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Author: George E. Walsh

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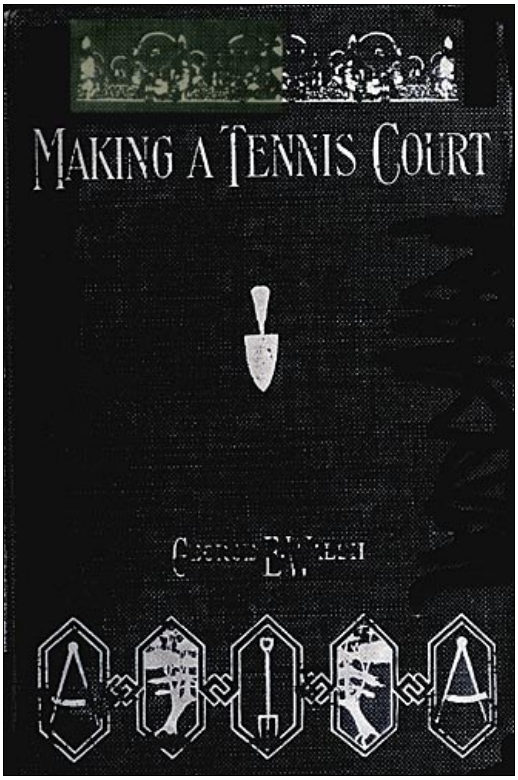
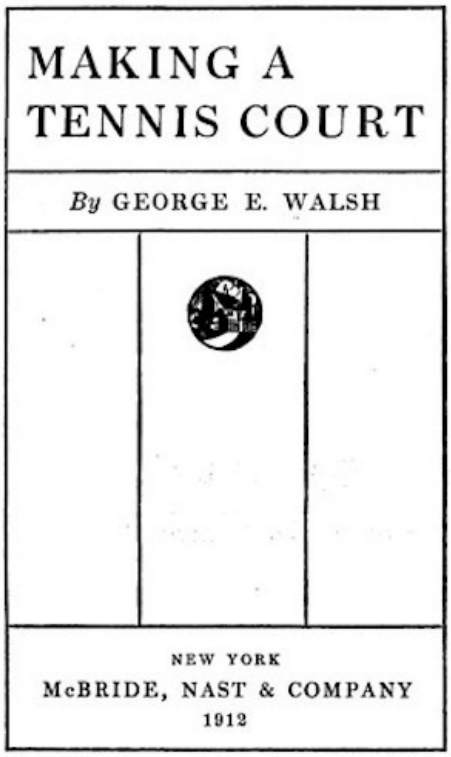
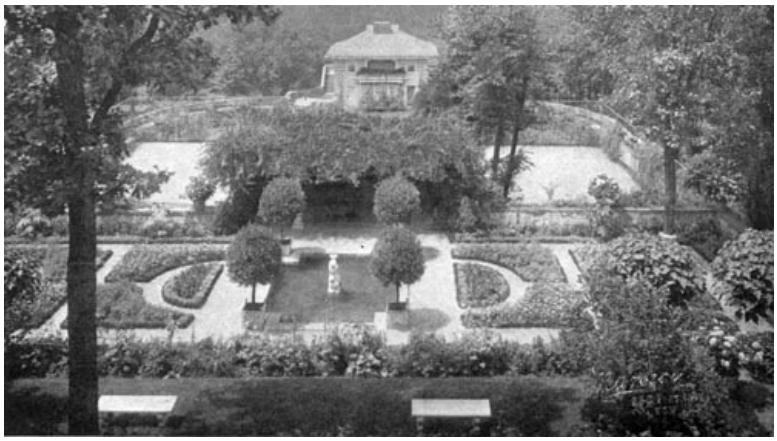




MAKING A TENNIS COURT

THE
HOUSE & GARDEN
MAKING
BOOKS

IT is the intention of the publishers to make this series of little volumes, of which *Making a Tennis Court* is one, a complete library of authoritative and well illustrated handbooks dealing with the activities of the home-maker and amateur gardener. Text, pictures and diagrams will, in each respective book, aim to make perfectly clear the possibility of having, and the means of having, some of the more important features of a modern country or suburban home. Among the titles already issued or planned for early publication are the following: *Making a Rose Garden*; *Making a Lawn*; *Making a Garden to Bloom This Year*; *Making a Fireplace*; *Making Paths and Driveways*; *Making a Poultry House*; *Making a Garden with Hotbed and Coldframe*; *Making Built-in Bookcases, Shelves and Seats*; *Making a Rock Garden*; *Making a Water Garden*; *Making a Perennial Border*; *Making the Grounds Attractive with Shrubbery*; *Making a Naturalized Bulb Garden*; with others to be announced later.



There is a great advantage, along the line of appearances, to be had by making the court an integral part of the whole landscape scheme

MAKING A TENNIS COURT

By **GEORGE E. WALSH**

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CONTENTS

THE ILLUSTRATIONS

INTRODUCTION

ALTHOUGH the game of lawn tennis as played to-day dates back only some forty to forty-five years, it is in reality one of the oldest of all existing ball games. The origin of the game is involved in considerable obscurity, but it has numberless historical associations which make it of peculiar interest.

Tennis was mentioned in the Arthurian romances, and it was quite extensively played in Europe in the Middle Ages. It was played upon open courts in the parks or ditches of the feudal castles of France and Italy. It was called, in Italy, *giuoco della palla*; in Germany, *Ballspiel*; in France, *jeu de paume*; and in Spain, *jugar al able*.

The French borrowed it from the Italians, and the modern word "tennis" was derived from the French exclamation of *Tenez!* that was employed in serving the ball. It was a game of kings and nobles. Originally a cork ball was used, and this was struck with the palm of the hand. A bank of earth was used instead of a net. The first appearance of the racket is uncertain, but in the time of Henry VII the hand sometimes met the racket on the royal courts of Windsor.

Major Walter C. Wingfield, of the British army, practically modernized and popularized tennis. He patented his game in 1874. It was played on a court 60 × 30 feet, shaped very much like an hour-glass. In this early game of tennis, the net was 7 feet high at the ends, but sagged gradually toward the center to a height of 4 feet 8 inches.

