



With regard to case No. 2 M. Bouchard thinks he has already satisfactorily solved the problem shown how it can be done some 3 years ago or in 1878 in his articles published in the "Civil Engineer and Builder" or in the "Civil Engineer" and other papers of the period. This was after the foundering of the latter ship *Petera* with over 400 souls on board when struck by the rain of the *Champion* during the great naval review of England in the occasion of the visit of the emperor William of Germany to that country some 4 or 5 years ago.

It will be remembered that the *Petera* being due to the weight of water accumulated on one and the same side of the vessel to which it was confined by the longitudinal bulk head caused the ship to keel over so that the vessel's parts dipped below the sea when the water entered in increasing quantities causing the ship to roll over onto its beam ends and finally upset and go to the bottom.

The French liner *Boulogne* went over with over 200 souls due to the same cause to wit its longitudinal bulk head causing the hull and water to pile up on one side of the vessel thus causing it to beam and turn over.

This longitudinal bulk head is of course a most important and necessary feature against which by preventing the fires from extending on both sides of a vessel simultaneously and thus allowing it to proceed at half speed when the fires on one side have been put out by an inrush of water, but some inrush had to be provided and ran easily to be relieved by a system of pipes and a pipe gate or a valve of the water going across to the adjoining transverse compartments of the vessel forward of the funnels and Bulkers or both, and this is what M. Bouchard has advocated thus in reality solving problem No. 2 by causing the vessel in the way proposed to maintain its centre of gravity its upright position in the water while of course settling down a little as due to the weight of water in the several compartments.

The solution may appear to be as simple as to be unworthy of any special recognition.