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Handmade
SHOES FOR MEN

Photography Georg Valerius

h.f.ullmann

Taking the Measurements

No two feet are exactly the same. A shoemaker can only make comfortable shoes of the appropriate size if he is given as much and as precise information as possible about both of the customer's feet. Whereas the tailor producing a custom-made suit recommends two or three fittings, the shoemaker – with the assistance of the so-called trial shoe – must make do with one at the most. This makes it absolutely essential to allow plenty of time for taking the measurements: ideally one or two hours. It often proves difficult to find the right time to achieve the most precise result.

In general circumstances a healthy person's feet are the same size at any time of the day. However, they can be affected by temperature (extreme heat, for example) or by strenuous exercise (walking for a number of hours, or engaging in high-intensity sport). It is therefore recommended that measurements should be taken during the morning.

Then the feet can swell as a result of certain illnesses. If the customer knows that treatment will be completed before long and that his feet will then return to their original dimensions, he should not have his measurements taken until they have done so. However, in the case of a chronic illness, slightly oversized shoes may make walking easier.

Measurements are taken in both the standing and sitting positions.

While he is constructing the shoes a shoemaker always takes the greatest possible account of any malformations or pathological changes, such as hammer toes or bunions. But in such cases it may be better, under certain circumstances, for the customer to postpone the purchase of a pair of comfortable shoes until after he has undergone minor orthopedic surgery.

In any case a pedicure is advisable a few days before the measurements are taken in order to avoid problems like ingrown toenails, an inflamed nailbed, or painful corns. Thin, close-fitting socks should be worn so that the measurements will be as accurate as possible.

The taking of measurements is fundamentally a sort of ceremony; it is equally important for it to take place at the right time and to last the right length of time, for any disruptive factors to be eliminated, and for the customer to provide the maximum amount of information. The movements of the shoemaker are almost ritualized, taking place in a predetermined sequence. This ceremony is the basic prerequisite for the preparation of a last that will take the place of the feet as faithfully as possible throughout the production process, and hence for the creation of a pair of shoes that will be a unique work of art.

The shoemaker measures the length, width, height, and circumference of the feet in two different positions: first while they are bearing the weight of the body and again when they are not under strain. In the standing position the foot can be as much as three-eighths of an inch [1 cm] wider, the arch is rather lower, and the tendons and muscles are tense. This position also roughly reflects the state of the feet when they are under strain, that is when walking. But inevitably, shoes stretch – both under the strain of walking and owing to the warmth and moisture of the feet. So if the shoemaker were to treat the measurements taken under strain as "correct," the owner's pleasure in his new shoes – which would be perfectly comfortable from the word go – would in a few short days turn to disappointment when they became too big and loose.

Where measurements are taken in the sitting position the situation is reversed: the feet are smaller when not under strain. Despite this many shoemakers consider these measurements more important, because they constitute a better basis for establishing the varying width of the feet when walking and for estimating the extent to which the shoes will stretch when worn.

The first measurement phase is the visual inspection of the foot to determine its shape. The shoemaker checks whether it is inclined outward or inward with respect to an imaginary axis running lengthwise through the foot,

The Bone Structure of the Foot

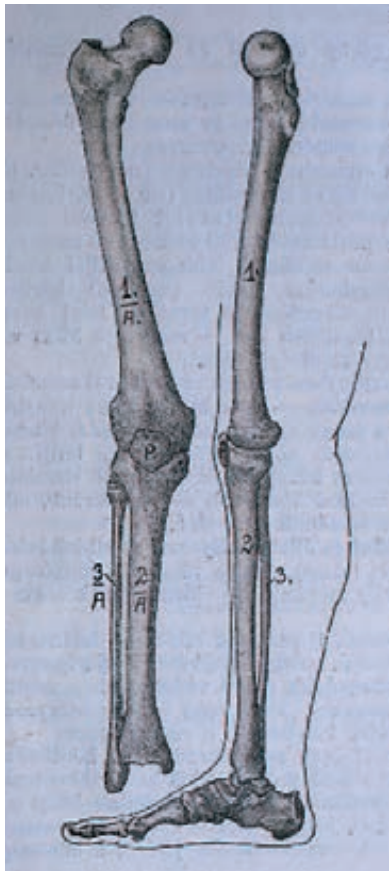
From the origins of the shoemaker's craft in ancient times until the end of the eighteenth century, shoemakers practicing their trade concentrated exclusively on the external shape of the foot for which they were to provide a protective covering, utterly ignoring what lay beneath it: the bone structure and musculature. Not until the nineteenth century did master craftsmen realize that a shoemaker simply cannot do without a knowledge of anatomy. Numerous shoemaker's primers appeared, summarizing the essence of the shoemaker's craft – most of them beginning with a description of the anatomical characteristics of the foot.

