



***WILLIAM
HUNTING***

***THE ART
OF HORSE-
SHOEING:
A MANUAL FOR
FARRIERS***

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William Hunting

The Art of Horse-Shoeing: A Manual for Farriers

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PREFACE.

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This little book is written for three classes of readers—for horse-owners who may interest themselves in the subject, for farriers who are open to conviction, and for veterinary students who have to be examined.

The method pursued has been, to first describe the form and action of the foot, next the preparation of the foot for shoeing. Then the form of a shoe is treated of and the details to be observed in making it. The selection of shoes for varieties of feet or for special kinds of work follows, and afterwards the fitting and nailing-on are considered. Other chapters are devoted to "roughing," shoeing defective feet, accidents, the use of leathers and pads.

Throughout an endeavour has been made to be as simple and clear as possible in expression, to lay down correct general principles and to point out the technical details which are essential to good shoeing. On all these points authorities are not agreed, and I trust those who differ from me will pardon any too dogmatic expressions of opinion in these pages.

The illustrations will be of assistance in making clear the text. Some of these are copied from books, some are drawn from models or preparations, and some are diagrammatic. The books I am indebted to are, "Anatomy of the Domestic Animals," by Gamgee and Laws; "On the Horse's Foot," by Bracy Clark; Bouley's "Atlas of the Foot," and Goyau's "Maréchalerie."

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THE
ART OF HORSE-SHOEING
A MANUAL FOR FARRIERS.

CHAPTER I.

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Farriery is the art of shoeing horses, and can only be properly learned by a long practical experience in the shoeing-forge. If the foot of the horse were not a living object perhaps the training obtained in the forge would be all that was necessary for efficient workmanship. As, however, the hoof is constantly growing it is constantly changing its form. The duty of a farrier therefore is not merely to fix a shoe upon the hoof but to reduce the hoof to proper proportions before doing so. Now as hoof is only the outer covering of a complex and sensitive foot, damage to the exterior surface may injure the structures within. Injury does frequently result, and not always from carelessness. Perhaps as much injury follows careful work, based upon wrong principles, as slovenly work carried out in perfect ignorance of any principle. The injury to feet resulting from shoeing may not be apparent at once. It may be, and often is, of a slow and gradual nature, and not credited to its true cause until the horse is rendered an incurable cripple.

It seems evident then that to do justice to a horse a farrier should not only possess manipulative skill, but should have a correct idea of the structures and functions of the foot, as well as a thorough knowledge of the form and variations of the hoof.

Few persons appreciate the importance of horse-shoeing, whilst a small number tell us it is unnecessary. Here and there an enthusiast has the courage of his convictions and is able, for a time, to exhibit animals doing work without

shoes. In some countries horses are regularly ridden with no addition to their natural hoof, but in such places the surface over which the animals travel is grass land. In all civilised countries where good roads exist shoeing is practised. The gentleman with a fad who occasionally appears in England with unshod horses at work is an unconscious impostor. He sets his little experience against the common sense and universal practice of others. No man of business would pay for shoeing if he could do without it. The "shoeless" experiment has been tried over and over again, but always with the same result—a return to shoeing. In dry weather the hoof becomes hard, and it is wonderful how much wear it will then stand on the hardest of roads. In wet weather the hoof becomes soft, and then the friction on hard roads soon prohibits work without shoes. If work be persisted in, under such circumstances, the hoof rapidly wears away and lameness results. Persons trying to prove a pre-conceived theory meet this difficulty by resting the horse until the horn grows, but business men who keep horses for work in all weathers can afford no such luxury. Shoeing has been called "a necessary evil." The phrase is a misuse of words, for there is no necessary evil about it. Of course it is no more free from accident than other operations, but its evils are fairly described as accidents, whilst its benefits are fully apparent. Without shoes horses at work would be more often lame than with them; without shoes horses could not do half the work they do with them, and so we need not further discuss the necessity of shoeing.

The value of horse-shoeing depends upon the manner in which it is done. Very seldom does the owner of horses

appreciate the quality of the work. As a rule the price charged, or the distance from the forge to the stable, regulates the choice of a farrier. Not having any pecuniary interest in the trade, I may say that such matters should not be allowed to decide between one farrier and another. A bad workman may do an injury at one shoeing which will cost the owner of the horse more than would pay ten times over the difference between his charges and the higher prices of a better man.

