles. Aeroplanes might legitimately be designed to accommodate airflow, but streamlined automobiles elaborated upon the same imagery simply to create effect. By the time streamlining's imagery had been further adapted to toasters and refrigerators, any pretence at function had long since been abandoned. The legacy of streamlining was the principle of simply encasing objects in cases or shells which were expressive not of the way the products themselves functioned but of some vaguely abstract, superimposed aesthetic.
>
> (Vickers, 1992, p. 42)

Visual style is the determinant for sales of a commodity. Manufacturing companies face more competition now than ever before. Each time they introduce an item into the market they have asked themselves many questions about the piece in comparison with that which has gone before:

Is this product more stylish?

Is it more reliable?

Is it modern? Comfortable? Durable?

Does it have technological appeal?

The consumer factor is the important one.

In medical treatment, the user-friendly notion is the main factor in design. Equipment that is used in hospitals or industry both have had a dramatic facelift in the past twenty years. Since the early 1900s many large machines have followed the motto of form-follows-function, with ugly and intimidating casing if any at

all. At present, with the growth of competition in large machine-manufacturing, designers are forced to re-evaluate what has gone before and improve the image of these monsters in order to appear user-friendly. One such example of this modern workmanship is the Baxter Ventricular Assist System, which is a heart accessory worn by heart-failure patients to stabilise beat control. The design group, IDEO, has stream-styled this potentially threatening unit, using an organic curved surrounding, which proves to be sympathetic in visual terms.

Only in the 1990s have we regained an appreciation of early streamline styling. Other items that have been treated in a streamlined, user-friendly fashion include modern cameras, stereo systems, computers, telephones and plastic packaged consumer goods. Today we often see new designs that are actual remakes of old ones, such as the re-introduction of the 1950s contour bottle for Coca-Cola, now produced in plastic, which is lighter, cheaper and safer than glass (Fig. 2.3).

The German Cutex company has recently introduced lipsticks in cleverly packaged torpedo-like cases. The pastel coloured plastic is reminiscent of earlier 1950s models. The form is cute and curvaceous and different from many 1980s lipsticks that were basic, cylindrical tubes. To add to this aerodynamic feature, the lipstick's body carries a logo stating AQUA MOIST and beneath this a stamped tear-drop design (Fig. 2.4).

The Cover Girl range which has headed the minimalistic make-up or cosmetic range even goes so far as to do away with separate boxes for foundation and powder. It has perfected the all-in-one notion where with one sweeping movement users can

Fig. 2.3

1990s Coca Cola Contour Bottle

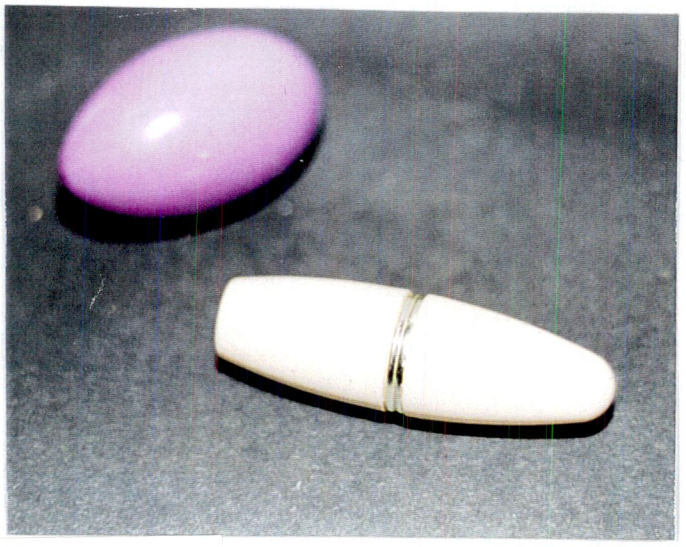
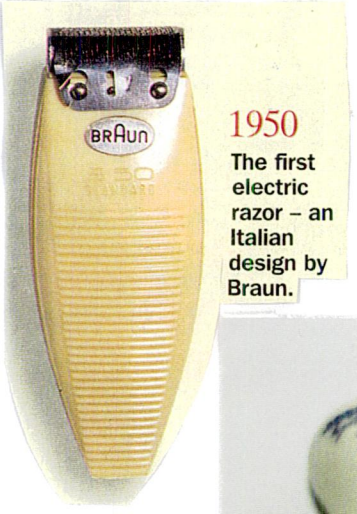


