

LEATHER

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INTRODUCTION.

Having met a Director of a well known Scottish leather garment manufacturer I became very interested in the wide variety of skins used and imported from countries all over the world including South Africa, Canada, South America and Sweden. I was also fascinated on hearing of the vast amount of preparing and processing involved in the curing and tanning of the skins and the various steps taken to convert the original skins into fashion garments.

I felt that it would be both an interesting and rewarding subject for my thesis. Having shown interest and enthusiasm in the subject to such a great extent, I have been offered an opportunity to work with this Scottish firm.

My thesis covers such subjects as:-

1. The History of leather manufacturing.
2. Types of leather.
3. Early manufacturing techniques.
4. Development of tanning methods.
5. Modern leather manufacturing.
6. Leather used in clothing.
7. Italian and Irish designers in leather.
8. Accessories made of leather.

It was primitive man whose groping mind first discovered that a pouch or bag could be fashioned from a skin or hide, that the head of his hunting arrow could be bound to the shaft by a thong and that his naked body could be protected from the elements by the skins of the animals he hunted.

Thousands of years may have passed before the next significant step was taken and the first skin tanned, but that historic date will never be known, because, when human history began, it did not record the identity of the individual or the place of the first tanning operation.

It is known, however, that the art of tanning and leatherwork was practised long before the Christian era. Evidence shows that five thousand years or more before Christ it had reached a remarkable standard of perfection in the highly advanced cultural societies of Babylon, Egypt, and ancient India and China. It is also known that in those days, individual craftsmen, because of their skill and technical knowledge, held a special status in their community entitling them to various privileges.

Some men specialised in working with different hides and skins while others worked fashioning various leather goods such as shoes, sandals and harness. It was, in fact, this individual specialisation which led to the division in the industry of 'heavy' and 'light' work.

With the advent of the Christian Era, a new phase in the leather arts and crafts developed. Since documentary evidence of pre-Christian times is scarce, the few remaining articles which survive, are insufficient to serve as a standard of comparison for what was to follow, but the

available examples are characterised by the remarkable degree of technique and skill which contributed to their making.

From the Middle Ages and onwards many unusual specimens of leather craftsmanship have been preserved for posterity and may be seen in museums around the world.

From these exhibits it is possible to obtain an insight into the intriguing story of the important role leather has played in influencing and moulding the cultural development of civilisation.

Leather has been used to satisfy almost every human need. Clothes, vessels and containers, shields and armour, slings and catapults, were all made from hides and skins. The literature of our ancestors was written on parchment and it was on similarly prepared pig and sheep skins that they painted the exquisite illuminations which are the illustrative documents of life four hundred years ago. Ornamental creations such as the bindings of fine books are a rich reminder of the creative uses of leather years ago.

In the years before Christ, leather was used as a form of armour because in its simplest form it is indistinguishable from ordinary clothing. Coats made from five to seven layers of rhinoceros skin were worn in China in the eleventh century. B.C. Similar armour of ox hide was used by the Mongols in the thirteenth century A.D. The Shoshoni Indians of North America wore jackets of several layers of hide glued or sewn together and they also had leather horse armour. The Aztec chiefs wore, as part of their regalia, jackets of jaguar skin. In the sixteenth century the Europeans wore coats of stout buff leather under their plate armour. The leather sleeves retained after plate arms were abandoned, were sufficiently sturdy to deflect a sword cut, and buff leather was used for the cuffs of cavalry gauntlets until the nineteenth century. Leather has also been used widely as a base for other defences.

EARLY USES OF LEATHER.

Early uses of leather may be grouped as follows:-

1. APPAREL.

Trousers, shirts, footwear, gloves, headgear and belts.

2. CONTAINERS AND HOLDERS.

Wine and water casks, bags, pouches, luggage, tents, sheaths for knives, scissors and swords.

3. TRANSPORT AND TRACTION.

Chariots, whips, wagon covers, boats, saddles, bridles, and harness.

4. RECREATION.

Musical instruments, and puppets.

5. COMMUNICATION.

Parchment and vellum for writing and drums for transmitting messages.

6. WAR NEEDS.

Slings, bows, quivers, shields, helmets, leg guards, ankle leather, armour, military clothing and powder horns.

7. INTERIOR USES.

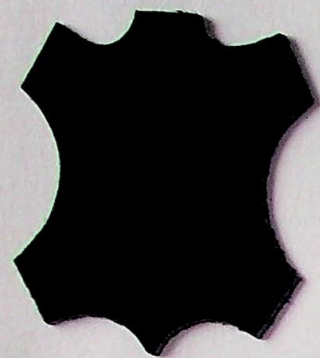
Beds, cushions, upholstery, moulded and ornamental articles, book-binding, tapestries and paintings.

TYPES OF LEATHER.

There are many varieties of leather throughout the world and these find uses in hundreds of applications.

CATTLE GROUP.

This group includes ox, cow, and bull hides. These supply leather for boot and shoe soles, heels, inner soles, uppers, saddles, horse collars,



A fully chromed calf skin.



A semi chromed calf skin



A sveded calf skin



Sheepskin.



A Persian sheepskin which grows hair

travelling bags, suitcases, straps and upholstery.

Handbags, belts, gloves and garments.

Industrial leather for aprons, buffing wheels, textile carders and combs, footballs and other goods.

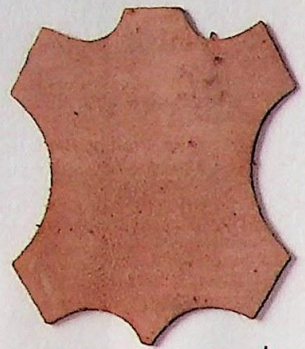
CALF SKIN.

Calf skin is a close fibred and tough leather produced from animals about nine months old, though larger ones may be up to twelve months old. It has a fine grain and smooth surface, is supple and most durable. A large percentage of skins produced are chromes (a chemical process used in making the leather soft and pliable). It is easily recognisable by its grey-blue-green tint interior unless it has been heavily dyed, and is used for upper leather in the shoe trade.

Calf skins are also used in the making of gloves and garments, fancy leather goods and handbags, and hat sweatbands.

SHEEPSKIN.

Sheepskin indicates the unsplit skin and does not have a very attractive grain. In quality it is inferior to that of the goat and for that reason it is frequently embossed with the grain of another animal and is called a grained sheep. Roan and Pasil are names also applied to full sheep. Roan is a specially good tannage. Basil is unprinted and smooth grained. Sheep reared in the temperate climates grow wool, and those from the sub-tropics grow hair. Generally, the better the quality of the wool, the poorer the quality of the leather. Leather made from the hair sheep is called Persian or cabrettas and is superior in quality to the wool sheep and its grain is much more attractive. It makes good suedes and clothing leathers, shoes, slippers, coats and chamois.



A goatskin used for lining.



Glaced kid leather.



Sveded kid.

Suede is not another leather but a type of finish. It is any leather which has had its flesh side buffed up to a fine nap. Most leathers are treated in this way, the few exceptions being those with exceptionally interesting grains. Sheep suede is used for bag linings and persian (cabrettas) suede for clothing. Suedes which are too thick in the spine are reduced to uniform substance by splitting, called degrading. The grain split is called a "skiver". When the grain side of a leather is buffed as a finish, the word 'velvet' is used to describe it.

Skiver is the grain split of sheep and is generally split before tanning. Because of the paper thickness to which skivers are sometimes split and of the variety of grains with which they are embossed, it is sometimes thought that skiver is not leather. There is a variety of qualities of skiver. Some have a substance like small and thin sheepskins, while others are so thin it is possible to see through the hair follicles, none the less they are all classed as leather. When sheepskins are split before tanning the flesh split is generally oil dressed and converted into chamois leather. The flesh side and a split side is clearly visible here.

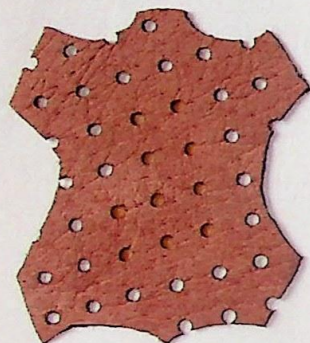
GOAT AND KID GROUP.

The skins are mainly used in the making of shoe-uppers, handbags, gloves and garments.

Morocco leather is the skin of a goat which has been vegetable tanned and boarded. Boarded leather is a raised grain leather produced by folding the skin in half, grain to grain, and firmly drawing a cork or rubber-faced board across the fold and forming a series of creases across the skin. Hand grained moroccos are used mostly for leather goods and the soft grained type for book binding and box covering.



Sveded Pig.



leather pig skin.

Skin sizes vary from about $3\frac{1}{2}$ sq.ft., which would have a fine grain, to 10 or 12sq.ft., which would be coarse. In substance the smaller skins would be 0.6 to 0.8mm., and larger from 1 to 1.25mm. Moroccos and sheepskins are of similar shape. See diagram.

EQUINE GROUP.

Included in this group is horse, colt, ass, mule and zebra hides used for shoes, gloves, handbags, belts and sporting equipment.

BUFFALO GROUP.

Domestic, land and water buffalo provide leather for shoe soles and uppers, buffing wheels, luggage and handbags.

PIG GROUP.

Pigskin is tanned from the domestic pig and a considerable number of these skins come from Scotland. The hair follicles of pigskin penetrate the whole substance of the skin and are clustered in threes.

Sizes of pigskins vary but few small skins are available. The average size is about 15sq.ft. An exceptionally large one could be about twice that size. 0.6mm., is wallet weight, 0.75 to 0.8mm., for handbags, and 1 to 1.5mm., for heavier cut-edge work - the last weight would be suitable for folios and document cases.

AQUATIC GROUP.

Animals whose main habitat is water include seal and walrus, from whose skin luggage and fancy leather goods are made. Luggage and shoe uppers are made from shark, whale, dolphin and porpoise.

MISCELLANEOUS.

The Ostrich supplies leather manufacturers with their main source of skins

from bird life. Its characteristic grain, with its heavy quill marks, covers only about half the skin and makes the design and careful planning essential if the maximum use of the skin is to be obtained. Ostrich is normally finished in tan colour and averages about 12sq.ft. Reptile skins are produced in great variety. Lizard, crocodile, alligator, and python skins are mostly vegetable tanned and finished in a selection of colours. Water snakes and small python make excellent belts. Lizard, toad and frog skins, though small, are used for some fancy goods. Their granulated grain has a beauty with which few other leathers can compare. Small reptiles are measured in centimetres across the widest section of the body for costing purposes.

A large proportion of skin for leather is imported into Ireland and the United Kingdom from the large meat producing countries and skins such as goat from India and reptile from tropical and sub-tropical areas. The leathers manufactured from the fully grown bovine animals are called hides and those of smaller animals are called skins.

Hides used in leather goods manufacture are sold either as whole or half hides, or are cut before tanning into butts, shoulders and bellies. The butt produces the best leather, the shoulders are course grained and cheaper, and the bellies loose and thinner. Hides and skins are measured in square feet for their superficial area and their substance is measured in millimetres. The term 'thickness' is not used. Hide substance varies from about 5mm. down to 0.75mm.

All leathers can be split through in sections to give two or more pieces of equal area.



Splitting pelts at the fellmongery of G. V. Russell & Son at Hitchin.



Shrunken grain skin.



Corrected grain skin.



