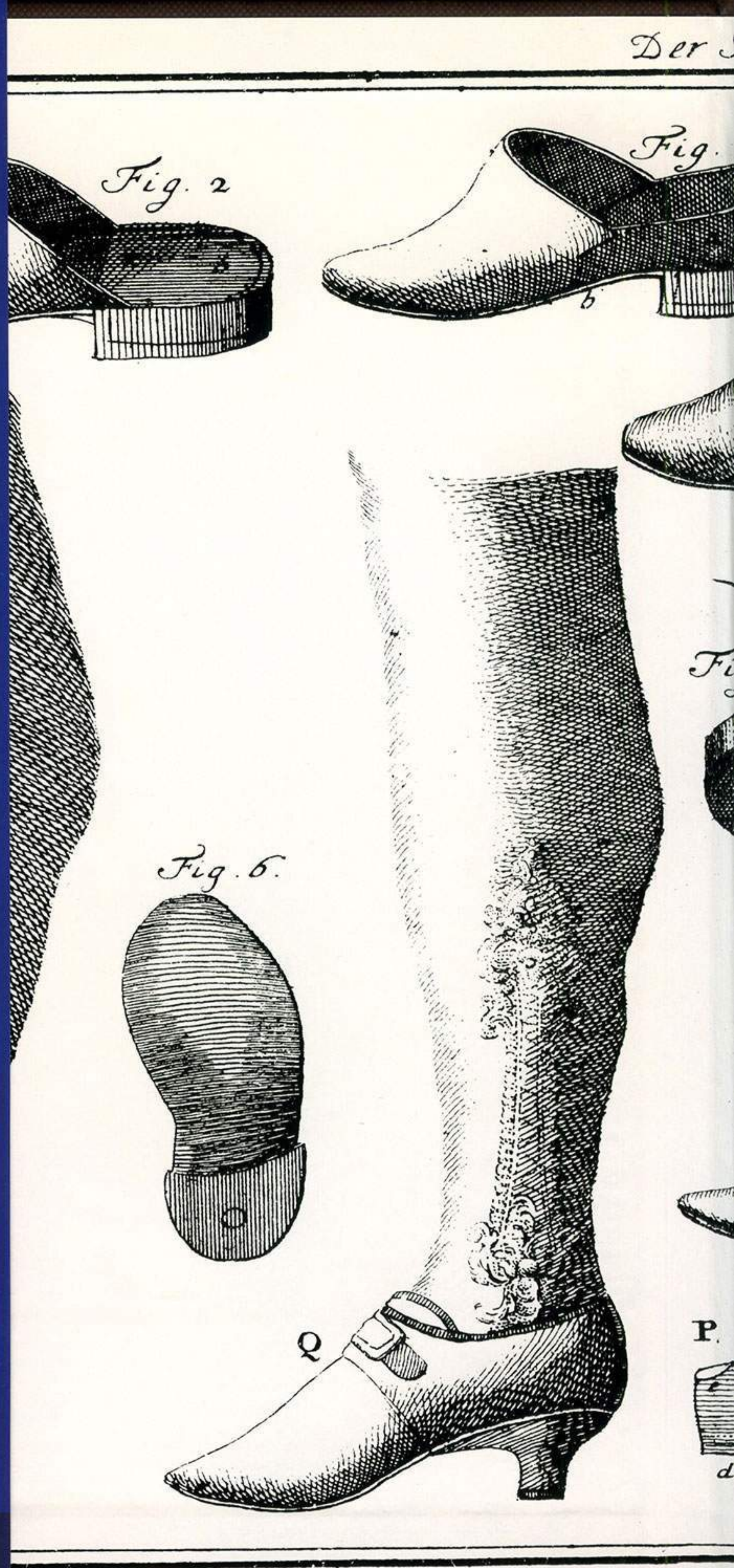


A man's shoes are the most important items in his wardrobe. However, a pair of custom-made welted shoes goes beyond mere items of apparel. They are the creation of a master craftsman, expressing the social standing of the wearer while simultaneously providing the delicate structure of the feet with optimum protection from the stress and strain of every-day life. Custom-made shoes are also a work of art in leather, designed for the distinctive feet and the individual taste of the fashion-conscious gentleman.

This book takes an expert look into the workshops of internationally renowned shoemakers. The many detailed photographs in this book reveal the closely guarded secrets and tricks of the trade that come between the taking of measurements and the completion of the shoe. What is it that determines the size of the foot? How is a piece of beechwood turned into a custom-made last? What is the treatment that turns raw leather into the upper of the shoe? Why is the welt the soul of the shoe? From the lastmaker to the tanner, the closer, and the shoemaker himself – many hands help to make every custom-made shoe a masterpiece.

Step by step, the portrait of a living craft emerges, a craft that blends centuries-old traditions, classic style, and an up-to-the-minute sense of fashion. Which shoes are right for which occasion? And what does it actually feel like to wear custom-made shoes?

This book is for those with a sense of both fashion and tradition, for those who love shoes. It is also a worthy introduction, for both the professional and the layman, to the wealth of tradition that is waiting to be discovered in the shoemaker's workshop.



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László Vass & Magda Molnár

Handmade SHOES FOR MEN

Photography Georg Valerius

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The more prominent the feet, the more spoiled they are? It has not been proved that all these gentlemen's feet always wear custom-made shoes. Nor do we know from which workshop they might have originated. But shoes are often interpreted as the visiting card of the personality.

Be that as it may, the public appearances of these gentlemen confirm that shoes are the most important things a man wears. They are (from top left to bottom right): Bill Clinton, Clint Eastwood, Michael Hutchence, Sylvester Stallone, Tom Hanks, J.F. Kennedy Jr, Mickey Rourke, Liam Neeson, and Jack Nicholson.

Elegance Begins with the Shoes

Every hand-sewn, custom-made shoe is a precious creation by craftsmen; on the one hand it protects the particularly delicate structure of the human foot from all sorts of unpleasantness; and on the other, as part of the wearer's clothing, it also expresses his taste – and sometimes his position in society as well. Elegance begins with the shoes.

There are two main reasons why people choose to have shoes custom-made for them. One is the thirst for differentiation and individuality: we like to have an influence on everything – the shape, the model, the leather, its color, the combination of different leathers, the thickness of the sole, the height of the heel, the embellishments – for ourselves, so that the shoes will go with a particular suit or be appropriate for a particular occasion. But apart from that, many a man – entirely in line with classical tradition – would like to have an entirely new and modern pair designed for him.

One other reason is rather more prosaic. In general, people arrive in this world with soundly constructed feet, which would serve them well only if they could spend their whole lives walking around barefoot on sandy, stony, or wooded ground. But in our civilized world the feet become accustomed at an early stage to “laziness”; the toddler who is just learning to walk has shoes put on him, and later on this process is encouraged by driving a car, office work, or spending hours in front of the television. But mostly it's the shoes themselves – poor-quality, uncomfortable shoes, that is – that do the most damage. And it is by no means unusual for people that have undergone years of torment to discover, in middle age, that custom-made shoes are the only source of relief.

It is not known exactly when making shoes became a craft, though it was a respected trade in Egypt 4000 years ago. The skills, tricks, and wiles of the craft were refined over the centuries, for until the end of the nineteenth century – when industrial shoe production became widespread – everybody wore handmade shoes or boots.

The shoemaking process today still consists of exactly the same stages as it did 100 or 200 years ago, though today the preparatory stage has undergone a certain degree of specialization, leading to a division of labor. The shoemaker takes the customer's measurements, certainly, but it is the lastmaker who uses these measurements to make the last that takes the place of the

foot for the subsequent production stages. The shoemaker selects the leather, but it's the clicker who cuts out the individual pieces and the closer who fits them together; it's real teamwork. When the last with the upper stitched round reaches the workshop, the rules for constructing the shoe are the same as they used to be for both royal shoemakers' establishments and little village workshops.

Making a new pair of shoes is always a challenge to the experience and skill of the shoemaker. From the time the measurements are taken to the moment when the completed, polished shoes are handed over to their future wearer, the shoemaker's eye must not fail him, nor must his hand falter. Even with more than 30 years' familiarity and experience, the “journeyman's sense” of how to produce a masterpiece of a particular model has to be fine tuned from scratch every time. If this process is successful, the saying of Chuang Tse comes true: “If the shoe fits, the foot is forgotten.”

This book introduces the skilled craft of making comfortable, beautiful, classic gentlemen's shoes that offer the magic of individuality. In spite of the changes brought about over the centuries by science and technology, to which shoemaking as well as footwear production have not remained immune, the workshops where handmade shoes are produced – whether these are in London, New York, Munich, Vienna, Rome, or Budapest – hold fast with quiet pride to their conservative traditions. These apply in equal measure to the various types of shoe, to the material used, and to the ethics of the profession.

The types of shoe today regarded as classics for the elegant gentleman appeared in the last decades of the nineteenth century. Where the material is concerned, the conservative maxim applies: nothing can replace natural, genuine leather, whether for the upper, the lining, the insole, or the sole. Only leather that has been treated with vegetal tanning agents by a centuries-old technology is selected for these. The sewing thread, too, consists only of the strongest plant fibers, and only natural ingredients are used for the glue.

Step by step the book follows the more than 200 operations that are carried out over a period of some ten weeks to make a single pair of shoes. How can the precise measurements of the foot be determined? What happens in the two years that elapse between the felling of the tree and the emergence of the measurement last? What are the

characteristic types and design features of the classic gentleman's shoes? How is the leather for the upper tanned? How about the leather for the sole? Why is the welt the heart of the shoe? Is it worth having handmade shoes repaired? How can we take care of our favorite shoes so that they will last? How does it feel to wear hand-sewn shoes?

