

a chain hitch above the hock, so that the animal lay with his head and neck on the floor; after remaining in the unpleasant and painful position for some minutes his throat was cut, and after another prolonged wait, he was knocked on the head. I thought the mode of death necessarily prolonged and cruel. The carcasses after being prepared in the usual way are carried into the refrigerator rooms where they are kept at temperatures varying from  $40^{\circ}$  at first down to  $34^{\circ}$  F. These cold storage rooms are very clean and divided off from the rest of building by powerful and close-fitting doors. In one establishment I visited, the cold storage room covered one acre and was seven stories high. The temperature is kept low not by ordinary ice, but by large pipes connected with a refrigerator apparatus in which ammonia is the active agent, and which is so effective that everywhere the pipes are seen covered with thick frost.

The rendering vats are all built after the same fashion, being iron cylinders of large size with conical ends, having an opening at the top for inserting the offal, etc., and another at the bottom for its removal after treatment, the openings being protected by doors with fastenings similar to those of a steam sterilizer. The contents are subjected to prolonged action of hot steam, the oil being drawn off by a pipe about a third of the distance from the top. Vast quantities of oleine, or as it is called there oleo oil, are manufactured in this way.

As this rendering process was the one that formerly gave rise to the most nauseating and unpleasant odours, viz., the butyric, caproic and other fatty acids given off in this process, I was particularly careful to ascertain if they were effectually disposed of. I found that this was done. In some of the places these gases were drawn off by a steam exhaust and carried away under water. In one the gases were forced under the furnace fires in the boiler room, and neither in the boiler room nor from the chimney could I notice any appreciable odour.

It is not correct to claim that these abattoirs are free from smell. In and near the slaughtering rooms there is an unpleasant smell and it cannot be otherwise, but there was a decided difference in this respect in different places, depending, I presume, upon the amount of care and thoroughness with which the place was cleansed after the day's slaughtering was over.