Today a study of the characteristics of the bone structure, the musculature, the joints, the tendons, and also the skin of the foot is part of the standard training in the shoemaker's craft. The taking of measurements is based on anatomical fixed points selected in accordance with rules formulated over decades of practice. These points are characteristic and easy to recognize, and they manifest only small variations when measurements are taken repeatedly.

Although it is true that no two feet are absolutely the same, their anatomical structure is identical in every human being. This structure first appeared some two million years ago, when for reasons still disputed to this day the progenitor of modern man – *homo erectus* – stood upright and began to walk on two legs.

Of the 208–214 bones in the skeleton the ones to be found in the most mobile parts of the body, the hands and feet, are among, the smallest. The bones, joints, muscles, and tendons of the foot jointly constitute the most complex mechanical structure in the human body. The area of the soles of the feet totals less than 46 square inches [300 sq. cm], yet when standing they must reliably bear an average body weight (for men) of between 150 and 260 pounds [70 and 120 kg], and when walking they adapt flexibly to any surface unevenness. The soles of our feet make delicate internal adjustments to enable us to walk barefoot in the soft, shifting sands of a seaside beach, and to negotiate rough, stony paths.

The foot is thus an extraordinarily resilient structure that is capable of amazing achievements. According to an English study the average central European covers 93,000 miles [150,000 km] on foot during his lifetime. The case for comfortable shoes could not be better made.



The shoemaker's primer by József Bodh published in Budapest in 1920 contained anatomical illustrations appropriate to the standards of the period.

Width Numbering

Differences of bone structure and musculature can mean that feet of the same length have very different girth (referred to here as width) measurements. It is therefore most expedient for both the shoemaker and the lastmaker to measure and tabulate these various widths. This is the background to the width-numbering system, in which 5 (E) denotes the narrowest foot, 6 (F) the average, 7 (G) wide, and 8 (H) very wide.

Since the ratios between the measurements of an average foot are constant, particular circumferential measurements are associated with particular lengths. Formulas exist enabling the shoe size (denoting length) and its associated width number to be used to calculate the width of the metatarsals, the instep, the heel, and the ankle. To obtain the width of the metatarsals, for example, the shoe size is added to the width number and the result halved: shoe size 42, average width 6, width of metatarsals 24. (This is one of the simpler formulas; in view of the complexity of the others we shall not consider them here.)

These formulas have been developed over many years, and are tried and tested. A customer can be confident that his shoemaker will use them accurately in order to assess the size of shoe needed for him.

Size *	width of metatarsals in cm									
	A (1)	B (2)	C (3)	D (4)	E (5)	F (6)	G (7)	H (8)	I (9)	
5	19.50	20.00	20.50	21.00	21.50	22.00	22.50	23.00	23.50	increase of 0.5 cm per width number
6	20.10	20.60	21.10	21.60	22.10	22.60	23.10	23.60	24.10	
7	20.65	21.15	21.65	22.15	22.65	23.15	23.65	24.15	24.65	
8	21.20	21.70	22.20	22.70	23.20	23.70	24.20	24.70	25.20	
9	21.70	22.20	22.70	23.20	23.70	24.20	24.70	25.20	25.70	
10	22.25	22.75	23.25	23.75	24.25	24.75	25.25	25.75	26.25	
11	22.75	23.25	23.75	24.25	24.75	25.25	25.75	26.25	26.75	
12	23.30	23.80	24.30	24.80	25.30	25.80	26.30	26.80	27.30	

* The increase in width per size is not constant.