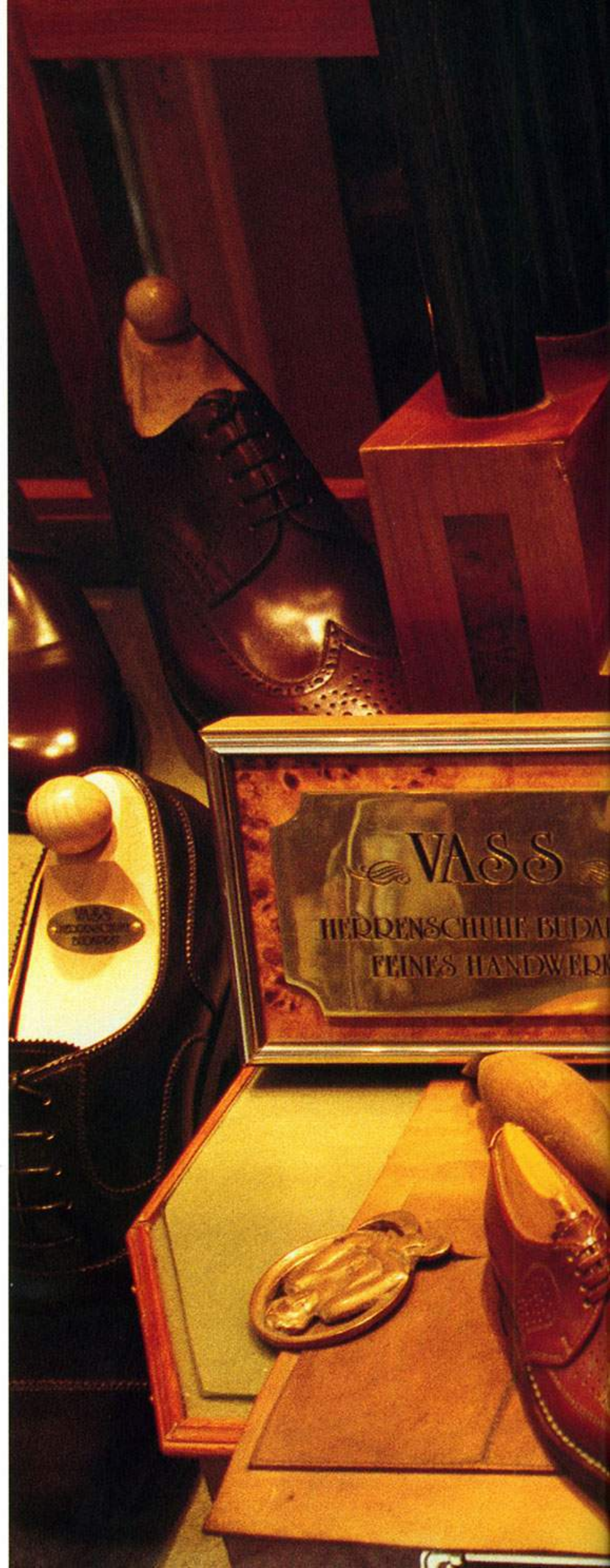
Every shoemaker in the world will give more or less the same answers to these questions – even if every workshop, naturally, develops its own special tricks. And they will all be found in this book.

My love and reverence for the shoemaker's craft has helped me to describe everything that goes on day by day in my workshop. With great sensitivity, the photographs portray the various materials, tools, and – not least – the people that create a truly unique product.

My thanks are due to the craftsmen from whom I learned my trade and to those who work for me: their expert knowledge has enabled me to extend my own. Thanks also to Ludwig Könnemann, who invited me to write this book.

Special thanks go to my co-author Magda Molnár, who molded the most diverse material into the book you now hold in your hands.

László Vass





It's the little secrets and ruses – some of them closely guarded – of the individual workshops in Vienna, London, or Budapest that make some shoes even better than the best.



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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.

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,



Measurements are taken in both the standing and sitting positions.

whether the inside arch is high or low, whether the ankle sits lower, whether the heel is strong or weak; he checks the shape of the insteps and the metatarsals and notes the presence of any characteristic malformations (for example flat feet, bunions, protruding little toes, big toes higher than usual, hammer toes). To do this the shoemaker needs to feel the feet all over, sensing their shape and outline with his hands. He observes the customer's gait, which may be substantially affected by his body weight or by unconscious mannerisms. Some people are light on their feet, while others cannot walk without stamping – and this is why the shoemaker also examines with great care the shoes that the customer was wearing when he came, for the way these are misshapen (whether they lean one way or the other, at what points the soles and heels are worn) may provide indications that will be useful when making the new pair.

The shoemaker then has a discussion with his customer. Generally very few people have any idea of the condition of their feet. The most they will say is that "shoes always pinch my big toe" or "all shoes are tight over my insteps." This indirectly brings up more information that is important for the size and shape of the new shoes. For example, people suffering from diabetes or constricted arteries must not wear tight



The shoemaker establishes the shape of his customer's feet by touch.

footwear: their shoes must be made slightly looser. Such considerations are, of course, crucial in the design and making of a person's shoe. A perfect fit is the desire of both customer and shoemaker. A gentleman needs to be able to put his trust in the team responsible for providing him with his shoes, and it is in the shop's interests to produce the best shoes for him so that he will come back for more and recommend the service to his friends.

The various stages of shoemaking can be seen in this shoemaker's workshop, among them the use of a foot gauge to take measurements (right). This copperplate print, one of a series entitled "Craftsmen's workshops with their principal implements and processes," was made in Esslingen in 1836. It is interesting to observe the footwear of the craftsmen.



The Draft

There's a golden rule among shoemakers: the simpler the measuring device, the more reliable the measurements. Even the most exclusive workshops make do with two shoe heels, two sheets of paper, a shoemaker's tape measure, a right-angled bracket, a pencil, a device for measuring the length of the foot, as well as the requisite items for making a sole imprint (indigo paper or a footprint measure).

In order to determine the length and width of the new shoes, drafts – outlines of the feet – must be drawn. The pencil must be exactly vertical to the paper when this is done. If it were to lean outward away from the foot (this is also called “underdrawing”), the result would be shoes at least one size too small. The shoemaker draws the line

from the heel, along the inside of the foot to the big toe, round the tips of the toes, and back along the outside of the foot to the heel. The toes are pressed down during this process so that they extend to their full length. As the left and right feet are never absolutely identical, the process is repeated with the other foot.

Once the draft has been taken the shoemaker marks the location of the first and fifth toe-joint bones (see page 19) and the outermost points of the outer and inner metatarsals and of the heel, so as to prepare for the actual measurement of the foot.



As the left and right feet are never absolutely identical, drafts of both feet must be taken.

The Length and Width of the Foot

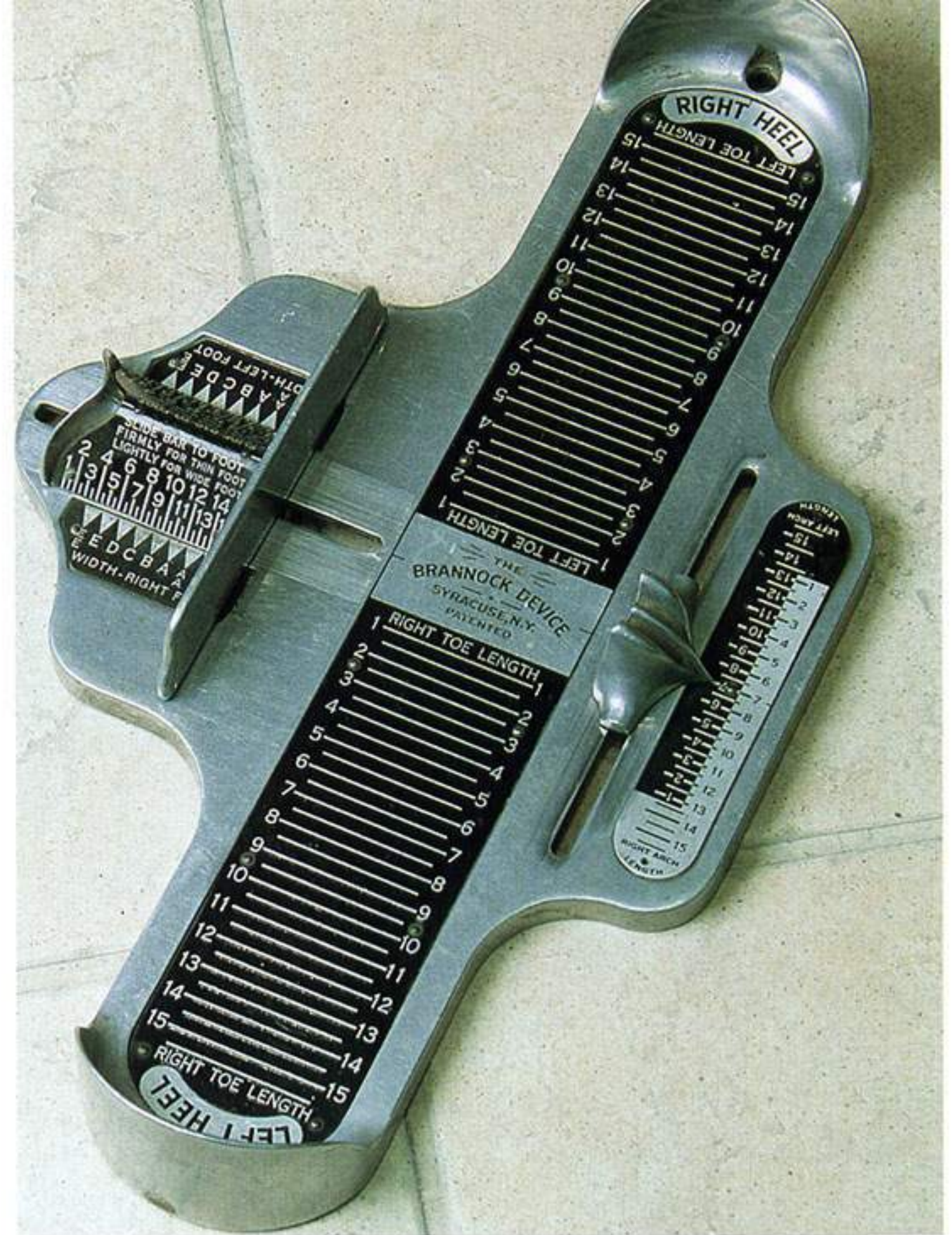
The length and width of the foot can be measured from the draft with a special shoemaker's tape measure. This consists of a nonelastic textile strip calibrated differently on each side.