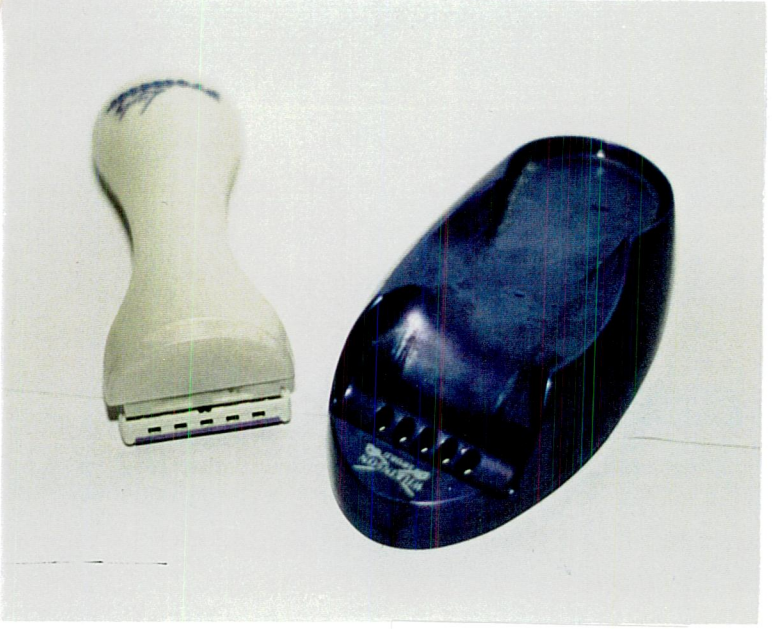
Fig. 2.4

Cutex Lipstick



1950
The first electric razor – an Italian design by Braun.

Torpedo Style Mascara (1990s)



Modern Razor

sponge-apply complete facial coverage from one magic mixture. This same efficiency is apparent in the hair-care industry, aimed at dynamic less-time, shower lifestyles, with one squeezed blob from a compact, plastic tube giving you a shampoo, condition and go!

In the fashion industry there is a revival of space-age wear such as PVC clothing which had been prophesied in the 1930s as clothes for today. These items sell as high fashion novelty clothing now.

In other fields of visual design the streamform is also apparent. The Aer Lingus company has just replaced its old flat shamrock symbol with a new, brighter shamrock placed on the tail of its aeroplanes at an angle, giving the impression of motion. This is reminiscent of go-faster stripes used on vehicles to conjure up images of speed (Fig. 2.5). The new Opel Vectra car uses streamlining as a form of art as we see in its advertisement (Figure 2.6).

Supersonic Cars

> Under 350 mph it's a job straight, 350 to 550 is boring, at 600 it gets really exciting as shock waves form.
> (Noble, 1996, p. 15)

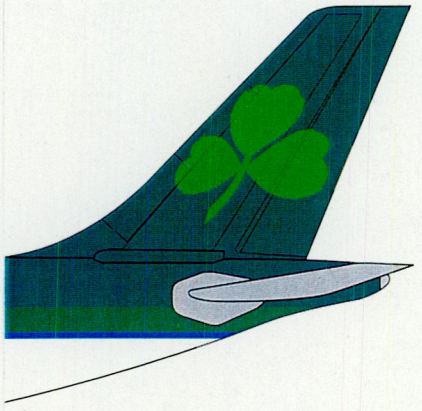
We are still obsessed with breaking speed limits. Where speed records are set by earth-bound wheels, streamstyling is a major factor in aiding the function. Since Jeantaud's car (Fig. 2.7) of 1898, which set the world land speed of 39.24 mph covering a kilometre in 57 seconds, fierce competition rose among the car manufacturers to better this record. By 1927 a British-made car, Sunbeam, had improved that to 203 mph. The

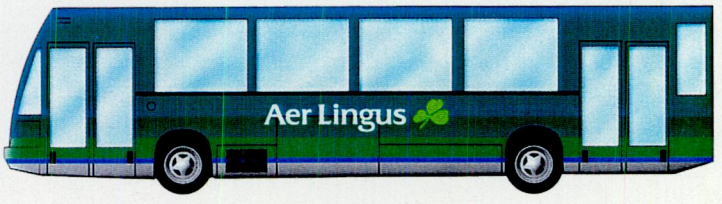
Fig. 2.5

Aer Lingus Aerodynamic Shamrock

Fresh Shamrock

So if as you travel, you see old signs coming down, and new signs going up, or new shamrock flying in and old shamrock flying out, please bear with us; we're changing - and we know you'll find it's for the better.





Aer Lingus

THE NEW OPEL VECTRA

Fig. 2.6

The new Opel Vectra

Add technology and beautiful becomes very useful.

Sculpture by Ana Duncan.

The new Vectra is a unique combination of Art and Technology. Art that brings not just the most comfortable and advanced design yet, but sheer style and elegance. Technology that brings you Performance, Safety and Security.

The new Vectra comes with the following standard equipment - ABS braking, driver's airbag, remote central locking, factory fitted immobiliser and 100hp 16 valve Ecotec engine on the 1.6 GL. A further choice of 1.8i, 2.0i and 2.5 V6 petrol and 1.7 TD engines, and a trim choice of GLS, CD and CDX is also available. Discover this piece of art today at your local Opel dealer at a price as low as **£15,600.***

New Opel Vectra. Art in motion.