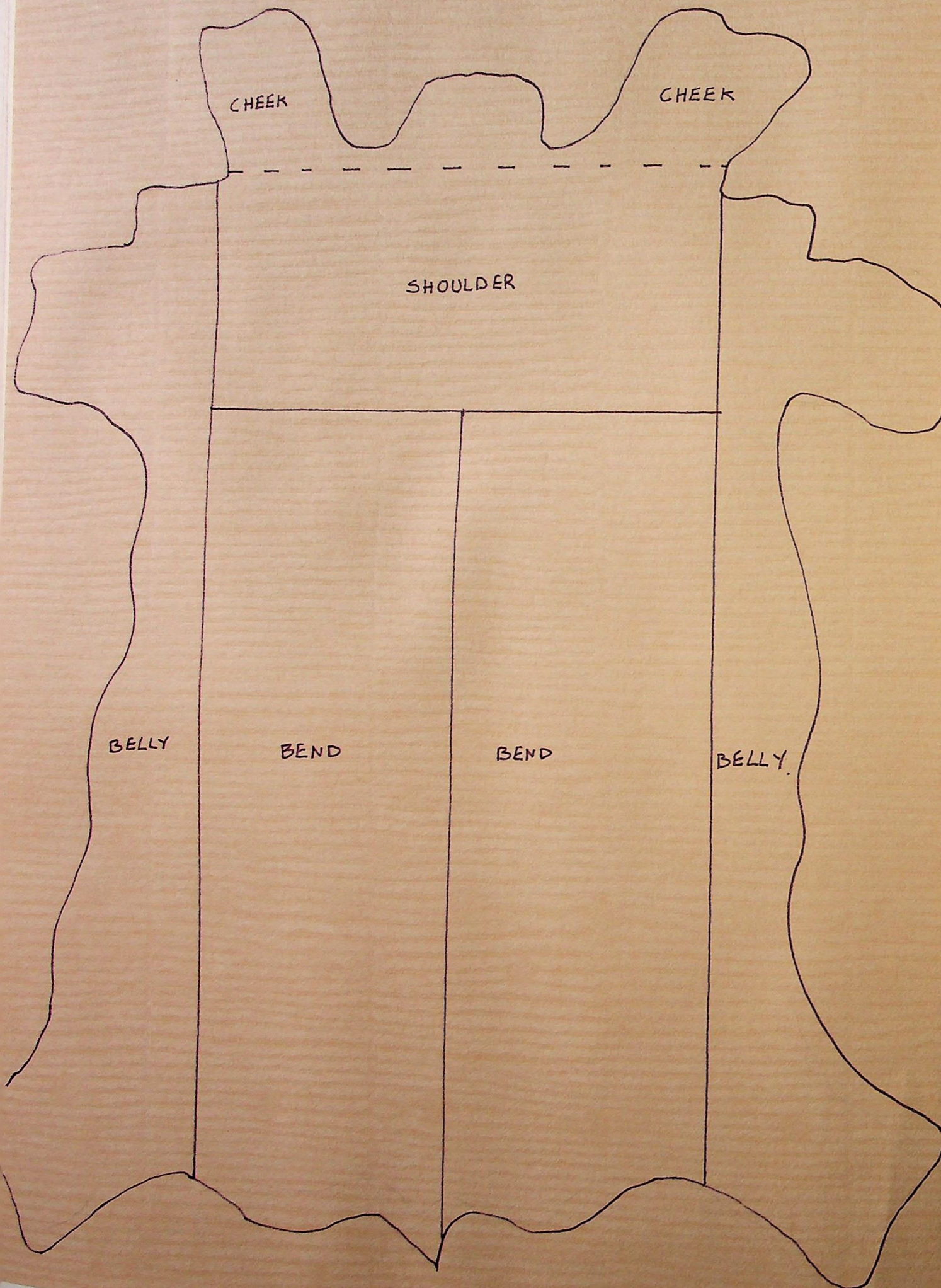
A printed skin.

The surface containing the hair follicles, or the outside of the skin, is called the grain side, and that nearest the meat or inside, is the flesh side. It is the grain which provides leather with one of its most individual qualities, each having a character of its own, some more beautiful than others, and no two skins or parts, being identical. Although this does pose problems when cutting out leather garments as each skin has to be traced and cut out separately, as block cutting is impossible, the extra time spent is very worthwhile.

There is one great difference between a natural leather surface and that produced by the mechanical method of printing or embossing. When a hide is split the grain layer is known as a split hide and this grain would be of uniform substance throughout the natural leather. The lower layers are known as hide splits, flesh splits or middle splits.

There are many methods of finishing the grain side of leather. A stain or dye reveals its beauty. It also shows its natural growth marks, some less pleasing than others, and its faults. These faults such as open warble holes, brandings and horn raking can disfigure the best sections of hide. With these hides it is the practice to pigment the surface. This solid colouring matter fills the pores of the leather, giving the surface a uniformity resembling lino or plastic. I have a preference for leather with its natural grain rather than to-days trend which makes leather look more like a smooth plastic.

THE DIVISION OF A HIDE.



THE DIVISION OF A HIDE.

The division of the hide, before tanning, is divided into two bends, two bellies and a shoulder, called rounding the hide. Each section is of approximate equal size about 10sq.ft. SEE DIAGRAM.

Vegetable tanned leather.



DEVELOPMENT OF TANNING METHODS.

VEGETABLE TANNAGE.

Vegetable tannage is quite ancient. The Hebrews used oak-bark, the Egyptians used Babul pods (a type of tree) in 400 B.C., and the Arabs used barks and roots. A wide variety of vegetable tans are used today. Synthetic tannins were introduced in 1911.

In the classical method of vegetable tannage the skins are placed in a pit or vat in alternating layers with ground vegetable tanbark, pod, leaf, wood or root. Water is poured over this and the skins are left here for 6 to 12 months. Even today the 'sandwich' method of tanning is employed with certain modifications.

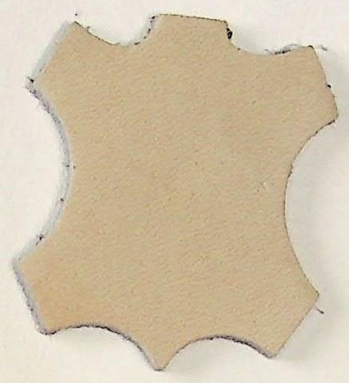
Another method of tanning is called 'bag' or 'bottle' tanning. Here the skin is used as a bag and is filled with tanning material and water and tied to a pole. The water drains from the material inside the bag and the tanning diffuses through the pelt completing the tanning in 3 to 6 days.

Long before the birth of Christ the Chinese cured skin with mud and alum. The use of alum led to tawing - the first mineral tannage. (Tawing is the method used to convert skin into white leather). There is evidence of the use of this tawed leather in Assyria, Babylonia, Phoenicia and India and later by the Greeks.

Two or more processes were sometimes combined e.g. alum and oil, alum and gallnuts or sumae leaf producing soft nappa leathers. By the early 11th century A.D. three basic processes were used.

1. Oil
2. Vegetable
3. Alum

chrome tanned leather



chrome re-tanned leather.





A typical shot taken at a large tannery in Kent. As in the majority of these establishments, there is little evidence of building improvement, due largely to the relatively unchanged methods employed in the process.



An example of hand-fleshing. Despite the introduction of mechanical fleshing, the hand method will always be superior because of the highly individual characteristics of each hide.

CHEMICAL TANNAGE

Towards the end of the 19th century a significant change took place. In 1858 the value of basic chrome salt for tanning was discovered. In 1884 a two bath tanning process was patented and in 1893 single bath chrome tannage was introduced. Chrome tanning is by far the principal method used for light leathers today.

Since the early days leather was made more decorative and adaptable by finishing. In the Middle Ages, vegetable dyes and earth pigments provided the various colours. Leather was frizzed (curled and tufted) to make nap which made Morocco leather.

The earliest tanning tool was flint which was used to scrape off the flesh from the skin. Later a sharp knife was used for this purpose. Such hand-tools were improved constantly. Machines were introduced in the early 19th century - a splitting machine in 1809 and a fleshing and dehairing machine in 1840. Today most operations are carried out by machines, though some sections of the leather industry still defies automation because of the irregular size, thickness and quality of hides handled. The scientific study of leather processing only started at the close of the 18th century. With progress in science, newer methods, materials and machines have made possible a greater variety of improved leathers.

MODERN LEATHER MANUFACTURING

RAW MATERIAL

Skins from cattle, buffalo, sheep, goats and pigs are used most often, although any hide can be tanned into leather. For instance, skins from horses, camels, crocodiles, snakes and lizards. Skins of animals such as elephant, zebra, leopard and tiger are quite valuable. Animal skins vary in size, shape, texture, thickness and quality. Quality depends on how and where the animal was reared, whether it died of old age or was slaughtered. The value of the skin is greatly reduced if it has been damaged in any way. The most common defects one finds on live animals are caused by parasites and diseases, brand marks and barbed wire scratches. Damage can also be caused by poor stripping of the skin, bad handling and storage. The best method of storage is over a horse similar to the type used in a gymnasium. Unfortunately, this is seldom possible nowadays and the skins are tied in bundles. When this is so skins should be rolled with the necks to the centre of the roll and with the grain on the outside. This is particularly important in the case of leathers with a smooth grain. If they are packed tightly with the grain innermost it will get crushed and have a slightly boarded appearance.

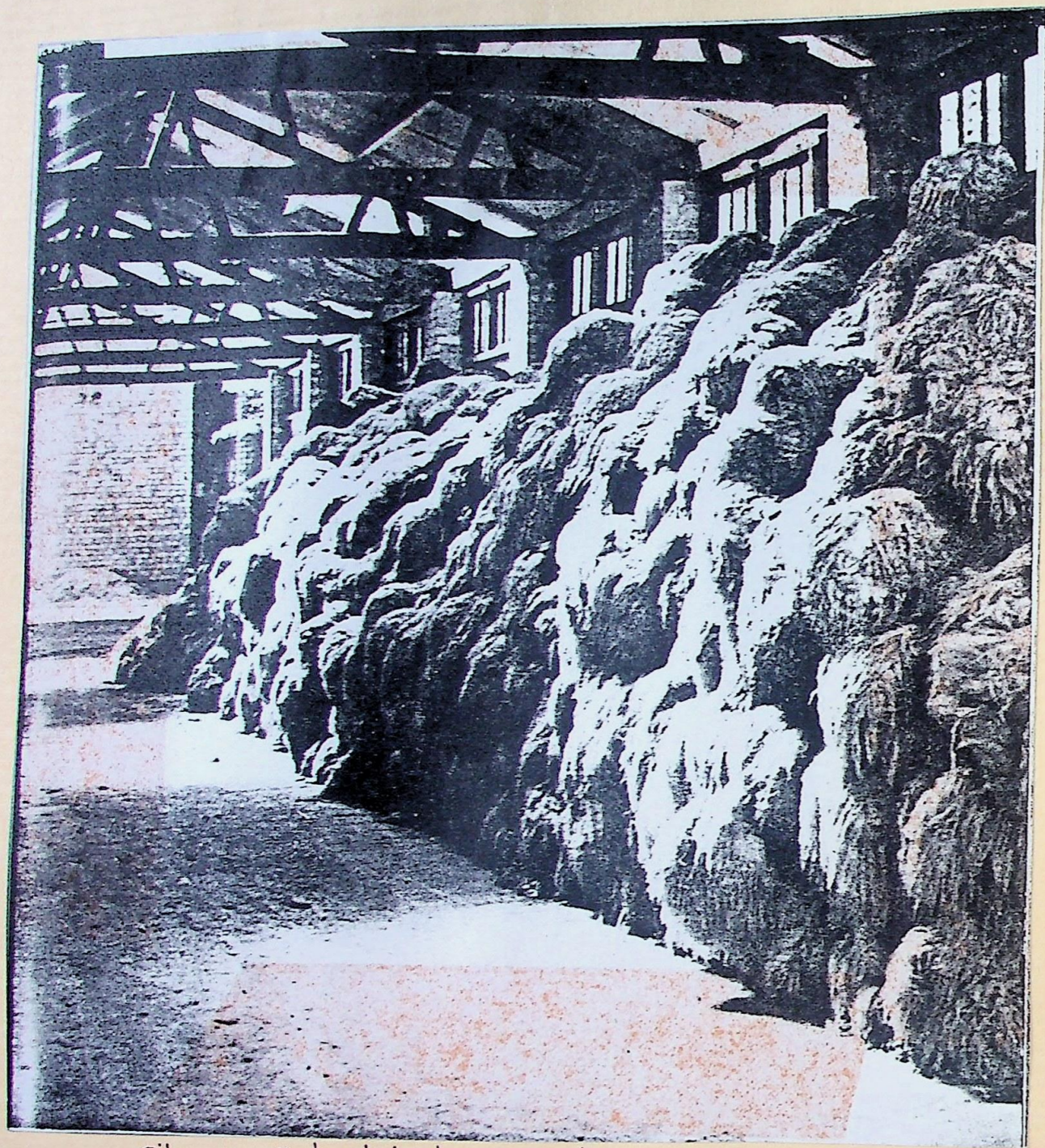
THE CHARACTERICS OF THE ANIMAL SKIN.

Mammalian hides and skins are devided into three layers distinct in structure and origin.

- These are:
1. A thin outer layer of cells called the epidermis.
 2. A thick layer called corium, or dermis.
 3. Flesh layer.

In tanning the epidermis and flesh layers are removed and the corium is tanned into leather. One layer of the corium containing the grain membrane and hyaline layer (transparent layer), together with the arrangement of hair pores, give a distinct grain surface pattern for each species of animal. The other corium layer is composed of large collagen fibrous (collagen is an insoluble fibrous protein which converts to gelatine and glue when heated with water) bundles interwoven at an angle in a three dimensional 'network'.

Fresh hide is composed of 60 to 70 per cent water by weight. Of the solid matter, 90 to 95 per cent is made up of proteins.



Piles of salted skins before undergoing treatment in the
fellmongery.



Poling the skin after the epidermic layer has been scoblised by liming.

BASIC STEPS IN LEATHER MAKING.

Leather is made in 3 steps;

1. Removal of undesirable constituents such as hair, flesh, and fat leaving a concentrated network of high-protein collagen fibres, greatly softened and interspaced with water.
2. Tanning, which is the treating of the hide with an agent called tannin, which displaces the water and then combines with, and coats, the collagen fibres. Tanning increases resistance to heat, hydrolysis (decomposition caused by water), and micro-organisms.
3. Finishing to obtain proper thickness, moisture, lubrication and aesthetic appeal. Leather is essentially animal skin protein combined with tannins, small amounts of oils, dyes, finishes, and moisture.

