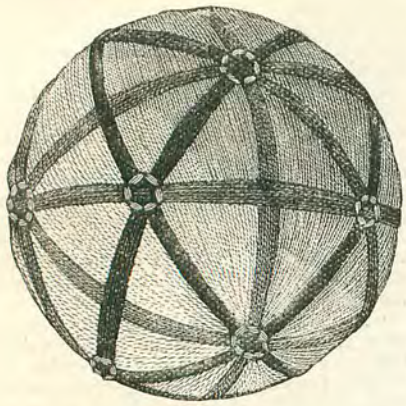
A NEW LIFE FOR AN OLD BALL.



WHAT numbers of worn-out tennis balls accumulate in most country houses where there are young folks fond of that pleasant pastime. And what untold pleasure these same worn-out balls can give to many poor or sick children, if a very small amount of time is spent upon doing them up in a new dress. For this new dress, most people who do much fancy work can produce all sorts of odds and end of wool left over from various articles, either crewel work, crochet or knitting, for it matters very little what kind of wool you use so long as you make the balls bright and attractive-looking. We shall describe exactly how the model was covered because the design upon it is a particularly successful one, which might be carried out in many different schemes of colour. Its first coat was composed of white Shetland wool, left over from crocheting a baby's jacket. It was firmly and evenly wound round the tennis-ball, until it was covered completely. This winding was done entirely like the meridians on a globe, never like the parallels of latitude, but some discretion had to be used not to mark the north and south poles too strongly, by allowing the wool always to cross upon one particular spot. The end of the wool was fastened off by running it a little way into the winding with a wool needle. This small globe was then divided into four quarters by scarlet bands of winding, which crossed one another at the poles, and a scarlet equator was added. Some black wool further divided the quarters made by the scarlet wool, and marked the ball into eighths. Our globe was then turned on its side, and two dark blue bands were wound which crossed one another half-way between the red bands, making the general meeting-places on the spots where the red bands crossed on opposite sides of the ball. It was then turned round till the next crossing of red bands came uppermost, and two light blue bands also crossing one another were wound there. The ball was now divided all over into a number of triangles. Last of all a needle was threaded with some bright yellow filoselle, and a small circle was neatly stitched at each spot where either three or four bands crossed, and that made all quite firm.

It matters little what colour you choose for the ground work of these balls provided the other colours all form a good contrast to it. As small quantities do for the encircling bands, it is therefore better to begin the foundation with something you are sure to have enough to finish with, in order not to run short in the most important part of the design. These balls cost so little that they can be sold very cheaply at bazaars, and are always, in consequence very popular with tiny purchasers.

SUSAN M. SHEARMAN.

TWO DOMESTIC SANITARY APPLIANCES.

THE DUSTBIN.

LOOKING out from a back window on a sultry day in July, over the smoking chimney-pots in every stage of dilapidation, the slated roofs, the solitary aspin-tree with leaves of a dirty brown colour (or what was left of the leaves by the hosts of caterpillars that had striven to eke out their monotonous existence earlier in the year by eating the rest), and the various other features, not forgetting the cats, which constitute a London landscape, my attention was drawn to an incident that was happening in the courtyard of a neighbouring house. A servant was standing in front of a lidless "sanitary" dustbin and deliberately emptying the contents of a teapot—leaves and stale tea—into that sanitary emporium, which was already half-filled with fishbones and cabbage-stalks.

A *sanitary* dustbin is only sanitary if it is used in a sanitary manner. Do not think as this girl apparently did, that as the thing was sold as a *sanitary* dustbin there was no need for caution. She is not the only person that I have seen misuse a dustbin in this manner. A "sanitary" dustbin without a lid, filled with cabbage-stalks, fish-bones, tea-leaves and water on a hot day in July will not remain sanitary for very long. If this is the way you use the bin, it is better far to return to the old-fashioned wooden dusthole, for this, at all events, lets the water run away.

The sanitary dustbin has proved a great blessing to London, and if it is used carefully it is as sanitary as anything put to such unsanitary purposes can be. It is no mystery how to use it. See that it has a lid, and that the lid is always on it; have it emptied as often as possible, and do not put liquid of any kind into it. The position of a dustman is not an enviable one, and I have been told over and over again by dustmen that they did not mind the dust but that they did object strongly to have water from the rubbish trickling down their backs. They all agreed that this pernicious method of emptying teapots was the chief cause of fluid in the dustbin. Surely it is very little extra trouble to pour off the water from the tea-leaves—and it is exceedingly important to keep the contents of the bin dry, both for yourself, your neighbours and also for the dustmen.

I will now leave that subject and go to another household utensil which is still more misused, and of which, indeed, the use in any way is misuse. I refer to the filter.

THE FILTER.

Of all the nonsense that we have heard I do not think that any other subject has had so large a share as filters.

First, let us see what filters are made for. To filter water of course. But to filter it from what? From microbes, don't you know that? Then why are they used in London houses? Because London water is swarming with germs! This is totally untrue. There are no pathogenic (disease-producing) germs in London water,* so why use a filter?

Now let us take the disadvantages of filters. You say that filters remove the germs from water. Do they? Just come into my laboratory and see for yourself. Those little tubes over there, plugged with cotton wool, are "cultures" of various organisms. Tube No. 1, you see, contains nothing but a clear mass of gelatine at the bottom. That, I can tell you at once contains no organisms. It is a culture of a drop of London water taken from my own tap. You see in tube No. 2 that the gelatine has been liquefied, that it is of a dirty yellow colour with an abominable odour; it is swarming with organisms. It is a sample of the same water as No. 1, but it has been passed through a carbon filter. You seem surprised and incredulous, but to me nothing can be more natural. If you look at a carbon filter from any point of view it is obvious that it must foul and not purify the water. Now you are going to say to me "that cannot be true, for the other day I saw for myself that filters did purify the water." I will tell you what you saw, two baths or two vessels arranged like opera-glasses or some such object, one filled with London water, the other with the same water filtered. The former was pale green in colour, the latter a beautiful blue. Of course the latter is the purer water! Not a bit of it! The yellowish colour of the unfiltered water is due to a minute trace of peat, which is not of the least importance. You cannot tell from inspection whether or not water contains germs. You have seen other tests exhibited, but they can all be explained in much the same way. The filter decolourises, that is all.

There is one form of filter that is really useful—the "Pasteur-Chamberland Filter." It consists of a cylinder of unglazed porcelain which is screwed on to a tap, and the water is forced through the porcelain absolutely freed from any impurity that it may have contained. Its disadvantages are, however, numerous; it has to be screwed on to a tap and requires high pressure to force the water through it, so that it can only be used in large towns where filters are unnecessary. Again, the cylinders must be thoroughly scrubbed out and then baked occasionally, as they soon get covered inside with slime.

Of other filters two kinds are in common use. One of these consists of a block of carbon or some other substance and two glass vessels. You all know these by sight. They are perfectly useless, as the carbon soon gets crowded with organisms. The other kind is filled with small lumps of charcoal with interstices for stagnant water and germs. This is called the cottage filter and is the most objectionable of all.

So both the dustbin and the filter are used for the reception of stagnant water. Might I suggest that the proper place for the latter is within the former?

T. N. D.

* In times of epidemics organisms are occasionally, but very rarely it is true, found in London water.