1.6 GL 4 DR. Model illustrated 4 DR CD 1.6i £18,100 (prices exclude plates and delivery.)

OPEL

Fig. 2.8

Thrust SSC

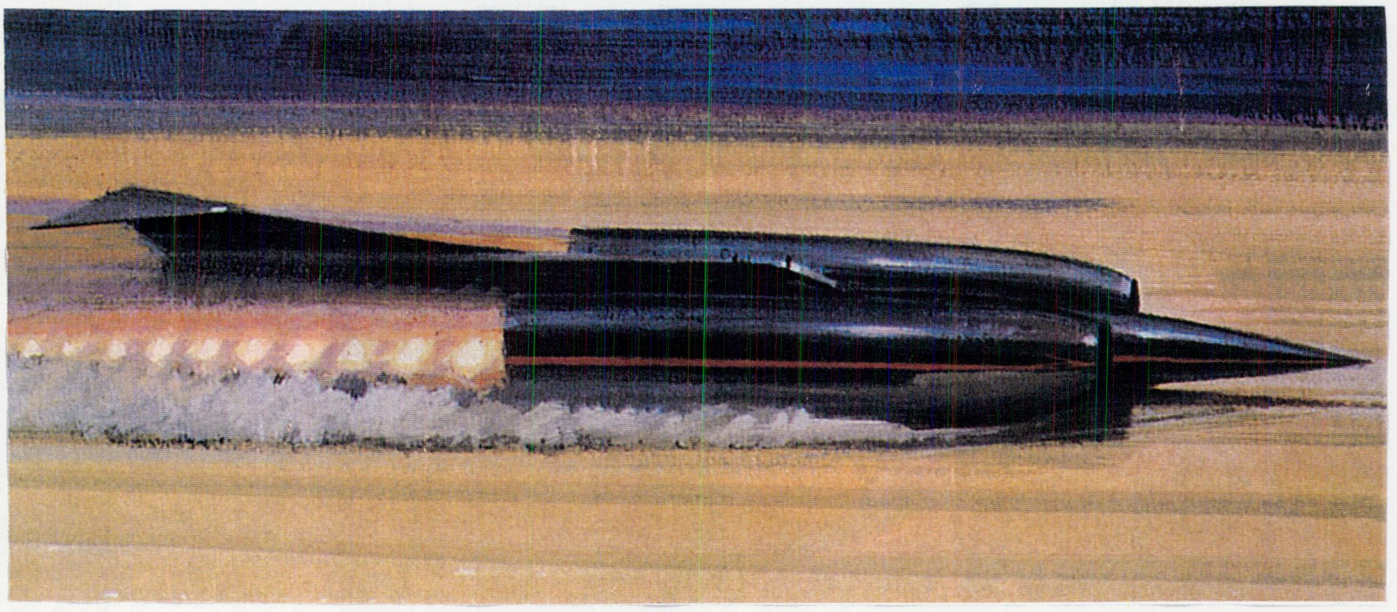
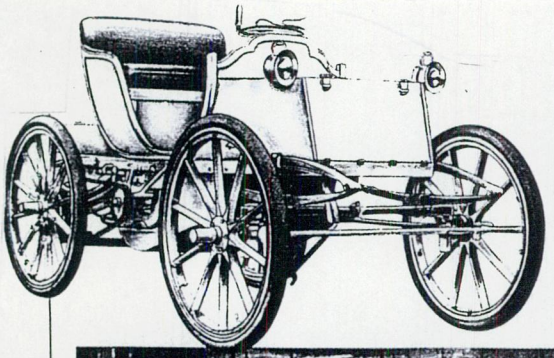
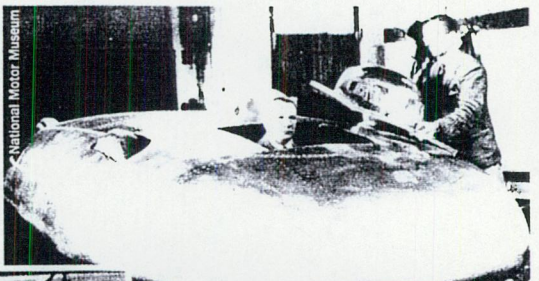


Fig. 2.7 Early Supersonic Cars



The first record, in 1898, was set in a French Jeantaud (left). By 1927, a British Sunbeam had improved that 39.24 mph to 203 mph

Hulton-Deutsch



John Cobb sits in tl Railton Special he raced at 350.20 m 1938. Donald and Malcolm Campbell' famous 1964 Bluebird (below) hi 403.10 mph at Lake Eyre,

bodies of these cars were barely raised off the ground in order to help the car stay on track; they also had a rear fin which created a downward force to prevent the car from taking off.

Richard Noble of Britain is the current world speed holder. The car was Thrust 2, which reached the speed of 633.47 mph in 1983, driving across Nevada's Black Rock Desert. The Thrust was modelled on a Concorde aeroplane. It is long, low and seems to tilt forward. During the summer of 1996 a competition is to be held between Britain, Australia and America to better Noble's record. Britain's new car, Thrust SSC, is more sleek in design than the original Thrust, it measures 54 feet in length, is 12 feet wide, has two Rolls-Royce engines on each side of the cockpit which resemble wind tunnels. It is a true example of the streamform and even sports an elongated nose cone which the designers believe to be of use in piercing the air.

