AUSTRALIAN MILITARY FORCES.

BOOTS

INSTRUCTIONS
REGARDING THE FITTING,
PRESCRIPTION,
AND CARE.

By Authority:
Albert J. Mullett, Government Printer, Melbourne.
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Issued with M.O. 424, 1914.

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NOTE.

Rank and file are to be made and kept fully acquainted with the necessary portions of this publication:

BOOTS.

NECESSITY FOR MILITARY BOOTS TO BE WELL-FITTING.

It has come to notice that a large number of men in the Commonwealth Military Forces have been issued with ill-fitting boots. Many men, on being questioned as to why they were not wearing regimental boots, inter alia, gave in effect the following reasons: Boots too small; boots too large; boots hurt in some particular manner, &c.

Inquiries have elicited the fact that frequently no supervision has been given in seeing that the recipients of boots are suitably fitted. It has been further ascertained that in many instances the procedure has been as follows:—

A man asks for boots, and states the size he considers he requires. Boots are given to him, but not tried on until he gets home, when he finds they hurt him. He does not wear them, and no inquiry is made by his superiors as to why he is not wearing them. Cases where men had boots on issue for over six months under such conditions came to notice.

Other men stated that they tried the boots on at the time and place of issue without supervision, C.8707.
and thought they fitted; but subsequently found they did not, and failed to wear them without any notice of the fact being taken by their superiors.

Other men were found wearing the boots and suffering the discomfort and disabilities of ill-fitting.

It is not necessary here to dwell on the great importance of boots properly fitting the wearers, it is imperative that they should; nor should it be necessary to comment on the incumbency of the military boot being worn on parade.

The responsibility of seeing that military boots are worn, and that properly fitting boots are issued, is primarily the officers’. It is realized, however, that in the conditions existing it is not practicable for the officer to be present on every occasion when boots are issued to see to the fitting (though he should endeavour to be), but his responsibility is not thereby removed, and it should be seen to that the sergeant instructor, or a capable N.C.O. carefully fits the men in the unavoidable absence of a responsible officer.

In fitting cadets the greatest care is to be taken to see that boots are large enough, taking into consideration the rapid growth of the boys. It will very frequently be advisable to issue boots a size larger than the size a boy can wear at the time of issue. In this regard it is confidently hoped that those responsible will exercise their very best judgment in the interests of economy.

When practicable boots should be issued before the hour of commencement of a parade, or at the beginning
of a parade, and worn on such parade, by which course a good opportunity is afforded of judging as to whether they will prove suitable or not.

Of such paramount importance is the good fitting of boots, that it has been thought desirable to publish for general information and guidance the following extracts taken from *The Soldier's Foot and the Military Shoe*, a handbook published for officers and N.C.O.'s of the Line, approved for issue by the War Department of the United States of America.

This publication was compiled by a "Shoe Board" composed of admitted experts, after the most exhaustive and thorough investigation and tests extending over many months, in connexion with matters affecting the foot and the footwear of the soldier of the American Army.

The extracts here quoted should receive the most careful study, and the intelligent practical application of the subject-matter thereof where necessary will, it is felt, go far to secure the satisfactory booting of the Commonwealth Forces.

**THE FITTING OF MILITARY SHOES.**

"A shoe is said to fit when its contour smoothly follows the normal outline of the foot, without undue pressure on any point or points, yet not so loose as to result in harmful friction between the foot and the shoe. These last must thus be considered together, the important thing being the relation between the inner surface of the leather and
the outer surface of the skin. The point of support should be large and firm, so as to take up and distribute without injury the shock resulting from the impact of the foot against the ground in marching.

"The fitting of the shoes to the feet is the second essential necessary to insuring that the soldier is properly shod. It is of no advantage that a type of shoe be supplied the conformation which very closely approximates the foot type of the soldier, nor would it in addition be of any practical value to have the Quartermaster's Department maintain a full stock of shoe sizes and widths at all posts, unless the shoes selected from the numerous varieties officially available are intelligently chosen and carefully adapted to the requirements of each individual foot. It is a truism to say that when shoes are not properly fitted to feet, those feet will become sore under marching. The fundamental importance of shoe fitting has been largely disregarded in our service, and in every case the fitting of shoes to soldiers should be directly performed by a commissioned officer. The matter of the proper fit of shoes has too close relation to military efficiency to be left to the hazards of chance, indifference, ignorance or prejudice.