PREPARATION OF HIDES FOR TANNING.

During preparation and shipping, protection against excessive heat, humidity, rain, and pests, are essential. Raw hides are cured or preserved to prevent decay which begins within hours of slaughter. Curing consists of dehydration without disturbing the skin structure. Common methods are simple:- air-drying, salting, which includes treating the hide with a saturated solution, rubbing the flesh side with salt wet-salted) and further drying, and pickling the pelt with acid and salt. Preservatives are also added to improve curing efficiency. Such methods as cold storage (5 degrees centigrade) freeze drying and vacuum drying are very costly.

DEHAIRING.

Wool skins are dehaired by the old method of sweating them in a hot moist room or keeping them over-night in a fermented bath. In the sweating process, the hide is allowed to rot partially and the hairs fall out easily.



fleshing the pelts.

Liming, in which soaked hides are treated with lime for one to two weeks to dehair, is still an old standard practice. By addition of such agents as sodium sulphate, dehairing time is reduced to a few hours. For dehairing sheepskins, lime sulphide paste is applied to the flesh side to save the wool, which is ready in three to twelve hours. Liming not only removes hair, fats and soluble proteins but also swells and conditions fibre structure.

DELIMING AND BATING.

A hide with its hair and flesh removed is known as a pelt. Deliming is done partly or fully to remove excess alkali and is accomplished by treating with such mild acids as boric, acetic, lactic or such acid salts as ammonium chloride or sulphate. The material is then bated to remove certain proteins and to produce a clean white pelt.

Bating is essential for special types of hides such as those for glove making and glace kid leathers.

MODERN TANNERY METHODS AND MACHINERY.

VEGETABLE TANNAGE.

Vegetable tannage is still an important tanning method. Delimed pelts are treated with infusions of vegetable tanstuffs resulting in firm, full, solid leather. Almost every fibrous plant contains tannins. Some examples are:

Wood (chestnut 6 - 8 per cent)

Bark (mimosa or wattle 38 - 40 per cent).

Tanning material is ground, mixed with water and concentrated into solid or powdered extract. Sometimes it is bleached to yield more soluble and light coloured extracts.



Hanging hides after immersion in the tanning pits.

DYEING THE LEATHER.

After excess water and wrinkles are removed from tanned leather, it is shaved or split into uniform thickness and dyed.

The dyes can be applied to the leather by a variety of methods: -

By brushing the leather on one side.

Tray Dyeing.

Drum Dyeing.

Spray Dyeing.

Solvent Dyeing.

Vacuum Dyeing, and many others.

Fancy colouring is accomplished either by dabbing dye on with a sponge, sprinkling it onto a folded skin, spraying, padding through stencils, or tie-dyeing.

The evenness, penetration, the richness of the shade of colour and the fastness to light, dry cleaning and rubbing, are all affected by the acidity, temperature, the type of leather, the dye concentration and the special additives.

THE LUBRICATION OF THE SKIN.

Leather will dry hard, unless lubricated. The dyed leathers are treated with oils and fats to insure

1. Lubrication.

2. Softness.

3. Strength.

4. Waterproofing.

Oils and fats are blended in either their natural condition or as an emulsion or solvent to the drum.

The vegetable tanned leathers are oiled by swabbing peanut oil into the grained surface. The leather used for re-soling and re-heeling shoes

is treated with a mixture of vegetable oil, epsom salts, mineral oil, and glucose.

the oil keeps the loose tanning material from rising to the grain during drying, and produces supple light coloured leather. The leather from which belts are made "beltleather", is treated by hand or in a heated drum with a mixture of cod oil, tallow, wool grease, and parafin wax.

Light leathers which are usually used for garments are fat-liquored in a drum with an oil and water emulsion. The uniform penetration of the leather by fat-liquor gives a soft, stretchy, loose-grained leather. If on the other hand, the fat-liquor is only deposited on the surface, the leather will be very resilient and tight.

Raw oils mixed with emulsifiers give the right degree of softness and pliability to suede. Raw oils mixed with soap are commonly used, such as:-

Castor, palm and groundnut.

Animal oils - tallow.

Marine oils - cod and sardine.

DRYING AND FINISHING.

After the process of dyeing and fat-liquoring, the leather contains 45 - 60 per cent water and is dried to about 14 per cent. Moisture, chemical and physical reactions have taken place.

When the leather dries to a paler shade, loose tannins, dyes, and oils spread and penetrate uniformly in being fixed. However, uneven drying causes the spreading of unfixed tannin dye and oil to the surface and this results in dark stains in certain areas. During the drying process leather tends to shrink, particularly when the water content

falls below 25 per cent and drying temperatures are high. Vegetable tanned leathers tend to shrink less than others.

DIFFERENT DRYING TECHNIQUES.

The most widely used drying techniques are as follows.

1. AIR DRYING.

Skins are hung from hooks or on sticks or are placed on horizontal racks and dried by the natural passage of air or with the help of overhead fans. Vegetable tanned leathers are air dried. The process is cheap and yields slow drying and gives a uniform, light coloured product, but productivity is slow.

2. TUNNEL DRYING.

These drying tunnels have a controlled temperature, humidity and with the air circulation provide an efficient drying service. Fresh dry, warm air meets the dry leather and subsequently moves towards wet leathers. The leathers may be hooked to a moving chain or held on moving toggle frames or plates.

3. DRYING UNDER TENSION.

These leathers are stretched out, nailed or tacked on wooden boards or stretched on a perforated metal frame by toggles or grip clips, and dried by either process 1. or 2.

4. PASTE DRYING.

In this method the leathers are pasted by the grain metal and then travel through the tunnel drier consisting of four to eight zones of controlled temperature and humidity. In three to six hours, the dry leather is stripped off.

5. VACUUM DRYING.

The leather is spread out, grain down, on a smooth polished metal plate, heated by a built-in thermostatically controlled heat exchanger,



an operative wheeling or facing chamois leather.



Rolling cow hides in an English tannery.

covered by an airtight hood. The air is then removed from under the hood. Drying to 14 per cent moisture is complete in ten minutes for vegetable tanned leather at 50 degrees centigrade and three minutes for chrome leather at 80 degrees centigrade. Vacuum driers are costly but operate independently of weather conditions, and productivity is high.

6. OTHERS.

dyed, seasoned, finished leathers are dried by moving through a tunnel heated by infra-red heaters. Radio frequency heating has the potential of removing water without heating the leather itself.

FINISHING.

The finishing technique involves mechanical and chemical treatments. The dried tanned leather is first trimmed, conditioned with damp saw-dust to obtain a uniform moisture content, and staked by hand over a steel blade or by a machine to stretch and soften it. Some leathers are impregnated with synthetic resins to improve their properties. Polyurethanes give the best scuff resistance.

The leather is further finished by coating the grain surface. A good coating adheres well to the leather surface and is elastic and resists:-

1. Abrasion and cracking.
2. Peeling and rubbing.
3. Light and heat.
4. Cold and moisture.

The finishes are applied by a hand-brush, pad or spray, or by means of a flow coater in which the leather passes through a curtain of finish. Automatic spraying is also used.

Water resistance is obtained by treating leather with silicones and waxes.

Glaze finishes may require further treatment by a glazing machine. Matt or resin finished leather is usually plated by passing it between polished heated cylinders. Sometimes it is embossed with artificial designs by a hydraulic press. Certain types of leathers are boarded by rolling the leather upon itself by hand or machine.

Sole leathers are bleached with an acid or a tannin, seasoned and rolled under pressure. Belting leathers are stuffed and stretched. Shoe upper leathers are impregnated, buffed, pigment finished, and top dressed with one or two coats of lacquer emulsion.

BY-PRODUCTS OF THE LEATHER INDUSTRY.

Rawhide trimmings are used in the manufacture of many products:-

edible gelatine,

fleshings for glue, oil, manure and animal fodder.

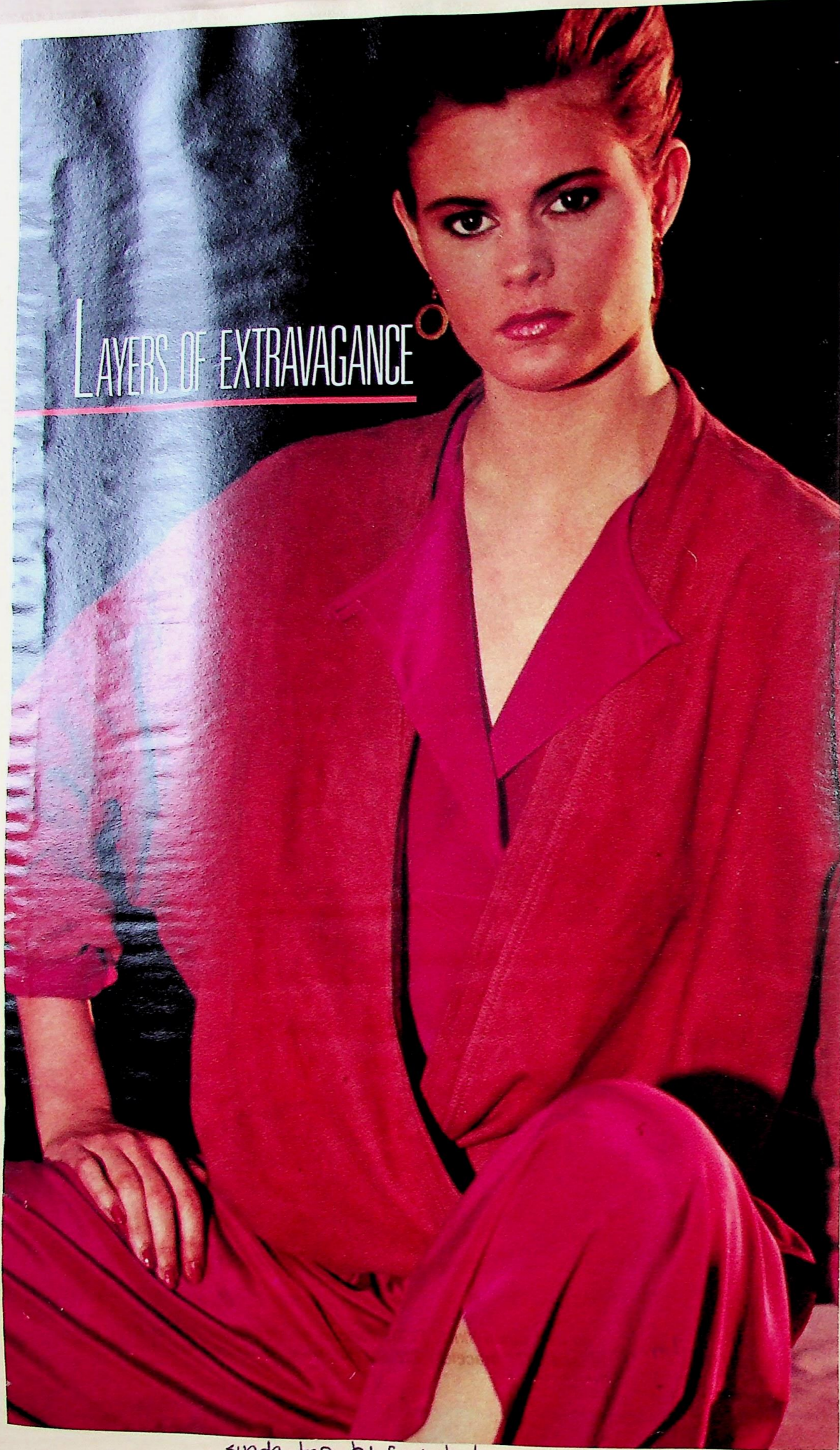
lime sludge for cement and road making.

leather trimmings and shavings for leather board and fertilizer.

the effluent water from the hides can be treated and used in agriculture.



Jacket by English leather importer Alma leathers.



LAYERS OF EXTRAVAGANCE

suede top by English designer Maxfield Parrish.

Calvin Klein



Calvin Klein's suede outfits.

LEATHER CLOTHING.

Men and women have worn animal skins since clothing was first created, but leather clothing was never considered high fashion - unless the fur was left on the skin.

Nowadays, however, leather and suede have been transformed into glamorous materials that can be used for any garment, from bikinis to eveningwear.