CHAPTER 3

ALESSI AND STREAMLINE

> I believe that Alessi as well as other Italian industrial design factories have a common physiognomy that makes them a little different from other normal industries in a classical orthodox sense. We are more concerned with the aspects of research and culture than other businesses. It is very important to understand this concept because, otherwise, it's too difficult to understand our operation . . .
>
> . . . I believe Alessi can be more closely defined as a research laboratory of applied art. Remember that our scope, our real goal, is an endless mediation between the most advanced expressions of contemporary creative culture and the expectations and the needs of the public.
>
> (Talarico, 1991)

Alessi : The Workshop

The Alessi factory, or as it likes to be known the Fun Factory, is located at the foot of the Italian Alps on Lake Orta, a little working village. Alberto Alessi is a businessman who insists that his factory is a research studio for applied art and that his business is in the field of art and poetry. He interacts with many famous international designers including the Italian Achille Castiglioni, the zany Phillippe Staek of France, the American Michael Graves, and the Russian Yuri Soloviev. Alberto Alessi has a dream that is reminiscent of the 1930s designers, to bring beautifully styled objects to the people that will touch them emotionally. His philosophy works judging from the annual sales of 100,000 tea kettles designed by Michael Graves. The family firm was established in 1921 and began by producing small metal tableware such as tea-infusers in such materials as copper, silver and brass. The 1960s saw the use of

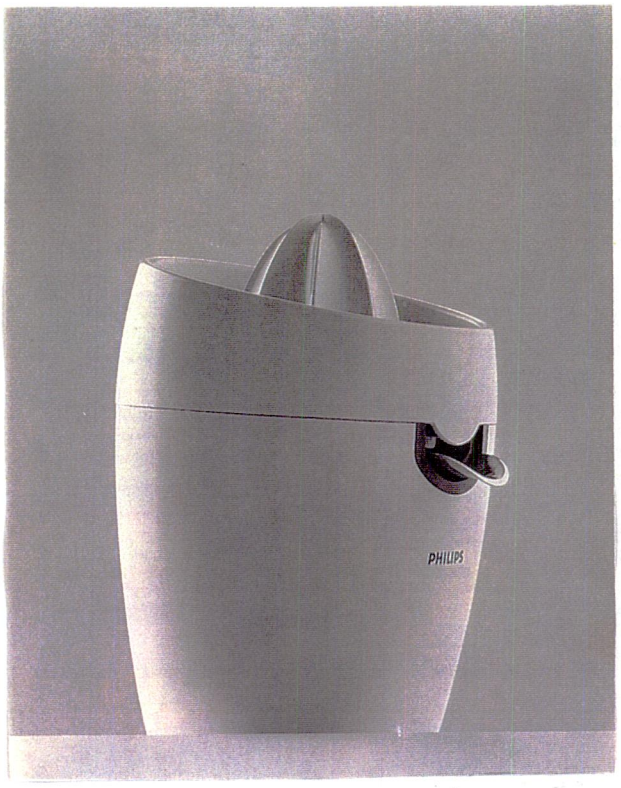
stainless steel for mass-production items. In the 1980s and 1990s the expanding company began covering areas such as watchmaking, musical instrument design and various items in wood and porcelain, furniture and luggage design. The products can be divided into three categories: mass production, which has the Alessi trademark; middle-production which carries the Officina-Alessi trademark; it also runs a line of limited editions of two hundred pieces per year. Off-shoots of the main trademarks are two others: Twergi from 1989, making small wooden objects, and Tendentse, 1990, concerned with ceramic and porcelain objects.

The Philips-Alessi Project

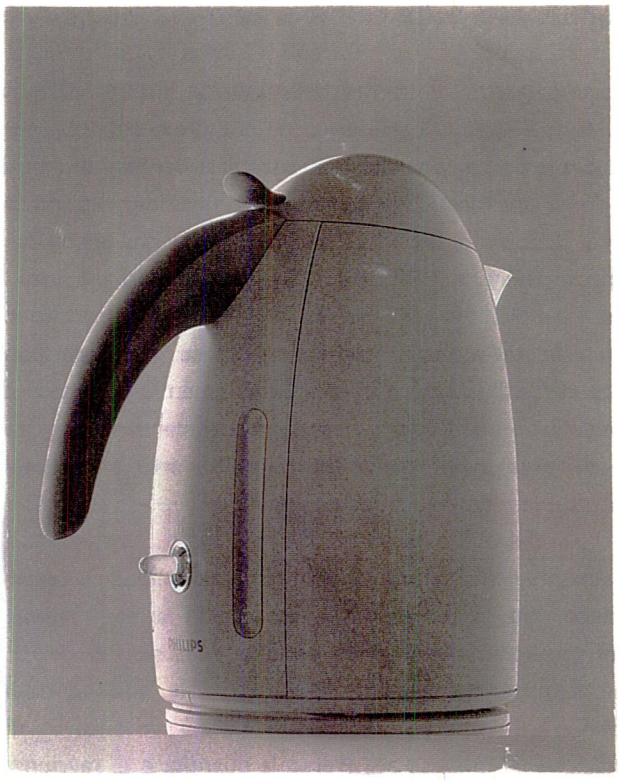
> The rationale of this Philips-Alessi project stems from the belief that by and large, present-day international mass production of consumer goods is dominated by technological and marketing considerations and is therefore little inclined to take into account the poetical aspects of life. This is leading us into a world of look-alike, anonymous and emotionless objects.
>
> (Alessi, 1994, p. 1)