"There is nothing in the fitting of shoes to the feet of their men which can be regarded as detrimental to the dignity of infantry officers. On the contrary, it is a legitimate part of their duty and
direct evidence of their efficiency and desire to enlarge their usefulness. Officers at the Mounted Service Schools learn blacksmithing and farrier’s work as part of the regular course; and they learn to themselves fit horse shoes with an intelligent appreciation of the basic influence of proper shoeing upon the marching capacity of cavalry and field artillery. Neglect by officers to give proper personal supervision to matters of shoe fitting and supply is equally detrimental to the military efficiency of man and beast.

“Criticism of the new military shoe, *per se*, by any person, is thus unjustifiable unless it can first be demonstrated that any injuries to the feet complained of are not the result of improper fitting. It has undoubtedly happened in the past in many cases that footwear has been held responsible by officers and men for foot injuries which were, on the contrary, directly attributable to their own indifference and neglect in the essential matter of fitting.

“In fitting the soldier, he should be encouraged to continue to try on shoes until fitted. This, in the past, has not been carried out as properly as should be done. The convenience of those in charge of getting the shoes drawn was apparently more consulted in many instances than the wishes and comfort of the soldier who was to draw them. Any method of fitting which is more or less nominal and perfunctory will be largely barren of the results desired.”
"In connexion with the necessity for properly fitting shoes in the removal of undesirable friction and pressure, it is well to recall the number of completed foot movements required in ordinary marching. Assuming the average step to be 30 inches, each foot will strike the ground at intervals of 60 inches or every 5 feet. But there are 5,280 feet in a mile, so each foot strikes the ground approximately 1,000 times for each mile traversed. If a fair march for infantry in the field is put at 15 miles, with some 3 miles before and after it in the performance of making and breaking camp and for other purposes, it is evident that each foot will strike the ground some 18,000 times during the day. It is said that falling drops of water will ultimately wear away the hardest stone; and it will be apparent that even a relatively slight defect in the relation between the foot and shoe, if enabled to act with each step through such a vast number of repetitions in such a relatively brief period, can scarcely fail to do injury to the delicate and tender foot structures in contact with it. If the defect be considerable, it is apparent that more or less complete incapacity for marching will scarcely be avoided.

"It will probably at once occur to not a few that such careful official supervision by organization commanders of the fitting of the soldier’s shoe, as is here laid down, is unnecessary, and that 'the soldier is the best judge of what he wants.' The latter is undoubtedly true; but it is equally true
that in respect to the shoe ‘the soldier is not the best judge of what he ought to wear.’ And to this statement the officer himself is by no means always an exception. Custom, habit, feet deformed by previous bad shoe selection, desire for conformance with prevailing styles, and regard for conventional ideas of sightliness rather than comfort, so warp the judgment and control the preferences of the average soldier as to make his personal selection of a proper shoe the very rare exception. The Shoe Board, after its careful study of many hundreds of soldiers’ feet and its fitting of many thousands of pairs of military shoes, in several of its reports stated its conviction that only about one soldier out of five, if this matter was left to his own selection, would properly fit himself with shoes—and that such proper fits as were actually secured were probably as much the results of chance as of intelligent effort. These conclusions of the board very closely approximated those of Major Reno, M.C., who, in one series of 521 enlisted men of our army studied by him, found that only 26.2 per cent. of these wore shoes that were properly fitting; and that in a later series of an additional 609 men, only 16.5 per cent. of these men wore shoes that fitted them properly, while 508 had on shoes that did not fit them. In the light of such exhaustive and un-biassed studies as have just been mentioned, the propriety from the military stand-point of letting the soldier select his own shoes must be emphatically answered in the negative.
"In one of its reports the Shoe Board said: 'The practical experience of the Board in twice fitting every available man at Fort Sheridan shows absolutely that a very considerable proportion of soldiers cannot be trusted to select their own shoes without guidance and oversight. Some are indifferent, some are slow witted, and many are convinced that a size and width which they believe they have secured before enlistment is the proper size to select in a military shoe. It is the unvarying experience of the board that sizes of shoes suggested by it to such men are accepted by the men as better fitting, after trying on, than were the shoes originally selected by them.'

