

to his initiative, and to the fact of his early association with Mr. George Steers, the designer of many successful pilot boats, that we owe the laying of the keel of the schooner yacht "America." It was after talking over the scheme with Hamilton Weeks, George L. Schuyler, James Hamilton, and J. B. Finlay, that the Commodore and his friends—prototypes of many a later "cup syndicate"—told Steers to go ahead and build a schooner that should make the transatlantic passage and try conclusions in their own waters with the British yachts. Commodore Stevens joined the yacht at Havre, and—well, not to repeat the details of an oft-told story—he brought back a curiously-wrought-and-fashioned silver flagon, that has since acquired a world-wide fame of which the gallant commodore and his friends little dreamed.

Commodore Stevens, who had held the position of chief flag officer from the year 1844, in which the club was organized, resigned in 1855, and he was succeeded by his brother, Edwin L. Stevens. The "America" Cup, which was won on August 22, 1851, was presented by the surviving owners, in 1857, to the New York Yacht Club as a perpetual international challenge cup. *Hinc illæ lachrymæ.*

But it is of the home of the club that the present article is to treat; and for the first club house we must go back to the year 1845, cross the Hudson River, and find the Elysian Fields, located north of Castle Point, Hoboken, where in a very modest way in a quiet little house the members met for the first time in their own club house.

At that time there were 122 members in the club, and only a dozen yachts were entered on its roll. Here the club remained for twenty-three years, or until June, 1868, when a move was made to Clifton, Staten Island, which remained the headquarters of the club for three years. In 1871, another transfer was made to the corner of Madison Avenue and 27th Street; and thirteen years later, on May 1, 1884, the club made another move, this time to 67 Madison Avenue, which it occupied for a period of eighteen years, or until it entered into possession of its present magnificent home.

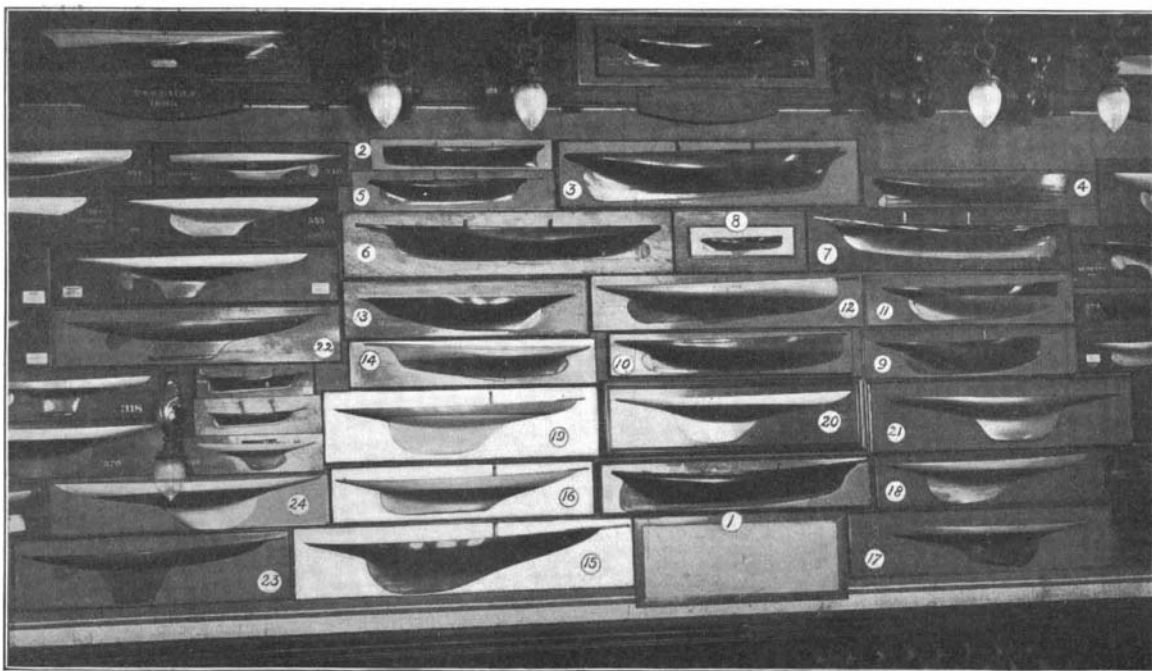
The new club house is located on the north side of 44th Street midway between Fifth and Sixth Avenues. It stands upon a lot 100 feet deep and with 75 feet frontage, which was presented to the club by ex-Commodore J. Pierpont Morgan, one of the most enthusiastic members of the club and the present owner of the famous cup yacht "Columbia."

