

## The Craft of the Ball Maker

Squash Rackets, Fives, Tennis and Rackets - October 1933

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The craft of the ball-maker has stood the test of time. As long ago as the end of the sixteenth century the government was petitioned by English makers of tennis balls for a monopoly of the craft in England and for an order against the importation of French manufactured balls. Among other benefits which would result from the granting of their request it was claimed that the English balls would be better made and that unemployment would be relieved. Today the manufacture of tennis balls has little or no effect upon the state of employment but there is a sister craft the making of balls for Rackets and Fives which is still carried out entirely by hand. In these unfortunate days when the wheel of progress has rewarded the skilled craftsman by making him the slave of a machine it is a pleasure to behold a craft still being plied, usefully and diligently, under similar conditions to which it has always been accustomed. Perhaps, even this small craft of ball-making will before long disappear, for experiments have and are being made to produce the perfect machine-made ball.

With the craft of ball-making the name of Malings has long been connected. That name has become part and parcel of the history of the game, and for no other reason is it mentioned here. To the best of our knowledge there is no other manufacturer of these balls in the whole world, who carries on this craft under the same old-world conditions as do Malings. Other big sports manufacturers, such as Messrs. Gradidge and Messrs Prosser, make these balls in their factories, as a small side-line to their greater activities, but Malings confine themselves to the making of balls alone. It was not always so. For Malings have another connection with games history, for they claim to have made the first rackets for Major Wingfield for his game of sphairistike or Lawn Tennis. We, however, are well aware how great is the divergence of opinion concerning the real inventor of Lawn Tennis.

More than eighty years ago a certain and unfortunate Mr. Malings, a relation of Mr. Henry Malings the founder of the business, was thrown into prison in company with Mr. Pickwick and others, for the incurring of debts. But with this difference. For, whereas Mr. Pickwick was thrown into the Fleet, Mr. Malings was confined in the King's Bench. As is well known the chief recreations of the prisoners were the games of Rackets and Hand-ball, the latter game being known generally as Fives. The prisoners were obliged to manufacture their own balls for their games and at this craft our Mr. Malings proved more than usually adept. But here is a very interesting point. The balls manufactured for the hand-ball game were not known among the inmates of the prison as Fives Balls, but as Bench Balls, that is King's

Bench Balls. And in the trade they retain that name today. Told to manufacture a Fives ball, the craftsman knows that an Eton ball is meant, but a Bench ball, light or heavy, has always signified the two kinds of Rugby ball. Mr. Jefferies Malings inherited the business from his father, Henry, remaining in charge for forty years. When, at last, he was obliged to retire through ill-health he handed on the business to Mr. Edmund Bailey, his manager. The business is still carried on in the same house. In the room, originally intended for the front parlour, Mr. Bailey has his office and testing room combined. Huge baskets, full of Rackets, Fives and Rounders balls, stand about the room, and Mr. Bailey tests each ball himself at an amazing speed. He stands facing the fireplace with an empty basket on either side of him. Then, from another basket he takes a large handful of new balls. Like lightning he bounces these balls one after another on the hearthstone, testing each one partly by the bounce but more especially by the sound. With another flick of the wrist the ball drops neatly into the correct basket, according to its merit, sound or rejected. That, however, is the end of the story and it is more instructive to begin with the raw materials and then follow the story of the ball, as these materials are gradually moulded into shape beneath the finger of the craftsman.

The centre of a Fives or Rackets ball is a small piece of cork. Taking this piece of cork in his hand the craftsman folds around it strips of pure wool listing. Listings are less than an inch wide and are from the best possible cloth. Pure wool uniforms, such as pre-war Army Red and Blues and many officers uniforms have ended their days beneath the cover of a ball but the present-day Khaki contains cotton and is useless. Billiard cloth is also used when it can be obtained. The wool listing is the most important material in the manufacture of a ball. The entire bounce of a ball is derived from the wool and the liveliness of each individual ball is dependent upon the amount of pressure to which it has been subjected. Hence the 'stone', which every player of Rackets desires is simply a ball which has been refashioned beneath the press time and time again until it is very nearly a stone indeed. Far more wool than one could easily imagine from the size is embodied in the manufacture of a ball. Nine pounds of cloth are used in every gross of Fives balls and one pound of worsted for winding. Both the listings and the worsted have to be worked wet, as the ball is made rather bigger than its ultimate size and shrunk later by drying.