Many years ago I knew a firm who changed their farrier and system of shoeing for a cheaper plan. The cost for shoeing alone fell very considerably, but the cost of horse-flesh rose in one year more than £100. The old saw—"that for want of a nail the shoe was lost, for want of a shoe the horse was lost, and for want of a horse the man was lost," has been illustrated times without number. Few persons, however, are aware of the terrible consequences which have more than once attended neglect in the shoeing of horses. Napoleon's retreat from Moscow depended for most of its hardships and horrors upon the simple fact that his horses were not shod properly for travelling on snow and ice. The horses could not keep their feet, and were unable to drag the guns and waggons, which had to be abandoned. During the Franco-Prussian war, Bourbaki's retreat became a confused rout from a similar cause. In civil life no winter passes without injury and death to hundreds of horses from the same neglect. These are instances that anyone can see; but heavy losses due to bad shoeing are constant from other or less evident evils—from the adoption of wrong methods and the practice of erroneous theories.

The farrier has not been fairly treated by the public. His practical knowledge has been ignored, he has been instructed by amateurs in all sorts of theories, and coerced into carrying out practices for the untoward results of which he has been blamed. The natural consequence of all this has been that the art of farriery degenerated, and the farrier was forced into a position destructive to the self-respect of any craftsman. In no other trade do persons entirely ignorant of the business presume to direct and dictate as to how the work should be done. No one presumes to instruct the watch-maker or bell-hanger as to the details of his craft, but the farrier has been compelled to take his instructions from all sorts and conditions of men.

Only in recent years has the man who shoes horses been allowed to know something of his calling. Various causes have acted in putting an end to the state of discord, and the trade is now entering upon a brighter time. The Worshipful Company of Farriers—one of those ancient City Guilds which had survived their original vocation and usefulness—has wakened up, and is striving to resume its proper function as the head and director of the trade over which it ought to preside. Agricultural Societies have also taken the matter up, and fostered a healthy emulation amongst farriers by instituting practical competitions at their shows. Veterinary Surgeons have devoted considerable research to the elucidation of the anatomy and physiology of the foot, and many old errors have been corrected. School Boards have made the present generation of farriers able and willing to supplement their practice by a study of principles. We have, in fact, arrived at a time when everyone interested seems

inclined to recognise the importance of the art and its technical difficulties, and when no one has a brand new infallible discovery which alone can save the horse and guide the farrier.

My object in writing is not to suggest anything new but to point out the general principles upon which the art is based, and to indicate those details which are essential to success, and those which are to be avoided if soundness and duration of service are recognised as true economy in a stud of horses.



CHAPTER II.

THE FORM AND ACTION OF THE FOOT.

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The foot of a horse consists of a variety of living structures, differing in form and texture, and enclosed in a horny covering called the hoof. Although the farrier's work is applied only to the hoof it is necessary that he should know something of the whole foot, because it is but too easy to injure the structures within by alterations of the horny covering without.

The simplest way to understand the foot is to study separately the different parts, and to apply that knowledge in obtaining a general idea of the relations of all the parts to each other. There is not then much difficulty in appreciating the functions of each part, and the uses and action of the whole organ.

THE HOOF.

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Everyone is familiar with the general appearance of the hoof. It is not a regular geometrical figure. Each of the four feet of the horse shows some peculiarity in form, by which a farrier can at once identify a fore from a hind or a left from a right.

The fore feet should be similar in size and shape. Disease may be suspected when any marked difference exists. But a

healthy hoof which has been broken, or much rasped, does not retain its proper form and may thus confuse a novice.

The hind feet should be proportionate in size to the fore, and then it is not of much practical consequence whether the whole are large or small.

The front feet are rounder and less pointed at the toe than the hind; they are also more sloping in front. The two fore feet and the two hind should be in pairs. The right and left feet are distinguished from each other by the inner side being more upright or, if examined on the under surface, by the outer border being more prominent.

Although to a casual observer the hoof appears as one continuous horny structure, it may easily be separated into three distinct parts by prolonged soaking in water. The division takes place so as to leave the sole, frog, and wall separate portions. These may now be considered.