The building itself cost \$350,000, this sum not including any of the elaborate and expensive furnishings. As will be seen from the accompanying illustrations, which were taken specially by the SCIENTIFIC AMERICAN, through the courtesy of Mr. G. A. Cormack present secretary of the club, the club house was designed to harmonize, both in its architectural motive and in its accommodations, with the special uses to which it was to be put; and it will be generally agreed that in carrying out the work the architects, Messrs. Warren & Wetmore, have produced an extremely pleasing and satisfactory result. The facade on 44th Street has a total height of five stories, the three lower stories being carried up flush with the building line, and the front wall of the two upper stories being carried back to form a broad balcony which is roofed in with open rafters. These, in the summer season, are covered with trailing vines and afford a striking, but not unpleasing, skyline to the facade. The building as viewed from 44th Street, presents a dignified, and at the same time highly picturesque effect, the last feature being heightened by a very novel but effective treatment of the three main windows of the second floor, the lower third of which has been designed to reproduce the stern lights of an old Spanish galleon. And remarkably well does the device blend with the general architectural treatment.

The building is entered from the street level through a richly-carved doorway, that leads into a large and lofty hall. Immediately to the left is a small reception room, on the walls of which are some superb photographs of international yachts, notably "Columbia" and "Shamrock II." Also to the left of the hall is the entrance to the famous grill room, and to the billiard room and café. The grill room, which measures 30 feet by 68 feet, is an unique feature in this

very handsome building. It is entered by a few steps that lead down from the hallway, the room itself being somewhat below street level. Particular interest attaches to it from the fact that it has been built and fitted out to reproduce, as far as possible, the 'tween-decks of an old wooden sailing ship. The floor is deck-laid and the frames and deck beams are reproduced with fidelity, the illusion being greatly enhanced by the crowning of the deck beams and by the fitting of hanging knees complete with their bolts, etc. The dark oak furniture has been designed to harmonize with the room and the whole effect is both artistic and ship-shape. From the entrance hall access is had to the second floor by a broad marble staircase, the balustrades of which are richly carved in conventional marine designs. Directly opposite the staircase is a circular breakfast room, with a domed roof, while to the left a doorway gives access from the landing to the large model room. This noble hall (for it is nothing less) has the generous proportions of 45 feet width and 96 feet length, with a clear height of 26 feet to the roof, which is enriched with deeply carved beams and a cathedral-glass skylight.

This room is the pride of the club house, and justly so. It is furnished in dark oak. The elaborate carving and the dark leather upholstery, combined with the quiet tone of the color scheme, give the room a particularly rich and restful atmosphere. A continuous wall seat, broad and leather-upholstered, extends around the walls, while above this the walls are covered with what is probably the largest single collection of yacht models in the world, there being nearly five hundred in all. Above the models is a broad gallery carried on heavily carved brackets, and the



1. America.
2. Magic.
3. Cambria.
4. Madeline.

5. Livonia.
6. Columbia.
7. Sappho.
8. Mischief.

9. Genesta.
10. Puritan.
11. Galatea.
12. Mayflower.

13. Thistle.
14. Volunteer.
15. Valkyrie II.
16. Vigilant.

17. Valkyrie III.
18. Defender.
19. Shamrock I.
20. Columbia.

21. Shamrock II.
22. Jubilee.
23. Pilgrim.
24. Constitution.

REMARKABLE GROUP OF CUP YACHT MODELS.

gallery wall is also covered with models, although there is still space left for a considerable addition in the future. A very impressive feature of the room is the massive mantel of stone which stands in the center of the west side of the room opposite the entrance. Distributed throughout the room are various glass cases containing completely-rigged models of yachts; and arranged in various convenient positions throughout the room are curios and mementoes, several of them being of the late Spanish war. Another room of which the club members are justly proud is the library, which measures 32 x 46 feet, while adjoining it is a 28 x 34 foot chart room. Both of these rooms are well lighted and extremely comfortable; in fact, the sense of comfort, which should be a *sine qua non* in every club house, is the most conspicuous impression that one carries away from this superb building. Not by any means the least interesting room is the committee room, where important matters affecting the international yacht club races are debated and determined upon. The New York Yacht Club has grown in the half century or more of its existence at an astonishing rate, particularly in the past ten or fifteen years, the total membership upon the rolls of the club being now about two thousand.