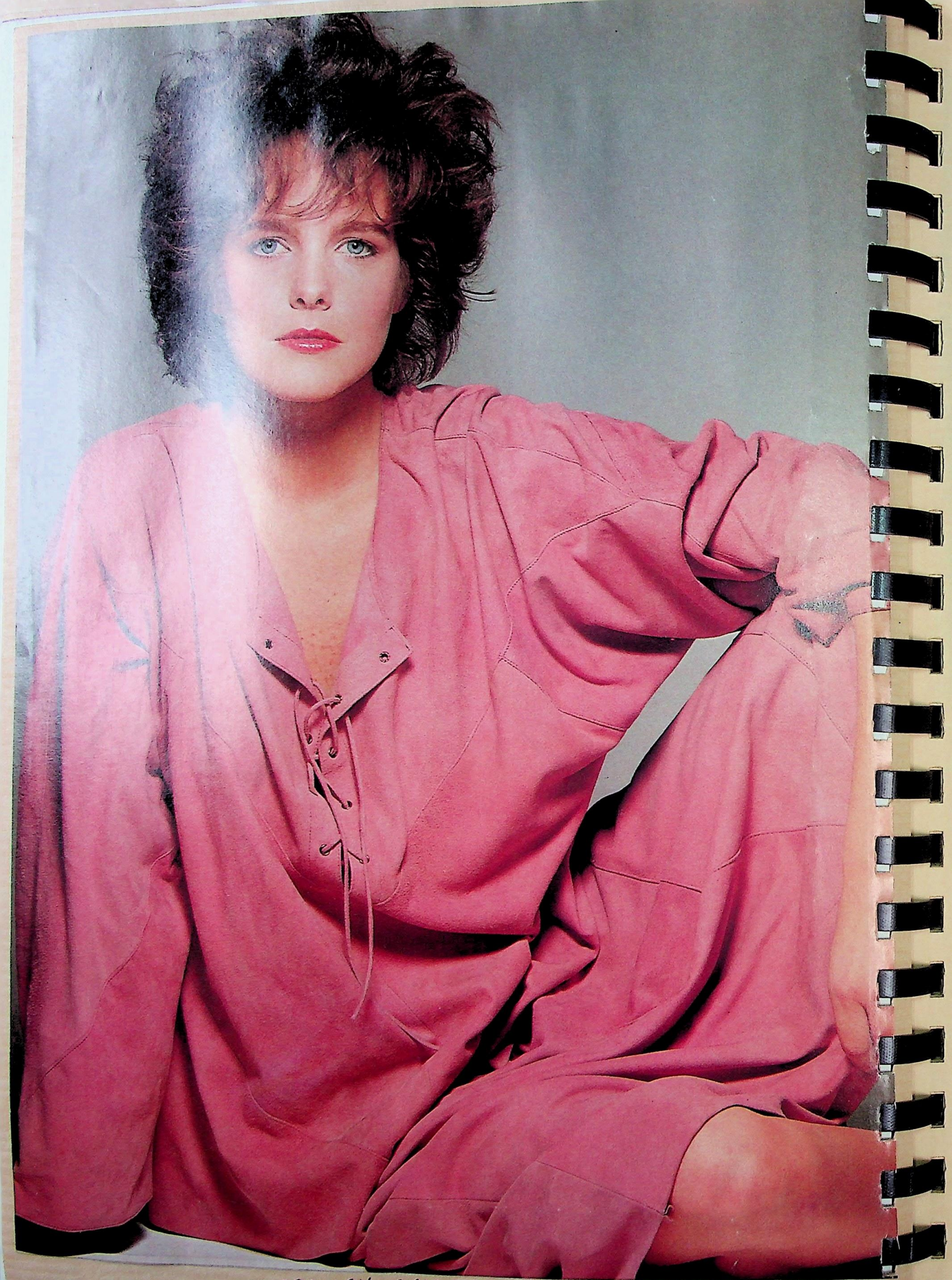
Thanks to the new techniques stiff bulky skins can be cut almost paper-thin and butter soft. As a result leather is becoming more popular all the time. American Vogue Editor-in-Chief Grace Mirabella said in 1982 "Suede is the fashion. It is the Star of the season".

Giorgio Armani, the Italian designer, who has been placing increasing emphasis on skins since he first used them in his 1976 collection, explains "Leather now has sex appeal". The difference between leather and fur is that fur is just a dead animal one carries around, while leather falls and folds on the body to become a second skin.

Designers, in fact, now put suede and leather in the same category as silk, cotton, linen and wool, calling it a 'fabric' and using it flexibly. I would quite agree with them on this point, Each piece of leather appears to have the character of the animal from which it originated compared with the uniformity of a roll of silk or linen.

Suede was first used in 1884 in Sweden in manufacturing gloves. The French called them "gants de Suede" - gloves of Sweden. The new ultra thin suedes and leathers 'breathe' more easily, they are as comfortable on a Summer evening as in Winter.

Calvin Klein, the leading user of leather in the United States, has increased the use of suede and leather for the past five years.



DRESSBY CALVIN KLEIN.



A Trio of Calvin Klein suede dresses.

"A beautiful something in suede", he says, "is more like a collector's item than a piece of clothing". In America Ralph Lauren and Anne Klein both use suede and leather extensively for knickers and culottes, skirts both mini and long, T-shirts and strapless tops.

One of the most successful designers in leather is New Yorker Carol Horn, whose comfortable, stylish clothes are priced at the low end of the scale. Her suede T-shirts sell for £100 Her most expensive entry is a ruffled suede dress for £150 "People are taking to leather", says Carol Horn, "because they are responding to something real, the way they respond to 100% wool!"

Giorgio Armani, part of whose Spring 1982 collection was composed of at least 15% of leather pieces, designed a series of jackets of all lengths. He said "colours will be intense and surprising. There will be Bermudas, vests, shirts, suede pullovers worked with inlays of different colours inspired by knitwear."

Leather lends itself to fine detailing. Giorgio Armani's created... for Italy's Mario Valentino print, stripe and weave leather to resurrect a rich Renaissance look.

Bill Bliss, the American designer, also uses a weave effect on some blouses, and Ralph Lauren has put ruffles on suede in delicate peasant blouses. Ralph Lauren says "feathery-light blouses which were once made of cotton can now be made in suede. It can mix with anything - silk, a sweater, tweeds, linen or cotton".

The new leather, made ideally from the African hair sheep, comes in a starburst of colours - fire engine red, hot and soft pink, vivid green, yellow, apricot, jade, purple and turquoise.

The thinness of the leather and the satin texture are due mainly to the

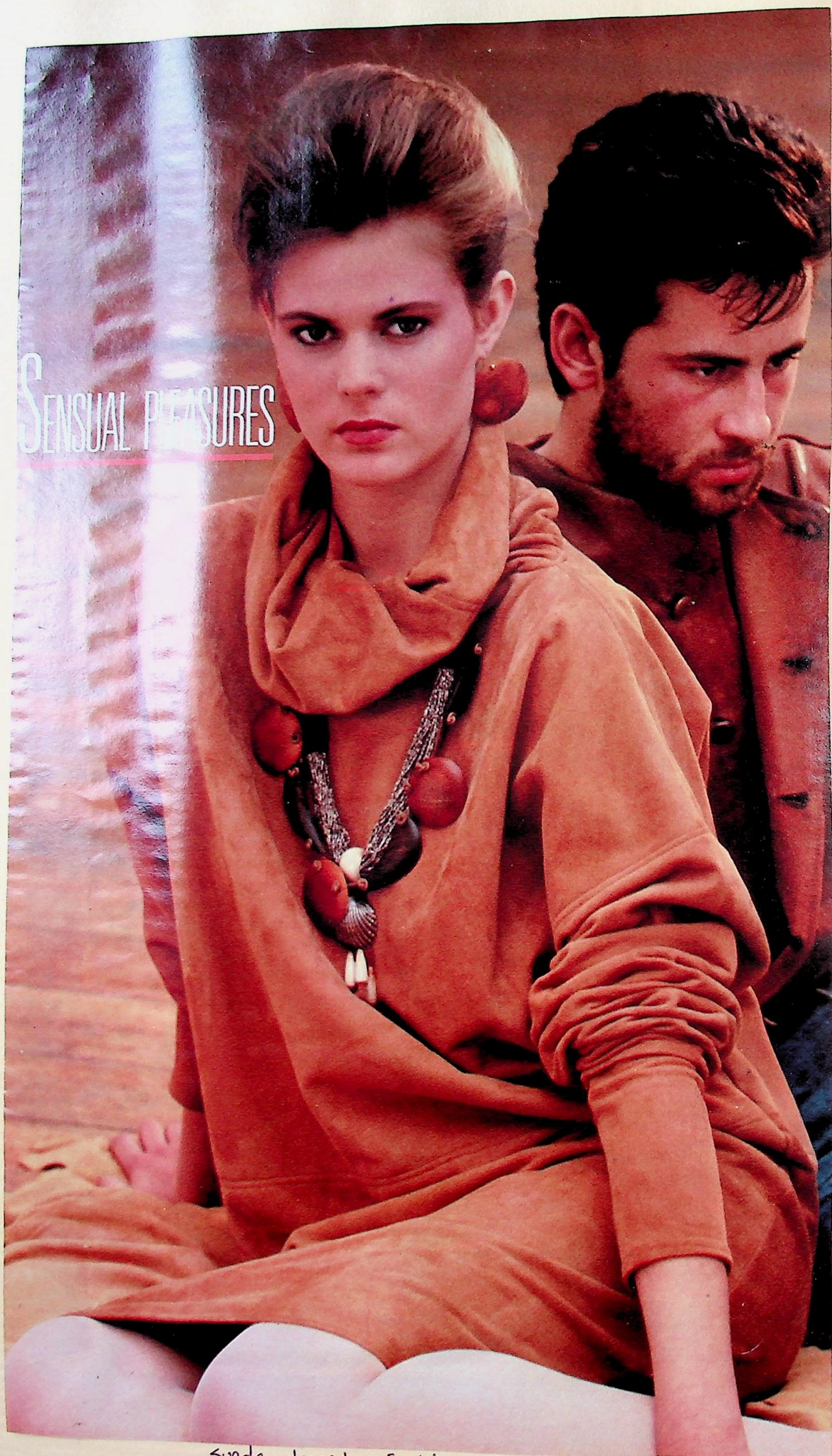


EFT. AFENDI blouse.
MIDDLE: A GEORGIO ARMANI TOP

ABOVE. ANNE KLEIN SEPERATE

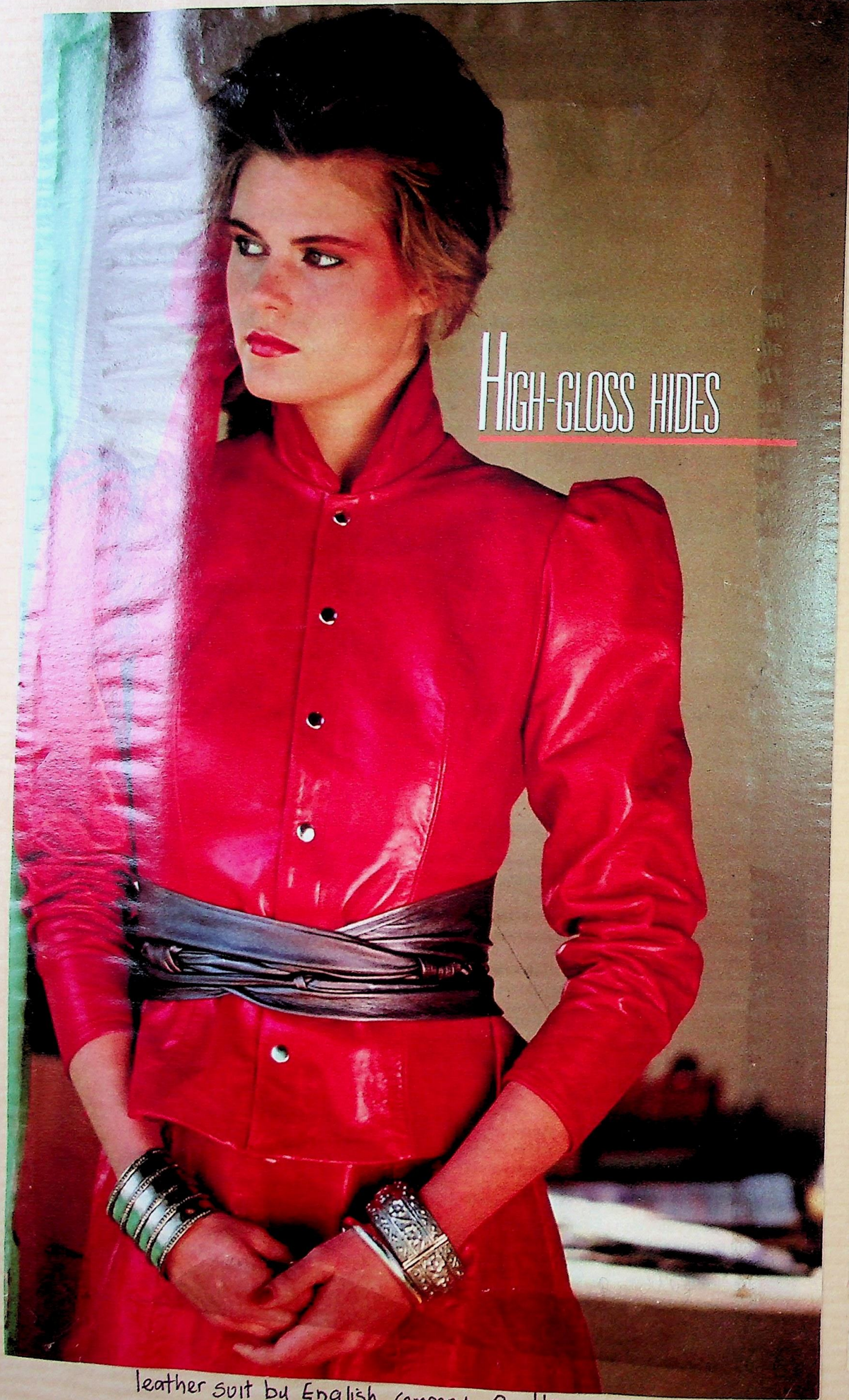


A Valentino striped suede top A Carol Horn dress.