From this alliance of two major companies came four finished products: a kettle, a juicer, a coffee-maker and a toaster (Fig. 3.1). The forms are directly related to 1930s streamstyle domestic gadgets

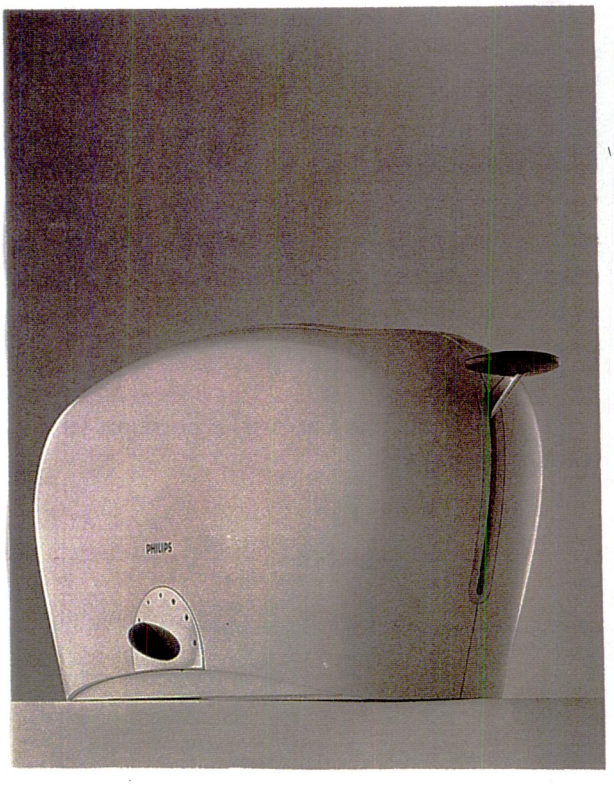
These basic, functioning units are surrounded or encased in a homogeneous covering. The forms are exaggerated, bulbous, curvaceous, torpedo-like, and ideal as minimal streamline designs. The colours used are also influenced by the 1930s popular pastel shades. The pieces, although more expensive than the average kitchen appliance, sell not only in



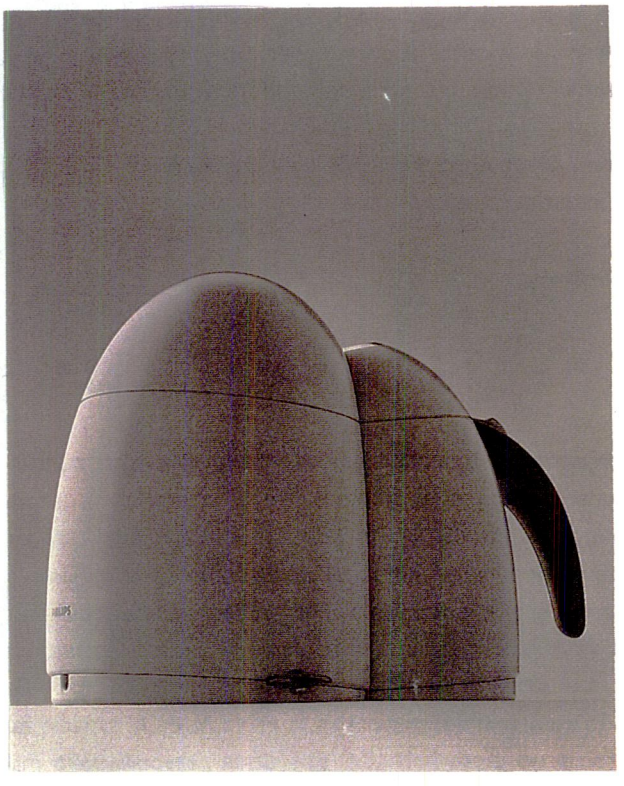
Citrus Press



Kettle



Toaster



Coffee Maker

Fig. 3.1

design shops but in large department stores where they are made available to a wider scale of consumer. Alessi and Philips are satisfied with the project and feel that they have changed people's lives in some small way.

Michael Graves is an American designer. He is responsible for the Alessi-produced design of the kettle with a bird-shape whistle (Fig. 3.2) which has become a best seller in his native America and throughout Europe. The form is a simple collaboration of soft-curved attachments with the addition of bright colours on the handle and whistle. When it was in the design process it was intended to be sold at $49.99 on the US market but re-considering the work and the finish it involved, it was launched in 1985 as an appliance costing $75. Despite this inflated expense, people buy and love this item, which is quite conventional but fun.