A GROUP OF FAMOUS YACHT MODELS.

Probably the most numerous, and certainly the most interesting, group of yacht models in the world, is that which adorns the walls of the New York Yacht Club, where not far short of five hundred models of yachts are to be found. The special interest of this collection is to be traced to the fact that a large proportion of the models are those of yachts which have been engaged in the long series of contests which have been held for

the possession of the "America" cup. When the club moved to its present quarters, the idea suggested itself of grouping the "America" cup contestants together, and placing them in chronological order, so that the yachts that competed in any particular period might be compared side by side. The result is seen in the accompanying photograph, which represents the north wall of the large model room; and it is safe to say that among the numerous histories that have been written of the "America" cup, brief and lengthy, good, poor, and indifferent, there is none that tells the story with such meaning and fidelity as does this picturesque, and, to the yachtsman, extremely fascinating group of models.

Referring to the engraving, model 1 represents the historic "America," a fore-and-aft schooner, 80 feet on the water-line, 94 feet over all, 22½ feet beam, and drawing 11½ feet. In a frame directly below the "America" model is the original drawing of the yacht's lines from which she was built, a truly classic sheet of paper. The group does not contain the model of any of her competitors. Number 2 is the model of the "Magic," which beat the "Cambria," model 3, the first English yacht to challenge for the cup, by 39 minutes and 12.7 seconds, corrected time. Another competitor among the fleet of fifteen yachts that sailed against the "Cambria" was the schooner "Madeline," model 4, which came in about fourteen minutes after the English boat. The "Cambria" was a keel schooner, 108 feet on the water-line, 21 feet in beam, and drawing 12 feet of water, and her defeat by the centerboard schooner "Magic," a much smaller craft, was an extremely creditable performance. These races took place in August, 1870,

and the owner of the "Cambria," not to be discouraged by his defeat, challenged for a race to take place the next year, and brought over the "Livonia," model 5, a keel schooner, 115 feet 2 inches on the water-line, with 23 feet 7 inches beam, and 12 feet 6 inches draft. In the first race, which took place October 16, 1871, the centerboard schooner "Columbia," model 6, was selected as being the best suited to the light-weather conditions on that day. She won from "Livonia" by 25 minutes and 28 seconds. The second race was also won by the "Columbia" in 10 minutes and 33 seconds. For the third race, as there was a strong breeze blowing, the keel-schooner "Dauntless," celebrated for her heavy-weather work, was brought to the line. Just before starting she was disabled, and the "Columbia" took her place.

After a series of mishaps the latter came home 15 minutes and 10 seconds behind the "Livonia." In the fourth race, the challenger met the celebrated keel-schooner "Sappho," model 7, 120 feet on the water-line, which beat the "Livonia" by 30 minutes and 21 seconds, and again in the last race by 25 minutes and 27 seconds. The next two challengers came from Canada. The first was a centerboard schooner, the "Countess of Dufferin," which was beaten by the "Madeline" in the first race by 10 minutes and 59 seconds, in the second race by 27 minutes and 14 seconds. The other Canadian challenger was the 64-foot centerboard sloop "Atalanta," which succumbed to the 61-foot centerboard sloop "Mischief," model 8. She was badly beaten in the first race by 28 minutes 20¼ seconds; in the second race, 38 minutes and 54 seconds.

