opposite to each other on the propeller shaft, at an angle of 45 degrees to the shaft. The propeller is placed lon­gitudinally in a hole cut in the dead wood, immediately before the rudder, the keel being continued under the screw. The average performance of the engines is 26 strokes per minute, and the revolutions of the screw in the same time 1382/3. If there was no slip or recession, the vessel ought to advance 8 feet for every revolution of the screw, or 12.60 miles per hour. The utmost speed ever obtained by her, under the power of steam alone, •was 9.25 nautical miles per hour, showing a loss by re­cession of rather less than 1/6th, under the most favourable circumstances. It is necessary to state that the Archi­medes is not a fair exemplar of the screw-propelling principle, its steam power being insufficient to drive a screw adapted to the size of the vessel.

The advantages of this species of propeller appear from Captain Chappell’s statement to be these 1. It occupies a position in the vessel in which it is not liable to injury, and in which it materially augments the power of the helm, enabling the vessel to be turned round and round in circles gradually smaller, until at length it seems to re­volve on a pivot. 2. It retains its efficiency of action, even in heavy seas, the rolling, pitching, or lurching of the vessel not materially affecting it. 3. It offers little obstruction to the speed of the vessel, when the sails alone are employed. When to these are added the saving of expense, which is said to be great, and the removing the top-weight and unsightly paddle-boxes, we are of opinion that there is enough in its favour to recommend its further trial.

We have now traced the art of steam navigation from its first suggestion to its present state of high perfection. We have overlooked, it is true, much that is interesting in the minute progression of the art; but we have en­deavoured to mark its greater advances. We have seen its advancement in the short period of a quarter of a century, from the canal boat experiment of Symington, and the three horse steam-boat of Bell, to the construction of the monster ships the British Queen and the President, of 500 and 600 horse power. When, in 1820, steam­ships weιe first used for conveying merchandise, as well as passengers, the tonnage of the whole of the steam- traders amounted to only 505 tons. In 1821, it amounted to 36,194; in 1822, it had reached to 101,744 tons; and thus advancing, it had ar∣ived, in 1836, at the prodigioιιs amount of 5,429,226 tons. The number of ves­sel· of the mercantile marine, with their power and ton­nage, is exhibited in the following table.

*An Account of the Approximate Number, Tonnage, and Pouter of Vessels belonging to the Mercantile Steam Marine of the United Kingdom and its dependencies, at the close of the gear*

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| SIZE OF VESSELS. | Total Number of Vessels, according to the Custom-House Returns in 1838. | Total  Registered Tonnage. | Tonnage of Engine-Room, &c., not Registered at the Custom-House. | Total Computed Tonnage. | Total  Computed Amount of Horse power | Average Computed Power per V essel. | Average Computed Tonnage per Vessel. |
| Under 50 Tons . . .  From 50 to 100 Tons .  100 „ 150 „ . .  150 „ 200 „ . .  200 „ 300 „ . .  300 „ 400 „ . .  400 „ 600 „ . .  679 „ . .  1,053 „ . . | No.  256  145  84  63  76  41  10  1  1 | Tons.  6,106  10.267  10 034  10,982  16,654  14.247  4,488  679  1,053 | Tons.  10,816  7 458  7,761  7,147  10,839  7,580  3.506  661  810 | Tons.  16,922  17,725  17,795  18.129  27,493  21,827  7,994  1,340  1,855 | Horse power  6,400  6,866  7.483  7,560  11,188  10,914  3,000  450  500 | Horse power.  25  47  90  120  147  266  300  450  500 | Tone.  66  122  211  287  361  532  769  1,340  1,855 |
| Number of vessels Registered in 1838 . . .  Not Registered .... | 677  83 | 74,510  4,154 | 56,378  5,484 | 131,080  9,638 | 54,361  2,129 | 50 | 116 |
| Total Number in Great Britain and Ireland,1838 | 760 | 78,664 | 62,062 | 140,718 | 56,490 | ... | ... |
| Isles of Guernsey, Jersey, and Man, 1837  British Plantations, 1837 | 6  44 | 832  8,411 | 618  7,253 | 1,4.50  15,664 | 600  6,160 | 100  140 | 241  356 |
| Total . . . | 810 | 87,937 | 69,933 | 157,840 | 60,840 | ... | ... |

THE THEORY AND ΓRACTICE OF MODERN STEAM NAVIGATION.

There is perhaps no popular error more injurious to the welfare of a mechanical nation, like our own, than the no­tion that theory is opposed to practice ; and there is no subject in which this error has ever been more disastrous than in steam navigation, and naval architecture in general. It is by the combination of theory and practice that most is to he accomplished ; and it may be hazarded as a general assertion, resting on all past experience, that the best promoters of the public welfare are—that theoretical man who has made himself best, acquainted with the practice of his art, and that practical man who has acquired the greatest knowledge of its scientific principles. There is no art which does not attest this truth, and none attests it more than strain navigation, lt is admitted, that out of every three steam vessels that are built two fall very far short of fulfilling the intention with which they were