French size	size	metatarsal width	instep width	heel width	ankle width
	in cm				
39	26	22.5	23.3	32	22
40	26.7	23	24	32.7	22.5
41	27.3	23.5	24.5	33.3	23
42	28	24	25	34	23.5
43	28.7	24.5	25.5	34.7	24
44	29.3	25	26	35.3	24.5
45	30	25.5	26.5	36	25

With a tape measure and this table anybody with average-size feet and width number 6 (F) can determine his exact shoe size. If the various measurements agree exactly or deviate by no more than an eighth of an inch [0.2–0.3 cm], he will have no difficulty in finding perfectly comfortable ready-made shoes. Anybody finding more significant discrepancies is recommended to have his shoes custom made; this is the only way to obtain a pair that will fit him properly.

Basic Types of Classic Men's Shoes

The basic types of men's shoes today regarded as classics were developed as the result of competition between the great European shoemakers during the years 1880-1889. The workshops of London, Paris, Munich, Vienna, and Budapest achieved fame around the world, thanks to their skillfulness and the individuality of their shoes.

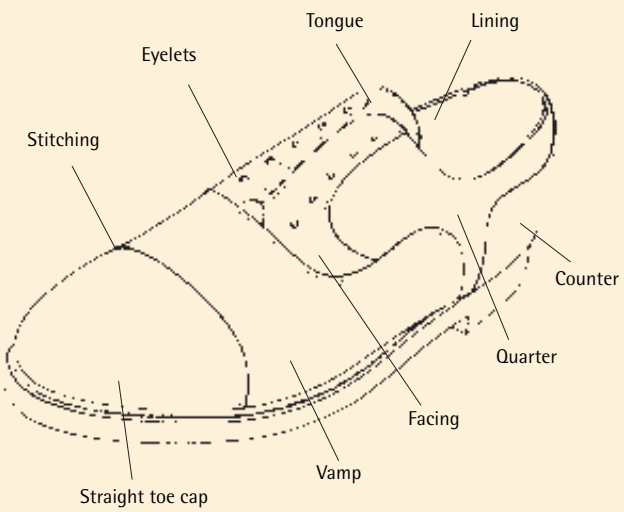
A shoe is categorized primarily by the style of its construction as belonging to one of a few main groups. Shoe styles are first of all defined by the fastenings used as laced shoes (closed or open), buckle shoes, or slippers. On a closed lace-up shoe, such as the Oxford, the quarters are sewn under the vamp and fasten over the tongue, which is sewn onto the vamp. In the case of an open-lacing shoe, such as the Derby, the quarters lie over the vamp, which is made of the same piece of leather as the tongue. Another characteristic is the number of components making up the shoe upper. The upper of the simplest shoe, the slipper, consists of a single piece of leather. Styles like the Budapest consist of a vamp, quarters, and an outer counter. In addition, the vamp can be divided by a straight, or winged, toe cap, and various types of apron. The third way of identifying shoes is the presence, or absence, of patterns of punched perforations (brogueing), which have been a feature of fashionable men's shoes since the end of the nineteenth century.

There are less than a dozen basic classic shoe styles, but they offer limitless possibilities for variation when designing individual models. When deciding on the basic structure of the shoe, the designer will always draw on the traditional range of shoes. His creativity is allowed greater freedom when it comes to the design of the upper. How should the lines run? How will the different parts combine together harmoniously? Which types of decoration (brogueing, stitching, gimped edges, inlaid panels), colors, and textures are suitable, and what combinations are possible?

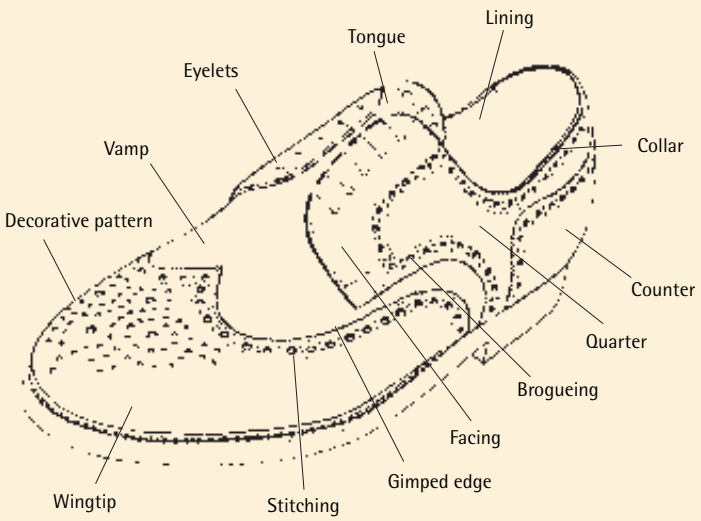
While shoemakers around the world are in agreement on the nomenclature of the basic types of shoe, the innumerable variations on these styles produced by the different workshops have individual names of their own. A selection of the styles that have been developed by famous workshops is given on pages 60-85.