From this time on, all the races for the cup took place between single-masted vessels. The cutter "Genesta," model 9, 81 feet on the waterline, 15 feet beam, 13 feet 6 inches draft, met defeat in 1885 at the hands of the centerboard sloop "Puritan," model 10, which was 81 feet 1½ inches on the water-line, 22 feet 7 inches beam, and 8 feet 10 inches draft, losing the first race by 16 minutes 9 seconds, and the second race by 1 minute and 38 seconds. The following year the cutter "Galatea," model 11, 87 feet on the water-line, and of the same beam and draft as "Genesta," was defeated by the "Mayflower," model 12, 85 feet 6 inches on the water-line, 23 feet 6 inches beam, and 9 feet 9 inches draft. The first race being won by 12 minutes 2 seconds, and the second race by 29 minutes 9 seconds. Then came "Thistle," model 13, of 86 feet 6 inches water-line, 20 feet 3 inches beam, and 14 feet draft, which was beaten by

the "Volunteer," model 14, by 19 minutes 21¾ seconds, and in the second race by 11 minutes 48¾ seconds. After a lapse of six years, "Valkyrie II.," model 15, came over in 1893. With a water-line length of 85 feet, she had a beam of 22 feet 6 inches and a draft of 17 feet 6 inches. She met "Vigilant," model 16, 86 feet 2 inches on the water-line, 26 feet beam, and 13 feet 6 inches draft, and lost a series of three races, being beaten in the first race by 5 minutes 48 seconds, in the second race by 10 minutes and 35 seconds, and in the third race by 40 seconds. For the defense of the cup in that year no less than four 90-foot sloops were built, "Vigilant," "Jubilee," model 22, "Pilgrim," model 23, and the keel schooner, the "Onia," whose model does not appear in this group. The "Jubilee" was a fin-keel boat with a centerboard which dropped through the fin. Her rudder was carried on a skag, as shown in the model, and in this respect she anticipated some of the fastest of the yachts of the present day. "Pilgrim" was also a bulb-fin yacht, of small displacement, which depended for her stability on a light bulb carried at the extraordinary depth of 22 feet. The "Jubilee" was a moderate success, but the "Pilgrim" proved to be a complete

failure. Two years later "Valkyrie III.," model 17, which measured 88 feet 10 3-16 inches on the water-line, 26 feet 2 inches in beam, with a draft of 20 feet, lost to the "Defender," model 18, 88 feet 5¾ inches water-line, 23 feet 3 inches beam, and 19 feet 4 inches draft, losing the first race by 8 minutes 49 seconds, the second race on a foul, and the third by default. Then came an interval of four years, and in 1899 commenced the "Shamrock"- "Columbia" era.

"Shamrock I.," model 19, was 87 feet 8¼ inches on the water-line, 25 feet 5 inches beam, and nearly 21 feet in draft. She met "Columbia," model 20, 89 feet 7¼ inches water-line, 24 feet 2 inches beam, and slightly less than 20 feet draft, losing the first race by 10 minutes and 8 seconds, the second by being disabled, and the third by 6 minutes and 34 seconds. In 1901 "Shamrock II.," model 21, 89 feet 3 inches on the water-line, 24 feet 5 inches beam, and draft of between 20 and 21 feet, met the "Columbia," which had proved a faster boat than "Constitution," model 24, which had been built especially for the defense of the cup that year. "Constitution" was practically the same in all dimensions and in outboard profile as "Columbia," the chief point of difference being that she carries 1 foot more beam. The "Shamrock II."- "Columbia" series were particularly close. The "Columbia" won the series by 1 minute 20 seconds, 3 minutes 35 seconds, and 41 seconds.

THE "EMERALD" TURBINE YACHT.

Special interest is taken in the steam yacht "Emerald," which was purchased early this year by Mr. George Gould, from the fact that she represents the most important attempt yet made to adapt the principle of turbine driving to the wants of yacht owners. The hull of the "Emerald" was built on the Clyde by Messrs. Stephen & Sons, and the engines were supplied by the Parsons Marine Steam Turbine Company, of Wallsend-on-Tyne. Apart altogether

from her novel system of driving, the "Emerald" would be worthy of attention as one of the smartest and most handsome yachts ever built on the Clyde. Her length over all is 236 feet, and she has 28 feet 8 inches beam and 18 feet 6 inches of molded depth, giving a yacht measurement of over 750 tons. She was built under special survey to rank 100 A1 at Lloyds. The hull is beautifully modeled, with fairly long and very shapely overhangs both fore and aft. The bow is of the clipper type and is finished with a figurehead of elaborate carving. She is schooner rigged, with two masts and one funnel, and presents altogether an exceptionally well-balanced model. A fine promenade deck is car-

ried from side to side of the boat, and on this is a large deck house divided into navigating room and deck lounge. The saving of space effected below deck by the adoption of the turbine system of driving has enabled the designer to lay down state and other rooms of exceptional size. There is a suite of four staterooms with bathrooms, and attendants' rooms, six extra staterooms for guests, and several rooms for valets and personal servants. The dining-room, drawing-room, and smoking-room are planned in a free treatment of the English and French Renaissance, and are luxuriously fitted. A photographic room situated aft, and fitted with all the appliances necessary for a free indulgence of this hobby, is one of the special features.

