

TALKING BETWEEN NEW YORK AND CHICAGO.

In the account of the opening of the telephone line between New York and Chicago as given in our last number, we mentioned the interesting fact that Prof. Bell was photographed by flashlight while talking with Mr. William H. Hubbard, at Chicago, a distance of nearly 1,000 miles. Our illustration, from the *Electrical Review*, is reproduced from the flashlight photograph and is interesting historically as showing the advances made in both sciences, telephony and photography. Directly back of Prof. Bell stands President John E. Hudson, of the American Telephone and Telegraph Company, and at his right is Mr. E. J. Hall, the Vice-President and General Manager.

It happened that at the time of the great Milwaukee fire on the 28th ult., the long distance lines were completed between Chicago and Milwaukee, which enabled the general superintendent, Mr. A. S. Hubbard, in his office at New York the next morning after the fire to give directions verbally by telephone in regard to the necessary repairs to the superintendent located in the suburbs of Milwaukee.

PROPOSED DESIGN FOR AN ATLANTIC PASSENGER STEAMER.

BY JAMES GRAHAM.

The question of transatlantic passenger traffic is one assuming greater importance from year to year with the rapidly increasing travel from America to Europe.

A large proportion of the seventy millions of people in this country and Canada would, doubtless, like to cross the ocean if they could do so with greater comfort and less expense.

The great steamship companies have attempted to meet the demand by putting on larger and faster steamers, but they have not reduced the rates; on the

contrary, the rates are higher, owing to increased cost of running such steamers.

The large steamers that are being built will probably mark the limit to profitable advance in size and speed with the present model of Atlantic passenger

Ten years ago \$750,000 was about the cost of the large ships, then the cost rapidly advanced with the rivalry in speed, till now they cost \$2,000,000, and the latest Cunarders will cost half a million more, while those of the White Star line will be at least \$3,000,000.

The passenger area of a 700 foot steamer is not much greater than that of one of 580 feet, and the speed will be only about two knots faster.

Our engraving illustrates a new design for an Atlantic passenger steamer in which greatly increased length is secured without proportional increase of draught and beam.

The proposition is to construct a system of nine hulls of special model connected in three trains of three hulls each, the center train being the principal part of the craft, and extending 225 feet forward and 200 feet abaft of the other two trains, the whole forming an outline similar to that of an ordinary ship. The total length would be 1,440 feet, breadth over three trains 142 feet, to outside of floats 180 feet.

Midship draught of center train, 18 feet; midship beam at water line, 45 feet; midship beam at main deck, 60 feet; midship draught of outer trains, 12 feet; midship beam at water line, 27 feet; midship beam at main deck, 35 feet; displacement of center train, 15,000 tons; of outer trains, each, 5,250 tons; total displacement about 26,000 tons. The propelling power would consist of seven engines, three in center train of 10,000 horse power each; two in forward sections of outer trains, 4,000 each; two in stern sections, 6,000

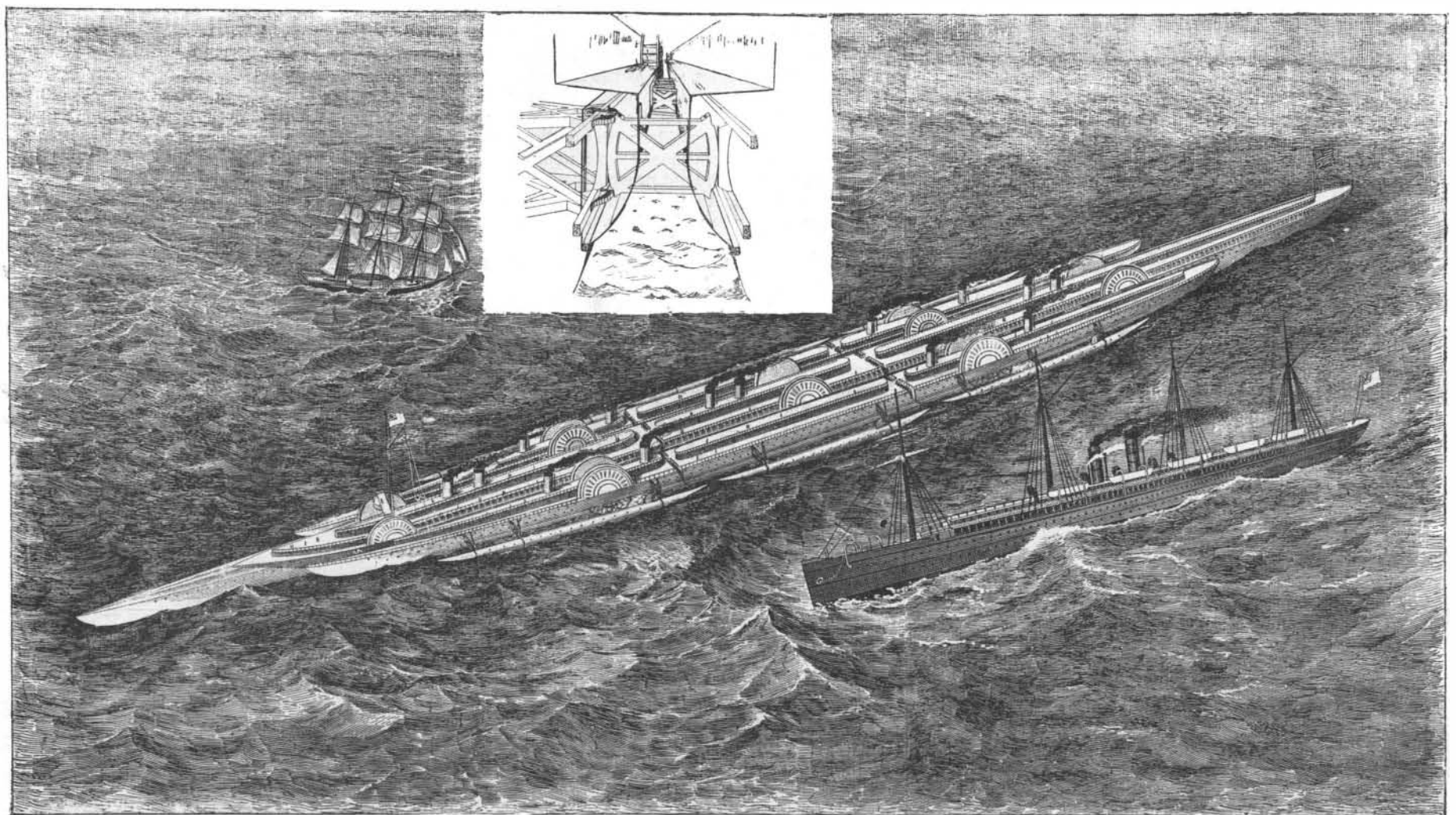
each. A total of 50,000 horse power, driving seven pairs of paddle wheels of 52 and 56 feet diameter, 6 and 8 feet wide, and having a dip of 8 feet.

This steamer would carry no cargo, and, owing to the system of construction, would require no ballast, so that the entire tonnage capacity would be



PROFESSOR BELL TALKING BY TELEPHONE FROM NEW YORK TO CHICAGO.

steamers. Greater speed necessitates greater length, breadth, depth and draught. The limit of draught suitable for harbors will soon be reached. Moreover, the increase of tonnage, propelling power, and cost is at a much higher ratio than that of the passenger capacity.



GRAHAM'S DESIGN FOR AN ATLANTIC PASSENGER STEAMER.