The ABC of the Oxford and the Derby

Plain Oxford



Full-Brogue Derby



It is the leather alone that makes a summer shoe of this Oxford, with its classic lines. The Bálint workshop in Vienna ordered the leather to be finished particularly soft and not dyed after tanning, but left with its natural color.

Summer Shoes

As a matter of principle, all the classic shoe styles can be turned into air-permeable summer shoes if the shoemaker selects a thin leather or inserts woven leather at certain points in the upper. Summer shoes manufactured according to the strict rules of classic shoemaking are therefore by no means only intended for one season. In a European climate they will last much longer than a machine-worked pair, which can only be worn for a few months in many cases.

Surprisingly enough, summer shoes are more often made in dark colors than light ones. Someone wearing black, or dark-blue, Derbys with a woven vamp at a wedding will not be bothered by the heat. A pair of Derbys with large perforations or sandals would certainly be quite inappropriate for such an occasion, though both offer comfort on hot summer days and are ideal for informal parties in the open air.

The Russian composer Igor Stravinsky (here shown in Venice in 1951) loved improvisation, but not when it came to shoes. In this area he was a stickler for tradition.

The Design

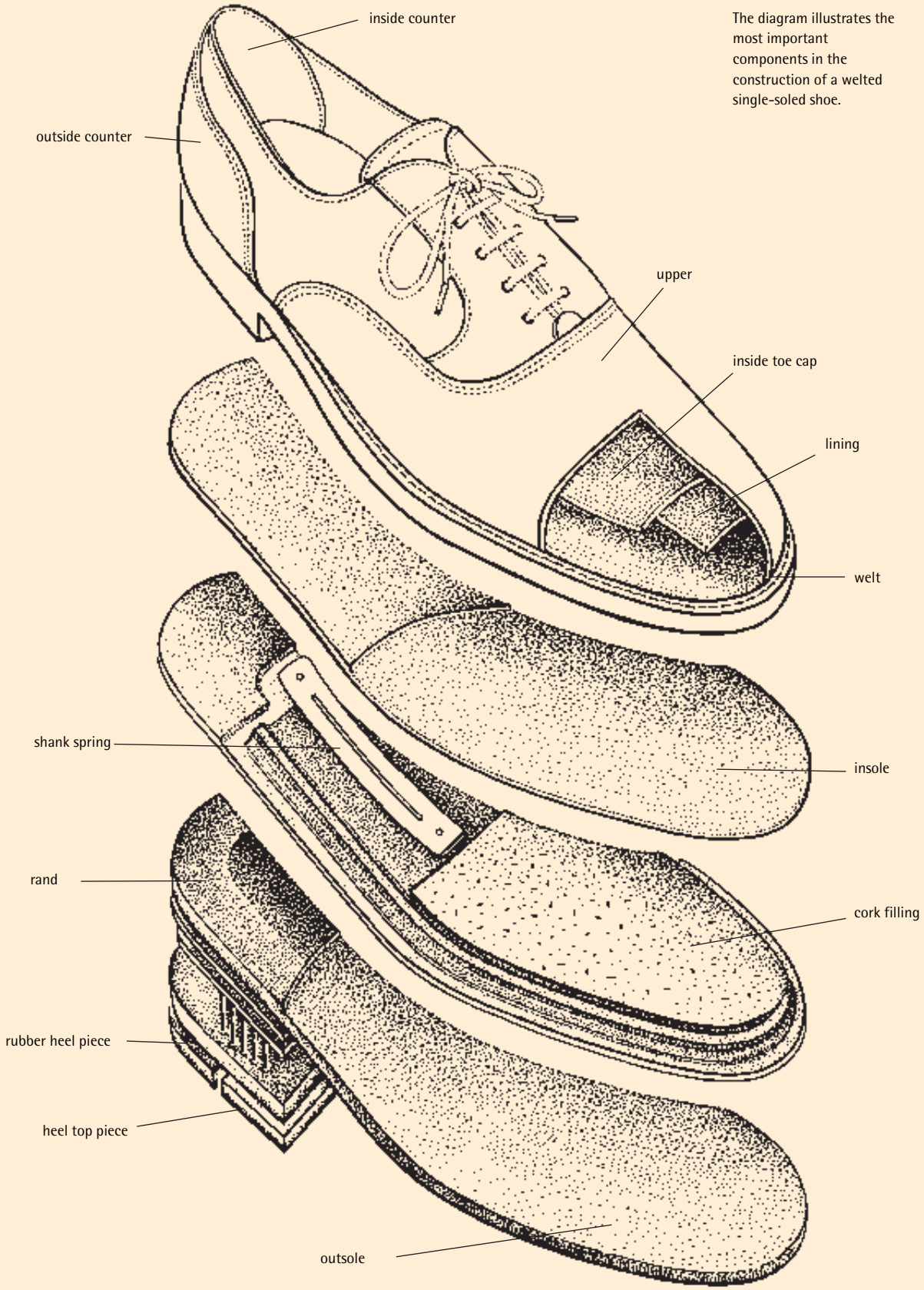
At one time the designer would first make a detailed, realistic drawing, which usually showed the shoe from several different angles. Today he is increasingly more likely to draw the parts of the shoe upper and their decoration directly onto the last. This creates a design in three dimensions, which is much more practical for working purposes.