It is, however, in the turbine system of driving that the main interest of the boat is centered. There are three sets of steam turbines, one high-pressure and two low. Each turbine drives one length of shafting. The center shaft carries one propeller, and each of the two outside shafts has two. As the turbines have been found to do their most satisfactory work when running at a very high speed, the propellers are of small diameter, the center one being 36 inches, and the four side propellers being only 20 inches. All these fittings are of manganese bronze. There are therefore only five propellers on the "Emerald" as compared with nine on

THE STEAM YACHT "NORTH STAR."

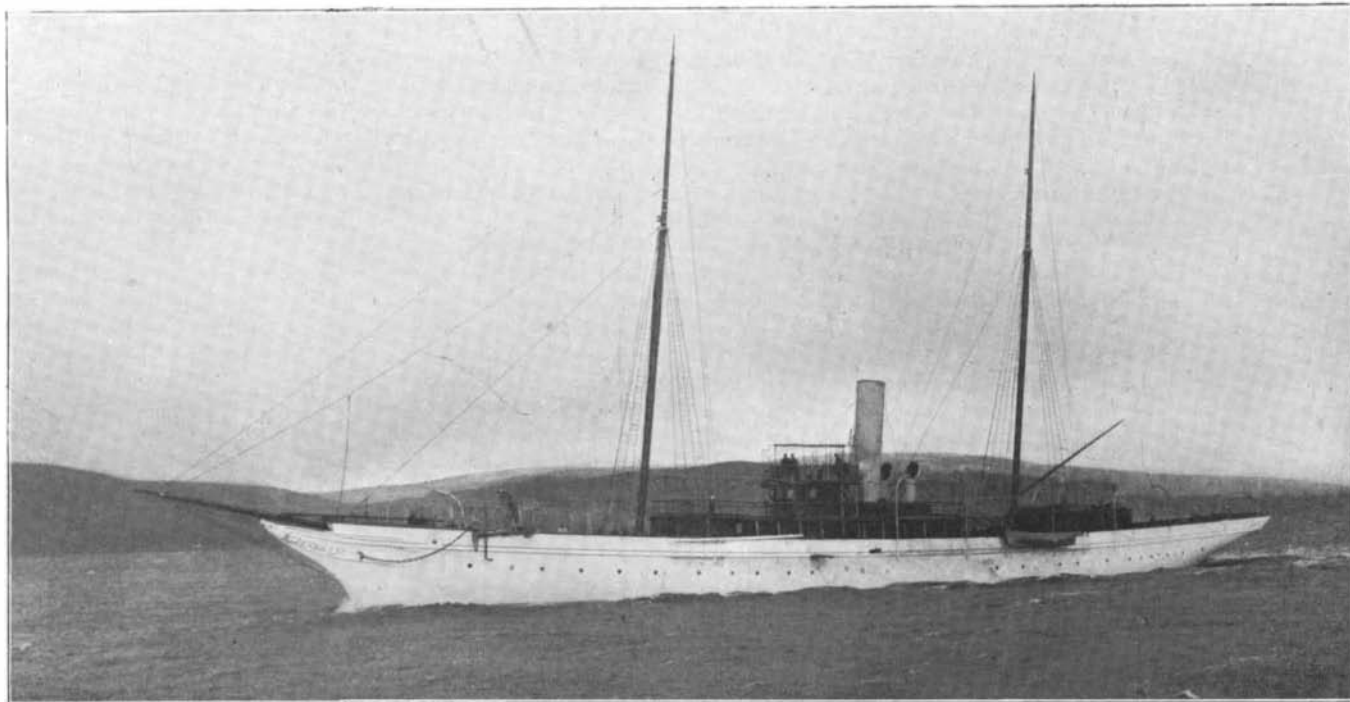
The handsome steam yacht "North Star" is one of several notable steam yachts recently added to the pleasure fleet of America. She was designed by Mr. W. N. Storey, an English designer of repute, and built for an English nobleman, Lord Ashburton by name. After her purchase in America by Mr. Cornelius Vanderbilt, she was sent back to the Clyde to be remodeled internally. On the return passage to the Clyde in the middle of October, she gave a sample of her powers of fast and steady steaming, making the run from Sandy Hook in 10 days 23 hours. This run and a previous trip to America in 10 days 14 hours mark the record for the double transatlantic passage for a boat of her size. On her arrival in the Clyde she was handed over to Mr. George L. Watson