"In his lack of judgment in respect to shoe fitting, the soldier is no worse—and is probably better—than the average of men of the military age in civil life. But in his case the effects upon himself of bad selection are so certain, as a result of the necessity for hard marching under heavy burdens not obtaining in civil life, and the aggregate amount of military inefficiency resulting from such cause is so serious, as to demand that a matter of such importance to all concerned shall be taken out of the control of the man himself and reposed in one who, beside having a proper knowledge of what is required, is invested with official responsibility for securing good results. In a general way, it may be stated that the few soldiers found by the Shoe Board to have selected good shoes also had feet exceptionally free from deformity and
blemish; this, however, is only what ought to be expected, for if such men had not consistently practised intelligent selection of shoes, their feet would not have remained good. As the reverse of this rule, it may be accepted that the worse the condition of a soldier's feet and the greater the difficulty he has with footwear, the more he has demonstrated his inability to fit himself, and the greater the need for the selection of his shoes for him by higher authority.

"When the average man is left to his own devices in respect to fitting himself, his dominating idea seems to be to crowd his foot into the smallest size shoe which he can put on without too much suffering. It is astonishing to see the very large number of men, who, however careless they may otherwise be in respect to their personal appearance, apparently take pride in making their feet appear as small as possible, and who to secure this result will cheerfully accept pain and discomfort.

"The method the average soldier uses in attempting to fit his feet makes the latter practically impossible to meet the need of military conditions. In this method, the man sits on a bench, puts on the smallest shoe he thinks he can wear, rises and stands on both feet, and takes two or three steps. If his foot does not hurt him too much, the shoe is probably accepted as a fit. His foot has not been permitted to assume even an approximation of its normal degree of expansion, and there is no burden
on the back to cause the foot to pain under the increased pressure which would thus be created. The soldier thus fits his foot at rest, and contracted to its minimum dimensions. He does not know the fact that in marching under the equipment his foot may increase in length and breadth as much as half an inch—and very possibly if he did know he would not care. The result is that a shoe is usually selected which is too tight for light duty in garrison; and in the field compresses the feet, under burden carrying, to an extent which in very many cases may promptly incapacitate for marching. He thus chooses a shoe for considerations of looks under conditions of peace and quiet; the method which the officer must carry out for him has for its purpose the selection of a shoe giving the maximum comfort under conditions of hard field service.

"By far the most common fault of shoes which have been selected by the men themselves is insufficient length. Reno found 425 men out of 609 wearing shoes which were too short for them. With shoes of this sort, the toes of the foot, elongating under pressure, are jammed against the front of the shoe in marching, and toe blisters, abrasions, and corns are inevitable. The next most common fault is insufficient width; of the series of men just mentioned, over 25 per cent. had misfitted themselves in this respect in the probable production of injury in the form of bunions, corns, ingrowing nails, clubbed toes, and other defects. Only an insignificant fraction of soldiers, say 1 or 2 per cent.,
tend to select shoes too large for them. These com-
parative tendencies towards misfit in too small sizes
the officers in direct supervision of shoe fitting
should bear in mind, so that they may be properly
combated.

"In this respect, too, the tendency was to force
the soldier into a rapid—even if an unwise—choice,
since it was for the convenience of all others con-
cerned in the issue that it be made as quickly as
possible. Recruits, particularly, were not infre-
quently enjoined by superiors to accept what was
given them without complaint, even though the
shoes so issued might differ widely from what was
requested and would fit.

"The theoretical answer for the question of shoe
fitting and supply would be to have the shoes for
each man especially built for him upon lasts made
from plaster casts of his own feet. This is, of
course, impracticable from the military stand-
point, and fortunately it is not at all necessary.
Given a shoe as anatomically correct as the one last
adopted, always available in fifteen sizes and half
sizes with a choice of six different widths for each
length, and these fitted with intelligence and judg-
ment, and the problem of foot injuries should
largely cease to trouble in our army.*

"But until a more uniform standard as to feet
prevails in the recruiting service, no single pattern