One side of the tape measure, which is calibrated in numbers of stitches, is used to read off the length of the foot. Traditionally the French stitch-measurement system is used, in which one division is equal to about a quarter of an inch [6.667 mm]. The shoemaker then increases the result by one and a half; if the foot is measured as 41, for example, the fitting itself should be 42.5 – because the foot generally stretches by about three-eighths of an inch [1cm] when walking. The shoes would not be comfortable when walking if the toes were jammed against the toecaps and the feet had insufficient room for movement.

The other side of the tape measure is marked in metric units – centimeters and millimeters. This side is used to measure the widest point of the foot – that is the distance between the inner and outer metatarsals – on the basis of the points marked on the outline.

These measurements are then checked with the Brannock gauge, which has the scale divisions for length and width marked on its plate. The foot is placed on the device and the heel firmly pressed into the heel cup, and the shoemaker then reads off the foot length from the scale. Two freely moving slides – one moving horizontally, the other vertically – are then used to determine the width of the foot.

The Brannock gauge allows for an accurate measurement of foot size and is an indispensable tool in the shoemaker's workshop. There are different gauges available for different countries, but each performs essentially the same function. Customers worldwide have reason to be thankful to the Brannock gauge for their foot comfort.

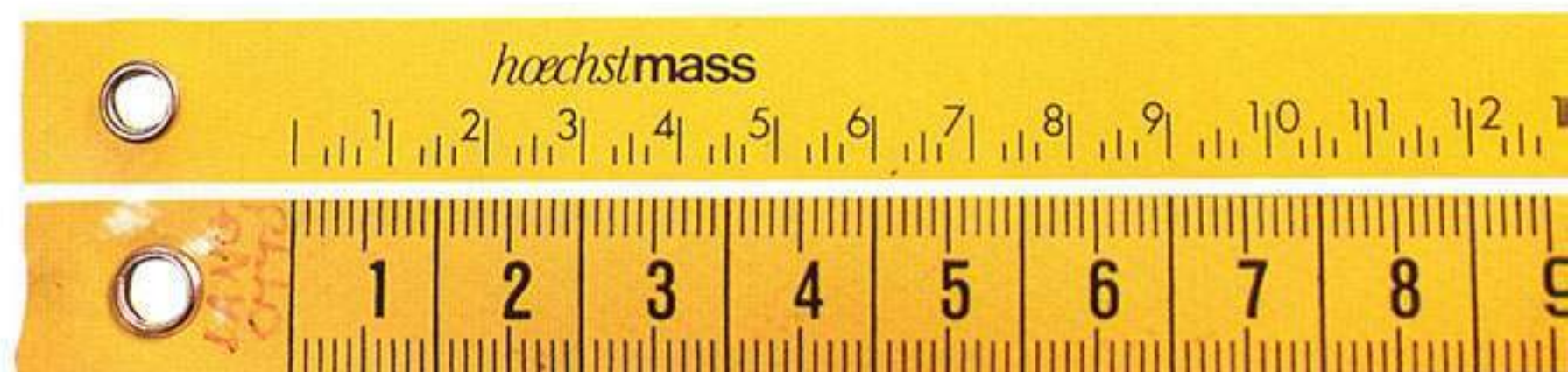


This Brannock gauge is used to check the shoe size and width number (see page 26). The scale on this one shows English sizes.

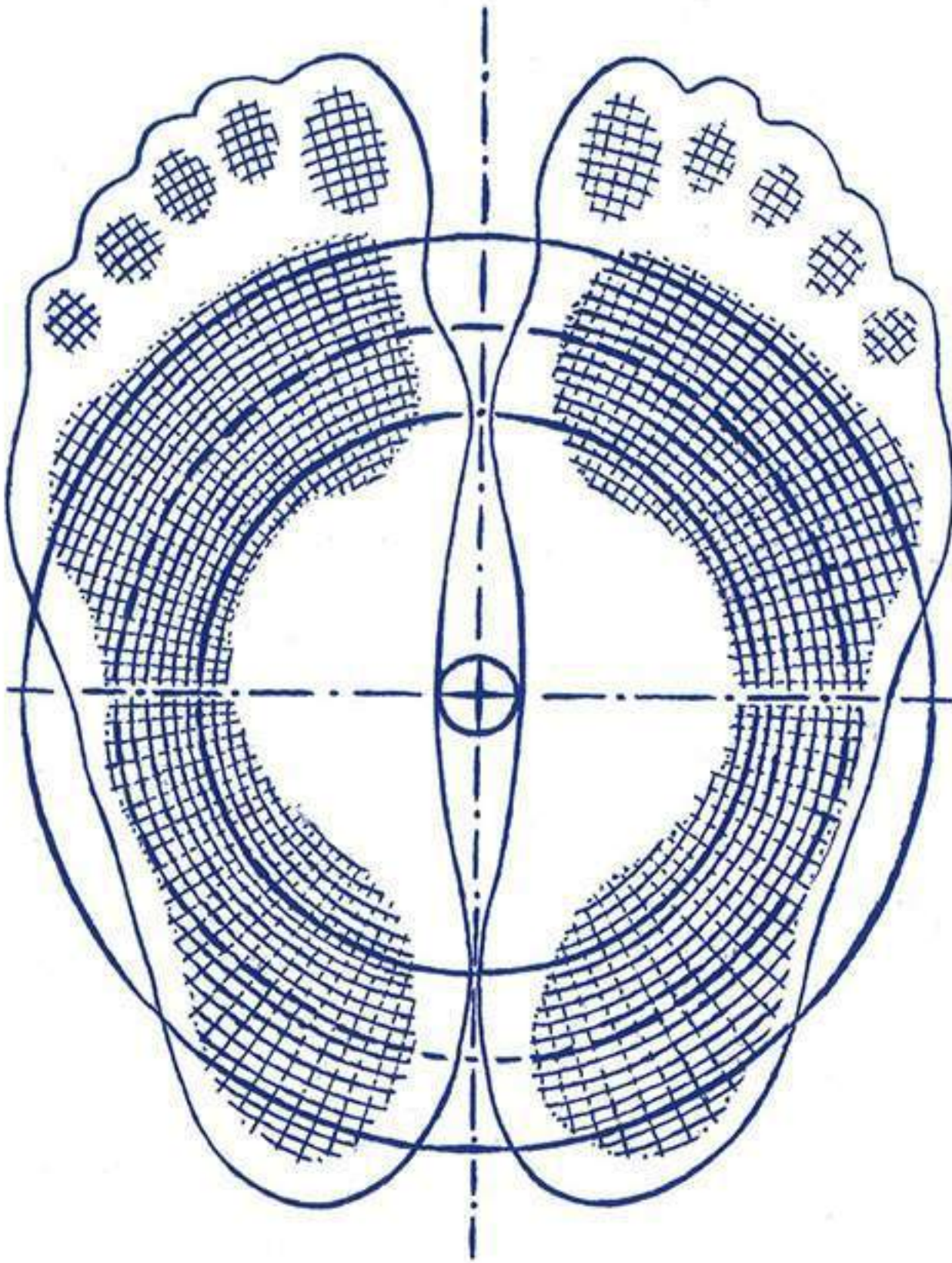


The foot must be placed on the device with the heel against the heel cup, and the toes pressed onto the base. The shoe size can then be read off correctly.

The shoemaker's tape measure has different scales on each side: one gives the length of the foot in French sizes (in which one division equals about a quarter of an inch [6.667 mm]), while the other gives the width of the foot in the metric system, that is in centimeters and millimeters.



The Foot Imprint



When placed close together the feet form a dome-like curve.

After the draft, the imprint; this is taken with a Ped-a-graph that provides an accurate picture of the condition of the arches, and enables both the intersection points of the arch curves and the location of the toes to be determined.

A rubber membrane with one side densely covered in pimples is painted with ink and laid on a sheet of paper with the painted side downward. The foot imprint is taken in a sitting position. The customer puts a little weight on the foot being measured, which transfers the ink to the paper, the color being darkest where the load is greatest. The lastmaker will make sure that the sole of the last is slightly elevated at points corresponding to the darker patches.

An arch with an ideal shape in both the longitudinal and transverse planes leaves hardly any traces. If the entire surface of the sole leaves colored traces, this is an indication of one of the most common malformations of the feet: fallen arches.

This problem can be successfully treated at an early stage with well-made, comfortable shoes containing inserts to raise the arches. So it is important for the shoemaker to get an accurate picture of the state of his customer's arches.



The foot imprint is taken with the Ped-a-graph.



The line linking the big toe and the heel determines the actual length of the foot.

The Foot from Different Angles

The side elevation provides further important information about the shape of the foot. The foot is placed on the measuring sheet with a heel piece underneath it of the same height as the new shoes; this puts the foot in the correct position. A drawing board is set up alongside the foot and the side view traced onto the paper. This drawing shows the height of the toes, the rise of the instep, and the bow of the heel. The heel elevation is also very useful, for example in determining the width of the heel and deciding on the shoe type. The shoemaker obtains additional information by measuring the height of the ankle, which affects the height and shape of the uppers.

