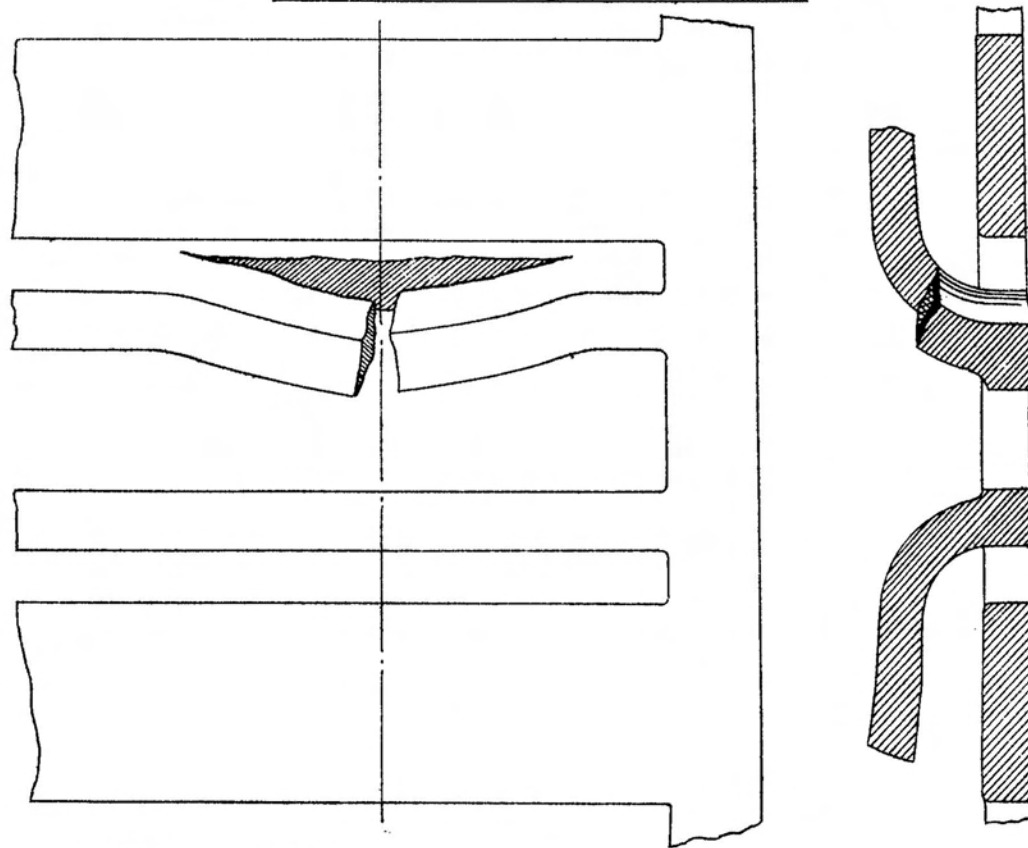


REPAIR TO L.P. VALVE FACE OF TRAWLER.
FIGURE I.-SHOWING DEFECTS.



REPAIR TO AN L.P. CYLINDER OF A TRAWLER.

A repair which was made to the valve face of the L.P. cylinder of a trawler in Admiralty Service about June 1918 is shown in Figs. 1 and 2.

The damage was caused by a spanner which had been placed at the top of the steam port during an examination of the L.P. piston rings, and which had slipped down the port unnoticed by the ratings employed on the work. The turning of engines by hand on the completion of the work failed to indicate any obstruction, but during a basin trial preparatory to putting to sea, the spanner was carried into the slide valve with resultant damage to cylinder port and slide valve (*see* Fig. 1).

At that time a new cylinder would probably have taken months to obtain, but as it was most important to keep every unit in service if possible, consideration was given to the possibility of making a repair which would remain effective until the end of the war.

The removal of the damaged part and the bolting on of a single bar patch was ruled out, both on account of the reduction in steam area that would have resulted, and the likelihood of the fastenings giving way if the slide valve rubbed hard across the edge of the bar. It was decided, therefore, to cast and fit a double bar patch, the two bars being joined by three vertical webs of which the right hand one should make a joint with the side of the port.

The bar of the cylinder face immediately above the damaged bar was consequently cut away and recessed to make a landing for the upper bar of the patch as shown in Fig. 2, and the clearance thus made rendered easier the machining of the facing for the lower bar of the patch, which was otherwise masked. The clearance gave the further advantage that some machining was possible on the jointing slope at the extreme left of the damaged portion of the port. The only available machine for cutting these jointing faces was a horizontal boring machine—the work being done by milling cutters.