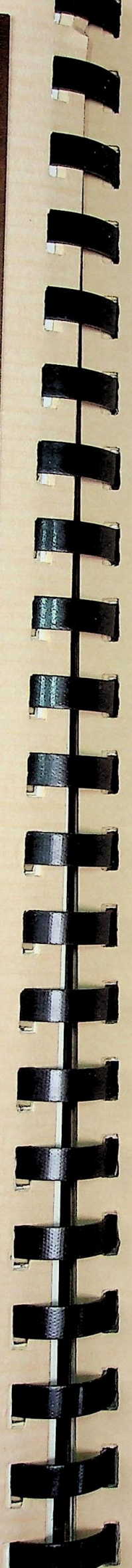
SENSUAL PLEASURES

suede dress by English Designer maxfield Parrish



HIGH-GLOSS HIDES

leather suit by English company Radley.



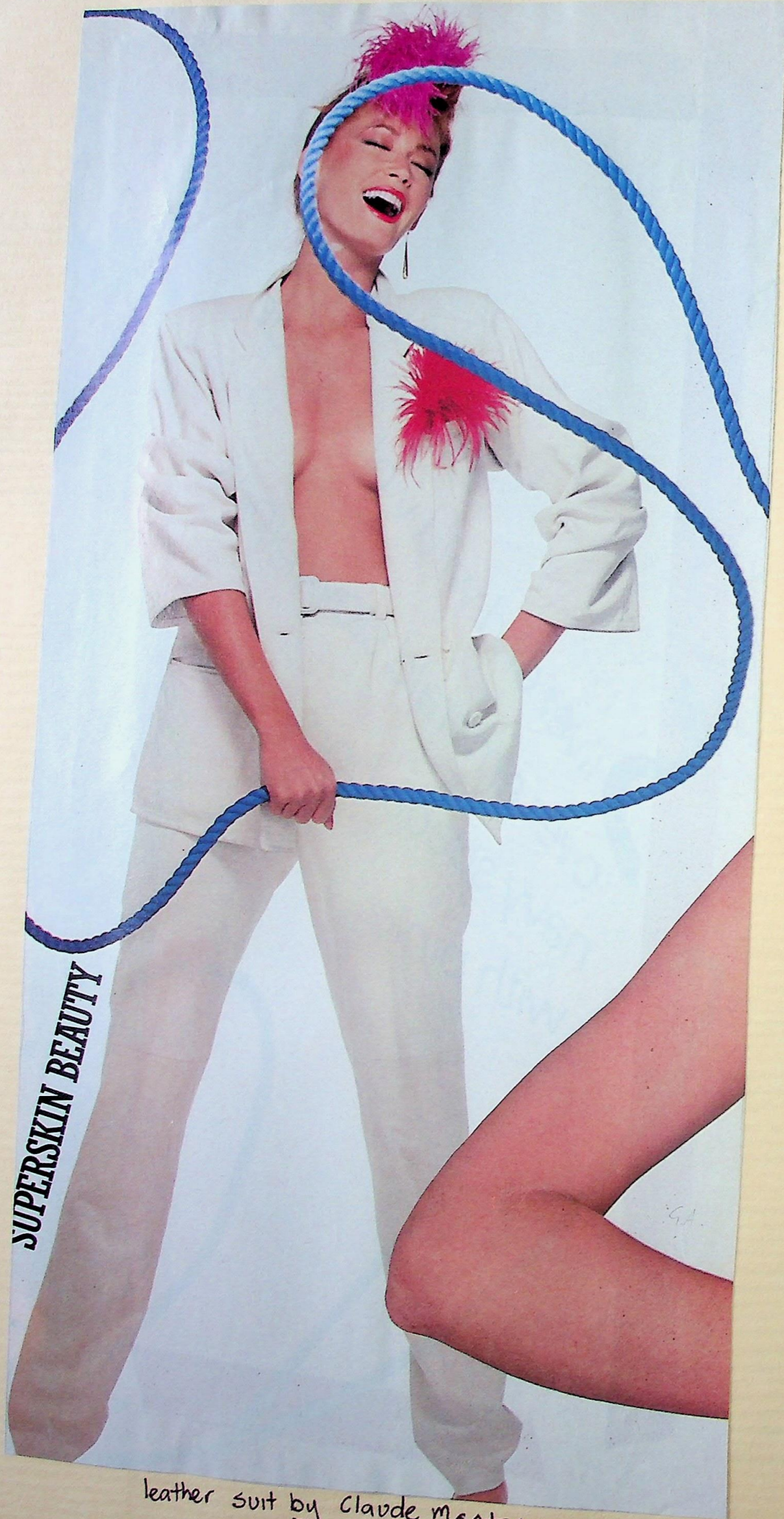
RASPBERRY PRINT JERSEY WITH LILAC SUEDE
AND A BRILLIANT PAIR OF LEGS



Suede coat by Jean Moir

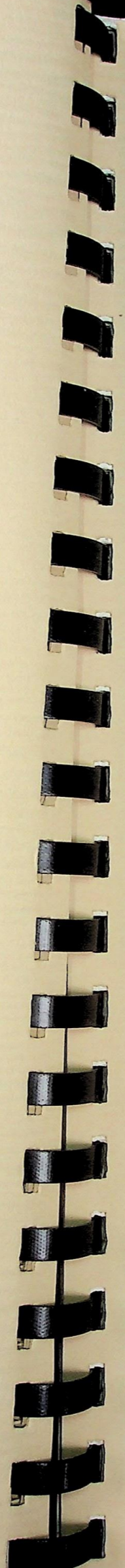


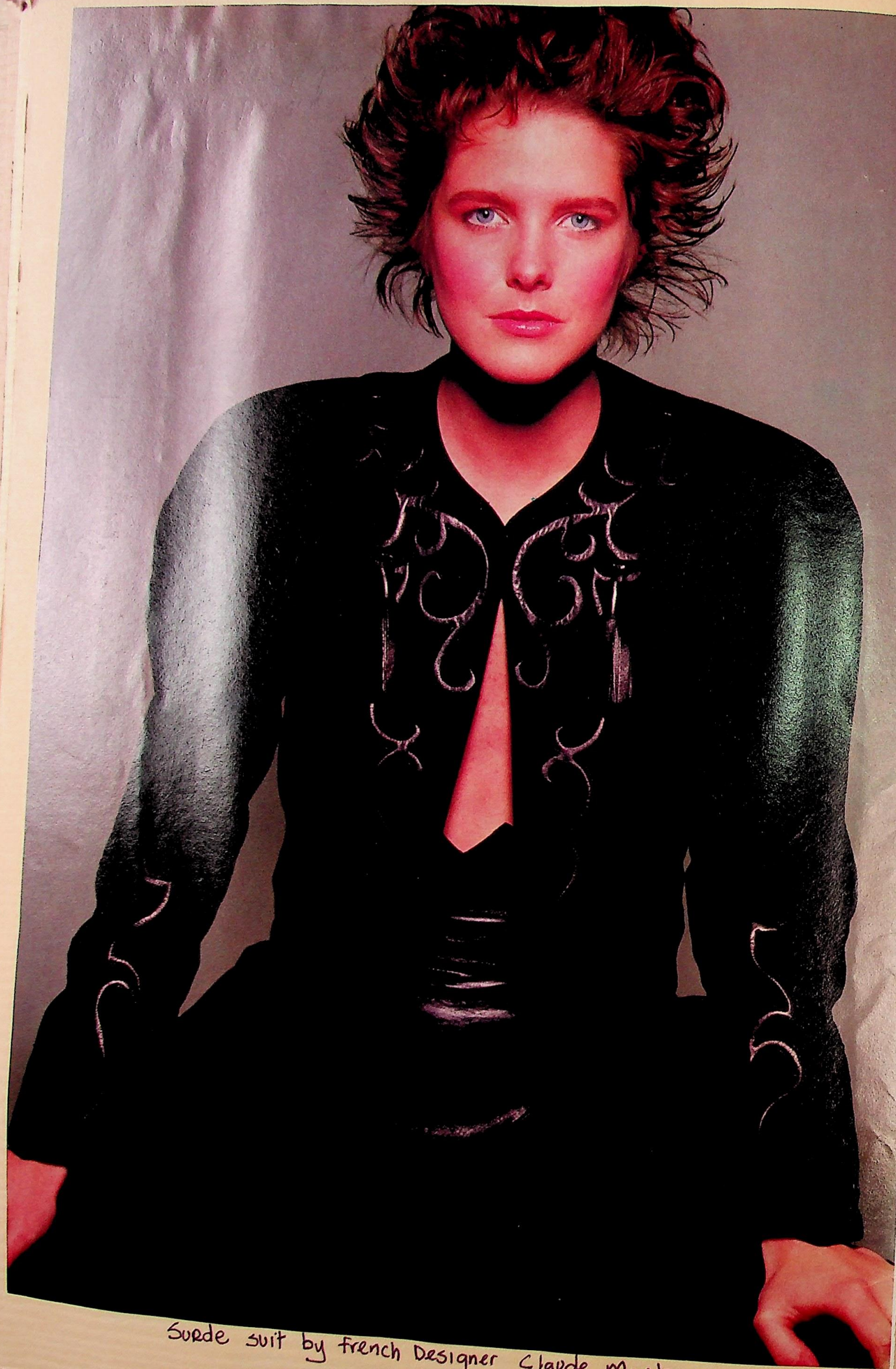
English designer Maxfield Parrish sheepskin coat.



SUPERSKIN BEAUTY

leather suit by Claude Montana.





Suede suit by french Designer Claude Montana.

use of new lubricating oils and chemicals in the tanning process. The new lubricants permit the leather to be cut thinner while retaining its inherent strength and softness. The bright colours are simply as a result of public demand.

David Trask who owns "The Leather Club Boutique" in Beverly Hills sells nothing but skins. He points out that a well chosen leather piece can be a real investment garment. He explains "Women can work with their old wardrobe by buying one pair of leather pants or suede T-shirt, and update their look for the next year".

Leather is expensive. A Lauren prairie shirt costs £500, a leather blazer from Yves St. Laurent comes with a £600 tag. Leather jackets with embroidered eagles, by Parisian designer Claude Montana priced at up to £1,200 sold in two weeks last Autumn in Bloomingdales in New York. It is an interesting comparison but I noticed, in Friends Shop in Grafton Street last year, some of the above mentioned Claude Montana jackets had been offered for sale but they were still on the rails the following Summer. Retailers report in the United States that the priciest items sell the best. The above situation re the jackets in Ireland either show a clear picture of the economic state of this country and the U.S.A., or else different outlooks on buying clothes in Ireland and America.

Alan Bilzerian, owner of two stores in Boston, claims "the customer" wants one piece from the 1980's the way a Bauhaus or Corbusier was a piece from the 1930's.

I think a woman nowadays wants to own something in leather just as she wanted perfectly fitting jeans when they were new on the market. I also think that many women want leather because of its quality factor - it is an investment and is going to wear well.



Italian designer Antonio Moschini for Gino's.

A well made leather garment will last ten to fifteen years. It travels well and does not wrinkle easily. Leather seldom, if ever, has to be cleaned. An American Actress/Model Arleen Sorkin says "when I was wearing silk, the dry cleaners loved me, When I was wearing white cotton, the Chinese laundry loved me. Now I have a £170 chamois dress and it is hand washable."

Some leather owners use a rubber to remove stains while others maintain that leather should be permitted, like a fine old wine, to mellow, undisturbed. Calvin Klein agrees, he has been wearing the same shirt of his own design for more than five years.

ITALIAN AND IRISH LEATHER DESIGNERS.

In response to our growing demand for quality in everything from cars to furniture, leather goods to cars, there is a return to handcraftmanship now, but on a new international scale. The long tradition of fine Italian artisanship that has been passed down from one generation to the next is now at the service of the best, most inventive most modern designers in the world.

In every field of business today, firms are run by families. There are the Missonis (knitwear), the Fendi sisters (fur and leather), the Guccis, Mario Valentino's family. This is due in the past to the natural revulsion Italians feel about allowing strangers to meddle with their business. Italians know whom to trust, themselves, their families and their land. Those who have prospered all invoke the same factors; -

1. Roots.
2. Tradition.
3. Family
4. Hardwork.

Anything that involves the hands and the mind in close concentration reaches the levels of excellence unknown elsewhere in the world.