The Marylebone Cricket Club, of Lord's, formulated the first official laws and rules for governing the game in 1875, and the official name of "lawn tennis" was then first adopted. This club set the official length of the court at 78 feet. The width of the court was 30 feet at the base-lines and 24 feet at the nets, which showed that the hour-glass formation was still adhered to. The net itself was 4 feet high in the center and 5 feet at the posts.

From that time to the present, changes have been gradually made, both in the rules and the formation of the courts. The net was gradually lowered and made uniform throughout its length, and the old hour-glass formation was abandoned.

Lawn tennis was brought into this country the same year it appeared in England, 1874. The first court was laid out at Nahant, near Boston, on private grounds, and others soon appeared at Newport, Staten Island, and near Philadelphia. The game grew rapidly in popularity until tens of thousands of people, young and old, were following it as one of the most fascinating of outdoor recreations.

To-day it is one of the most popular of our outdoor games for both sexes, and it has retained its hold upon the public for a good many years in spite of the introduction of other games and the craze for novelties. Tennis gives just the right amount of exhilarating exercise in the open air that one seems to need, and there are hundreds of thousands of devotees of the game who play it regularly throughout the season.

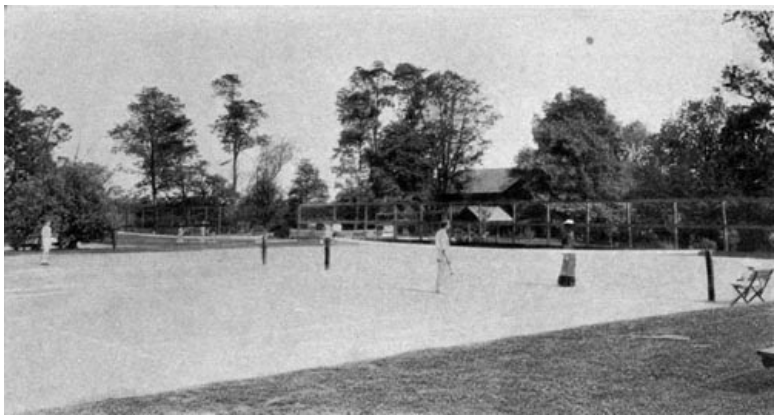
But the possibilities of making the tennis court a great social adjunct to the country place are not always fully appreciated by those who follow the game. Primarily the courts are laid out for practical use, but this should not interfere with their artistic development to make them attractive features of the garden. If one has the land sufficient for a tennis court, it should be utilized with the idea of making it a pleasant place for quiet rest and recreation on warm days.

Making a Tennis Court

LOCATION

THE site for the tennis court should have a perfectly unobstructed space of not less than 60 by 120 feet, and its location should be as conveniently near the house as the topography and landscape architecture will permit. The game is one that is best played in summer in semi-négligée attire, and if the courts are within a reasonable distance of the house there will be no necessity for lockers and dressing rooms. If possible a broad terrace should come between the court and the house, or, if it can be connected with the garden by a broad walk, so much the better. If the country residence is perched on the top or side of a hill, it may be necessary to make the court some distance away on account of the lack of sufficient level area. The architectural features of the house and grounds should in every instance be carefully considered in designing tennis courts, and if the latter are made to harmonize with the former the result is very pleasing to the eye.

The court should be constructed on a site where there is always plenty of sunlight, but there should never be any very light background. A light stucco house, for instance, or an Italian terrace of marble, would make the worst possible backgrounds for a court if located very near it. A light background confuses the players and often makes it impossible for the eyes to follow the ball.



It is a mistake to have a background of foliage for the ends of the courts if it can be avoided. Clear sky as a background makes the balls more readily seen

The site of the court should be, so far as possible, level and with natural drainage, but if these conditions are not present they may be obtained by careful grading and artificial drainage. They increase the cost of building the court considerably, and it may therefore be a question of abandoning an otherwise ideal site for another which is more level and better drained. A court should never be located in a hollow where the surrounding land slopes from all directions toward it. No amount of artificial drainage could keep such a spot dry. A series of grass terraces leading down to the court need not interfere with its construction if the land slopes away from the court in other directions. A blind ditch or drain can be built at the bottom of the last terrace so that surplus water will be carried away from the court.

The site should be selected also according to the nature of the soil, other things being equal. A rocky foundation means a good deal of expense in blasting and hauling of material for the foundation. A very thick clay soil that holds the water a long time is equally unsuited for the court, and the expense of construction is increased by hauling this away and replacing it with a more porous dressing. A natural, fairly sandy soil that is well drained is the ideal for the court, and when this is present the cost of construction will be comparatively light.

But usually the site has to be selected without much regard to the natural soil conditions. If the site is satisfactory in other particulars it is probably more economical in the end to choose it and then attend to the drainage question later. No court will ever amount to much unless it is well drained and well constructed, and these are points that will be considered in detail later. The chief considerations in selecting a site for a court are, therefore, space, light, and drainage.

A fact not always appreciated by amateurs in laying out tennis courts is that by laying the courts due north and south, the disadvantage of playing with the sun in the eyes is avoided. When laid east and west one player must always face the sun, which, of course, is a handicap. If the court is laid north and south the sun is never in the way either morning or afternoon.

The tennis court should not be inclosed by trees on all sides. That is a mistake commonly made. The trees should be planted only on the west side of the courts, and not on the north and south side. The foliage of the trees hampers the players in seeing the ball, especially towards night. The ball stands out more clearly against a background of blue sky than a background of green foliage. The trees on the west furnish shade without thus interfering with the players.

If trees crowd too closely to the court they make the surface damp, and in wet weather it may be impossible to play for days at a time. If the court is free from shade on the east side, the morning sun will dry up the surface after a rain, so that playing can be resumed in the afternoon.

All of these points in laying out a tennis court may seem simple and plain to any one when consideration is given to them, but failure to observe them often causes an endless amount of annoyance. For instance, one of the best tennis clubs in the country had its courts laid out running east and west, and the difficulty of playing with the sun in the eyes caused so much trouble that the courts had to be rebuilt. There was no reason, except oversight, why they were laid out wrongly in the first place.