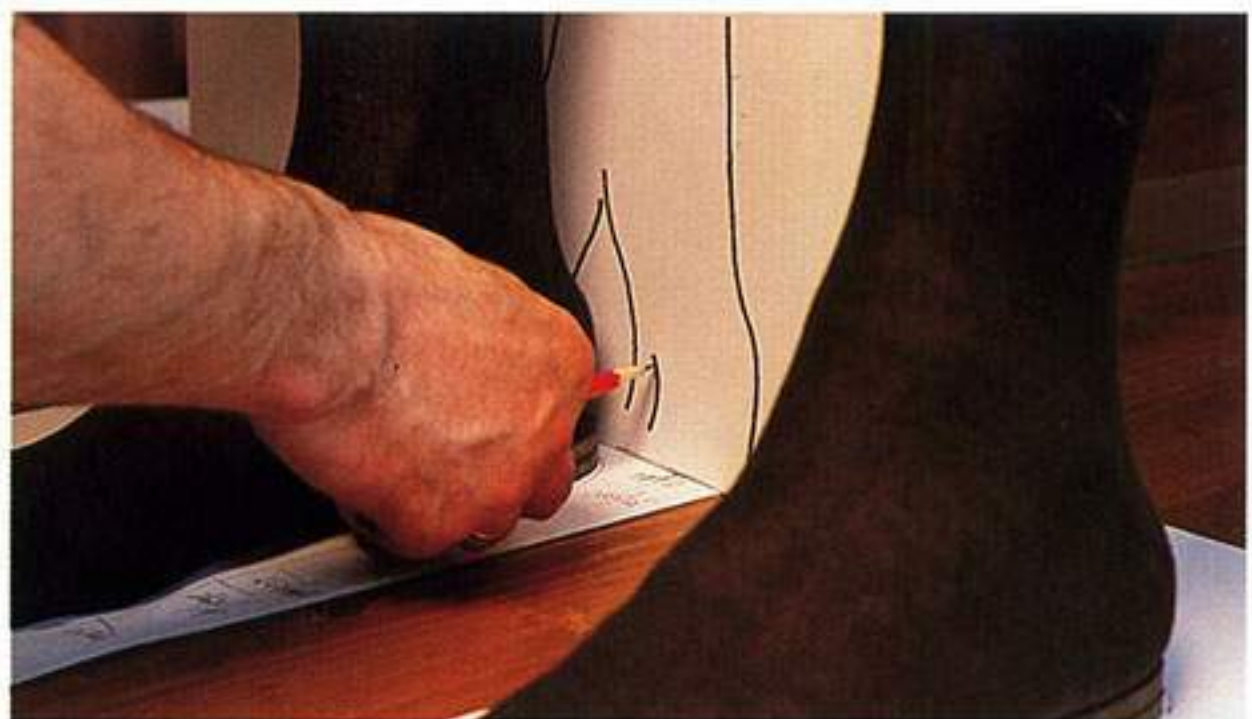
With the knowledge obtained from the draft, the imprint, the various elevations of the foot, and its critical points, the shoemaker marks up the areas where it diverges from the norm on a prefabricated blank that will be fashioned into the last. Of course, there is no such thing as a “normal foot”, and it would be surprising if there were no deviation from the dimensions of the blank.



A heel piece is placed under the heel to bring the foot into the correct position.



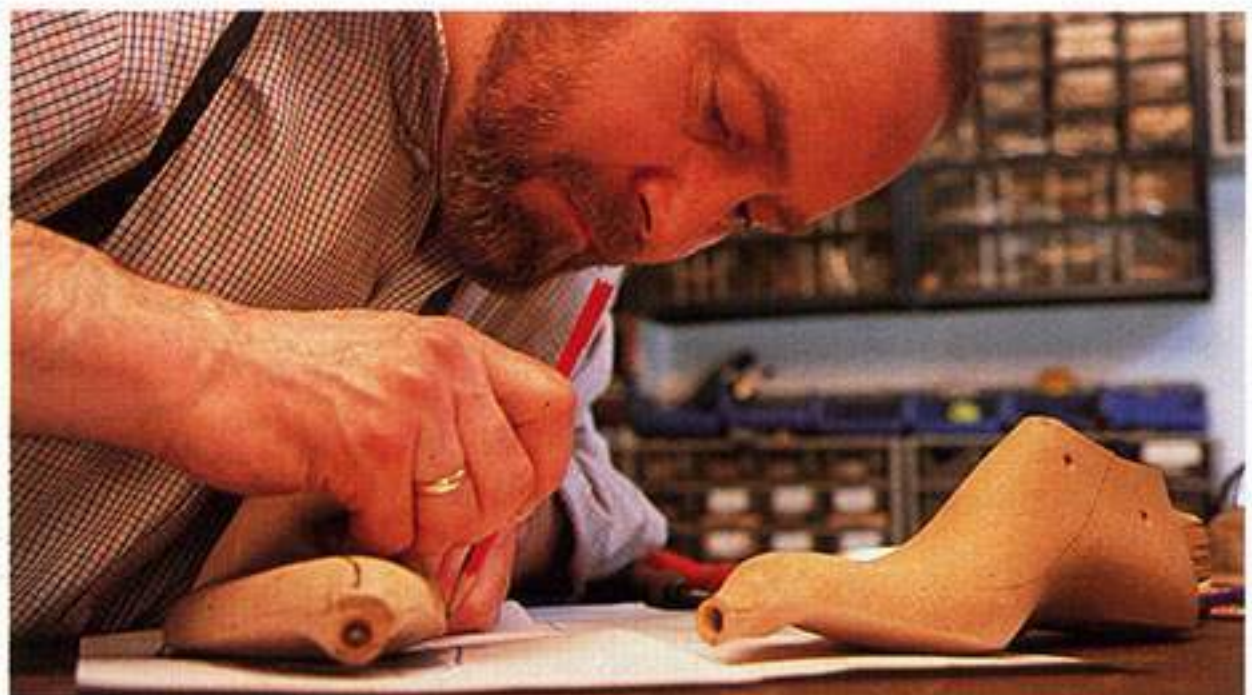
The side elevation shows the height of the toes and of the instep.



This elevation indicates the shape of the heel.



The height of the ankle is important for shoes as well as boots.



The shoemaker rechecks all the measurements (the blank last is on the right).

The Bone Structure of the Foot

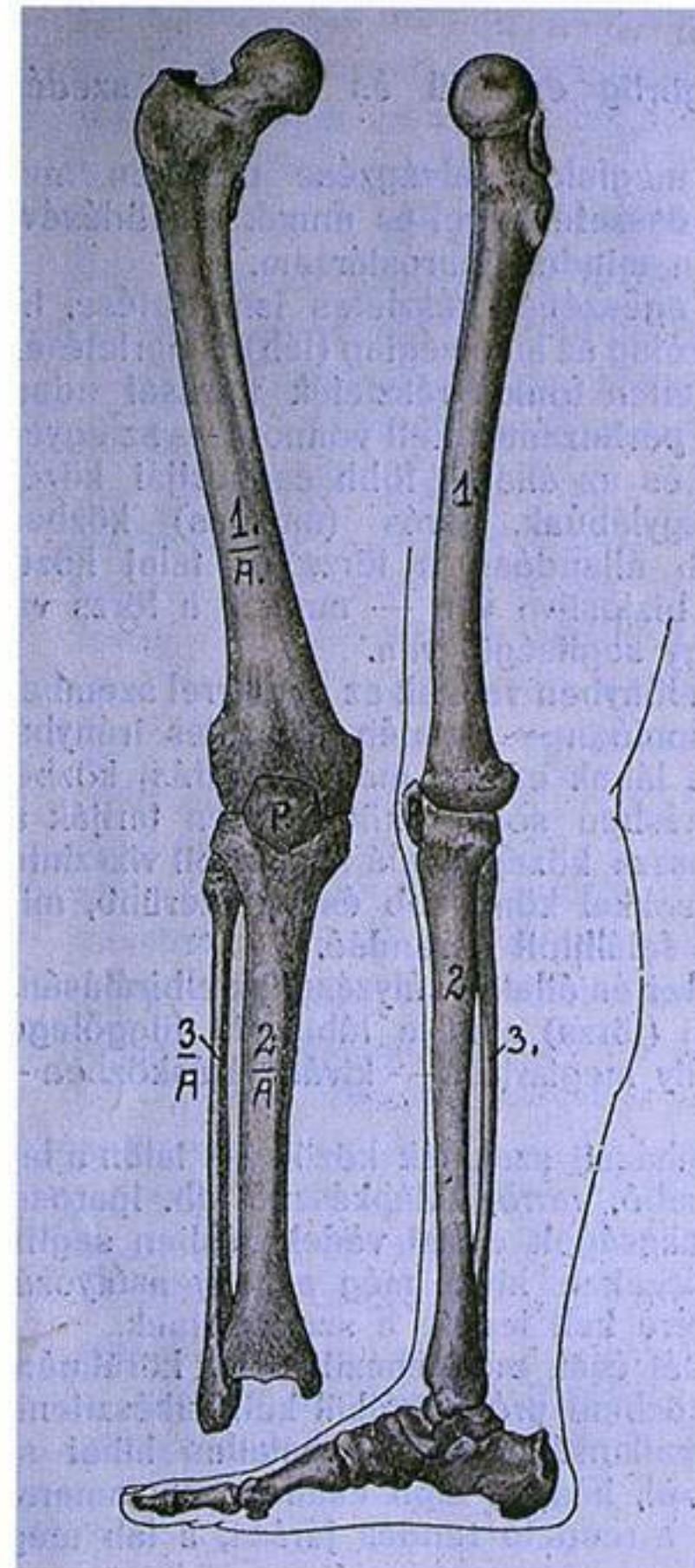
From the origins of the shoemaker's craft in ancient times until the end of the eighteenth century, shoemakers practicing their trade concentrated exclusively on the external shape of the foot for which they were to provide a protective covering, utterly ignoring what lay beneath it: the bone structure 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.