This method has other advantages. It is easier to check that the decorations and proportions – of the toe cap, quarters, and counter, for example – are correct. If the designer is not happy with what he has drawn, he can always rub out a line that does not fit, or even the entire design, and begin again. At this early stage in the design process, it is usual for a new design to be shown to everyone working in a workshop.

Semi-Brogue Derby

Semi-Brogue Oxford

Plain Oxford



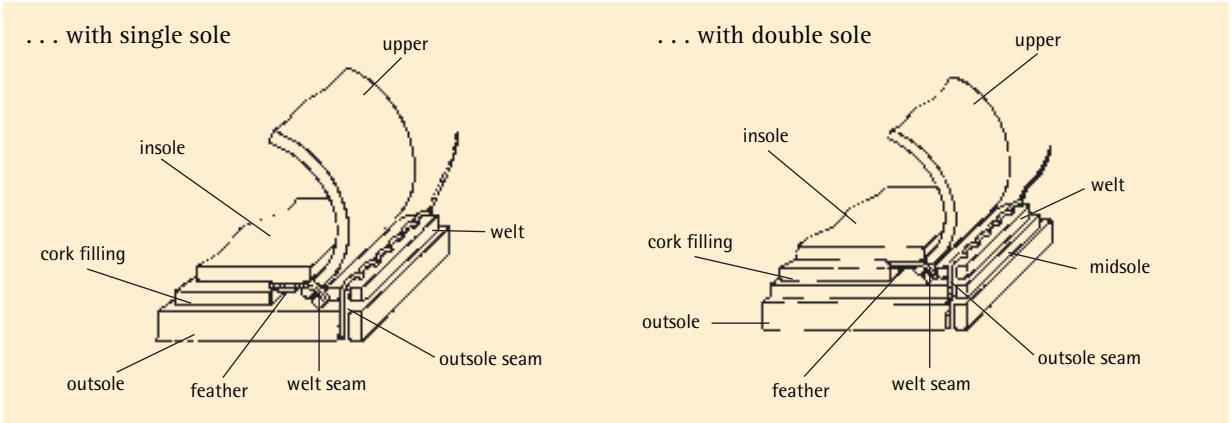
The diagram illustrates the most important components in the construction of a welted single-soled shoe.

The Welted Shoe

Handmade shoes are divided into two types, depending on the way they are made: the welted shoe and the double-stitched shoe.

The basic way in which the upper is fastened to the insole by means of a welt is the same in both types, and so are certain parts of the operation, for instance the technique of stitching with two needles. The following detailed description of the techniques of the making of both types of shoes, however, shows that there are considerable differences between them, whether in respect of their appearance or their function.

The welted shoe, which may have either a single or a double sole, is a lightweight, elegant shoe. Depending on the individual model, it is suitable for everyday wear and for special occasions. In short, the style is a must for every gentleman's wardrobe.