Another club which had its grass courts laid out with a dense growth of trees a few yards back from the courts, on the east side, finally came to the conclusion that they either had to rearrange the courts or chop down some of the trees. The morning shade of the trees kept the courts from drying up quickly so often that the players became disgusted. Beautiful mornings would dawn after a rainstorm, and the players would anticipate fine afternoons of tennis; but the courts were too wet until very late in the day.

Like everything else, there is a right and wrong way of laying out courts, and if one is doing it as a permanent fixture of the grounds a little care and attention to these details will add a hundred per cent. to the value and increase the comfort of players and spectators.

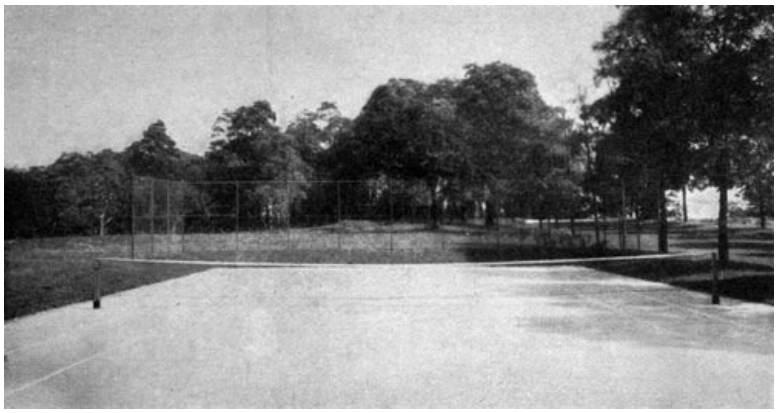
KINDS OF COURTS

TENNIS can be played on almost any smooth, even surface, either indoors or outdoors, and the question of securing in the best way the most desirable surface for the courts is one that has attracted a good deal of expert attention. While a lawn is considered the ideal place for playing the game on home courts, tennis clubs and associations have more generally adopted the clay or dirt court. One reason for this is that the surface is not so easily scarred by the feet of the players, and its maintenance in perfect condition is easier where its use is almost continuous throughout the season.

But conditions vary in every country and in parts of our own land, and ideal turf and clay courts are not always so easy of construction where needed. Consequently we find many attempts made to build courts of other materials. In Australia, for instance, they have for years built courts of cracked bluestone. The great abundance of this material in that country is responsible for its general use. The foundation of the court is made of bluestone of considerable size, and the surface was finished off with very finely cracked bluestone. Such a court is hard and durable, but it has the disadvantage of being hard on the feet and upon balls. In fact, many tennis experts refuse to play in tournaments held on courts constructed of such material.

In England many of the tennis courts were made of brick rubble, which is really a cheaper substitute for the Australian material of bluestone. An English court made of this material has the further disadvantage of being very dirty, and the players dislike it very much. Cinder is another material that has been used both in England and in this country for tennis courts, but it has never been popular. It makes such a gritty surface that the feet of the players become sore after a few sets.

Along the Jersey shore, tennis is popular, but conditions are unfavorable for the construction of either a turf or clay court. The soil consists chiefly of a heavy muck underneath, with a surface of fine beach sand, or it is composed almost entirely of sand. The building of clay courts in such localities necessitated the complete removal of the soil to a depth of nearly two feet, and the importation of clay from some distance. The fine seashore sand was used as a top-dressing. This sort of court has rarely proved satisfactory. The fine seashore sand works loose too easily under the action of the feet of the players, and the court soon showed unevenness. In order to use the seashore sand for surfacing, it is necessary to mix it with a large proportion of clay for a binder. If the proper mixture is obtained the surface is rendered fairly durable. Usually this proportion must be as high as two or three parts of clay to one of sand. Any larger proportion than two to one makes the drainage bad. There is not sufficient sand to make the surface porous, and water collects, making the court useless for some time after every rainstorm.



A good dirt court is perhaps more expensive to build in the first place, but it is more easily kept in first-class condition

Nevertheless, some very fair courts have been made by using a foundation of cinders, and top-dressing with three inches of seashore sand and clay. In selecting the sand for this purpose, the coarsest found on the seashore should be chosen. The finest sand mixes with the clay without making it porous.

We have also concrete, cement, and asphalt tennis courts, but few of them are really satisfactory. They all have the disadvantage of being hard on the feet and the balls. The concrete and cement courts are, furthermore, very hard on the eyes. The white glare of the surface on sunny days frequently causes players to desist after a few games. Asphalt is not so hard on the eyes, but it is not an ideal material for tennis courts. It is very expensive, to begin with, and it is too easily affected by heat and cold. On hot days it sometimes gets too soft, and even sticky to the feet, for expert playing. In winter it is liable to crack with the frost, although this may be obviated if it is properly laid with a foundation of stones and cinders.

There is one other material that has been tried for tennis courts that is receiving considerable attention. This is wood. Indoor tennis in the winter season has long been popular among lovers of the game, and armories and other large buildings have been utilized as shelter. The courts here are naturally laid out on wooden floors. Fairly good tennis can be played on these, as there is more give and resiliency to wood than to concrete or cement, and it is not nearly so hard on the feet or balls.

The popularity of indoor tennis on wooden floors has led to the construction of wooden courts outdoors for winter playing. A properly constructed wooden court can be used all through the cold weather. Mud and water cannot interfere with the players. Snow can be removed, and the courts are immediately ready for playing.

An outdoor wooden court for winter use is rather an expensive work, for a solid foundation must be made of broken stones and small pebbles, topped off with a layer of concrete. Then the wooden floor is laid on top of this. The wooden courts are in process of evolution for outdoor use, and the most satisfactory way of building them is still disputed. One way is to use wooden blocks or squares set up on end, so that the grain of the wood runs up and down. Wooden pavements have long been made in this way, and they stand heavy traffic and constant use. There is no danger then from splinters, and they are very durable. The blocks are set close together, and the surface smoothed off with a floor scraper. If the court is worn in places, the surface can be scraped off at no great cost by a modern floor scraper. But the wooden surface must be laid on a solid foundation that will not be affected by the frost, or the wooden blocks will be thrown out of line. Also, the surface must be raised above the surrounding land so that water will not settle on the courts. The wooden tennis courts will undoubtedly become more and more popular for clubs as the demand for winter outdoor playing increases. Improvements will then be gradually made as experience teaches.