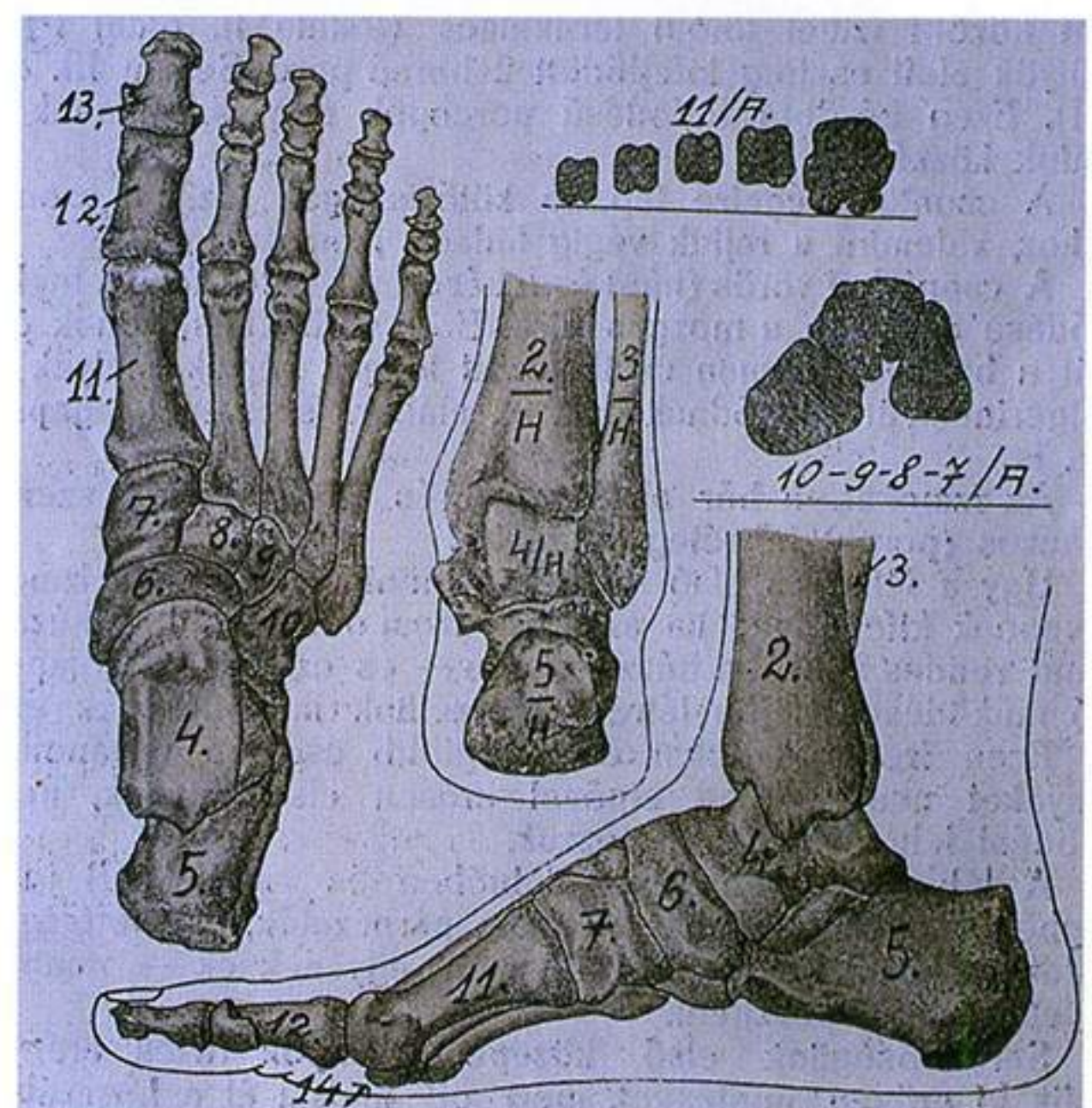
Although it is true that no two feet are absolutely the same, their anatomical structure is identical in every human being. This structure first appeared some two million years ago, when for reasons still disputed to this day the progenitor of modern man – *homo erectus* – stood upright and began to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

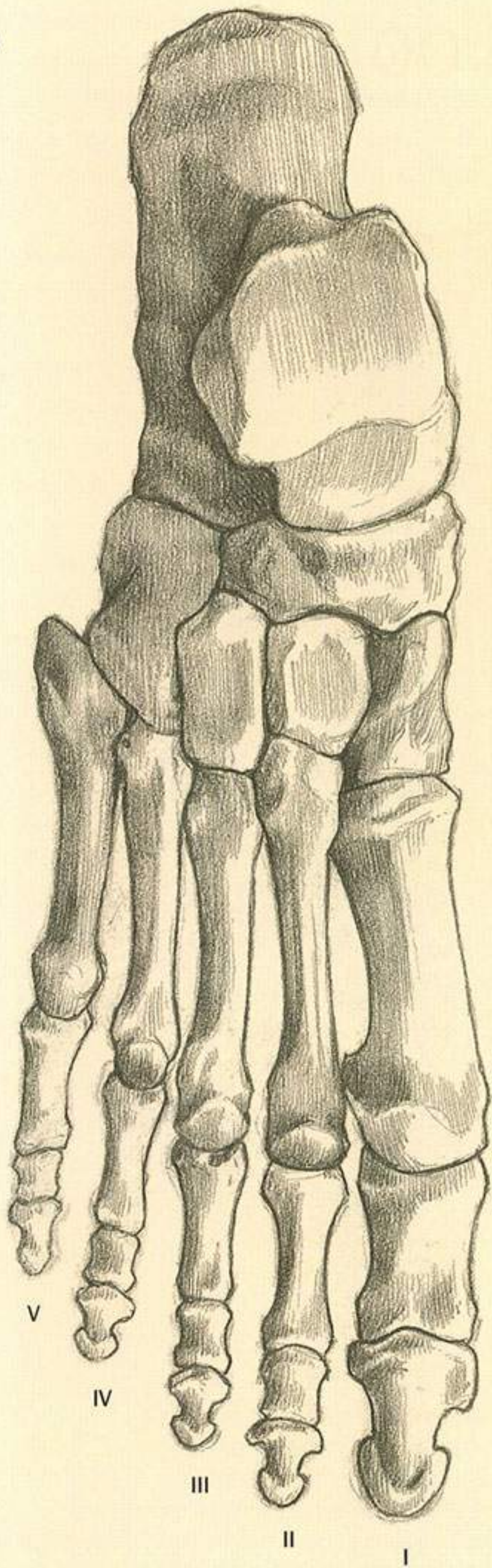
The foot is thus an extraordinarily resilient structure that is capable of amazing achievements. According to an English study the average central European covers 93,000 miles [150,000 km] on foot during his lifetime. The case for comfortable shoes could not be better made.



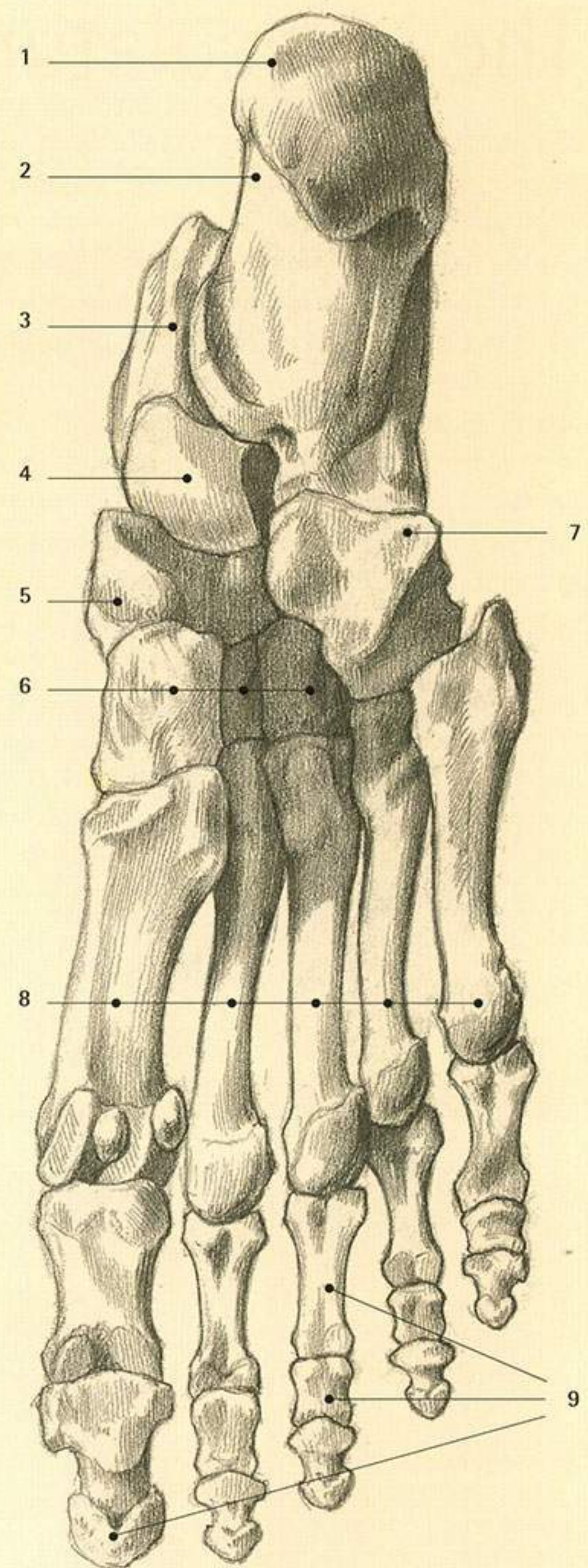
The shoemaker's primer by József Bodh published in Budapest in 1920 contained anatomical illustrations appropriate to the standards of the period.