After the craftsman has wound the listing round the centre of cork, he stands in front of his bench and press. The press is a simple machine with an arrangement of cups shaped to



size. Taking the ball between his fingers the craftsman begins to wind, twisting the ball round and round, working his fingers like a spider's legs. He is moulding the shape of the ball in his hand. He binds the worsted tight, stretching it to twice its natural length and every now and again he presses the embryo ball between the cups of his machine. Soon the first stage of the procedure is completed, the ball is a perfect round and although still big the listing has been covered with an equal layer of worsted. Although many weeks will go by before this ball is ready for play the most difficult task in its manufacture has been accomplished. It takes two years or more, rarely less, for the craftsman to learn to shape the ball between his fingers as he winds. Five out of seven boys who apprentice themselves to this craft prove quite unfit for the work, for it requires nimbleness of the fingers, which few possess.



*Fives Ball 'Factory'.*

The ball is then taken to the drying room, where it is placed alongside many of its fellows on a rack. There is no artificial heating in this room and the balls lie like so many apples in the loft, gradually drying beneath the roof. Here they remain for four, five or six weeks before having a final baking in a warm oven. If the ball has been badly moulded, it will have shrunk out of shape and will now be discarded for reconstruction. If it is a good ball, it will have shrunk to the right size, quite round. The ball is now placed in the hands of the finisher. The finisher takes the ball between his fingers but instead of twisting the ball and winding the worsted round and round, he winds straight, first in one direction and then at right angles to the original line. He, too, uses the press from time to time. Once more the ball is replaced in the oven to make quite sure that every vestige of dampness has disappeared, for if the wool is wet, the ball will not bounce. The ball is now ready to be covered.

Covering is done by women workers, who do their work in their own homes. Stitching Rackets and Fives balls is not the easiest of tasks, and since no woman can be expected to ply her needle for more than two hours at a time, it has been deemed wisest to let them work at home at piece rates. Accordingly a woman will call for so many uncovered balls and the same number of coverings. The coverings are made of the best sheepskin. First they are cut into squares of regulation size for the type of ball required; next they are thoroughly damped; then, when the ball has been placed in the centre of the square the four corners are joined together at the top, in much the same way as an orange is sometimes peeled by stripping the skin off in four quarters. The waste

skin is cut off and the seams stitched as close as possible. It would be impossible to get a tight skin if the covering was worked dry. As it is the damp skin stretches for the worker and grows tighter and tighter as it dries. The covering is very difficult and important work, but however good it is, the seam will stand up slightly from the skin, causing the bouncing ball to break at awkward angles. Hence the next step is to roll down the seams. This again is done by hand. Half-a-dozen balls are taken together and placed inside a specially grooved cover. A similar cover but with a handle is placed on top so that the balls are sandwiched between the two. The top cover is then wound round and round, fast and furiously, first in one direction then in the other, while inside the balls are having their seams rubbed down.

The important business of testing is now begun, and those which pass this eager scrutiny are stamped with the name of the maker and made ready for sale.

A few more facts about Rackets and Fives balls are worthy of notice. The whole manufacture is carried out entirely by hand. There are eleven thousand stitches in the coverings of a gross of Fives balls or an average of 84 stitches per ball. A good woman coverer may do as many as ten balls an hour, others as few as four or five. It takes a long time to gain the required knack for a coverer mainly because the stitches must be small and a small ball is a difficult object to handle. The speed of a ball is usually in relation to the number of times it has been returned for recovering. Each time it returns it is rebaked until gradually it grows more and more like a stone. Hence it is important that Rackets balls should be returned for remaking, because at the present moment the harder the ball the better the player is pleased. The harder type of Fives ball has usually been re-made.

Other kinds of ball, those for Tennis, Rounders and Stoolball, are made in much the same way but not with the same materials, since they are not required to bounce to the same height. Tennis balls are covered with cloth, while balls for Rounders, although having a skin jacket, have a core of wool waste or stuffing.

Mr. Bailey had an amusing remark to make about the players of Eton and Rugby Fives. Rugby Fives players, he said, were content to have their balls delivered in a large sack. This sack would stand in the corner of the tuck-shop whence the boys would choose their ball by bouncing one or two upon the floor. Not so the Eton Fives player. He, not only desired his balls to be packed in boxes of a dozen so that he might carry them about under his arm, but demanded also that they should be individually wrapped and sealed in blue paper. Of the game of Rackets, Mr. Bailey spoke sadly. Since the Great War, he said, there had been a great decline in the number of players all over the world and although players of today were keener and more enthusiastic than ever on their game, they were making it more impossible each year for Rackets to regain its lost popularity. They were making it too expensive. Today, in order to meet with the approval of Rackets players, he was forced to make each ball as hard as a stone. It had not always been so. The strings of a racket and a wooden frame could not be expected to stand up for ever against the constant battering of a stone ball travelling at a high speed. In consequence many boys at the Public Schools were unable even to learn the game, simply because they were unable to afford to play.

*John Armitage*