CONSTRUCTING DIRT COURTS

A PROPERLY constructed clay court is usually more expensive than a turf court, for the ground must be excavated to a depth of eight or ten inches so that a foundation can be made of stones, cinders, or gravel. The drainage problem is one of the most important in laying out clay courts, and, if overlooked, the most promising court will soon become a place for pools to collect. In time it will settle in spots and need constant repairs to keep it in any kind of condition. While it may take a good engineer to build a clay court suitable for professional playing, a novice can do work that is suitable for all ordinary purposes. As the cost of building one is largely due to the labor item, it may be achieved at one-third the total expense through the coöperation of several members of the family in excavating and hauling material to the site.

To make a good dirt court it will be necessary first to dig off the surface to a depth of at least one foot, and level it roughly with a spirit level. The cost of this excavation in ordinary dirt is not more than ten or fifteen dollars, but where rocks must be blasted away the cost may be five or six times as much.

After leveling the foundation, a six-inch layer of trap-rock, such as is used in macadamizing roads, or any broken stones ranging in size from a walnut to an egg, should be placed in the excavation. This must be leveled off also to keep the grade. An uneven tennis court will never give satisfaction. Before the next layer of gravel is placed on the trap-rock, provision must be made for drainage. There are several methods of draining a court, depending greatly upon the nature of the soil and the preference of the owners.

For ordinary soil a good method is to lay the drain pipe near the net and at right angles to the courts, dividing them in half. The drain pipe may consist of terra cotta sewer pipes cut in half or terra cotta gutters, such as are used on tiled roofs. They are laid parallel with the net and filled with loose stones. The drains are tilted sufficiently to carry the water off at the sides or to a receptacle in the center. Sometimes a barrel is sunk in the middle and filled with stones, and the drain pipes empty into it.

Another common method is to drain the courts at the end. In this case the court at the net is two inches higher than at the ends, and on porous soil this will be sufficient to carry off the water. When the drain pipe is placed near the net the tilt from the ends toward the center should be from one to two inches.

We have more difficult drainage problems in very thick loam and clay soils. Artificial drainage of a more elaborate nature is required here, or else the courts will be muddy and sticky for days after rainstorms. Drain pipes must be laid under the courts at various places, and tilted toward one particular point. The open drain pipes are laid down before the trap-rock is placed, and filled with broken stones so they will not clog up with dirt. Two or three of these lines of open pipe should be placed on either side of the net. They should run from the ends of the courts toward the net and drain into the gutter that has been placed under the net. The number of these drain pipes depends upon the sticky nature of the soil. Four parallel rows of them on either side of the net should be sufficient for the poorest kind of soil.

When the drain pipes are laid, and the courts properly leveled with the trap-rock foundation, a three-inch layer of coarse gravel or fine broken stone should be spread over the surface. This must be pounded and hammered down and watered. The water will tend to show any weak places where settling is liable to occur, and the depressions thus formed must be filled up with fresh material. When this layer of coarse gravel has been leveled, pounded, and settled, the top layer, of sandy loam and clay mixed, should be applied. This finishing layer should be at least three inches thick, and four or five is better. Sandy clay and loam must be mixed for the top-dressing, but the proportion of each depends upon the nature of the clay. If the clay is very sticky it will require more sand. It needs to be sufficiently porous to permit the water to pass through easily, and yet not so porous that the surface is too soft. If there is not sufficient sand the surface will be sticky after a rainstorm. For ordinary purposes one part of fine sand to four parts of clay make an ideal finishing surface, but sometimes one and a half parts of sand have to be used.

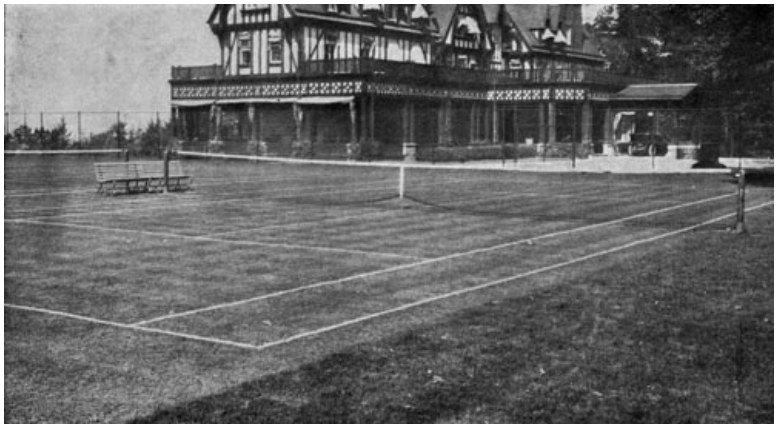
When the finishing surface is laid it should be leveled off and rolled repeatedly. Watering is also essential, but a good rain will do wonders to settle the surface. Faults and depressions will then develop, and they can be corrected by filling in with new material. Also, if the surface is found to be too sticky, add a little more sand to the top and work and roll it down. It may take several weeks to perfect the top surface of the court so that it is rain-proof.

CONSTRUCTING GRASS COURTS

FOR garden and home purposes where tennis is played only by members of the household and their friends, the grass court is of course the most artistic and beautiful. The dirt or clay court is more satisfactory for clubs where constant use is apt to wear off the turf. If the green is large enough for shifting the court frequently so that the wear will not all come in certain spots, the turf court may answer all purposes for clubs and parks.

If the natural sod of the site selected for a grass court is luxuriant and the soil favorable for rapid growth, the expense of construction may be very slight. If the natural sod is poor, and the soil thin, it will be necessary to import good soil and purchase rich grass sod from some farm or meadow. If the grass is very patchy, but the soil rich, it may be satisfactory in the end, and certainly cheaper, to remove all the sod and sow down to grass in the late summer, and repeat it early in spring. It would hardly be advisable, however, to use the court much the first year, for the young grass would soon be worn off unless a firm sod was obtained.

