

This, therefore, may be regarded as a perfect instrument for all ordinary purposes.

A number of the instruments which had been previously tested in the press were sent out in the 'Porcupine' on her summer cruise in 1869, and on her return the results of Captain Calver's observations at different depths in the ocean were carefully compared with the effects of equivalent pressures applied to the thermometers in Mr. Casella's 'Bramah's press.' The result in the ocean, contrary to that in the hydraulic press, proves that the elasticity is not regular or in a ratio to the pressure, but that after continuing regular up to a pressure of 1,000 fathoms, it decreases in a compound ratio to a pressure of 2,000 fathoms, when its elasticity nearly ceases.

The following table gives an abstract of the behaviour of Casella's ordinary Hydrographic Office thermometers in the ocean and in the press:—

Pressure.	ERROR.		PER 250 FATHOMS.	
	Press.	Ocean.	Press.	Ocean.
Fathoms.				
250	0°·726 C.	0°·738 C.	0°·726 C.	0°·738 C.
500	1·548	1·564	0·774	0·782
750	2·123	2·223	0·708	0·741
1,000	2·474	3·015	0·674	0·754
1,250	3·255	3·492	0·651	0·698
1,500	4·107	3·921	0·684	0·653
1,750	4·555	4·056	0·650	0·579
2,000	5·354	4·284	0·669	0·536
2,250	6·021	—	0·669	—
2,500	6·817	—	0·682	—

For taking bottom temperatures at great depths two or more of the Miller-Casella thermometers are