*Note.—Each size, i.e., each length of boot in the Commonwealth Military
Forces is made in three fittings as regards width.
of shoe can be expected to exactly meet the needs of all soldiers. A small number of accepted recruits, say 1 or 2 per cent., have feet widely variant from the general and normal foot type. These can wear the present shoe, but would very likely be more comfortable in shoes of a somewhat different last. However, if it were attempted to satisfy the needs of this small class in this respect, proportionate discomfort would be produced among a much larger number, for whom the present last is a practical duplicate of the general foot type.*

"The fitting of the soldier with shoes is best done in posts at the quartermaster's storehouse, where proper facilities for trying on should be provided. These include a space of sufficient size, proportional to the strength of the command, so that there need be no unnecessary delay in fitting; benches for the men to sit on while putting on the shoe; a stout box or platform, about 2 feet high, 2 feet broad and 3 feet long, for the soldier to stand upon while being fitted; a quartermaster's foot measure, working in a slotted board so as to give a level surface to the foot being measured; a quartermaster's foot tape measure; one or more quartermaster's shoe stretchers, for the rapid softening and stretching of fitted shoes; a complete set of army shoes, including a sample of every size and width, for fitting by trying on and which orders

* This suitability to general foot type has also been aimed at in the latest pattern Commonwealth Military Forces boot.
require that the quartermasters shall maintain at all times; a set of partitioned racks to hold the sample shoes, each space plainly numbered with the size and width of the pair of shoes it is to contain. A chair for the officer to do the fitting, drawn up to the platform on the side which will be on the right of the soldier being fitted, completes the outfit.

"All being ready, the soldier to be fitted steps upon the platform in his naked feet, and carrying on his back either the full field equipment with rifle, or a 40 lb. burden to represent approximately the weight of such equipment. This weight is necessary in order to bring about by its pressure the maximum expansion of the soldier's foot, and place it during the shoe fitting under such conditions as it would be placed during marching. While shoe fittings in civil life are habitually based on feet at rest, and thus occupying the minimum space in the horizontal plane, the method of shoe fitting here described is based upon the fact that the foot in action differs very materially in appearance and dimensions from the foot at rest, and calls for a determination of the greatest length and breadth of the foot under the conditions which regulate its expansion in marching. Conventional ideas as to sightliness control shoe fitting in civil life; those of practical utility and accurate adaptation to each individual normal foot type are intended to govern such fittings in the army. The expansion as to length under conditions of marching pressure is
much greater than is ordinarily believed, not a few feet showing a lengthening of as much as one-half of an inch, while others grade from that down to a point where lengthening is insignificant. In general, the type of foot showing the greatest expansion as to length is one with a high arch and weak, undeveloped muscles—the least lengthening occurs in strong, normal feet, in which the plantar arch is well filled up with muscular tissue. Flat feet show practically no lengthening whatever, for as the arch is already broken down the foot is incapable of further longitudinal expansion. As the amount of foot lengthening which will result in any individual foot under marching pressure cannot be foretold, it is necessary to produce such expansion, measure the expanded foot, and thereby start the fitting from an accurate individual basis.

"To fit on, the soldier goes to a seat, pulls on a pair of light wool socks, puts on the shoes given him, and laces them tightly. He puts shoes on both feet, for the latter sometimes differ from each other quite materially in size and contour; also sometimes shoes get mixed and the man then receives a mismatched pair. For these reasons, both feet, and not one only, are fitted. The soldier, with his burden* on his back, mounts the fitting platform. The officer notes with his eye the general appearance of the shoes, as to whether the latter are smoothly adapting themselves to the outline of

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* This should be made to approximate the weight (including arms) carried in marching order, say 45 lbs.
the feet, are too loose and wrinkling, or are too tight and tense. He then causes the soldier to stand squarely on one foot, supporting himself and his burden or equipment in such a way as to maintain easy equilibrium. The officer then grasps with his hand the vamp of the shoe across its widest part. Bringing his thumb and fingers slowly together, he notes the feel of the leather and its apparent relation to the foot enclosed. If this leather seems loose and tends to wrinkle under the hand, the shoe is too wide and a narrower width should be tried on; if it feels hard, tense and bulging, the shoe is too narrow. A good fit as to width may be said to exist when the foot expanded under body weight has its outline everywhere smoothly followed by the shoe leather, without the latter being either redundant or binding the foot in any manner.