A grass court is the best to play on in warm weather. The green of the lawn is pleasing and restful to the eyes, and the soft turf is cooling and soft to the feet. The sweet aroma of the green grass adds to the pleasure of the pastime, and the restful slopes and terraces invite one to lounge on the greensward after or before a game. Dirt courts, concrete, and asphalt, and even wooden courts, may appeal to the enthusiasts intent only upon playing the fastest game, but their glaring whiteness and hard, unyielding surface do not bring the pleasure that grass courts do. For these reasons the turf courts should always be chosen for the summer or country place, and they should be constructed and developed with an eye to their harmony with the surrounding landscape and architecture of the residence.



Grass courts are certainly more attractive features of the home surroundings, but for really serious play they need constant care

The construction of a grass court is less difficult than that of a clay court, but if the soil is very thick and heavy, some sort of foundation must be provided to drain the under-soil. On very unfavorable soil, tile drains are sometimes placed down before the turf is replaced. A layer of stones six inches beneath the sod is sometimes resorted to; but usually no such provision for underground drainage is required for the grass court. If side and end drainage is provided, and the soil is not too heavy, water will not collect and remain on the court to any great extent.

The construction of a grass court is simple when no attempt is made to drain it. The first thing to do is to lift the grass sod as carefully as possible and lay it aside for later use. The sod should be cut down as nearly to six inches depth as possible, and should be lifted in squares of fifteen to eighteen inches. Pile the sod carefully on one side and keep moist and partly protected from the hot sun. When the sod has all been removed spade up the soil to a depth of eighteen inches, removing all stones, roots, and obstructions. Rake over carefully and roll down to a level, watering frequently and filling in all depressions. When a perfect level has been obtained replace the grass sods.

These must be put down carefully so that the edges meet snugly. Open cracks and seams must be filled in with smaller pieces of sod. Roll, water, and level the surface until all is satisfactory. Fresh sods may have to be cut and placed wherever thin places appear during the first season. In the spring of the year fresh grass seed may be sown.

If the turf or grass is poor it will be better to omit sodding entirely and sow the surface with seed. It is better in such a case to make the grass court in the fall of the year. The winter storms will settle it thoroughly and reveal weak spots. In the middle of March rake up the surface, level, sow the seed, and roll carefully. It should be sowed twice from different directions, so that an even catch is obtained. Sowing can be made in the fall or spring. About five bushels of grass seed will be needed for the full-size court. Do not use clover seeds in the sowing, nor guano for fertilizers. When the grass is high enough to cut use the scythe or sickle first, and keep the lawn-mower for later cutting. Remove weeds as fast as they appear, uprooting them, or, if the roots persist, rub salt on them. When the grass is tall enough for regular cutting, use the mower at least once a week, and oftener in wet weather.

In many localities worms are very numerous and destructive to tennis courts. By working up to the surface they form little mounds and holes which permit water to trickle through and cause depressions. In regions where the worms are a great nuisance, a layer of finely sifted cinders is placed on the stone foundation of the dirt court or at the

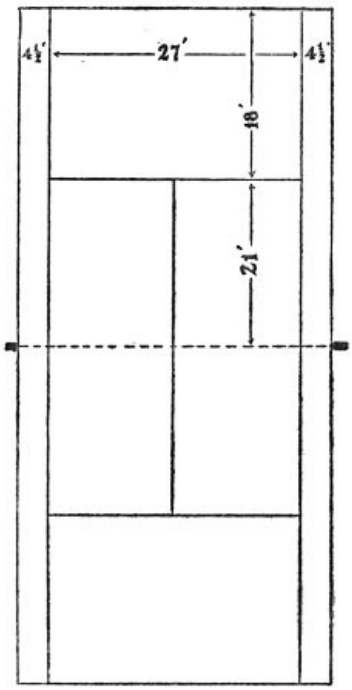
bottom of the excavation of a grass court. These cinders will keep the worms from working up, but if placed on the grass court the cinder layer must be at a depth of a foot or more below the surface, so as not to interfere with the grass roots.

One should remember that grass courts wear out more rapidly and require more care than those of dirt, especially when they are subjected to constant usage.

The cost of making tennis courts will vary considerably, as one may readily see. As much as $200 and $300 is sometimes paid for making tennis courts, but others are made at no greater cost than $25 where conditions are favorable and one is willing to do some of the work. The hardest courts to make are dirt ones laid on rocky foundations where blasting is necessary. Grass courts that are nearly level can sometimes be made by removing only a part of the sod and replacing it after digging out some of the under soil. This may cost only a few dollars.

SIZES AND MARKING

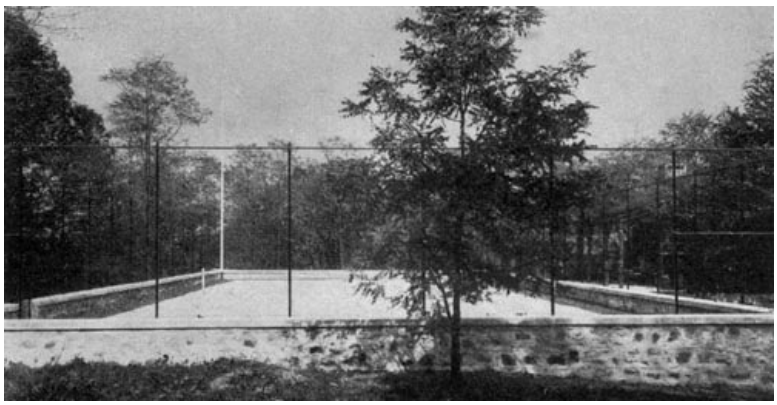
THE playing surface of a tennis court for singles is 27 × 78 feet, and for doubles 36 × 78 feet; but as a double court contains all the lines for singles it is usual to mark out for doubles at the beginning. Back of the outer line there must be a space of from 15 to 20 feet to the stop-nets, and at the sides there should be at least 6 feet, preferably 10 or 12 feet, beyond the line of the double court. This permits free access to the courts on either side of the net, and also allows room for players when volleying. This is the reason why a space of 60 × 120 is generally considered necessary for a good tennis site.



The standard dimensions for a double court are given. A convenient method of laying these dimensions out is given in the accompanying text

The marking of a court must be exact. First determine the position of your net in the middle of the site, and then lay out the single court. Place two pegs temporarily in the ground 27 feet apart and make a line there to represent the net. Then measure off two lengths of string—one 39 feet long, and the other 47 feet 5 inches. With these two lengths you can make your courts exactly right.