Gillo Dorfleo, an Italian professor of esthetics agrees with the notion that Italian shoes are a work of art.

"During the Renaissance, Italian craftsmen built basilicas and cathedrals, devoting their talent to painting and the art of sculpture. All Italians have an innate sense of beauty, but today all their energies are turned towards personal adornment. They care only about clothes, cars and their comfort and that is where Italian genius has come to rest."

GIORGIO ARMANI



leathe Menswear by Italian Giorgio Armani .

It is said that Italians cannot help but make things beautiful, surrounded as they are from birth by a harmony of stones and colours. Giorgio Armani, in March 1982, refused to show his Autumn/Winter 1983 leather collection to the press. The reason for Italy's No.1's odd behaviour seems to be that he feels there is very little advantage to him in the press publishing pictures of his clothes six months before they appear on his customers' backs. On the other hand he sees no reason why he should pander to the copy-cats who are keen on making quick but hardly fair reproductions of his clothes.

I have included some photographs of his much publisised collection. The world press, in their disappointment at not seeing the Armani collection in advance, wrote so much about the no-show that Giorgio Armani became the most controversial, the most written about, designer of the season.

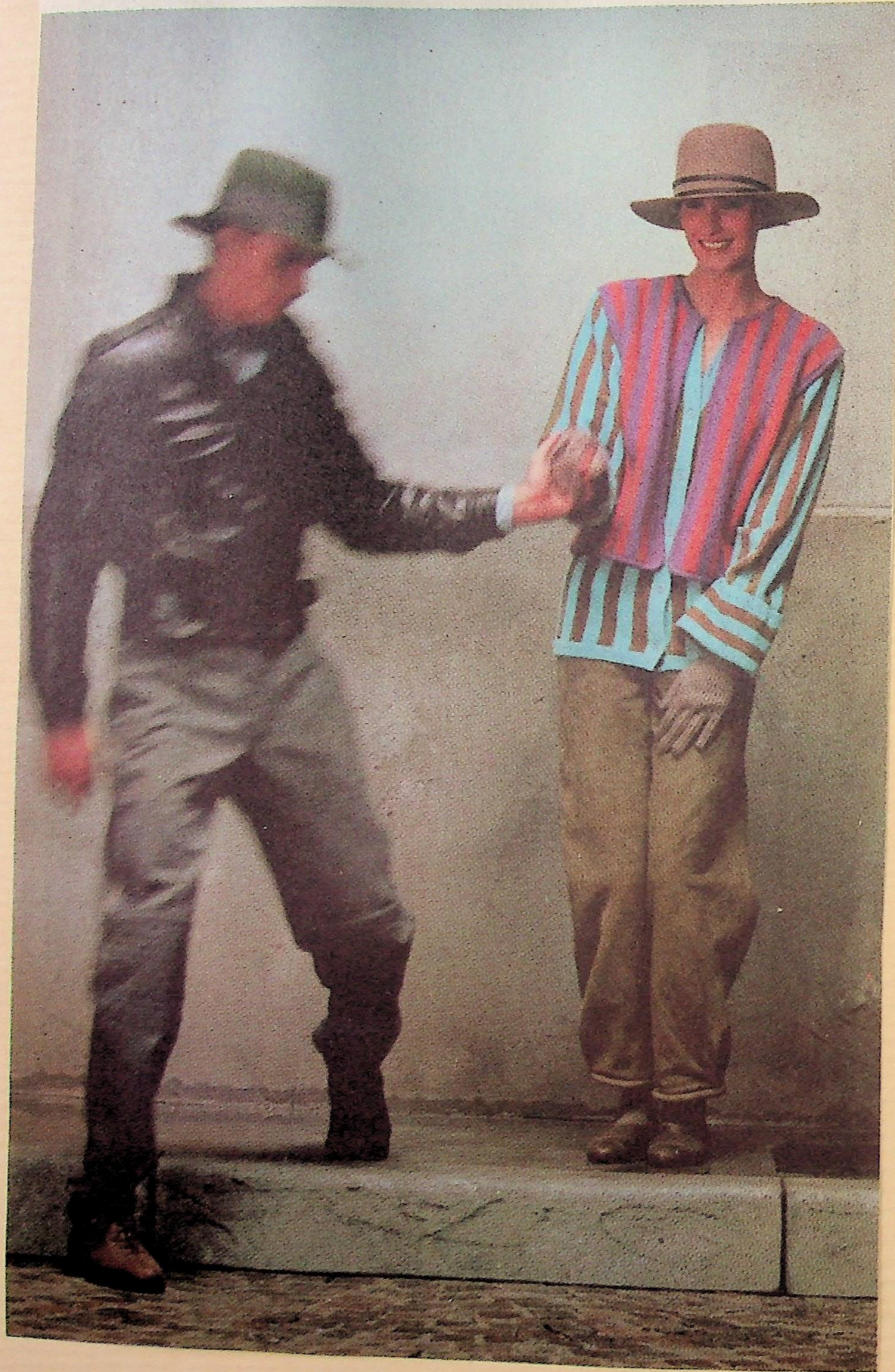
Giorgio Armani was born in Fiacenza, a small town in Northern Italy. When he was twenty he went to work for La Rinascente, a large department store in Milan, working in the display section and later became a menswear buyer. Seven years later he joined Hitman, a large menswear manufacturer. In 1974 Armani started his own company with Gergio Galeotti and in doing so reversed his talent and translated male fashions to suit the female form. As a result of this Giorgio Armani has turned male fashions into the greatest fashion revolution woman has ever known. I think he dresses the female form with great panache, working hard on detail to make this man-tailoring - feminine.

He questions and goes into great detail when he is designing even the simplest skirt or jacket. He questions the necessity of lapels on a



Unusual colour co-ordination by
Italian designer Giorgio Armani.

GIORGIO ARMANI



jacket and eliminates them if they intrude on the design and shape of the garment. He even questions skirts.

"I felt something had to change" Giorgio Armani said "especially in evening clothes". He decided on cullottes, - "a new way of holding the legs, a way of saving suits from executive grimness". Armani's style has evolved in six years into something absolutely recognisable with a purity and stamp of his own.

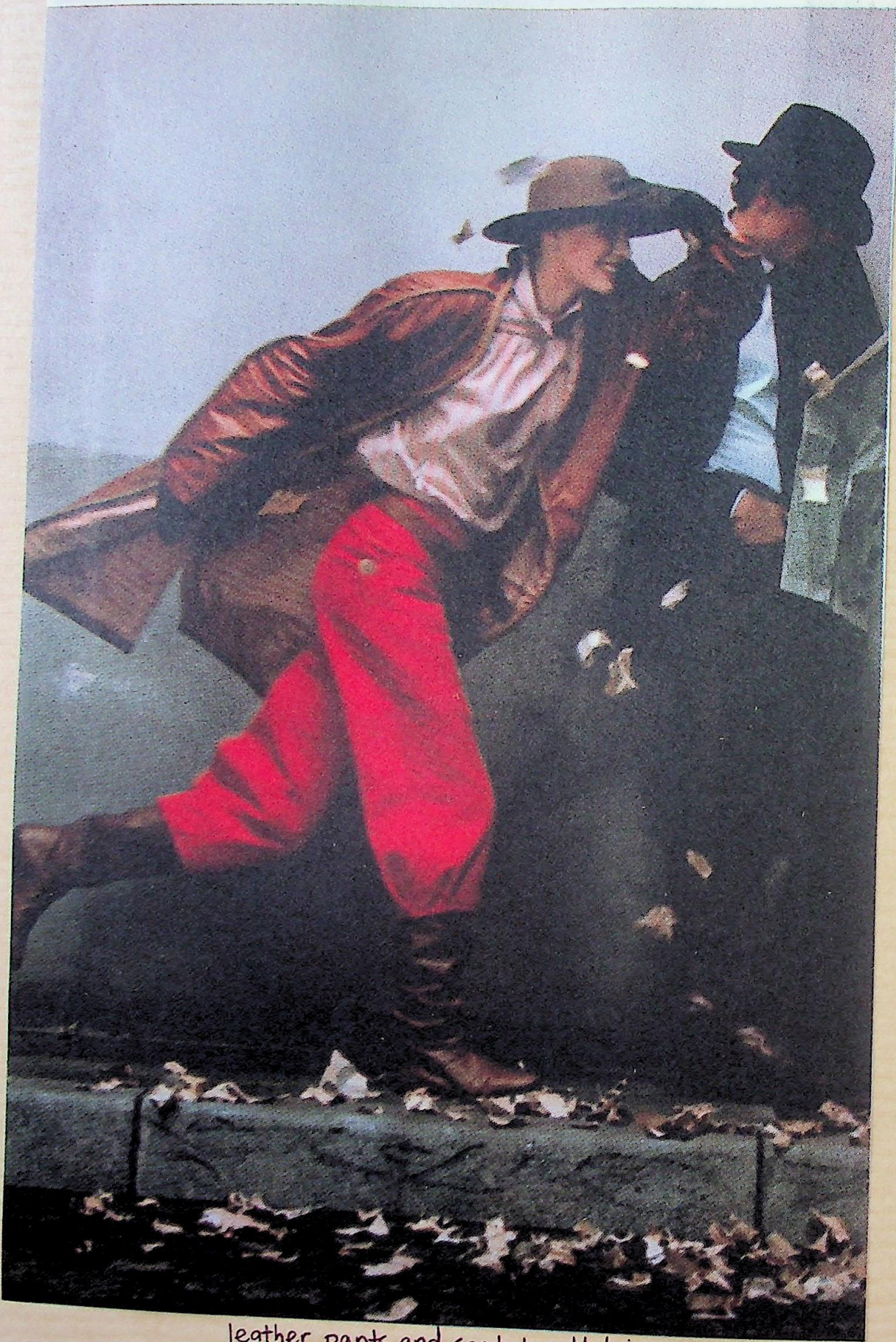
In my opinion Giorgio Armani gives woman everything they ever wanted from fashion - the long and the short, the full and the narrow, neutrals and colours. His look is a varied one which needs no props. Accessories are used only in the form of hats, if any. He designs for women purely to flatter and disguise. One can hide it all, show it all, dress up, dress down, be classic or wild. I think he caters for every whim, flight of fantasy or mood.

I think the secret of his success lies in the brilliance of his tailoring. This means not only his craftsmanship but more generally the look, shape and fall of the garment, the balance is always right.

Like most Italians I think he is extremely and refreshingly adventurous with colour, fabric and design. I love the way he plays with design; - stripe on stripe in two or three widths; plaid with striped or even prints. He uses suede and leather as if it was cotton or silk. He prints on it, pleats it, gathers it. He is daring too with colour and it is so fabulous, there appears to be no restriction with his palette, as seen in his illustrations.

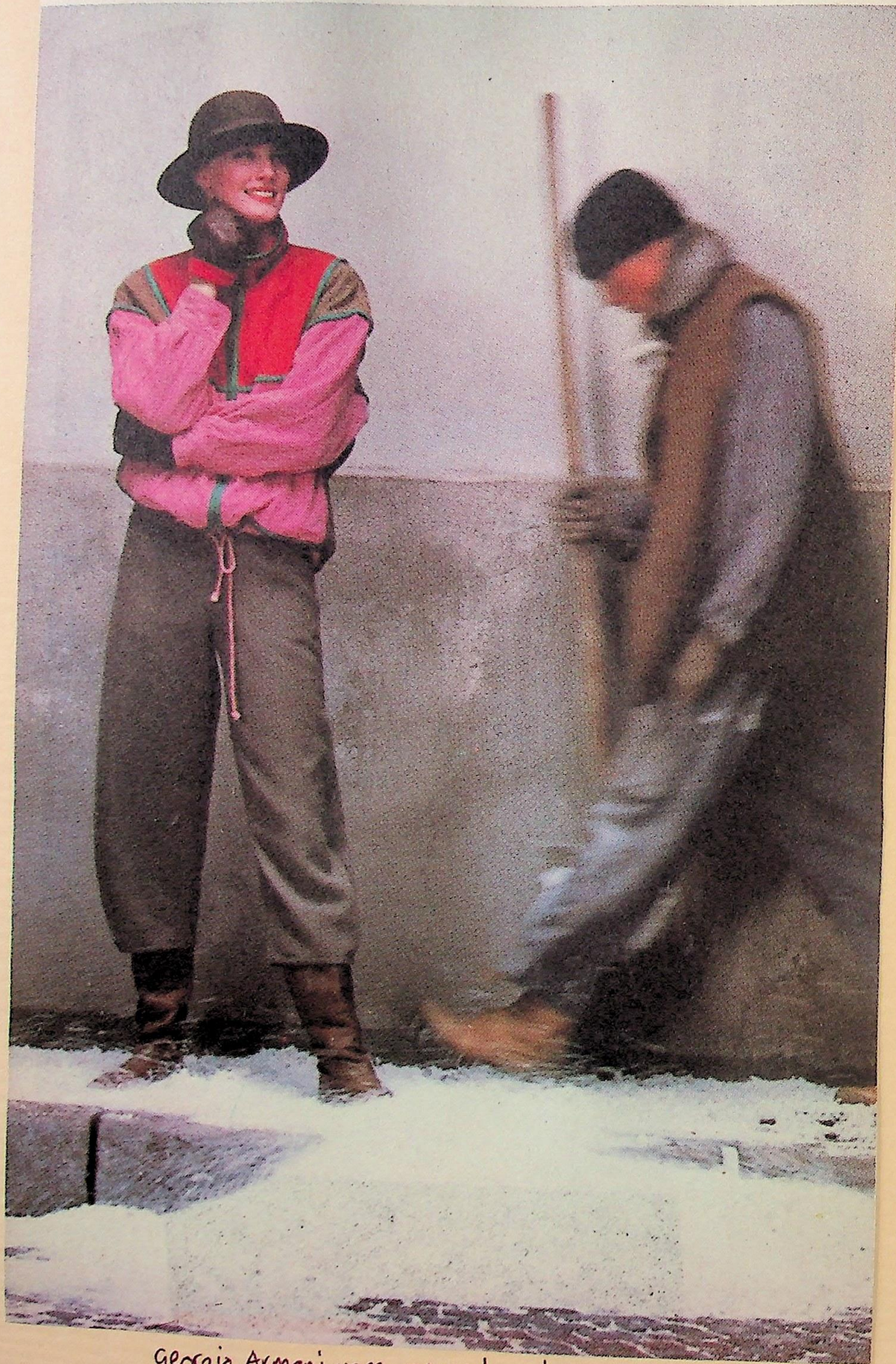
He teams the royal blues with browns and cerise, the greens with cherry and vibrant yellow, greys with purple, pinks and browns or anything that comes into his head - the results are always stunning.

