

The damaged grain from layers X and Y, together with that from under the forward ventilator and the "sweat" damaged grain in layer E, was weighed up apart from the rest of the cargo, the total quantity being about 160 bushels. This was the only damage reported by the cargo superintendents, and amounted to less than 0.2 per cent.\* But the total quantity of damaged grain is increased by probably more than 800 bushels if the more or less injured grain be taken into account. As far as the present shipment is concerned, this damage is perhaps of little commercial interest, since the wheat affected by it was mixed with the sound grain when the usual practice was followed during the discharging. It will indicate, however, where trouble may be expected in the case of future shipments unless certain precautions are taken.

While the reported damage was evidently due to "sweat" or the admission of water into the hold, the cause of the heating near the stokehold bulkhead is not quite so clear. As will be seen from Figure 19 the heating took place under the ventilators, down which a little water may have dripped during and after the loading. Tests on samples of heating wheat from layer C showed 15.2 and 15.7 per cent of moisture while a sample from



Fig. 19. Section through heating wheat near stokehold bulkhead.

layer E, contained as high as 21 per cent of moisture. These percentages do not however, necessarily indicate the admission of water into the hold, since the chemical changes due to respiration, which is very rapid in warm grain, always result in an increase in the proportion of water present. But whether the cause of the heating was the drainage of some water from the outside, or whether the moisture content of the wheat as loaded was dangerously high for the conditions in that part of the ship, there is no doubt whatever that the temperatures close to this bulkhead were altogether too high for safety.

During the discharging of the grain, average samples were collected from some of the parcels. These samples were tested in the laboratory for moisture and the results obtained, which are given in Table 11, show that no appreciable changes in moisture content occurred during transit.

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\*See Appendix 2.