Lay the shorter length of string on the ground approximately at right angles to one of the net pegs; then start the longer string from the opposite peg and run it diagonally across until it reaches the end of the 39-foot string. At that point drive in a corner peg. You have a right-angled triangle that is absolutely exact. Repeat this operation to get the other corner, and then obtain the corners for the other side of the net in a similar way. With the corner pegs in place, proceed then to measure off from the net peg 21 feet on the 39-foot line. That point marks the end of the service line, and a straight line drawn across it will intersect in the middle the diagonal lines.



A space of 60 × 120 ft. is usually considered necessary for a good tennis court, and it is occasionally necessary to enclose this area with a low retaining wall of masonry

For the double courts prolong the net line 4 feet 6 inches, and join this to the points at the end to form alleys. The double courts are then finished except for the central line. This is obtained by measuring off the middle of the service lines and connecting them with a straight line through the center.

As there is quite a little bother in measuring off the courts, it is quite essential that the corner points be made permanent. Small stakes or pegs should be driven into the ground at the corners deep enough so they will not trip players. Nearly every heavy rainstorm washes away the lines so that remarking is required. On clay courts white paint is sometimes used for marking, as this will last longer than whitewash, but at the best, remarking must be done quite frequently. Paint is not suitable for grass courts on account of the injury caused to the grass roots. Portable white marking tape is sometimes used. This is held down by staples and double-pointed pins, but there is always the danger of the tape tripping a player.

Markers have been devised for facilitating the lining out of tennis courts. These consist for the most part of an iron or tin receptacle on wheels, with a marking wheel in front on which the contents are sprayed continually. Marble dust or slaked lime can be used in these markers. They give a uniform width, and one can mark off the lines as fast as he can walk. Home-made markers can be made by inverting a tin can and closing the mouth except for a tiny hole through which the liquid can flow. An ordinary wheel with a flat rim one inch in width is made to revolve in front of the mouth of the can so it will catch the drippings of the liquid. Mounted on an axle with handles this contrivance is pushed before the operator.

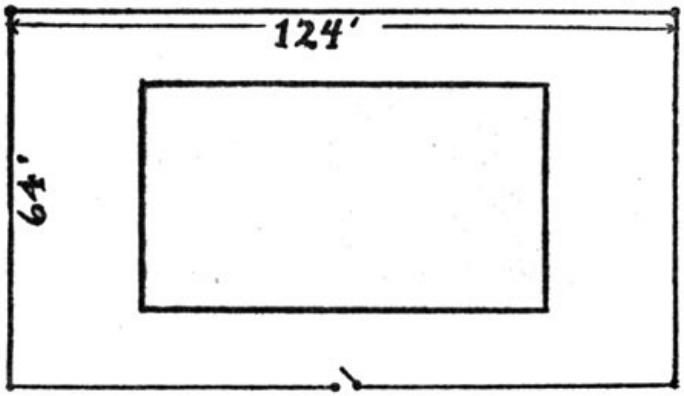
On a grass court none of these methods of marking are equal to grass itself. At the time the seed is sown on the court, plant freely in some part of the garden the seed of the crested dogtail grass. This grass is yellow green to white, and if sown very thickly it will serve to mark the courts. When the grass on the court is high enough for cutting transplant the crested dogtail grass to the lines marked out.

Mark out the courts exactly with tape or string, and then cut out on one side of it a strip of sod two and a half inches wide. This strip is then filled with the sods of the dogtail grass raised in the garden for this purpose. The sod should be patted down firmly in place, and a few seeds of the dogtail grass sown in with it. In this way you have the courts marked out permanently by grass, and the contrast in color is sufficient for all playing purposes. The effect, of course, is very striking, and far ahead of the courts that have to be whitewashed after every rainstorm.

The dogtail grass is a hardy grower, and it will, if not controlled, spread out into the court itself. This, however, can be prevented by an occasional weeding. It must be kept in its narrow strip even if roots have to be pulled up at times. If the spreading roots crowd out the green grass, the latter can be renewed by planting a little sod from some other part of the garden.

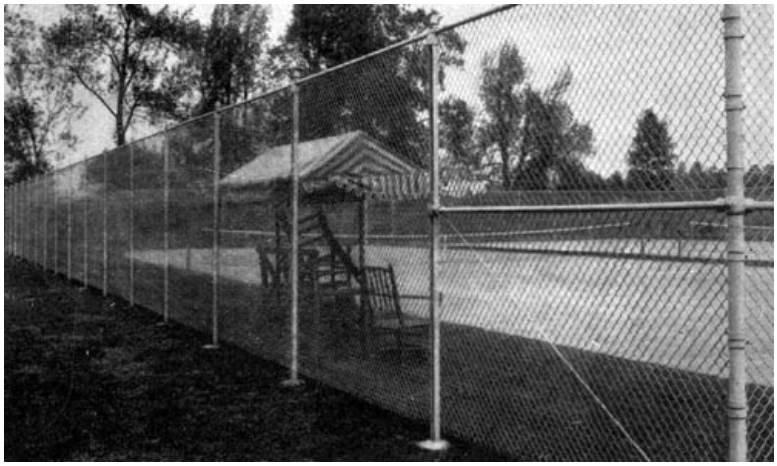
BACKSTOPS AND NETS

A GREAT variety of backstops may be introduced on the tennis courts, and their decorative effects should always be considered in laying out the grounds. The backstop nets should be at least 15 feet back of the court line, but 21 feet is considered the standard distance where tournaments are held. Many expert players refuse to take part in tournaments where the regulation distances are not maintained. The wire backstop nets should be not less than 10 feet high, and 15 feet is considered the most suitable height.

