

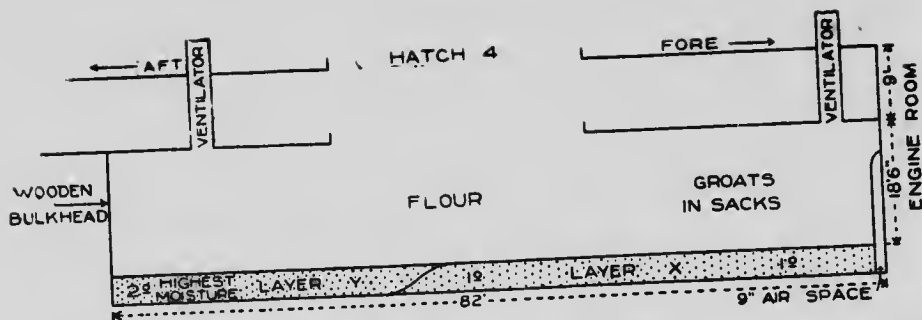


Fig. 4. Section fore and aft through afterhold.

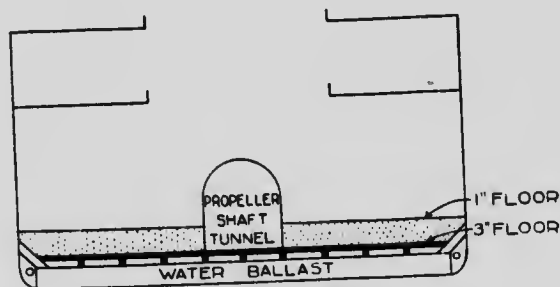


Fig. 5. Section through hatch 4.

The electrical resistance thermometers which were placed in the holds, had been previously used in storage tests on a large scale in elevator bins, and had been found to give very satisfactory results. With this apparatus the measurement of temperature depends upon the well known fact that the electrical resistance of a metallic wire varies with the temperature, the principle of the Wheatstone Bridge being used in determining the changes in resistance.

The thermometers were tied on to long steel cables with marlin, friction tape being wrapped round each knot to prevent it from slipping. They were usually arranged in sets of thirteen along each cable so that a distance of 5' separated one thermometer from another. After each parcel of wheat had been trimmed and just before spreading the separating cloths, the line of thermometers for that particular layer was dropped down one of the ventilators leading into the hold, stretched out and embedded in the grain at a depth of 6" to 12". All the lead wires from the line of thermometers passed up through the ventilator and their ends were soldered to a thirteen point switch. This switch was screwed into a hard wood box which was lashed to the outside of the ventilator and afterwards covered over with tarpaulin for protection against the weather.* When the temperatures were to be measured, this cover was taken off, the door of the box opened and the switch connected with the temperature indicator and battery.

*See Appendix 1.