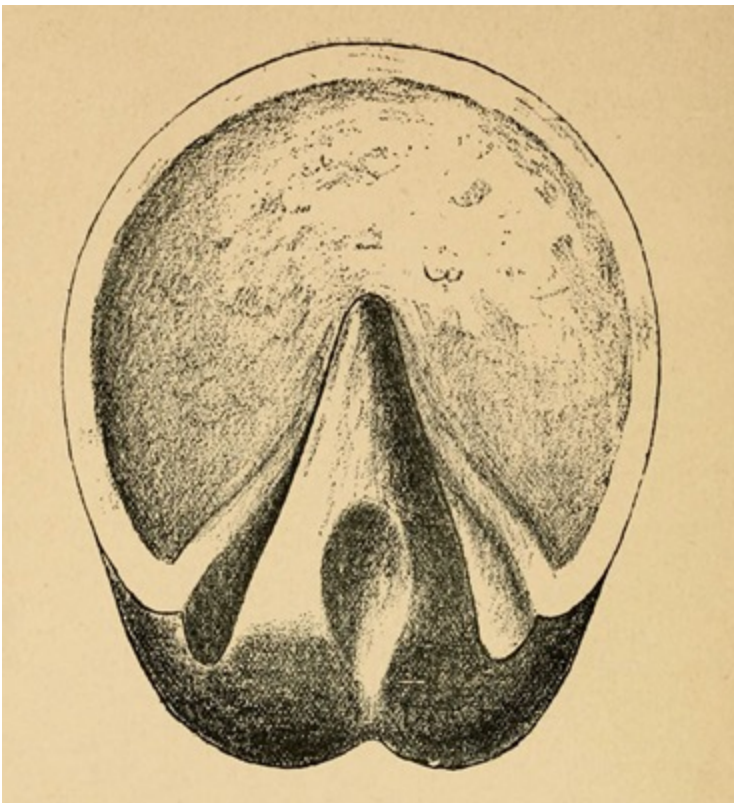


Fig. 1.—A Fore Foot.

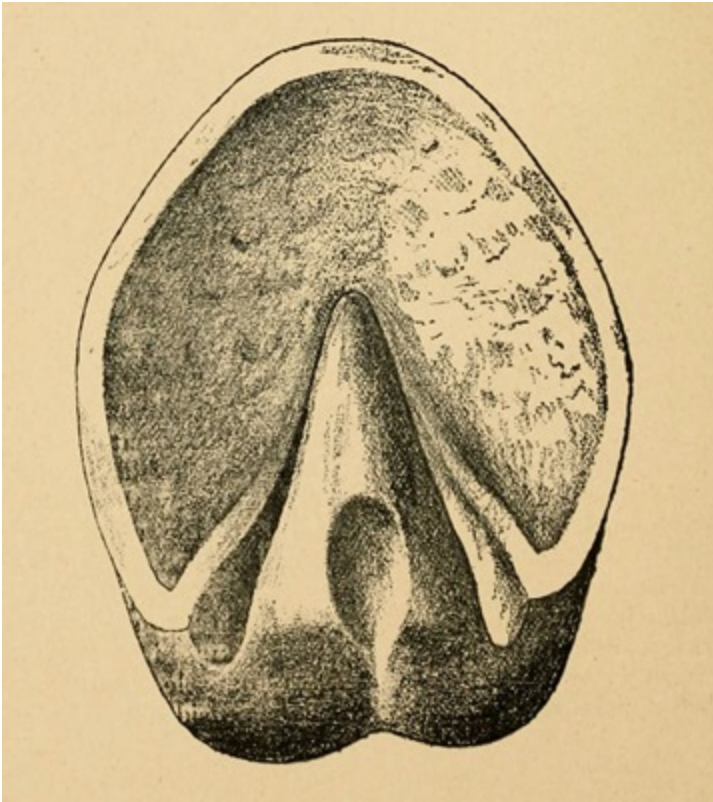


Fig. 2.—A Hind Foot.

The Wall is that portion of the hoof seen whilst the foot rests upon the ground. It covers the front and sides of the foot. It extends from the coronet downwards and slightly outwards so that its lower circumference is greater than its upper. The front portion shows its greatest height and obliquity, diminishing in these respects as it passes backwards. At the heels the wall is turned in upon itself, and passes forward towards the centre of the foot until it becomes lost in the structure of the sole. These turned-in portions of the wall are called *the bars*, and serve two purposes; they increase

the bearing surface of the wall, and by embracing a part of the sole on each side, they afford an increased solidity to the union of the wall with the rest of the hoof.