"Suitability of length is verified by pressing down the leather in front of the toes. If the leather and tip of the toe touch or are close together the shoe is too short; if more than about a half a thumb's breadth apart, the shoe is too long. In a good fit, there is not less than half an inch of vacant space in front of the great toe under pressure. But clubbed toes, with an elongated second toe protruding beyond the great toe, may in some cases necessitate a greater length in selecting a proper shoe.

"Sometimes several trials of different shoes are necessary before a fit is secured, even with careful foot measurement. This is particularly the case
with feet presenting some abnormality, as bunions, or hallux with clubbed toes. But the process of trying on must be continued until a fit is secured.

"It sometimes happens that after a man has been properly fitted as to length, the widest width in that length is found to be somewhat too narrow for him. Under such conditions, a shoe longer than necessary should be given in order to secure the greater width required. A little space in front of the toes does no harm whatever, while a shoe which pinches them will very likely cause discomfort and injury. Mistakes in fitting shoes which are larger than necessary are both rare and little liable to do harm—it is the too short and too narrow shoes which cause the vast majority of injuries, and which are to be carefully avoided.

"Inasmuch as a flat foot is one in which the maximum elongation has already been practically accomplished, there is relatively little danger of a soldier with such low arch getting a shoe too short for him; but the danger becomes greater and greater according as the soldier's arch is higher and the muscles which support it are thinner and weaker. A high arched but slender and undeveloped foot thus needs an exceptionally long shoe; later, when the foot strengthens, a slightly shorter one may be proper.

"The amount of lateral expansion of the foot across the ball, on pressure of body weight and burden carrying, is very considerable. The difference in this respect, between the foot at rest and
the same foot under pressure, as demonstrated by radiographs and footprints, amounts in many feet to as much as half an inch. Feet which have been squeezed and contracted by too narrow shoes usually show a relatively greater proportion of foot expansion in weight carrying than feet already well expanded through use of good footwear. This stretching naturally tires and renders painful the transversalis and interosseous muscles through their entire extent. Such stretching and discomfort does not mean that the shoe is wrong, but it does mean that the foot itself is at fault as a result of improper footwear previously worn. And it is a very cogent argument for the use of but one last—and that a physiological one—by the soldier.

"Another reason for fitting the shoe large, besides its natural expansion, is the fact that the foot swells considerably in prolonged marching, through flow of blood to the part and interference with its return flow from pressure on the veins. Then the constant striking of the foot against the ground, is a stimulus to the flow of blood to that part, with dilation of the capillaries, just as a red mark follows a blow on the flesh of any other part of the body. After hard marching, the soles of the feet are often painful and reddened from this cause; and with shoes which are too small, the soldier in marching in warm weather has a feeling of heat and irritation in his feet from congestion due to such interference with the circulation; in the winter, on the contrary, the same cause operates to
make the feet cold, numb, and readily susceptible to frost bite.

"The number of shoe sizes and widths now officially provided is undoubtedly quite sufficient to meet the needs of all soldiers' feet except the very few enlisted with feet widely variant from the generally military foot type.*

"In fitting the military shoe, it is quite as important that it be a snug fit around the instep and ankle as that it be a loose fit over the toes. The point of support in this new shoe is located over the instep, and this requires smooth fitting of the shoe over the posterior three-fifths of the foot with ability to hold it firmly in position by its lacing. If this be not possible, slipping of the shoe on the foot will occur in marching and injury to the latter is certain.

"In fitting the shoe, the laces must be passed through all the holes and tied after being well tightened. A shoe well fitting in this respect will usually have the margin of its quarters about one-half inch apart when well laced. According as the foot is greater or less developed than the average, variation in this marginal interspace will naturally occur.

"It is important that the position of the shoe on the foot, as a whole, be stable. This is best accomplished by a close fit in the posterior half of the foot, in which lateral pressure on the sides of the

* This is also true with regard to Commonwealth military boots.
heel, and around the heel over the front of the ankle joint, can cause no interference with any structure intended to be mobile.