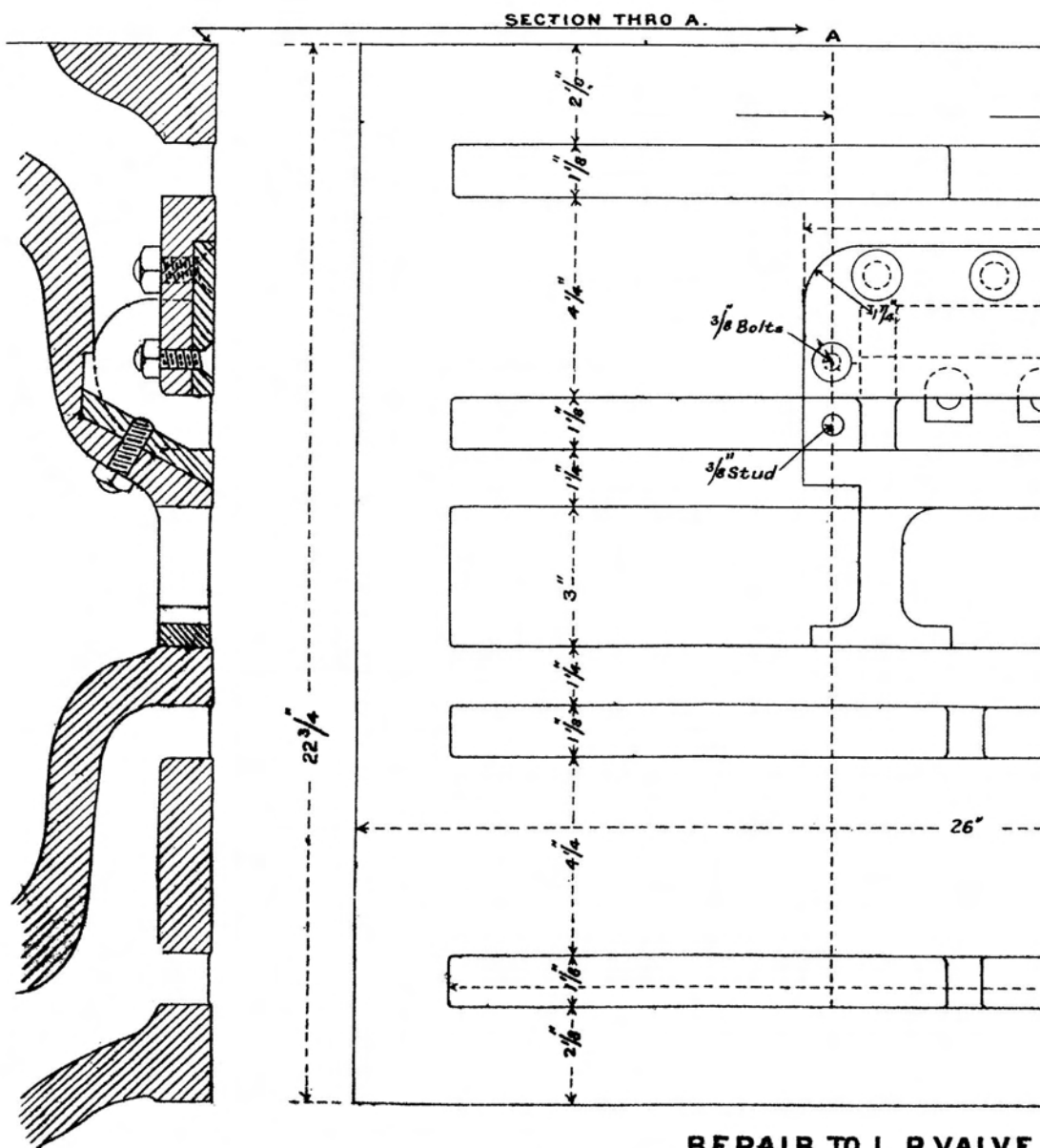
The pattern was fitted after the machining was finished, pieces at the sides being afterwards pinned on to allow for the shrinkage of the casting.

The final machining of the face of the patch was left until it had been bedded and jointed. It was then tested by straight edge and scraped as necessary to bring it a shade below the level of the remainder of the face.

Some support in addition to the fastenings was given by two feet cast on the patch and resting on the cylinder bar beneath. These feet were not secured in any way and were

intended only to assist to relieve the stress on the fastenings during the downward stroke of the slide valve.

The patch and the new slide valve, which had also to be fitted, proved satisfactory, and were still doing good service when the vessel left the Admiralty Service.



**REPAIR TO L.P. VALVE
FIGURE 2 - SHOWING**