If we detach the wall its inner surface is seen to consist of a number of thin horny projections running parallel to each other from above downwards and forwards. These are called the horny laminæ. They number from five to six hundred and correspond to similar processes on the sensitive foot. (Fig. 3).

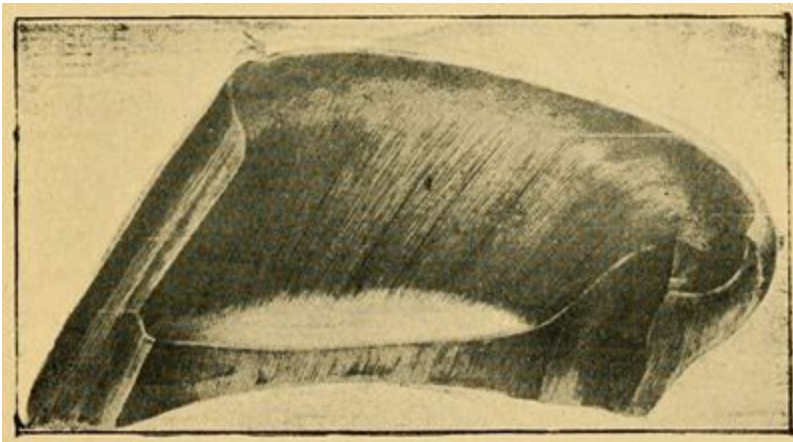


Fig. 3.—Half of a Hoof, showing the inside.

Round the upper circumference on the inside of the wall is a depression or groove presenting innumerable small pits or openings. This corresponds to a part of the sensitive foot called the coronary band, which will be noticed again.

A section of wall enables us to see variations in its thickness. (Fig. 4). It is thickest at the toe, becoming gradually thinner towards the heels; thus affording strength and solidity to resist wear at one part, as well as pliancy at another to ward off concussion.

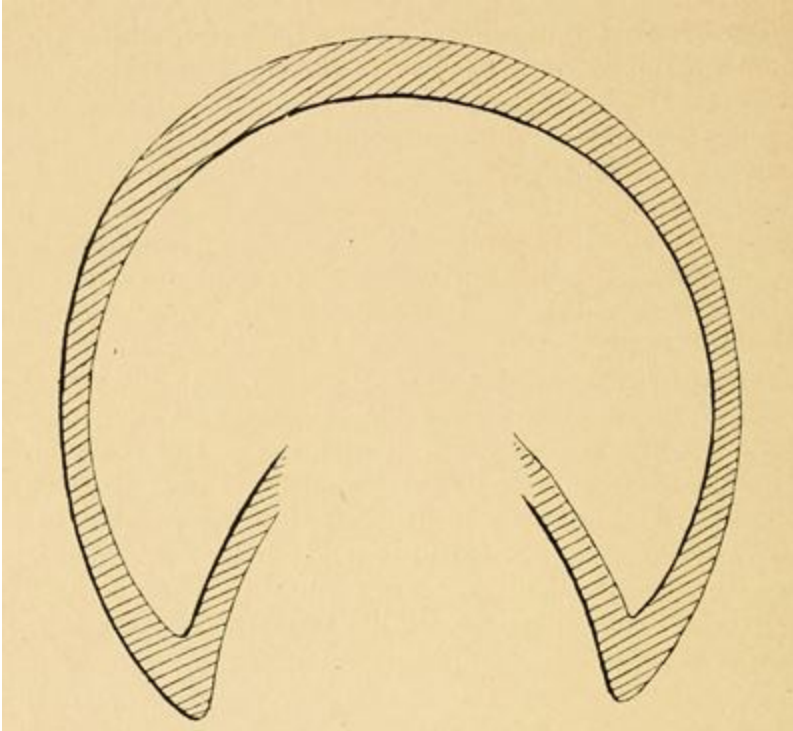


Fig. 4.—Transverse Section of Wall showing variation in thickness.

The structure of the wall is fibrous—the fibres running parallel to each other, and with the same obliquity as that presented by the front of the wall. Although the wall varies in thickness from before backwards, it does not from above downwards. It maintains the same thickness from the coronet to its lower circumference.

The layers of the wall are hardest externally, becoming softer as they approach the inner surface—a condition due to the outer layers being exposed to friction and evaporation. This is a simple and valuable provision of nature which should not be interfered with. The hard outer layer is best adapted to withstand wear, and its density protects the deeper layers from evaporation. This maintains