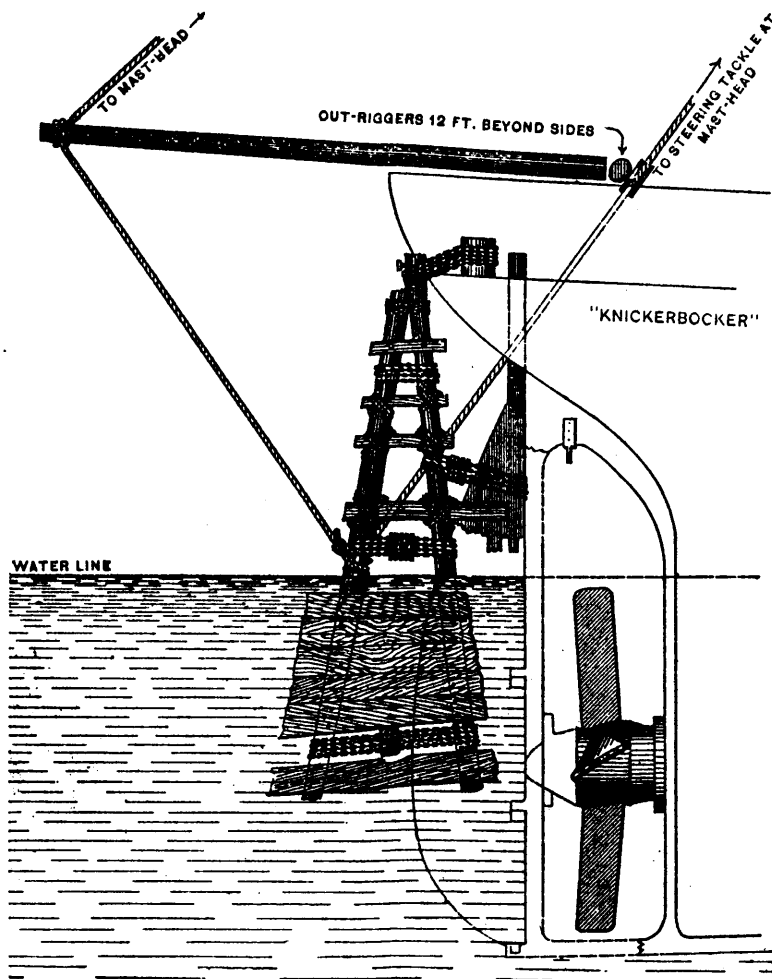


JURY RUDDER OF THE S.S. "KNICKERBOCKER."



that ship's distance beyond the horizon is $4\frac{9}{10}$ miles. Hence, if a ship is seen so far hull down, from the hull of the *City of Rome*, we infer that its distance is $4\frac{9}{10}$ miles beyond the distance of the horizon, which we have seen to be $7\frac{7}{10}$ miles—giving for that ship's distance $12\frac{3}{10}$ miles. And with like ease may all such cases be dealt with.—*Newcastle Weekly Chronicle*.

JURY RUDDER OF THE S. S. "KNICKERBOCKER."

The Steamship *Knickerbocker*, Captain Frank Kemble, of the Cromwell Line, from New Orleans, arrived at New York on Wednesday morning, April 23rd, steering with a jury rudder rigged at sea. Captain Kemble reported that during a heavy north-east gale on Sunday afternoon, about 120 miles S.S.W. from Cape Hatteras, the rudder and rudder-post were carried away. During the continuance of the gale the steamer was steered by towing a heavy hawser astern, which by judicious use of the sails enabled the vessel head on to wind and sea, and to proceed on the voyage toward New York. Captain Kemble at once set to work to build a jury rudder on deck, made from cargo gaffs and spars, with cross-pieces securely nailed and fastened with strong lashings and strains, as shown in accom-

panying drawing taken on the dock from the rudder itself. On Tuesday morning the weather had sufficiently moderated to enable the captain to get the rudder in position, and to secure it in place, further protected by guys running along each side of the ship to the deck amidship, and kept from getting foul of the propellers by guys running to the end of a spar projecting over the stern of the ship, then steering by lines running through blocks at the end of another spar (placed amidships), thence to blocks on the mast, and so down to the deck. Thus rigged, the ship was readily and successfully steered to her destination, refusing all assistance, coming in past Sandy Hook, and up channel to the Quarantine Station at Staten Island. Captain Kemble telegraphed to his owners and came to wharf a little later, employing only a tug to assist the ship into her berth at Pier 9, N. R.

The *Knickerbocker* is a large and valuable steamer and had full cargo and forty passengers. The vessel and cargo were probably worth at least half a million dollars. Captain Kemble deserves great credit for his ability in improvising this successful and ingenious steering appliance, which enabled the steamer to complete her voyage without other assistance, saving her owners and the underwriters from large salvage and other expenses and trouble, which follow accepting assistance at sea.—*Engineering*.