

And the governing rule has been thus stated: "It must be presumed that the master of a large steamer must know the effect of the frontal and side waves made by such steamer when going at her ordinary rate of speed in narrow channels; and he should therefore regulate, or moderate, the rate of speed, and keep sufficiently out of the way of an overtaken vessel."

The evidence of the captain of the "Burroughs" is that he was keeping her to the American side of the river—her proper starboard side of the fairway; and that when he found the "Bielman" abreast of him, and the suction caused by her speed beginning to operate and swing his vessel to port, he put his wheel hard-a-port and backed, and gave 3 whistles to the "Bielman" to check her speed, and also gave several short blasts as a danger signal,—none of which were answered by the "Bielman."

The effect of putting his wheel hard-a-port is described by several of the witnesses for the defence. The captain of the "Bielman" said that after the side wheeler passed, the "Burroughs" steered away from the "Bielman" to starboard about a point, and towards the American shore; and that she then steered towards the "Bielman," and struck her about midships by her stem at an angle of about 75 degrees. He also stated that after the "Burroughs" started to sheer—just appreciable—he heard her engine bells. The mate of the "Bielman," who had charge of her navigation at the time of the collision, said: "After the passenger boat passed, the 'Burroughs' went over to the American shore;" and adds that he heard the whistles to the engine room to check down the engine. The engineers of the "Bielman" confirm this sheering of the "Burroughs," and the hearing of the bells in her engine room. And the mate of the barge "McLaughlin" said that the "Burroughs" sheered about 50 feet towards the American shore, after passing the side-wheel steamer.

One of the expert witnesses for the defence described the effect of suction and displacement waves caused by a large steamer upon a smaller steamer on the same course. He said that when a large steamer was overlapping a smaller one the water thrown from the bow of the larger steamer would force the stern of the smaller one away from her, and would bring their bows together, or, as he said later, would bring the bow of the smaller one to impinge on the larger. The