"In a small percentage of soldiers, the proper fitting of the military shoe is rendered quite difficult by the fact that they have relatively large, broad feet, low insteps and slender ankles. For this class, which is fortunately small in number, a shoe that is large enough for the lower part of the foot is too large to properly fit the upper foot and ankle. The latter fault is serious, since unless the foot can be held snugly over the instep and ankle against slipping about in the shoe on the march, foot injury is practically certain. In a few other soldiers, a shoe at first apparently satisfactory may so stretch in the uppers as to be no longer capable of lacing snugly. A practical way of remedying these defects is to insert one or more thicknesses of blanket, cloth, or felt, torn into suitable strips, between the tongue and lacing of the shoe, so that the latter, when pulled tight, may thus have a point of firm support by which it can keep the foot in its proper position in the shoe. Occasionally, with an extremely slender, low instep, it may be well to pull the laces snugly and tie them in a knot at the third or fourth eyelet; this supports the shoe better, and looseness in the last two or three holes is of less importance as regards foot injury.

"The average soldier may be expected to object more or less vigorously to the size and width of
the shoe given him under his first fittings by his company commander. Accustomed as he has been to shoes which constantly bind and compress his feet, he will regard the new shoe given him as too long and too loose. The squeezing of his feet by the shoes he has himself habitually chosen has been so long continued as to appear to him to be natural and necessary. Hence any complaints that the shoes are unduly large should be looked upon with doubt, and should be disregarded unless corroborated by the officer in charge by the actual manipulation of the shoe and foot by the method already described. In the fittings made by the Shoe Board, a large number of protests of this nature were made at the time that the shoes were issued and during the first day or so of the march test. It was noted that these complaints practically disappeared by the time the march test was half over; and in no single instance during the foot examination, when the man complained of his shoes being too large, did his feet show any evidence of injury whatever. It is nearly always too small shoes, and not what may feel at first like too large ones, that cause sore feet. Besides fitting shoes to his men, the officer is thus called upon to combat error, prejudice and misconception.

"Where there is any difficulty in accomplishing a fit, it must be borne in mind that the trouble may not necessarily be in the shoe but may be in the foot itself, through some abnormality causing it to vary from the general type."
"In these trials of shoes, any local conditions affecting their fitting will be noted. Hurtful local pressure over bunions and corns can usually be seen and always can be determined by the hand. The same applies to pressure over the great toe. The man himself should be questioned, and any area or point of the shoe which is said to cause discomfort should be carefully examined. Sometimes such a shoe is badly finished, is shrunken from having been taken off the last too soon, or has a rough seam or wrinkled lining inside.

"It must be remembered that the shoe is built over a last which has perfectly smooth surfaces and gently curving contours such as are not found in the human foot. The last, while perhaps quite accurately reproducing in the transverse plane the sectional area of the foot at any given point, thus only relates to sectional bulk and general outline. The latter, in a generally fitting shoe, may both be quite correct, and yet the shoe may cause discomfort and foot injury. The reason is that it as yet is only partially fitted and still requires to be adapted to local conformation of the foot. If the latter represents no material abnormalities, this adaptation can be gradually accomplished by occasional and progressively lengthened periods of wear, until the shoe is 'broken in'—in other words, until the stretching over the prominences of the foot resulting from use of the shoe has resulted in better equalization of pressure, with enlargement where needed at the expense of contraction where
excess of leather is unnecessary. But it must be emphasized that the process of 'breaking in' is not without some risk that the foot, and not the shoe, will 'break in' first. The foot injuries so commonly seen in soldiers have almost invariably had their beginning in just such attempts to 'break in' new shoes, which, in either size, shape, or both, did not approximate the foot expected to wear them.

"A very excellent method of adapting the shoes to the feet, after careful fitting of the latter, consists in having the man stand in his shoes in about 3 inches of water for about five minutes, or until the leather becomes thoroughly wet and pliable and in condition to stretch easily. The soldier then walks on a level surface for about an hour, or until the shoes have dried on his feet, to the shape of which the pressure of body weight and muscular action have forced the leather in drying to conform. If desired, a little neatsfoot oil may be rubbed on the shoes to keep them supple after taking them off, but this procedure is not necessary.* Shoes treated in this way are made as comfortable in an hour—and without any possible danger of injury to the feet—as could be done with a week's wear under the ordinary method of 'breaking in.' This method is particularly necessary and valuable where troops are issued new shoes which there is no time to

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*Dubbing is to be applied to Commonwealth boots. See instructions on page 23.
break in slowly before they must be used for marching. It can be properly used under any conditions except where the temperature is well below freezing; and even then can often be carried out to a less complete but still advantageous extent by wearing the damp shoes indoors. The method does the shoe no harm, and merely secures with intent the beneficial results which would happen in any case through the first rain in which the shoes are worn. It is a deliberate repetition of the method originally employed to make the leather adapt itself to the last in shoe manufacture, and which is again employed to make the leather of the resulting shoe conform to the local contours of the foot which it must subsequently enclose and protect.