A



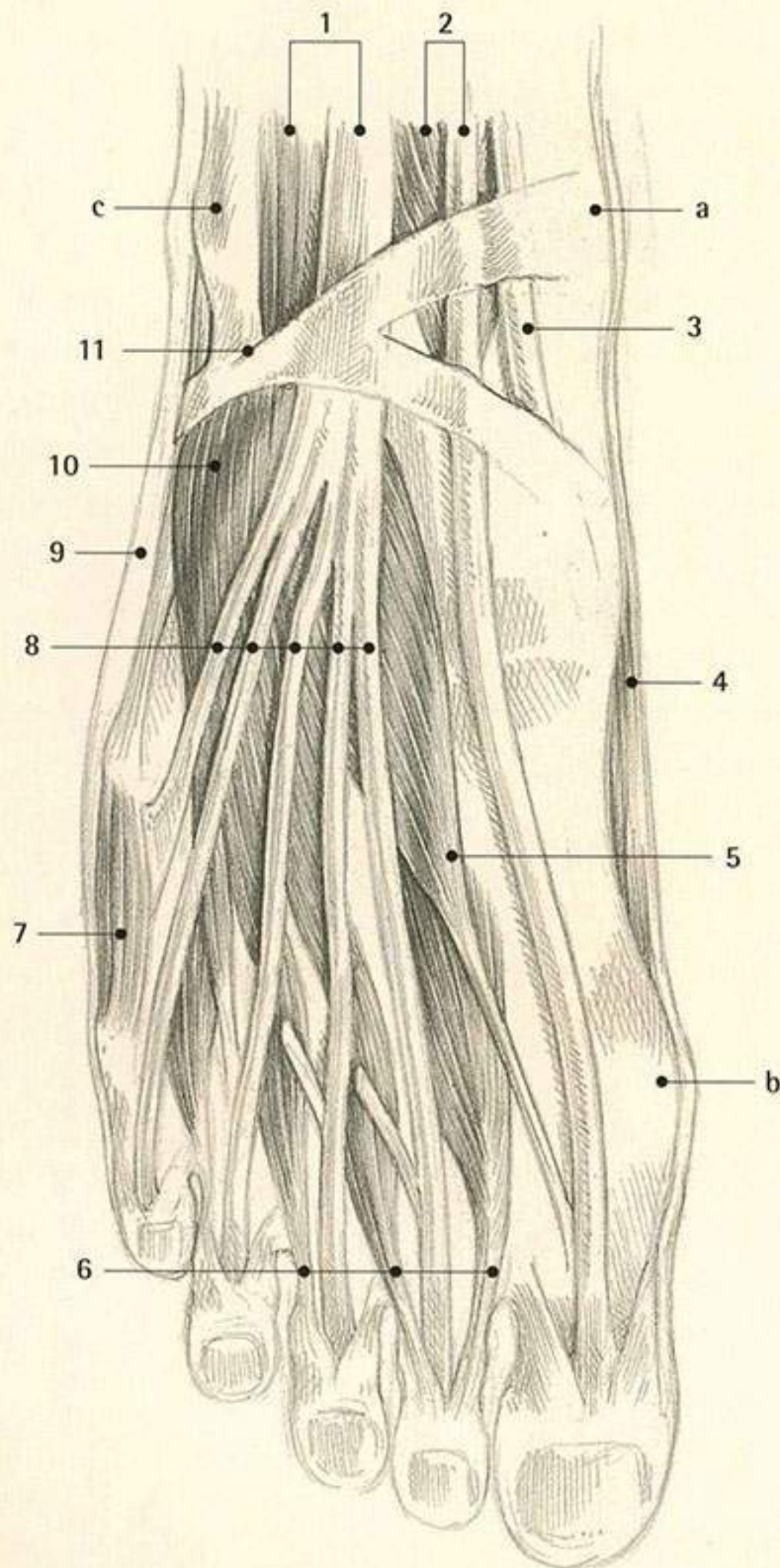
B



These views of the 26 bones of the foot, as seen from above (A) and below (B), show that the seven tarsal bones (items 1–7) are the most highly developed, because they bear the greater part of the body weight. It is clear from figure A that the length of the foot is equal to the distance between the end of the heel bone and the tip of the big toe, while its width is determined by the five metatarsal bones (8). The thickest of these metatarsal bones is that of the big toe; that of the second toe, the longest; and that of the little toe (V), the shortest. Toes II–V consist of three phalanges, while the longest and widest toe, the big toe (I), has only two phalanges.

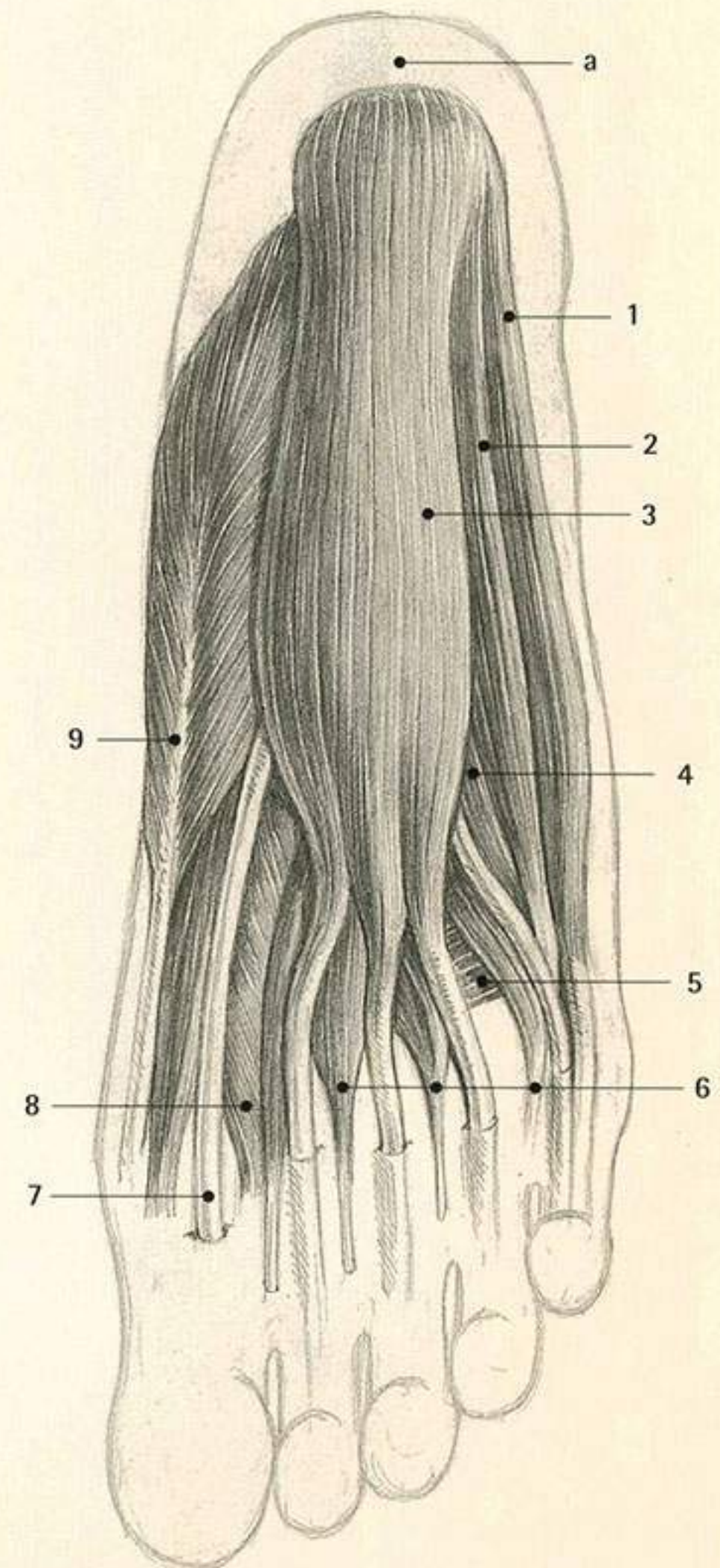
1. Body of heel bone (tuber calcanei)
2. Heel bone (calcaneus)
3. Ankle bone (talus)
4. Ankle-bone head (caput tali)
5. Navicular bone (os naviculare)
6. Cuneiform bones (ossa cuneiformia)
7. Cuboid (os cuboideum)
8. Metatarsal bones (ossa metatarsalia)
9. Toe bones (digiti pedis)

The Musculature of the Foot



The musculature of the foot as seen from above

1. long toe extensor (m. extensor digitorum longus)
2. long big-toe extensor (m. extensor digiti I longus)
3. shinbone-muscle tendon (tendo m. tibialis anterior)
4. big-toe spreader (m. abductor digiti I)
5. short big-toe spreader (m. abductor digiti I brevis)
6. interosseous muscles of the instep (three) (mm. interossei dorsales)
7. small toe spreader (m. abductor digiti V)
8. tendons of the long toe extensor (tendo m. extensor digitorum longus)
9. fibular-muscle tendon (tendo m. peroneus tertius)
10. short toe extensor (m. extensor digitorum brevis)
11. inferior transverse tendon-retaining ligament (ligamentum cuboideonaviculare dorsale)
- a inner ankle bone (malleolus medialis)
- b phalanx of the proximal big-toe joint (articulatio metatarso phalangea)
- c outer ankle bone (malleolus medialis)



The musculature of the foot as seen from below

1. little-toe spreader (m. abductor digiti V)
2. little-toe bender (m. flexor digiti V)
3. short toe bender (m. flexores digitorum brevis)
4. interosseous muscles of the sole (four) (mm. interossei plantares)
5. big-toe adductor, transverse head (m. adductor digiti I, transverse head)
6. "vermiform" muscles of toes II-V (mm. lumbricales digitorum II-V)
7. tendon of the long big-toe bender (tendo m. flexor digiti I)
8. short big-toe bender (m. flexor digiti I brevis)
9. big-toe spreader (m. abductor digiti I)
- a heel bone (calcaneus)

The bones form the foot's load-bearing structure, while the muscles, which are attached to the bones with tendons, carry out its movements. Muscles generally operate in groups rather than singly. A single movement of the body – taking a step forward, for example – can involve several muscles, some of them acting in opposite directions. All the muscles of the foot are small and short, their function being to support the musculature of the lower leg – some by bending, some by stretching. The spaces between the metatarsal bones are occupied by small muscles whose function is to spread the toes apart or draw them together. In comparison with the fingers, though, the movements of the toes are very limited. The small muscles of the soles of the feet play an important part in maintaining the arches. Beneath the thick skin of the soles and the fatty tissue underlying it there is a strong band of muscle whose function is to protect the nerves and blood vessels within.