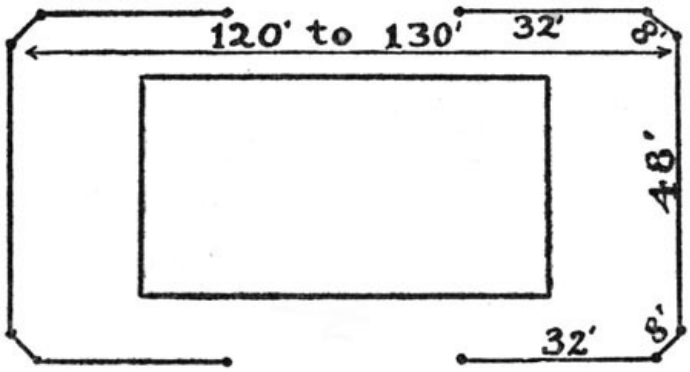


Where the court is entirely enclosed by the stop-nets the over-all dimensions may well be those given, but they should not be smaller than 60 × 120 ft.

While the usual backstop is made of hollow iron posts sunk in the ground at intervals of 10 or 15 feet, with chicken or fence wire stretched taut between them, it is not unusual to-day to find more elaborate affairs of genuine architectural worth to harmonize with the residence and other buildings. Pergola effects are thus used. The posts of solid wood are sunk in the ground, and then wrapped with wire netting to hold the stucco. The latter is applied in the usual way and finished off in white, cream-white, or gray. The wire net must be stretched from post to post before the stucco is applied. Wooden beams join the tops of the stucco columns, and a foot molding, with sometimes a railing, connects the posts from base to base. The rather elaborate character of such tennis backstops cannot always be worked out by a novice, although a good carpenter or mason can do the work if the plans are sketched carefully in advance.

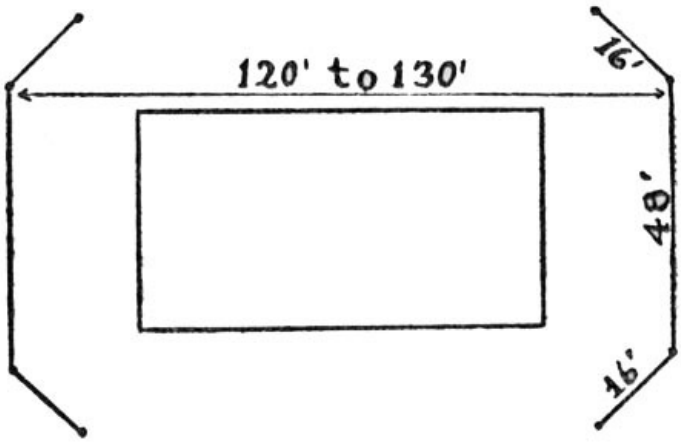


The simplest form of backstop is the frame of iron pipe forms, which are now made especially for that purpose, covered with the ordinary wire netting



A saving of stop-nets is frequently made by leaving open spaces at the sides

The plain backstop of wire net and iron posts does not enhance the beauty of the lawn, and consequently many experiments have been made to eliminate, so far as possible, their ugly appearance. Painting the whole affair a grass green so as to render it as inconspicuous as possible, is one way of partly achieving the desired results. Another simple and more satisfactory method of hiding the plain backstops is to utilize the things which nature furnishes so lavishly for us. These may be growing in our garden or found rampant in the fields and woods, climbing over hedges and fences and reaching to the tops of trees.



The most economical form of stop-net is here shown, although it will not, of course, stop all stray balls

For instance the wire net erected at either end back of the courts can be converted into screens of living green by planting vines on the outside, or, if one prefers, it can be covered with the climbing roses to make it a glorious color effect. Better even than the ordinary wire net, an artistic screen of lattice work or trellis can be erected. This can be covered on the back with almost any of the climbing vines. Roses, honeysuckle, clematis, trumpet vine, or moon flower are all suitable for this purpose. With a little pruning and training, the screen can, within a season or two, be converted into a beautiful garden ornament.

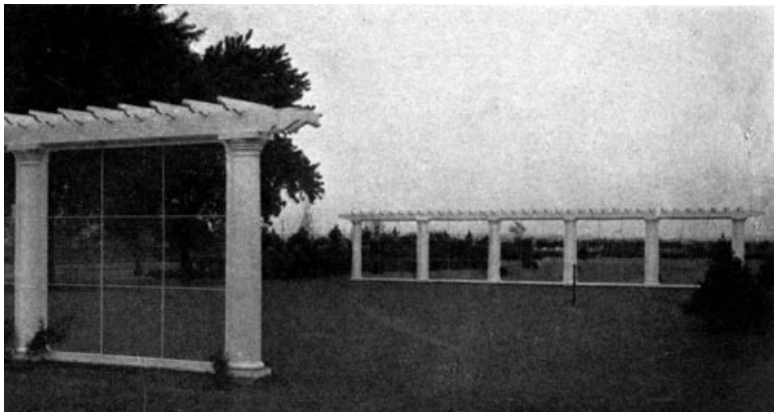
A grass tennis court with back nets to keep the balls from going too far, covered with climbing vines or flowers, adds so much to the appearance of a garden that other improvements are sure to follow. A series of rustic benches for spectators should be arranged on the west side, so that they can watch the afternoon game without having the sun in their eyes. If the land is rolling and hilly, the benches should be placed on a terrace at one side.

A tea house of suitable character is a great addition to a tennis court. This may be nothing more than a rustic covering to protect the heads of the spectators, with seats and a rustic table for serving the tea. If it is built on a terrace on the west side of the court visitors can watch the game under the most comfortable circumstances.

Nets of a great variety, from plain, machine-made twine to the hand-made, double-knitted cotton ones, canvas-bound at top and bottom, and reinforced at the corners and middle, may be had to-day. A strong, durable net is the cheapest in the end, and there will be less trouble from shrinking and stretching. For single courts the nets are 27 feet long and 3 feet high, and for double courts they run from 36 to 42 feet in length.

The most serviceable posts for holding the nets in position are those made with anchor sockets, which are permanently driven in the ground. These spade-shaped iron sockets hold the posts firmly in an upright position without the use of guy ropes. When the posts are removed from the sockets a wooden plug is inserted to keep dirt from collecting in them. In addition to this the iron posts are supplied with tennis-net reels that tighten or loosen the net as demanded. The reels automatically lock to hold the net firmly in position, and they are instantly released by moving the handle.