Cross-section of single-soled welted shoe. The first seam joins upper, welt, and insole; the second seam joins the welt to the outsole.

Cross-section of double-soled welted shoe. The second seam joins welt, midsole and outsole.

Glossary

A

Addition method
A method of fitting up the custom-made last. If the foot is broader, the instep or big toe higher, or the heel thicker than the average, the shoemaker corrects the last by attaching various pieces of leather to it. Though the shoemaker can use this corrected last to make the shoe, it is advisable to produce a definitive last by fine copying it.

Ankle boots
Footwear for colder days, with sides reaching 2–4 inches [5–10 cm] above the ankle bone and fastened with eyelets, hooks, or buttons. Their doubled soles give the feet extra protection.

Arch supports
At an early stage, fallen arches can be counteracted with supports. This is why it is important for the shoemaker to form a precise idea of the state of the arches.

Awl
The shoemaker uses a long awl to make holes in the welt for the stitches and a short one to make the holes for the wooden pegs in the rand.

Awl holes
Square holes made with the awl for the wooden pegs used to attach the rand. The holes are eventually sealed with adhesive.

B

Back stiffener
A leather reinforcement inside the shoe at the point where the quarters meet.

Basic forme
Used to produce the design for the upper. The designer transfers the design from the last onto paper.

Bend leather
The most valuable, hardest, and most massive part of a cowhide, between one-fifth and one-third of an inch [5–8 mm] thick, water and temperature resistant and easy to work, that has been softened and stored in the tanning pits for at least 15–18 months. It is used for the top sole and the heel (both the lifts and the top piece).

Box calf
Calfskin tanned with chrome salts. It is considered to be the best material for shoe uppers and boot legs.

Box cowhide
Cowhide tanned with chrome salts. It is used for shoe uppers.

Breasting iron
A tool with different cross-section sizes used by the shoemaker to smooth the edges of the sole and heel and make the material more dense.

Brogueing row
An arrangement of holes of the same or different sizes at regular intervals along the lines and curves where the upper components meet.

Budapest
A well-known full-brogue Derby style of shoe with a high toe cap.

Burnishing iron
Iron tool that the shoemaker heats to the required temperature over a flame and uses to press ink and shoe cream into the leather.

C

Cleaning brush
A coarse brush for removing dirt, made of pig bristles, the tailhair of cattle or horses, or agave fibers.

Clicking
Cutting out the upper components from the appropriate leather in accordance with the style formes.

Closing
Sewing the upper components together with single or double rows of stitches, depending on the strain to which the components will be exposed.

Closing shop
The workshop where the upper components were traditionally reinforced and stitched together. Today uppers are made industrially and supplied to the shoemaker.

Cobbler's hammer
Weighing some 18 ounces [500 g], the cobbler's hammer is similar to a household hammer – and has many uses.

Collar
A thin, rolled strip of leather serving to reinforce and decorate the upper areas of the quarters.

Cordovan
Horsehide tanned with chrome salts. It is used for shoe uppers and boot legs.

Cowhide
The raw material for shoe manufacture. The strongest and most massive part of the hide is located on either side of the spinal column. The neck section is used for the insole and middle sole, the belly for the welt, the toe cap, and counter. Vegetable-tanned leather is suitable for the lining and the lower parts of the shoe, chemical-tanned leather for the upper (see also bend leather).

Custom-made lasts
See last.

Custom-made shoes
Handmade shoes that fit the feet perfectly. They are manufactured on the basis of the information gathered in the measurement-taking process.

D

Decorative pattern
A perforated design, usually geometric, on the vamp. Typical of the full-brogue and semi-brogue types.

Derby
An open-laced style of shoe widespread in Europe, often double stitched and double soled. Also known as "Bluchers." The most common variants are plain, full-brogues, and semi-brogues.

Direction of stretch
The direction of stretch of the upper leather is important to the placing of the formes. The forme for the vamp, for example, must be oriented so that the leather can expand lengthwise but not across – whereas if the quarters can expand lengthwise, they will stretch by two-fifths to four-fifths of an inch [1–2 cm] and the shoe will lose its shape and fit.