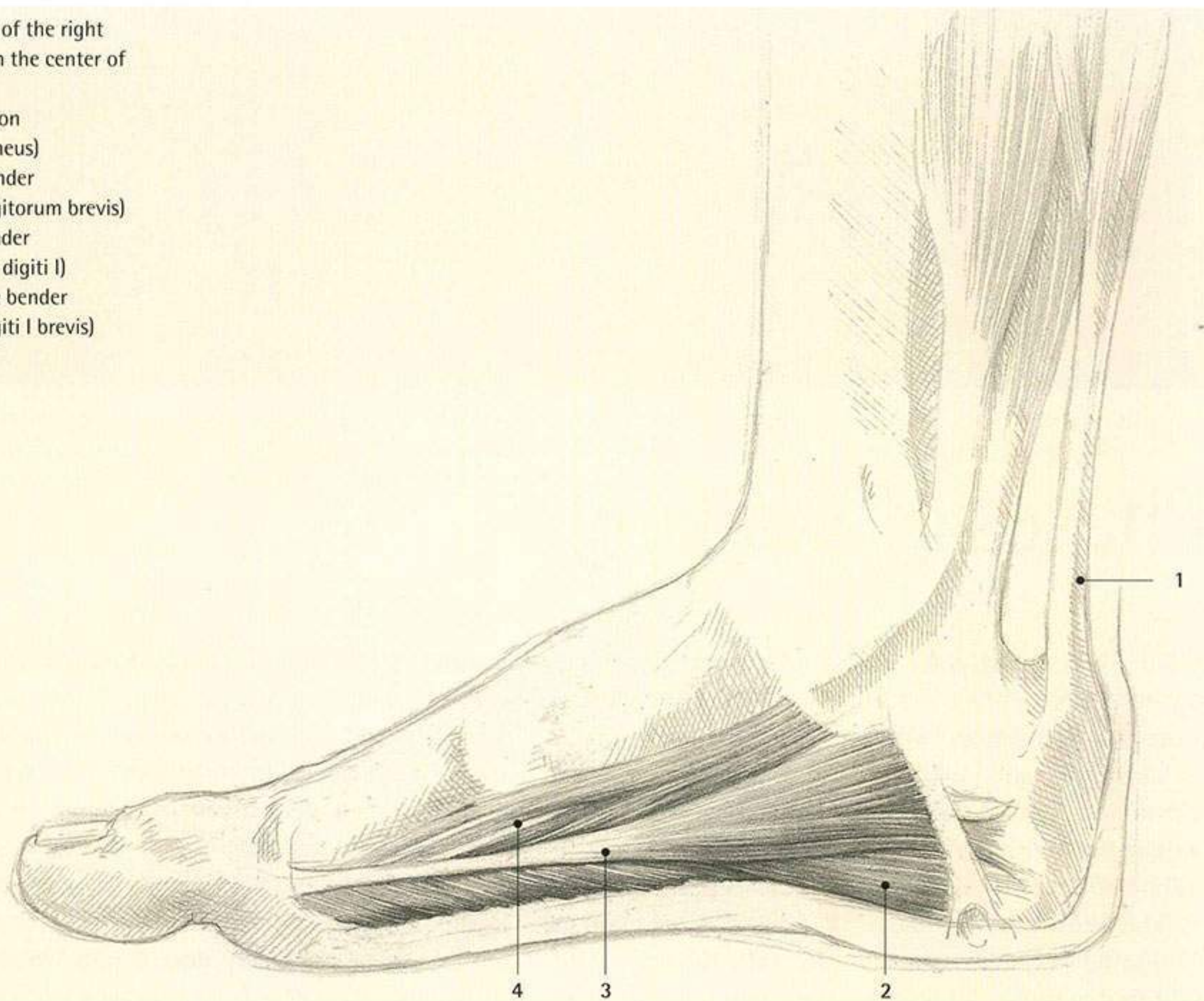
The foot has an unusually large and complex network of blood vessels and nerves. The nerve fibers transmit the impulses that trigger muscle contractions. They send the

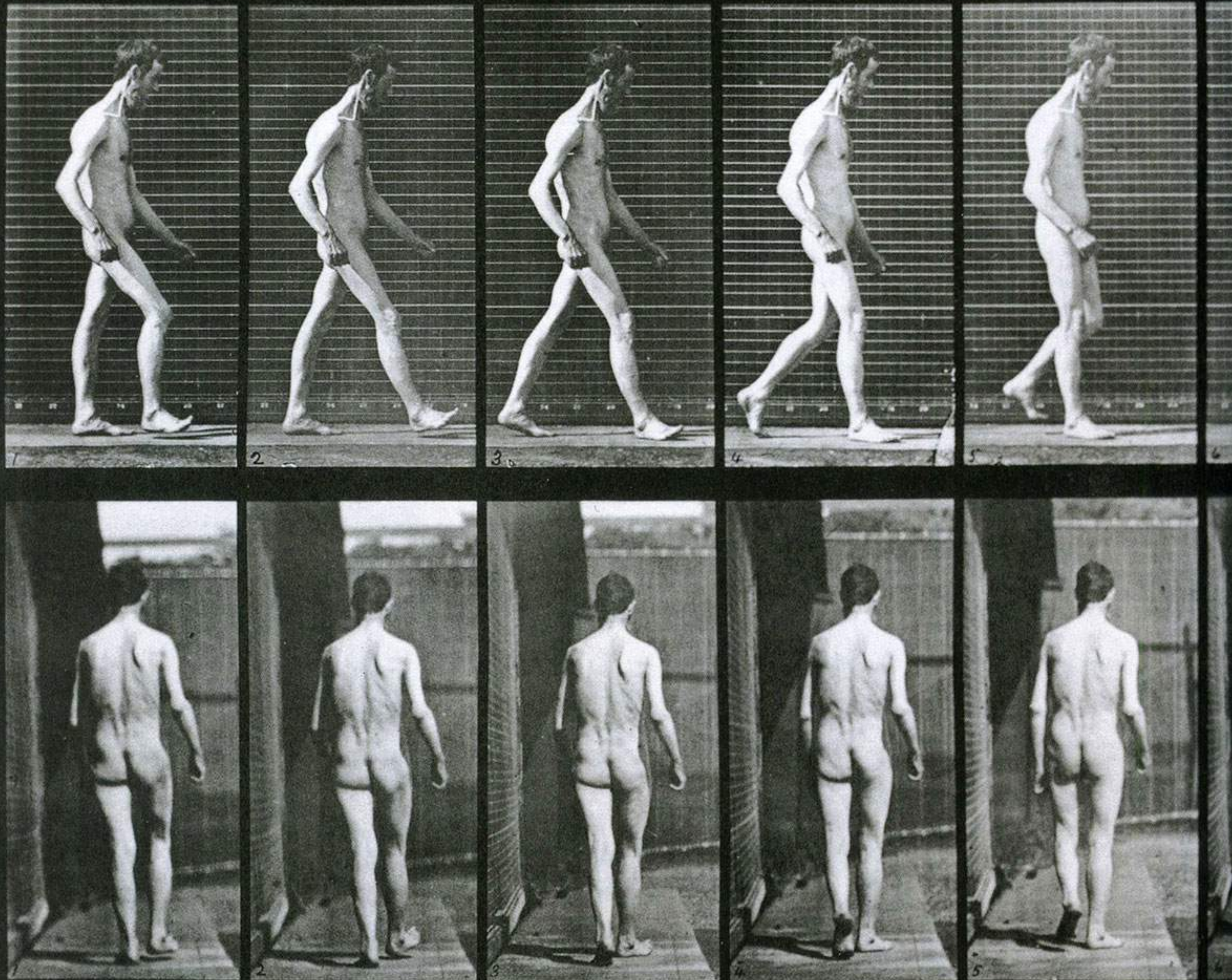
brain a continuous stream of information about the position of the limbs and the posture of the body, and they also transmit any sense of pain.

The skin of the soles functions both as protection and as a receiver of stimuli. It is resistant to elastic, mechanical strain (pressure, for example), and the chemically acidic secretion from its glands forms a protective barrier against pathogens. The soles of the feet are especially rich in sweat glands, with some 2300 to the square inch [360 to the sq. cm]. The volume of perspiration they produce can be substantial. People tending to perspire heavily should take care to avoid footwear containing synthetics; naturally breathing leather counteracts fungal infections and bacterial complaints. Some people find their feet sweating causes more discomfort than perspiration from any other part of the body, and have to wash their feet frequently. Perhaps this unfortunate situation would be alleviated if their shoes were a better fit.

