



BENDING TENNIS RACKETS.
Specially photographed for THE CHURCH MONTHLY

on a lathe, the object of turning, after gluing into the blade, being to obtain a perfectly true centre throughout the bat. Now comes the stringing of the handles, and then the sandpapering of the blades to make them quite smooth, and finally the oiling.

The stringing of the bat handle is easily accomplished. It is fixed between spindles and revolved quickly as in a turning-lathe, while the workman pays out the twine, which winds rapidly on the handle as it revolves. The twine is made of Dutch flax and is boiled in a mixture of oil, resin, and pitch. Some bat handles are covered by chamois leather, and some by indiarubber, but most players prefer the covering of black twine. Commoner bats, often made of poplar, with handles of the same wood as the blade, are shaped in the same manner as the others, but the handle is first cut out square by a saw and then turned, as are the square cane spliced handles.

From bats to balls is not a far cry, and here in a room close by you may see the red balls a-making that are to fly over many a well-fought field. The regulation weight of a cricket ball is, as I suppose most folks know, five-and-a-half ounces: but perhaps even many cricketers are not aware that the core or inside of the ball is composed of worsted and cork. The worsted is wound wet round a small square of hard cork and hammered tight after each winding, so that when dry it is quite hard and firm. The outer covering is of thick cowhide, which is first cut into quarters; then two of the quarters are sewn together and pressed with a mould into the shape of a half-sphere. The core is forced in and the other half put on and sewn to the first half, the ball when completed being again pressed hard in the screw press and greased. The hide is stained

red before being cut into caps for the cover, red being the best colour to notice easily in the green grass.

From cricket balls we go to footballs, passing from summer to winter at a bound. Some footballs are simply bladders with a leather casing, but the best are made of indiarubber, covered with leather. The hide is first cut into sections, like the quarters, or eighths, of a gigantic orange, and these sections are then sewn together by hand, something as cobblers used to sew boots before the introduction of so much machinery into the boot trade. The sections are kept in position by large springs, or clippers held between the knees of the men, who then work away with awl and thread.

But perhaps one of the most curious points about these playthings is the catgut for stringing tennis rackets. Catgut is never made from cats. It is generally made from the intestines of sheep, even for violins, guitars, clock-cords and so on, though sometimes perhaps from the horse or the ass. The part used for the cords of rackets is the external membrane, which is first loosened by steeping the intestines in water for several days, when it can be scraped off with a blunt knife and twisted. The cord is generally fumigated above burning sulphur, the sulphurous acid stopping decomposition, and acting as an antiseptic. As for the racket frames, they are cut in thin strips from ash logs, and are then steamed for half an hour—an operation which renders them quite pliable; the steam is injected into a long and strong box containing the ash rods, at a pressure of about one hundred and fifty pounds to the square inch, and the wood, which is naturally tough and light, can be bent into shape round an iron frame quite easily after its bath of hot steam. These bent shapes are hung for months in airy out-houses, high up aloft, to become thoroughly seasoned, after which the handles are finished off with cedar, or other ornamental woods.

The yearly output must be enormous. Something like 20,000 racket frames are often hanging together in one yard to be seasoned, the seasoning process occupying nine or ten months at a stretch; 50,000 bat clefts are often stored at the same time on the roof; while the annual bill for wood alone is over £15,000. And this is but one house among many for the production of England's playthings. What glorious games they suggest, what keen combats of strength and skill! May the best side always win and the vanquished reap a rich reward in healthy hours of happy recreation!