Other varieties of tennis posts can be used if needed, but the wooden poles supported by guy ropes and pegs are the least satisfactory. The pegs are constantly pulling out and destroying the sod. Straight iron anchor posts are better than these. They are driven in the ground, and by means of triple claw clutches they are held rigid. In place of the iron center forks for holding the middle of the net at the regulation three-foot height, canvas center straps are now preferred. The canvas straps do not chafe the net, and cannot cause the ball to glance off and strike out of court. Another method sometimes used for holding the top line of the net straight is to use galvanized steel cable top cords. These cords are a quarter of an inch thick, with metal loops at the ends and manila rope ends to fasten to the posts. They keep the net from sagging in the middle. Canvas-bound nets are also designed to keep the top firm.



It is strange that more people do not make the backstops a real architectural feature as for this court on Mr. Gage E. Tarbell's estate, Nassau Boulevard, L.I., Oswald C. Hering, architect

CARE OF COURTS

A WELL made court, whether of clay or turf, is an achievement to be proud of, and it will give more satisfaction than any other one thing; but it is essential that it should be kept in prime condition all the time. Constant watchfulness and attention are the price we pay for the proper maintenance of a first-class tennis court. The clay court will degenerate as rapidly as a macadam road, without proper repairs, and the turf court will lose its beauty and usefulness much faster than a green lawn if not attended to. A little intelligent care given to the court each week will preserve it from utter ruin, which must inevitably result if damages are not repaired at once.

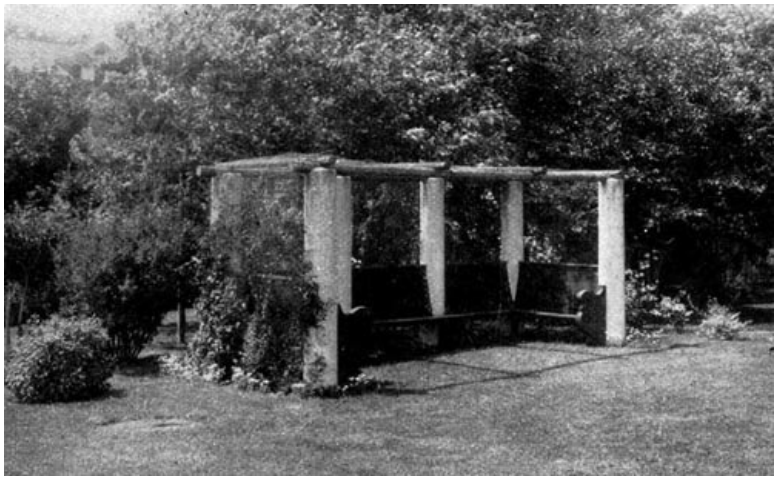
The clay or dirt court must be gone over about every second day to fill in and roll down depressions made by the feet of the players. On courts where playing is almost continuous, the rule is to make repairs every day or after every ten sets have been played on them. The simplest and most effective way to keep a clay court in repair is to take a straight log or thick piece of wood, five to eight feet in length, and nail to it coarse bagging or jute cloth. If the edges are frayed out, so much the better. Attach ropes to either end of this log, and drag it across the court several times. The ragged edges of the cloth will smooth out the surface and work the dirt into holes or depressions. If hard ridges or lumps still exist these must be loosened by hand or a hoe.

After the drag has smoothed out the surface, it should be watered, in dry weather, and then rolled. A good hand roller is almost essential to the preservation of the court. The operator should always walk in front of the roller and not behind it. The rolling should continue until the surface is rendered entirely smooth. After the rolling the wet surface should be allowed to dry before the courts are marked out again.

The care of the grass court must depend a good deal upon how much it is used and the condition of the weather. In very wet seasons, the turf is soft and spongy, and the heels of the players cut deeper into it. This produces slight depressions that may in time increase, so as to ruin the surface if not attended to at once. On the other hand, in very dry weather, the grass is more easily scoured and killed, and there must be frequent wetting to keep the turf in good condition.

The grass courts should always be watered at night after the play. Any time after the last game will do, although about sun-down is a good time. Cutting should be done early in the morning after the watering, and then the roller should be applied. This puts the court in fine condition for playing. If the grass is cut in the morning without previous watering at night, it may be injured by the hot sun, especially if the heavy roller is applied. The simple rule is: water at night, cut in the morning, and then roll.

All bare strips of grass should be replaced as soon as possible with fresh sod. Cut out the old sod evenly and put down good new sod with edges fitting snugly. Sometimes new seed sown occasionally will answer the purpose, but not in the spots where the feet of the players work the greatest damage. If many deep depressions have been made by the feet of the players in wet weather, they should be filled in with more dirt and fresh sod planted and tamped down firmly.



There is opportunity at the side of the court for some feature in the way of a shelter or seats for the spectators

Every spring the grass court needs special attention. In March or February all extensive repairs should be made to the damaged turf. New sod should be put down wherever the grass is poor or worn, and if fitted snugly in place, new seed sown, and a good top-dressing of manure supplied, the court should be in fine condition by playing time. Of course regular manuring should be done in the fall of the year, the same as for the lawn, and in the spring it should be raked off and the surface rolled. Before rolling, however, the grass should be swept. Sweeping is much better than raking even through the summer season, for the tines of the rake are apt to dig up the grass roots.

Sweeping is also good for worm casts, which spoil a good many courts. The broom scatters the little mounds caused by the worms, and then the roller smooths the surface so that no irregularities are apparent. Some sprinkle lime water over the places where the worms are numerous, and as this brings them squirming to the surface they are

swept away and destroyed.

It goes without saying that all tennis players should be required to wear rubber-soled shoes without heels. The damage to the court from shoes with heels is sometimes so great when the turf is soft that it will take half a season to repair it. Where tennis courts are a part of the general lawn a horse machine may be used for cutting the grass. In such cases the hoofs of the horses should be padded to prevent leaving sharp imprints in the turf.

If these directions for keeping a tennis court in good condition are faithfully followed there is no reason why a first-class court cannot be maintained indefinitely at little expense. It may be, in addition to this care, that a little work in exterminating weeds will be called for through the growing season. Obnoxious weeds must never be allowed to spread and get a foothold, or they will crowd out and kill the finer grass. They must be pulled or dug up by the roots as fast as they appear, and never be allowed to go to seed.

Transcriber's Note:

Minor typographical errors have been corrected without note.

Irregularities and inconsistencies in the text have been retained as printed.

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