Philippe Starck

Alberto Alessi first met with Starck's work in the mid-1980s. Francois Burkhardtt was chief of the Centre de Creation Industrielle in Paris and told Alessi he was interested in having a grand exhibition in collaboration with the Alessi company. Philippe Starck was among the five designers chosen to re-design some Alessi products. Starck's drawings were the only ones that made an impression on Alessi and as a result four of his designs were produced between 1989 and 1990. These designs were the Hot Bertaa kettle (Fig. 3.3), the Juicy Salif lemon-squeezer, the obviously airship-influenced Mar de Chinois (Fig. 3.4) colander, and the Walter Wayle 11' wall clock. Alessi, being delighted with these highly individual forms introduced into

Fig. 3.2 Kettle with a bird shaped whistle

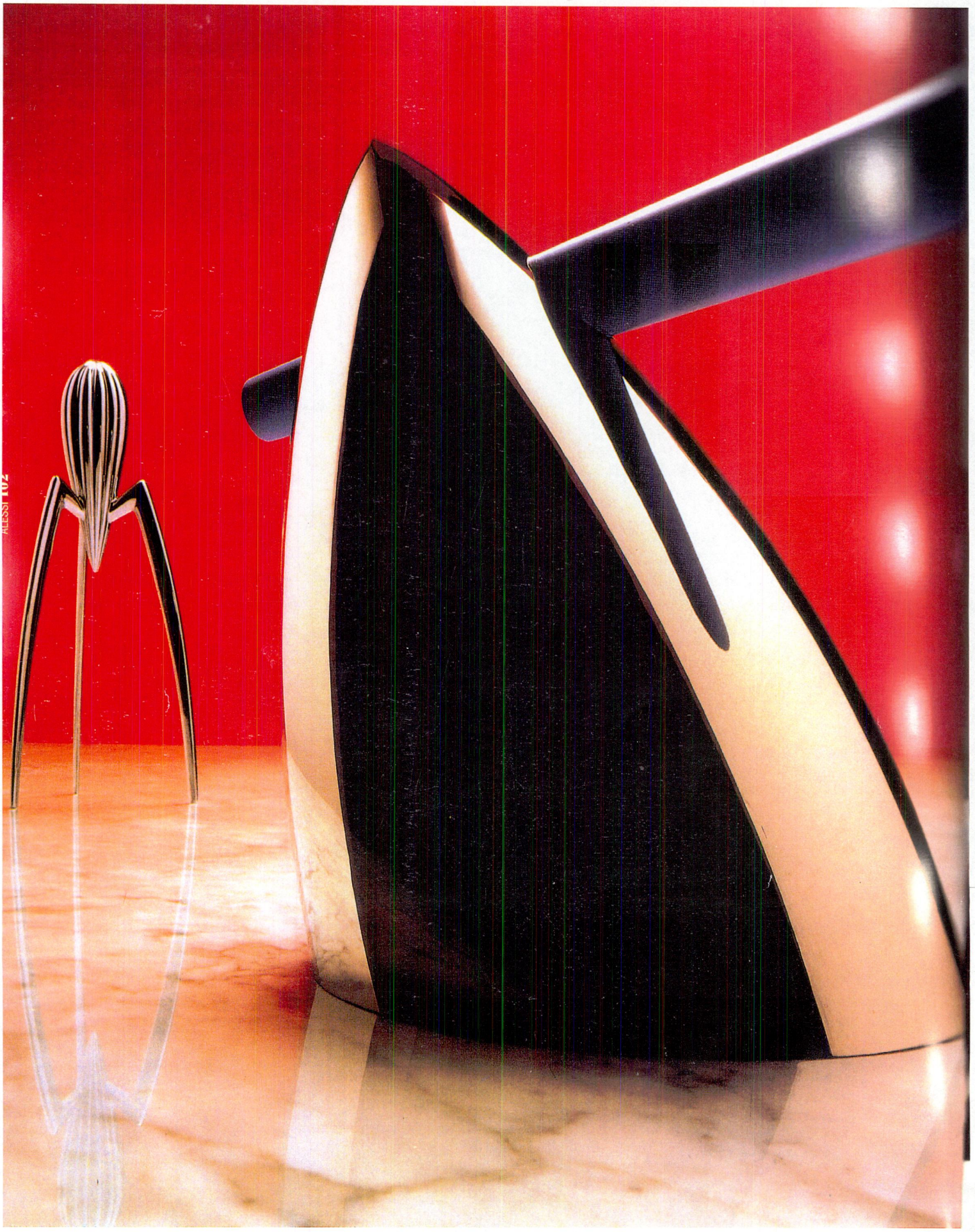


Fig. 3.3 Hot Bertaa Kettle

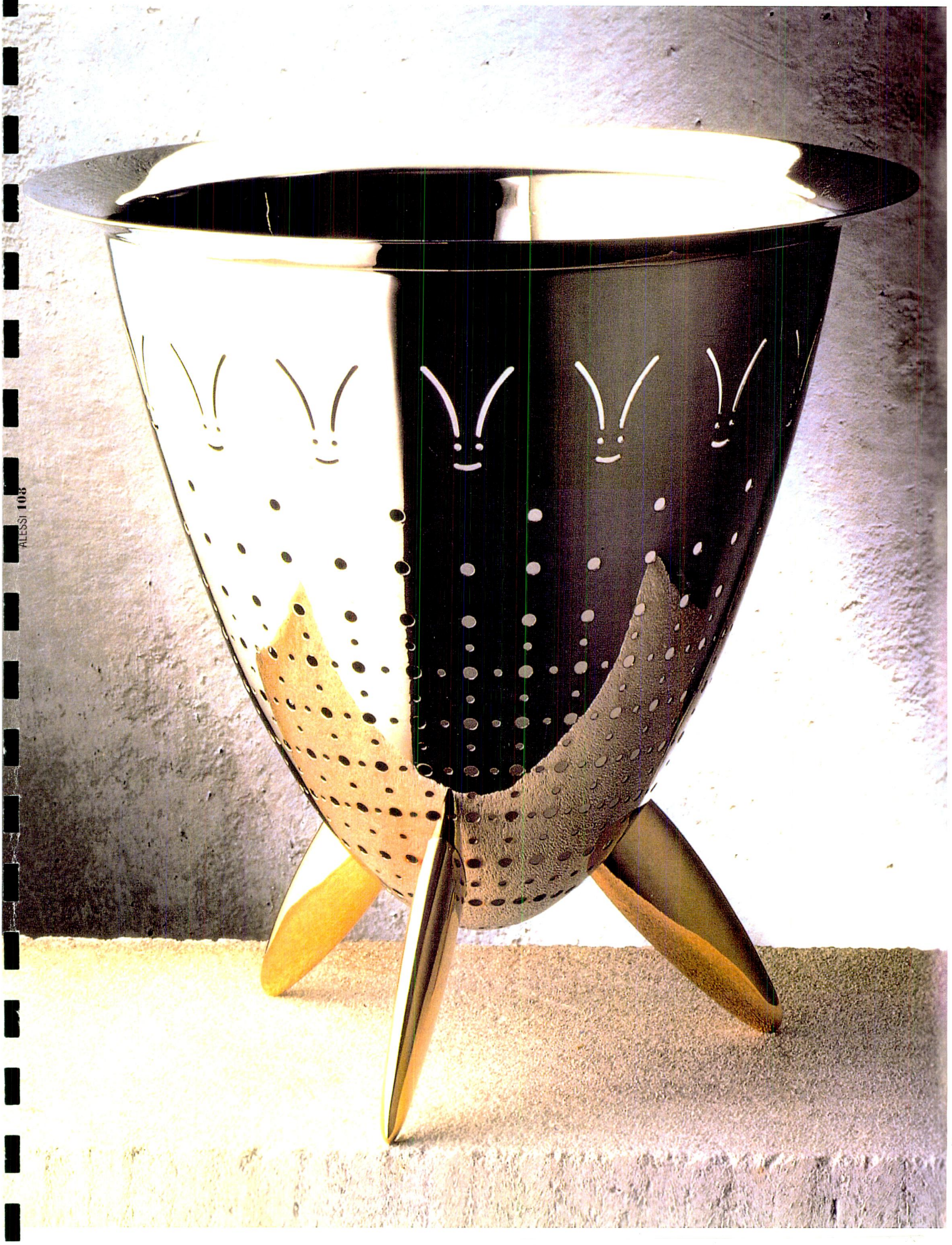


Fig. 3.4 Max le Chinois Colander

his company, eagerly collaborated on further designs with Philippe. Of Starck, Alberto Alessi has said:

> The aspect that I found most interesting about Starck's project-plans was the closeness of the results of his project methods to those of his artistic creation, for example, the creation of objects that were in a certain sense almost useless when it came to function, objects where at times the function is secondary to the expressive values of the object such as sensorial values.
> (Alessi, 1994, p. 103)

If we select the two more obvious streamform designs of Starck's Hot Bertaa kettle and the Max le Chinois colander, we can examine their style and functions closely. The Hot Bertaa from 1990 is a unique example of simplistic form of an every-day domestic item. It is certainly sculpture for the stove. The smooth, leaning, bullet-like body is broken only by the spearing of a conical tube which acts both as a handle and as a spout. It is simply beautiful and is the epitome of minimalism of a usually somewhat complex domestic appliance. Most disappointing is the fact that the Hot Bertaa is a tried-and-tested failure as a user-friendly functioning unit. No Dreyfuss influence here" The magazine *Design* put Hot Bertaa to the test of day-to-day use: Ian Renwick, marketing director for Habitat, says:

> I liked it from an aesthetic point of view. But it would not fit under my tap, you can't tell when it's full, and when it boiled. I couldn't pick it up without steam coming out or without holding it with a cloth. There's no noise to tell you it has boiled.

One disgruntled guinea-pig, Michael Cunningham, freelance translator, also spent a week with Bertaa. He had this to say: "It's pouring performance was very disappointing; I thought a beautifully designed thing like this would pour well, but it sputtered".