GIORGIO ARMANI



leather pants and coat by Italian Giorgio Armani.

GIORGIO ARMANI



Giorgio Armani uses unusual colour combinations

Women today want clothes that are not too structured. They like ease of movement together with elegance. They have long since broken away from the restricted tailored look of the fifties and sixties. But it is Giorgio Armani who has influenced women all over the world with his great "easy" look in fashion.

His super elongated jackets, tailored to perfection giving a roughed-up look which is so much part of casual fashion today. He teams his jackets with any kind of pants, culottes short or midi, gauch-style pants gathered at mid-calf or just below the knee, bermudas, shorts or mini skirts. That is his interpretation of the SUIT.

I adore his long line, blouseⁿ jackets which fall well over the hips, which is very flattering and gives an air of easiness to the wearer. His cardigan jackets usually complete a layered look - easy and sophisticated.

Giorgio Armani does not worry about a woman's shape, size, age or beauty. He just designs to flatter her. He cuts so that she can walk tall, keep her hand in her pocket if she wishes and still the jacket hangs correctly. The perfect precision of the sleeves, waistbands which stay in place, pleats with no skimping of material are all the qualities which give Giorgio Armani's leather suits that easy stride.

Another great Italian designer is Gianfranco Ferré, who is the latest Milanese designer to have made his name in fashion. He studied architecture and therefore, having the restrictions of design such a profession can impose, his imaginative and expansive talents now find their fullest expression in fashion.

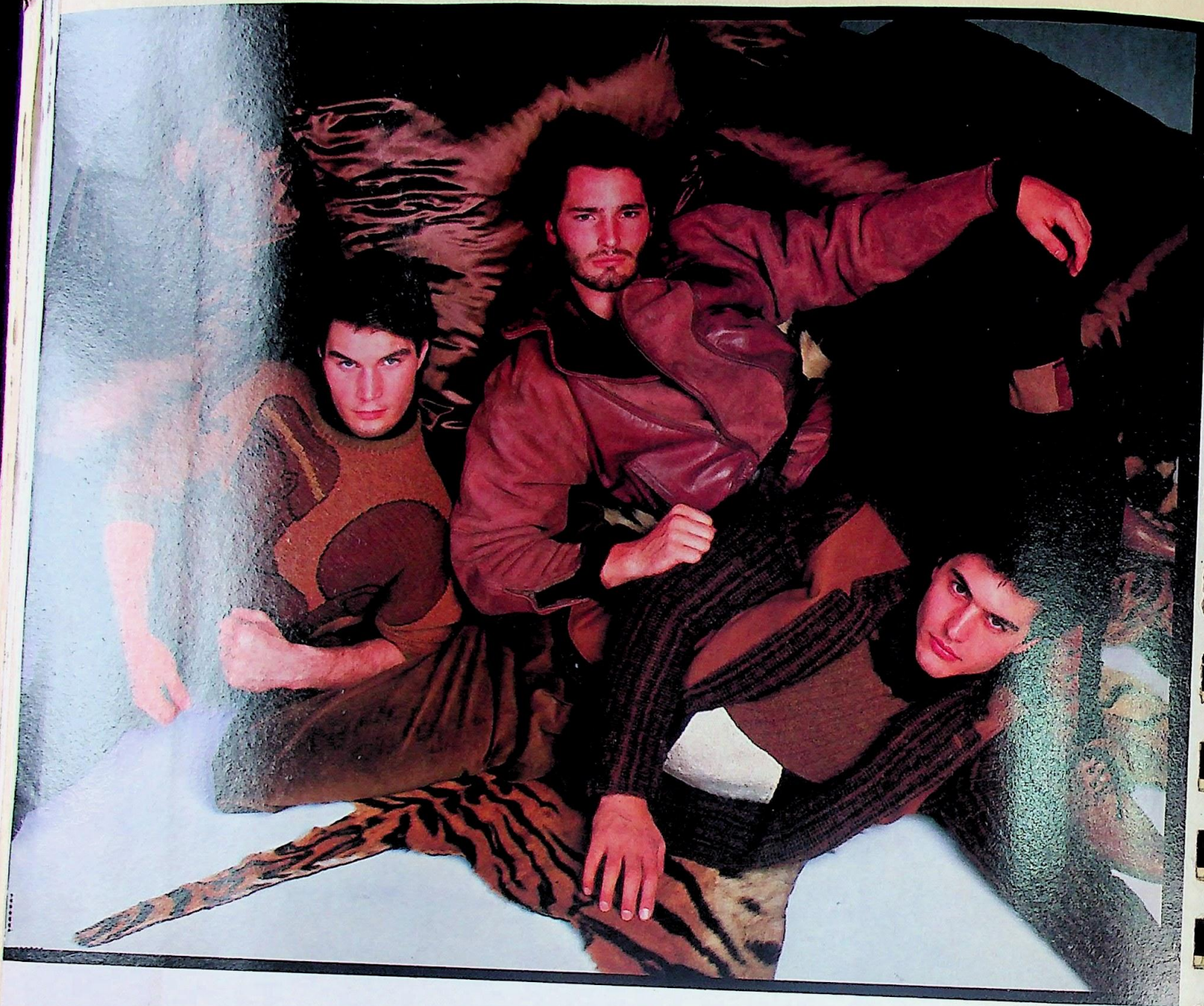
His clothes reflect his architectural background in their perfect proportions and lines but in addition I think he achieves tremendous



Suede and leather jacket by Italian designer.
Gianfranco Ferré.



leather and wool top by Italian designer Gianfranco Ferré.



Versace

London
17b, Brook Street



Beautiful soft leather garments by Italian firm "C. P. ..."

4Emy



Co-ordinating leathers by Italian "Genny".

versatility and individuality with his use of leather in colour, shape and mood. His clothes are full of flat leather panels and sliding walls. "I like things that are drawn", says Ferre, "It is tied to the desire not to see any more limp rags walking around. I want to make things that look as if they were meant, instead of just falling into place. Architecture is getting softer, and clothes are getting harder".

From his first steps into fashion designing accessories and shirts in the late '60s, raincoats and sportswear in the early '70s, he set up his own design studio three years ago. Today he is a fully fledged designer with his own label. He has always been innovative and full of interesting ideas which have won him high acclaim. One can see why from the illustrations.

Another great Italian designer who uses leather is Gianni Versace. I think his collections are very versatile. By day one can wear his leather pants or skirt and by adding a decorative sweater and jacket have a costume look for night wear. Versace always softens his leathers with some feminine detail like a mohair sweater.

In the early 1970's a company called "Genny" started up by Arnaldo Girombelli. Under the name of "Genny" a young and emerging fashion designer conceived a beautiful range of leather clothes designed for the woman whose immediate concern was high fashion but with classic styling. The leathers he uses are beautiful soft high gloss skins with fur trimming. He co-ordinated them with matching boots and striped skirts, as illustrated.

Here, in Ireland, unlike Italy, we do not have a big leather industry, but I think as the demand for leather garments increases the leather could be manufactured here.

The reasons that the industry is so small here is due to:-

1. No deep rooted tradition of craftsmanship in leather fashions.

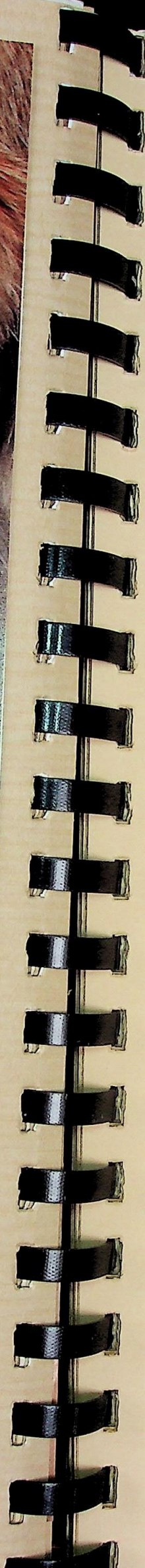


The Label

DUBLIN: The Arnott Group
 Clery's, The Switzer Group
 The Sheepskin Shops
 (Dublin and Dun Laoghaire)
 CORK: Moderne Ltd
 Gerald Barry
 LIMERICK/CLARE: McMenamin's
 Eve's, Helene Modes
 Griffin's (Ennis)
 GALWAY: Anthony P. O'Connell
 B. Dervan (Loughrea)
 ATHBOY: McEhinney's Fashionists
 KERRY: Vogue (Tralee)
 DUNDALK: Celtic
 and SHAW'S almost nationwide

Julian Vard
 11 HARCOURT STREET
 DUBLIN 2 IRELAND

Julian Vard. Dublin.



Patterns are constructed.



Patterns are sorted out into different sizes.



Patterns are stored on racks.





Skins are stored in racks



leather is matched for colour likeness



leather is cut out.

lining is cut out



Garment is
sewn up.





Leather and Fur garments from Julian Vard.

CHARLOW HAD MORE MINKS than
hot drinks. In those days you judged a
gentleman by the amount of hair on his chest and a lady
by the amount of fur on her back. Beautiful
women earned a millionaires just to become
the heroine of a furry story. These days, a fur
coat is no longer the prerogative of the movie
star or the millionaire's wife. It is the working
girl's survival kit. Furs are not kept in mothballs
and brought out from the storage vault when the
family jewels are ferried out from the safe. They
are worn every day and for any occasion, over
pants or party dresses, for instant warmth and
flattery. And for a spot of softness in a tough
modern world!



Fabulous full-length Canadian red fox coat £3,000 from JULIAN VARD and SHEEPSKIN SHOPS and selected outlets worn with green leather jodhpur trousers by Umberto Giocchetti £235.00 La Squadra mohair sweater £65 from the PAT CROWLEY Boutiques. Necklace £68.00 from the Wilson & Butler collection at ANASTASIA, Drury Street Dublin 2.

Willie Donnelly's fur design for Julian Vard.



Fox trimmed wolf jacket £1,100 available from JULIAN VARD, 11 Harcourt Street and the new Julian Vard shop in the ILAC Centre, Henry St. Dublin 2 and the SHEEPSKIN SHOPS. Cashmere camel skirt by Jasper Conran with matching satin blouse from the Private Lives Dept. BROWN THOMAS. Skirt £124.00, shirt £115.00. Bronze leather belt from a selection at the PAT CROWLEY Boutiques Duke St and Crosscourt Centre. Coral and dipped gold necklace by Wilson and Butler at ANASTASIA, Drury St. Dublin 2. £84.00.

Willie Donnelly design for Julian Vard.

2. Lack of technical knowledge and understanding of the skins e.g. In Italy they can drape and mould leathers into any garment of shape desired.
3. Availability of the leathers. The lack of variety and quality of leathers need to be improved.