"If the soldier has drawn and stretched shoes which, from some foot malformation, are still uncomfortable, a new effort for fitting must be made. In all probability the company records will show other men fitted by the same size and width who will be able to take over and use the offending shoes."

**PRESERVATION OF BOOTS.**

**Life of Boots.**

Commonwealth Military Boots have been allotted a life, as laid down in Regulations, and if the boots now being issued are given reasonable care, and only worn on duty, it is fair to assume that they will last for the period prescribed. In allotting the period of the life
of the boots, the approximate time they will necessarily be in actual wear during the performance of military duty has been the basis of computation.

Responsibility of Officers and N.C.O.'s. to Prevent Unauthorized Wearing of Boots.

To wear the boots at other times than when on duty is an offence against the Regulations, and officers and N.C.O.'s are charged with the responsibility of doing all reasonably in their power to prevent them being so worn, and in the event of it coming to their notice that they are being illegally worn it is their unquestionable duty to forthwith take steps to bring the offender to book. Failure in this regard not only in connexion with boots, but so far as the unauthorized use of any Government property is concerned, is a serious dereliction of duty, and a violation of the high trust placed in officers and N.C.O.'s by the Government. Large sums of public money have been spent, and will continue to be spent in connexion with the equipment of the Forces, which sums are a heavy strain on the resources of the country, and it is the bounden duty of every soldier and cadet, and more especially of those holding positions of authority, to in every way in their power, conserve the interests of the taxpayers by preventing undue extravagance and unauthorized deterioration of Government property.

Care of Boots.

The soldier's boots should receive as much care as his rifle. Nothing is of more importance in the maintenance of efficiency than the care of the feet of the
soldier, especially of the soldier who marches on foot, and nothing will tend to keep these fit more than a suitably shaped and good fitting boot, kept properly dressed, soft and clean inside and outside.

The leather of the military boot now being issued is well dubbed and softened during the process of tanning, and does not require dubbing when issued. But in course of time and wear it will require a further dressing with dubbing, say once in every six months after date of issue, and such dressing is to be applied. The old pattern rough leather boots in which no dubbing was put during manufacture are to be dressed forthwith no matter on what date issued, and afterwards once in every six months. It is calculated that 1 pound of dubbing will be sufficient for one application of dubbing to sixteen pairs of boots.

To dress boots that have been worn for some time, the following is the procedure to be adopted:—

Boots to be washed with common yellow soap and cold water, using a brush to remove dirt and any coating of polishes that may have been applied. Boots then to be placed in shade and when nearly dry, but whilst still in such a state of pliability from dampness, as would afford the greatest comfort to the wearer, to have the dubbing well rubbed in with the hand except round the joint between sole and upper and in the joints of the tongue, where it is desirable that it should be well worked in with a brush. The waist of the sole, i.e., the portion immediately in front of the heel is also to be well dubbed, and tongue and laces to be well softened.
Good brown leather polishes of light or dark stain may be applied at intervals subsequent to dubbing, and to the present pattern of boots, from the time of issue, to improve the appearance and further preserve the boots. The use of any Ox Blood Stain is strictly forbidden for use on either boots or accoutrements.

Before dubbing new boots of the old pattern, they should be damped into a similar state of pliability as referred to above.

Attention is drawn to the method of adapting boots to the feet described on page 24. If this method is adopted, the dubbing should be applied to the boots while still on the feet, and when nearly dry.

After being dubbed boots should be worn straight away for a short time in order to ensure, before the dampness has dried out of them, their assuming or retaining a shape in conformity with the contour of the feet.

An authorized dubbing, packed in 2-lb. tins, will be issued free to Units, on requisition to S.O.O., on the basis of 1 lb. per sixteen pairs of the prescribed issue of boots to a Unit for each half-yearly dubbing.

V. C. M. SELLHEIM,
Quartermaster-General.