The musculature of the right foot as seen from the center of the body

1. Achilles tendon
(tendo calcaneus)
2. short toe-bender
(m. flexor digitorum brevis)
3. big-toe spreader
(m. abductor digiti I)
4. short big-toe bender
(m. flexor digiti I brevis)



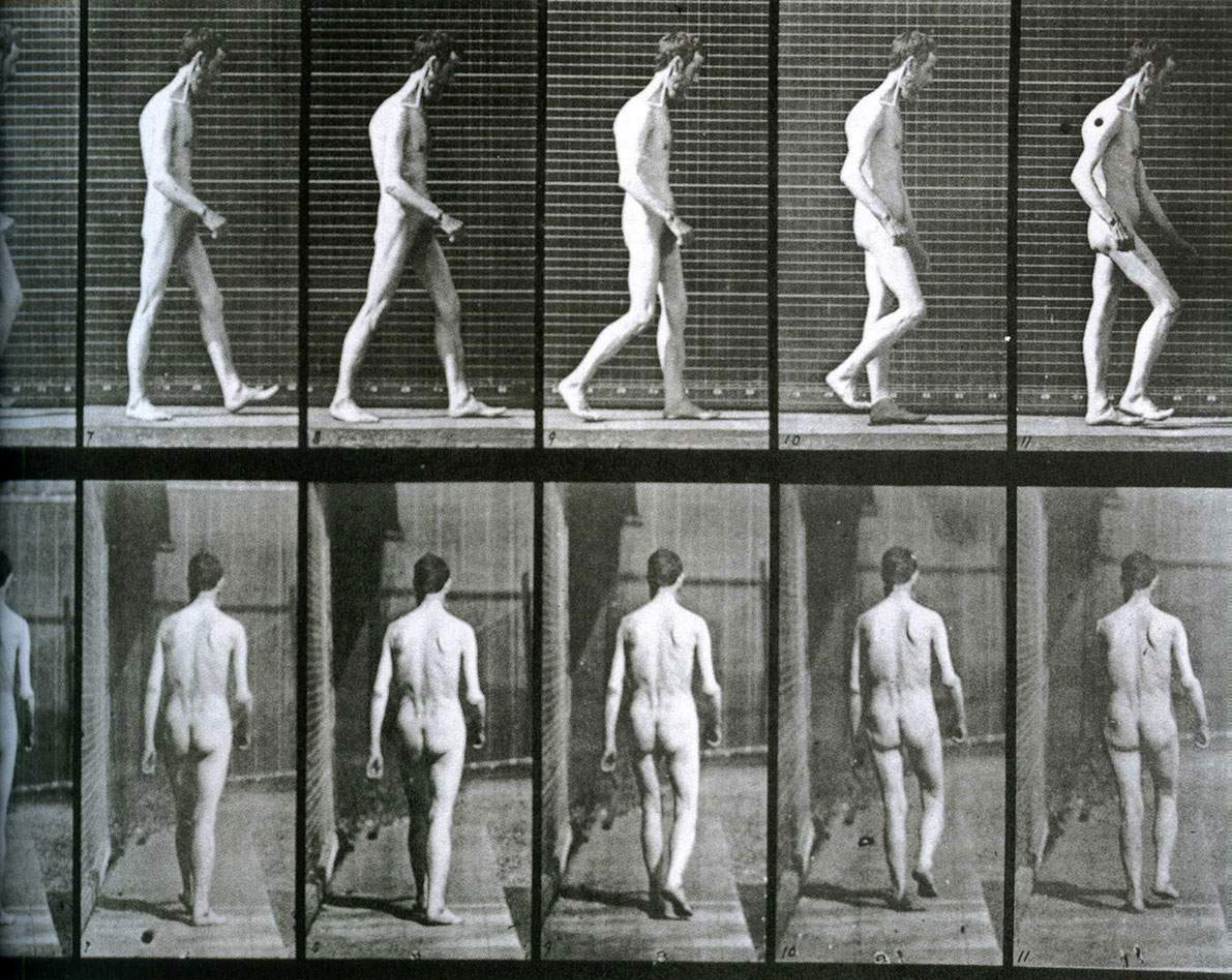


Phases of Walking

When we walk we place the soles of our feet on the ground alternately, at the same time either shifting or supporting the center of gravity of the body weight. With each step the body moves in the vertical plane, that is it rises and falls. But at the same time it also describes oblique and horizontal movements when the center of gravity of the body shifts from the side of the supporting leg to that of the other so that the body can maintain its equilibrium. When we walk we first raise the heel of the right foot, pressing the sole and the toes hard against the

ground at the level of the metatarsals. Assisted by the toes, this foot then lifts off the ground. It is still in the air when the left foot begins to execute the same series of movements. The right foot returns to the ground, the entire body weight initially resting on its heel. In normal walking the foot is subjected to great pressure differentials: either it bears the whole body weight, or it floats "weightless" in the air.

Running is actually accelerated walking, with the difference that there is a time when neither foot is in



In 1901 Eadweard Muybridge produced 196 photographic plates with over 4,700 images of the human body in motion. He used one camera for each movement phase, that is eleven cameras for the phases shown here. He

shot each image at 1/6000th of a second on a 10 x 13 cm glass plate. From: Eadweard Muybridge, *The Human Figure in Motion*, Dover Publications, 1955, New York.

contact with the ground. The bones and musculature of the feet, as well as their networks of veins and nerves, constantly adapt to the strains imposed by the individual movement phases of walking, running, and jumping.

At the end of the nineteenth century the English photographer Eadweard Muybridge (1830–1904) achieved great fame in the United States. He invented a special method of capturing the separate phases of movement. Together with the painter Meissonier (who afterwards actually corrected the positions of horses' legs

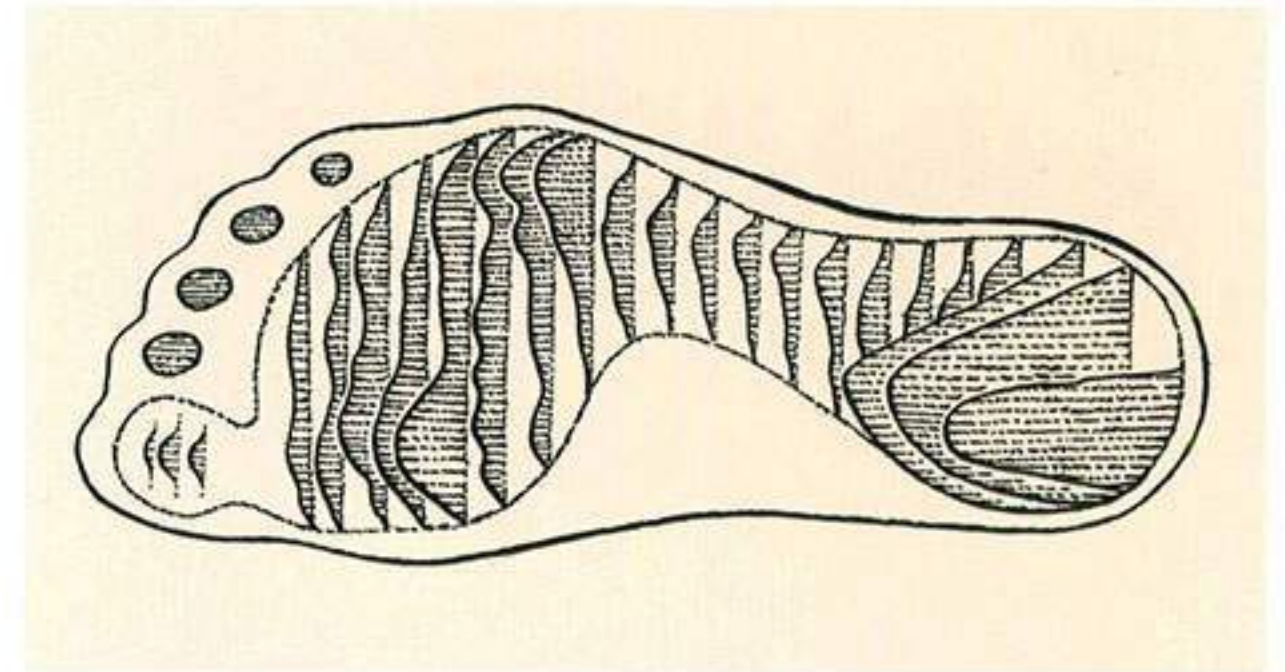
in two of his paintings) and the physiologist Marey he conceived a unique publication. He eventually published a lexicon containing some 100,000 negatives capturing the movement phases of the human body. Following this idea, shoemakers today often make video recordings of their clients walking in bare feet, in order to gather information that is important for the design of their new shoes. The increasing use of computers in conjunction with video technology should make shoe design a very precise operation.

The Arches

The sole of the foot does not make uniform contact with the ground. Instead the shape of the bones and the tendons and muscles connecting them mean that it rests on an arch curved in two planes: the lengthwise and the transverse. The outer lengthwise curve of the arch joins the heel bone to the little toe, the inner lengthwise curve joins the heel bone to the big toe, and finally the transverse curve joins the big and little toes to each other. When standing, the entire body weight rests on the three points where these curves intersect.

The arch changes shape when we walk. When it bears the body weight, for example, it falls by up to a quarter inch [5 mm], and the foot stretches. As soon as that load is no longer there, the foot regains its original shape. The arched structure acts as a shock absorber, reducing the impact on the head and spinal column of walking, and thus helping us to achieve a regular, uniform gait. The toes also have an important role to play in supporting the body. They too act as shock absorbers, and when the foot is lifted from the ground they make the motion flexible. The arch, which develops in childhood, is the result of correct or incorrect locomotion. Walking barefoot is the most suitable type of locomotion for the foot, because its musculature adapts in a self-regulating manner to any

ground unevenness. The muscles work ceaselessly, which stimulates the musculature and keeps it in good condition. All this ensures that the arch of the foot functions perfectly. Poor footwear impedes the natural movement of the foot, and problems with the feet lead sooner or later to more general postural disorders. It is therefore extremely important to have good footwear, and the only really satisfactory footwear in this respect is of the handmade variety. Mass-produced shoes can never be suitable, because every foot is different and adjustments need to be made to take account of this.



In a sound lengthwise arch the curve of the bones is ideal: the body weight rests on the heel, the inner and outer metatarsals, the outer rim of the sole, and the toes.





healthy foot



flat foot



club foot



kinked flat foot

Common Malformations

The “normal” foot is of average size (8–10 for men) and anatomically in proportion, that is taller people have larger feet. It has a pronounced arch, the musculature is firm, the skin surface smooth, and the volume of perspiration produced is always appropriate to the

inevitably develop into flat feet. It is no longer the lower part of the heel bone that forms the support; this function is taken over by the forward part of it as it falls towards the sole. It is followed by the whole of the foot's arch structure. Flat feet lead to further malformations: to toes

László Vass & Magda Molnár

Handmade SHOES FOR MEN