Double-stitched shoe
A handmade shoe with one sole and two stitch rows, or two soles and three stitch rows. All the stitch rows are externally visible. A strong, casual type of shoe. There are two very common variants of the double-stitched shoe: in the first the welt runs from one edge of the heel to the other, in the second the welt also embraces the heel – in which case the heel area is wider than

usual. A strong, smooth leather is suitable for double-stitched shoes, or one with a rough surface; combinations of different colors are also frequent. Variants covering the ankles are very popular, as are boots.

E

Eyelets
Holes one-eighth to one-twelfth of an inch [2–3 mm] across at intervals of two-fifths to three-fifths of an inch [1–1.5 cm] through which the shoe laces are threaded. Classic gentlemen's shoes normally have five pairs of eyelets.

F

Filling
Substance used to fill the gap in a welt-stitched shoe, with a shock-absorbing and stabilizing effect on the sole when walking.
Fine copying
1. Lastmaking method in which the measurements of the last forme are precisely transferred to the new last by machine.
2. Lastmaking method in which a last that has been corrected by the addition method functions as a last forme.
Finishing
The final process undergone by the shoe once its construction is complete, consisting of washing, creaming, and polishing the upper; and inking, heelballing, and polishing the edges of the sole and the heel. The edge of the sole is pressed with the edge iron and the edges of the heel smoothed with the dummy iron, and both are then individually patterned with the fancy wheels. The top piece and sole are creamed or inked.
Finishing wax
Type of wax, of which the shoemaker applies a thin coat to the upper surfaces of the shoe after inking. It is then pressed into the leather together with the ink using a warm iron.
Foot arch
The lengthwise and transverse arch of the foot. It bears the entire body weight when standing and walking. It acts as a shock absorber, reducing the impact on the head and spinal column of walking.
Foot documentation
All the important information about the feet and their owner established in the measurement-taking process: the measurement record, foot imprint, draft drawings, and marked-up lasts.
Foot elevation
The side and rear elevation of the foot transferred onto paper.
Foot imprint
An imprint of the foot produced by the Ped-a-graph. It gives an exact picture of the arch of the foot, the intersection points of the arch curves, and the position of the toes.
Foot outline
The shoemaker makes an outline of the foot with a vertically held pencil on a sheet of paper, from which the length and width of the shoes are then measured.
Full-brogue
A type of shoe decorated with perforated patterns, with winged toe caps and rows of perforations.

G

Gimping
Trimming and simultaneously decorating the edges of leather pieces. The shoemaker does this with a gimping machine in which steel tools with various patterns and designs can be fitted.
Girths
Characteristic measurements for the individual foot. The girth is measured at the metatarsals, the instep, the heel, and the ankle.
Golfing shoes
Sports shoes that are often handmade. The top sole is fitted with nine to eleven spikes for increased stability on grass-covered ground.
Gouge
Iron tool used to form the feather in the insole.
Grain
The upper layer of the leather is the grain layer. It has hair shafts and the excretory ducts of the sebaceous and sweat glands running through it; these give it its "grain." Every leather possesses its own characteristic grain.

H

Half-Brogue
See Semi-Brogue.
Hand-stitched shoe
A shoe made by the traditional method. The two most important types of hand-stitched shoe are the welt-stitched and double-stitched variants.
Heel
Structure consisting of a number of leather lifts and acting as a support while walking. Four to six lifts are needed for the heel of a gentleman's shoe. Two inches [5 cm] is the ideal height.
Heel construction
Several leather lifts, a top piece, and a quarter rubber are assembled to form the heel.
Heel cup
A piece of leather (part of the upper) on the outside of the back of the shoe covering the seam joining the quarters. It may be a narrow strip or a long, vertical piece of leather in line with the heel.
Heel edge
The outer surface of the heel. Usually it is black, but sometimes it is colored to match the upper leather. If it is not colored, the individual lifts are readily discernible.
Heel lifts
Two to four pieces of leather cut to the shape of the heel, which they jointly form.
Heel section
The back of the shoe.

I

Inner sock
Leather lining in direct contact with the foot. The customer can specify that it should cover the whole of the insole, three-quarters of it, or only a quarter (under the heel).
Insole
The foundation of the shoe: a piece of leather between one-tenth and one-seventh of an inch [2.5–3.5 mm] thick, depending on the robustness of the shoe, on which the shoe is built. The initial stage is to nail the insole to the last. A feather is then formed with the gouge.

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