Andrew Michel, owner of a cosmetics firm, and Penny Burton, actress, say:

> Visually it was very unusual, but we preferred the Graves kettle . . . we found it very impractical. It's very heavy and the filling process is awkward. And as a pourer it was atrocious, it doesn't have one smooth stream, it spat.
> (Extracts from *Design Magazine* Jan. 1993)

Here we see, as with some of the unnecessary styling of automobiles and gadgets of the 1930s, this usually enticing commodity favours the form rather than the function. Yet it is still a marketable product, mostly as a novelty; those brave Bertaa buyers must be of the breed who believe that beauty knows no pain. Starck himself emerges unruffled by criticism, commenting:

> I don't work with Alessi. I work with Alberto Alessi. I don't work with companies. I work with people. I'm only interested in experimenting with the projects and the result is surely secondary. Generally when I work on a project, I get interested in everything except for the object itself, intuition evolves unexpectedly through work that seems to be detached and parallel to my subconscious. Above all I want my projects to show emotion. In fact, I believe that one of our responsibilities is to be able to offer a small piece of poetry of a different moment through an emotion.
> (Alessi, 1994, p. 104)

If we examine Starck's other streamline design, the Max le Chinois, colander, we can only be relieved and glad to find that the form and the function of this piece are equal . Heals, the household good store in London, widely advertises this kitchenware in underground train-tube stations, as an evolved relative of the Zeppelin (Fig. 3.5). It is strong, large, durable, great fun to look at. It is also a best-seller and as yet has not failed to please the consumer.

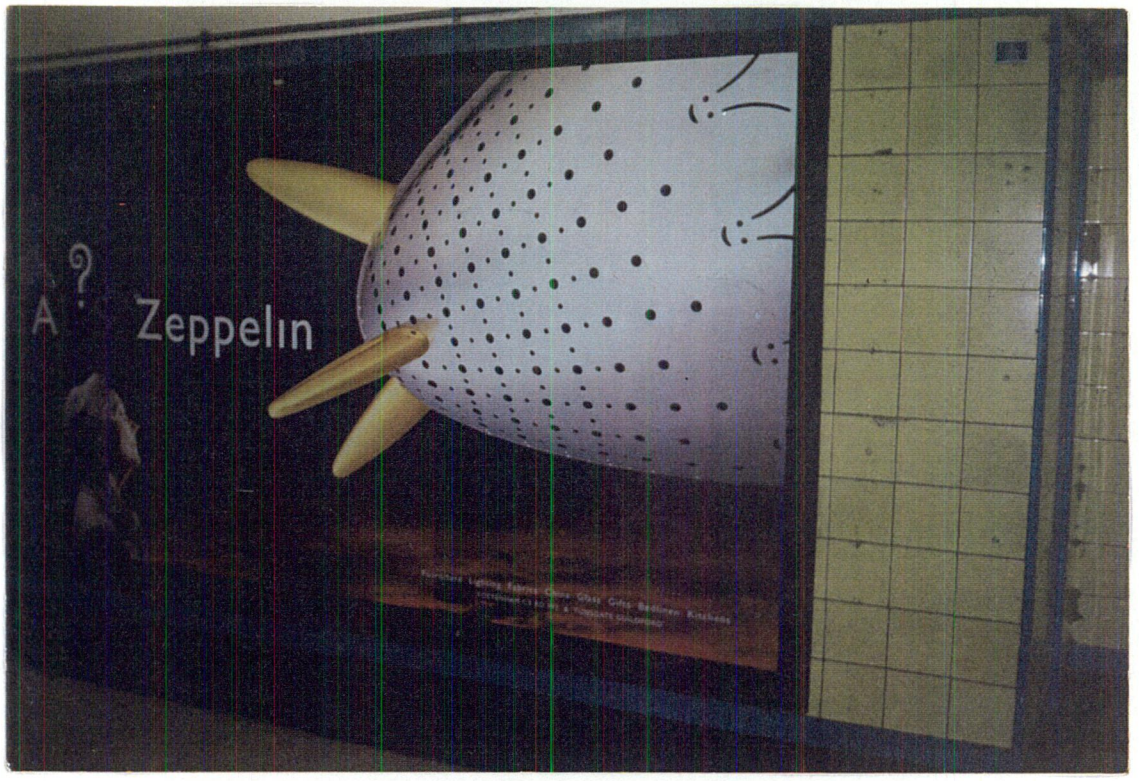


Fig. 3.5 Advertisement in London Underground Stations

Stack's priority to please people with his work visually and emotionally is reminiscent of the methods used by Bel Geddes and Loewy, as they put more emphasis on the styling aspect rather than the functional.

CONCLUSION

Like the very designs I have described, I must now attempt to give this work something of the seamlessness or continuity they contain.

Streamlining in this century has been celebrated, manipulated, exaggerated, rebelled against and has again emerged as though it were a new discovery. Yet this form, which is synonymous with nature, has been latent throughout the revolutions in design. Perhaps this revival of streamlining has come about because it is a simple non-threatening, safe and user-friendly styling which says to the people: future.

With the 1990s philosophy of returning to nature and discarding unnecessary trappings, the streamform stands out as the embodiment of all that is perfect.

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