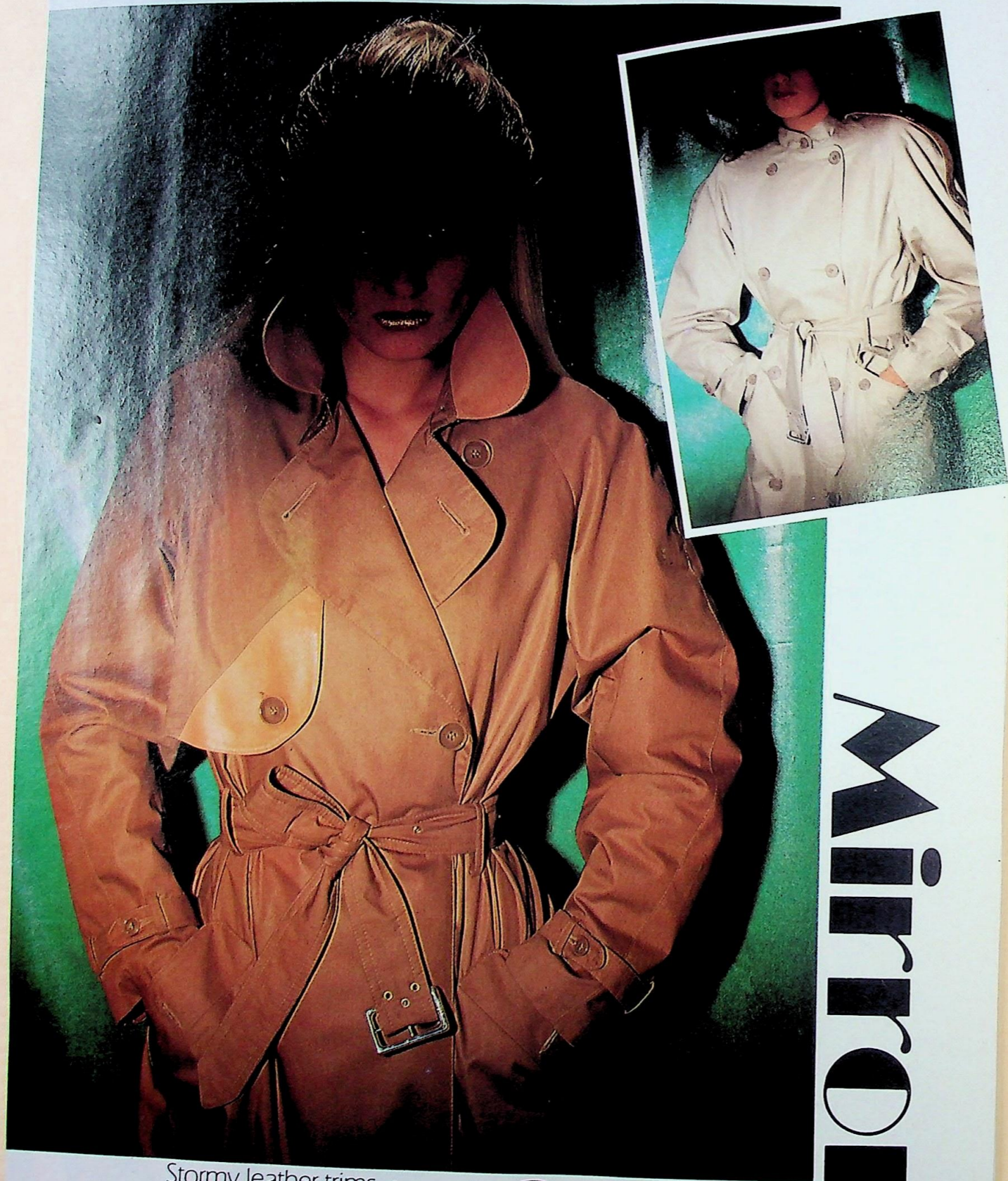
I visited the Julian Vard factory in Dublin in order to get an insight into the manufacturing side of the leather industry here in Ireland. They design and make garments in leather and suede. I was very impressed by the factory which has been newly renovated and is laid out in a "line system". This means that there is a rail weaving its way in and out between the machinists and the cutters and as each stage of the garment is completed it is moved along the rail. These rails are within easy reach of each of the workers.

The process of making a suede garment or skin coat is as follows:-

1. The skins are stored in boxes until they are needed.
2. The required number of skins are colour matched.
3. The footage of the garment is calculated.
4. The cutter lays out the skin and traces with his blade around the pattern. Each piece of the garment is cut out singly because of the different sizes of skin.
5. Garment pieces put on the "Rail line".
6. Required pieces are stayflexed (stiffened e.g., collars).
7. The pieces are lined.
8. The machinest sews up the garment.
9. The seams are glued open.

After this the garment is pressed and packed. Vards employ 40 staff. They have one cutter for suede and another for sheepskin garments. Many of our Irish designers use leather and suede as trimmings only.

Pray for Rain.



Stormy leather trims
this sizzling trenchcoat
from our exclusive
Michael Mortell rain range.
All branches, £109.

Mirror

Michael Mortell's leather trimmed + trenchcoats.



Michael Mortell

Irish Designer Michael Mortells leather trummed garments.



Super soft shirt suede two-colour zipped jacket with cowl collar and co-ordinating suede skirt, from the Michael Mortell Spring '83 range. Price: jacket £200, skirt £139. Also in a combination of fawn and khaki. At the Mezzanine, Mirror Mirror.

Michael Mortell's suede separates.

Michael Mortell is one of Ireland's most popular young designers today. He designs a suede and leather collection of garments each year. As part of my Educational Co-operative Course I worked in his factory. He likes to use leather as a trimming on his trenchcoats e.g., leather inset on the top of the sleeves and a leather collar. Two years ago these details helped to get him much acclaim on the fashion scene. He also designs a soft suede look including soft calf length suede skirts, T-shirt style tops, loose trousers and elongated tailored jackets which have eyelets on the shoulders.

I think the Irish public is beginning to realize the investment potential of leather and suede garments and, as a result, I think one will see an increase in Irish produced and designed leather garments in the near future.

LEATHER ACCESSORIES.

Italy has one of the biggest names for leather accessories. England is famous for the "Mulberry" creations. In Italy Gucci is the big name in bags, shoes, and belts, and he was an early exponent of luxury goods. The Gucci style is masculine and sporting. The wild popularity of his bamboo-handled pigskin bags and suitcases striped with canvas has spread from Rome to London, to Paris to New York, has ensured him that his shops are always jammed with feverish shoppers. Prices are high and the recent developments both in Italy and abroad have influenced the evolution of the Gucci look.

Bags have become smaller with the rising prices and women who at one time could buy three bags at one time are now reduced to buying only two.

Mulberry Company's accessories for ladies.
Envelope bags in leather and suede £29.50,
periwinkle blue ammo bag £19.50, suede
drawstring pouch £29.50, sunglasses
from £19.50, checked linen scarves
from £13.75, belts from £6.75.



English Company Mulberry produce leather accessories.

Mulberry Company's accessories for men. Pigskin leather Briefcase £89.50, matching loose leaf diary address book £39.50, wallet and creditcard holder from £13.75. Silk bowties and ties from £9.75. Oxford brogue shoes £38.50, belts from £6.50, sunglasses from £19.50.



English company 'Mulberry' produce leather accessories.



GUCCI

NEW YORK • BEVERLY HILLS • PALM BEACH • PAL HARBOUR • CHICAGO • ROME • FLORENCE • MILAN • LONDON • PARIS • CANNES • HONG KONG
NEW YORK 685 FIFTH AVE. TEL. (212) 636 2600 • TOLL FREE LINE (800) 371 2591

Shoes by Gucci.



ERIC BOMAN

co-ordinating Accessories as seen by Vogue.



Calvin Klein Handbags

Calvin Klein accessories.

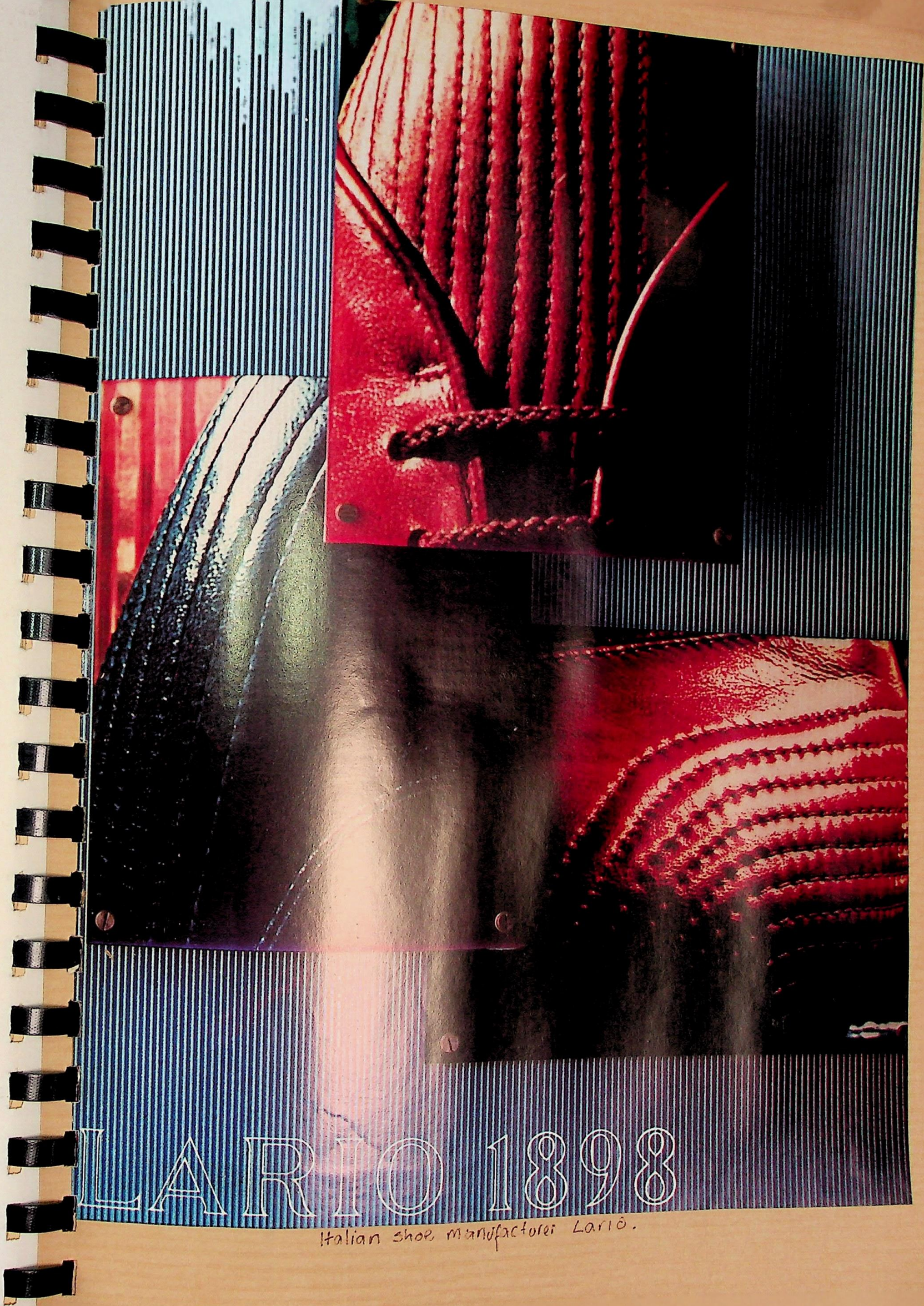
MARIO VALENTINO



In the Gucci factory on the ~~Austo~~ Strada del Sole, just outside Florence, 260 people work making bags. The Tuscan leather-making tradition is said to be traced to the existence of the white calves of the Val di Chiana, raised in stalls like horses so that their hides are not ruined by rain or thorns.

The famous Gucci pigskins all come from Scotland, where they are specially dyed Gucci colours - a light red, green, grey and dark brown. The Ostrich skins come from South Africa, lizard and crocodile from New Guinea, varnished black leather from Venice. Shoes and the simpler bags are manufactured by piece-workers at home.





LARIO 1898

Italian shoe manufacturer Lario.



Italian shoes by Lario



Italian shoes by Nazareno Gabrielli.

CONCLUSION.

Hides and skins are by-products of animals and as a result they enjoy certain advantages and suffer certain disadvantages. The advantages, I think, are mainly in the marketing. As long as meat and dairy produce are consumed, hides and skins will be produced.

This is undoubtedly the greatest advantage that leather derives from being a by-product, because I think it puts the leather industry in a comparatively unassailable position. The reason briefly is:- If a substitute for leather gains temporary favour with the public, the demand for real leather will accordingly decrease. This, in due course, forces down the price of leather but at the same time greatly increases its competitive advantage. Therefore, the consumer instinctively turns to the genuine article and the substitute is displaced.

Although expensive, leather has attained an important place in modern fashion. The flexibility and wide appeal of leather has enabled fashion designers throughout the world to create new and interesting garments using leather.

Obviously, as one can see from the detailed description I have given the labour content and skills which enable the hide to be transformed into usable skin, justify the high cost of the finished product.

I think the leather industry will increase its market during the next few years, as people today have become more aware of the advantages associated with natural foods, fibres and their by-products.

I firmly agree with the words written by Roberto Gucci "what we make, in the leather industry, is just an injection of prettiness and beauty that helps people forget the ugly things of life. It is like a little stardust in peoples' eyes."

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