



*The head brewer.*

Mixing the mash is one of the most important stages in the process. Temperatures and proportions are strictly controlled, but the possibility of something going wrong is often apt to give the brewer a headache. This he can, however, sooth by a sniff of the rich warm malt the odour of which fills the mash-tun room.

The wort flows down to the copper, and from there on to the hop-back after boiling. Just before this run-off, and during it, the copperman stirs the steaming copper with a long pole to ensure that all the hops go through to the hop-back. Our artist has given you an impression of this process. An obvious comparison is to an outsize witch's cauldron, though this is a little unfair to the copperman. Clouds of steam swirl up through the building, and, peering over the edge of the bricked copper, you can see the brown mixture bubbling and boiling furiously with a light foam frothing on the surface. Round and round walks the copperman, dimly seen in the mist of steam.

A float dropped into the copper records the quantity of the boil on a wall chart

—fifty hogsheads this time or 2,700 gallons. A sample is taken, and then the valve is opened to send the wort spurting into the hop-back below.

Here it is strained before being pumped to the top of the brewery tower to be strained and aerated. As the wort streams down through finely perforated vessels the air works through it, so guaranteeing that it has sufficient oxygen to react with the yeast. Next it is cooled to 60° F. by a refrigeration system similar to those in that most innocent of institutions—a city milk department. Then it flows through to the fermenting vats. Yeast is added, about 150 lb. to every 100 hogsheads of wort, the wort becomes a brew, and will soon become a beer.

During the refrigeration stage the wort is very delicate, as we were told as we stood by the open window—the tower is better ventilated than any dormitory—and watched the warm liquid flow down the chiller. The brewers had some trouble here a few years ago. The beer was playing funny tricks (even before it left the brewery), and the difficulty was finally tracked to the yeast. Wild yeast was getting into the beer. The question was how. They then discovered that when the wind was from the north wild yeast bloom from a pear-tree in the section next door was being blown in through the open window and infecting the wort. The remedy was easy.

The brewers grow their own yeast—a culture they call it—and so ensure its purity. Since yeast is a living, growing organism much more is built up brew by brew than is needed. Some is necessarily wasted, but sufficient is kept to use for the daily needs of the brewery. When processing plant is available a useful by-product can be made from the excess yeast.

In the fermenting-tanks the brew works for a day and a half and a fleecy carpet of yellow yeast begins to form on its surface. From now on bottled beer and draught beer part company. A brew for bottling is transferred to huge, open skimming-vessels. A brew destined for hogshead and handle goes off down to the cellar after its initial working and is