for remodeling, and on this work a sum of \$60,000 was spent. The heavier part of the work was done on the Clyde, and the yacht was then sent to Havre, where a French firm is still engaged with the upholstery and decorations.

We are indebted to Messrs. Tams, Lemoine & Crane, through whom the recent purchase was effected, for the following particulars of the dimensions, and the interior modifications, which were carried out under their supervision:

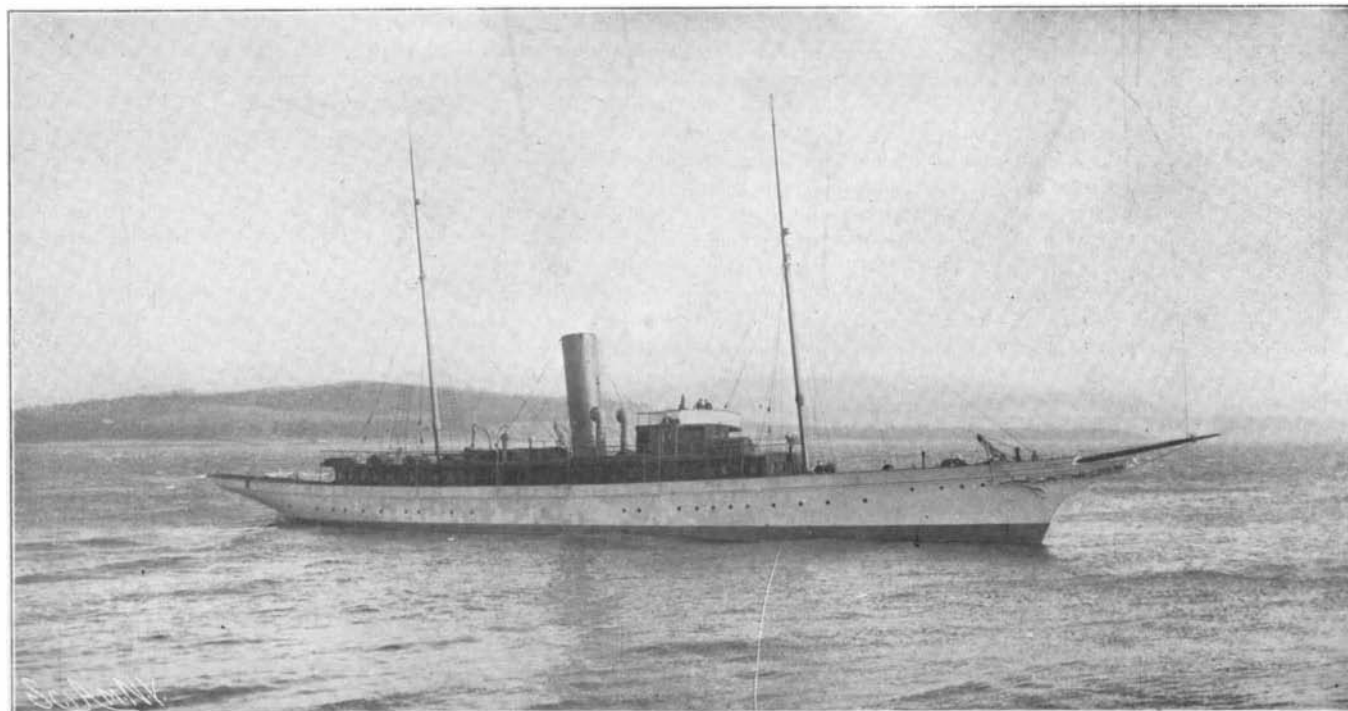
Length over all, about 243 feet; length on the water line, 219.5 feet; length between perpendiculars, 233.5 feet; beam, 29.15 feet; depth of hold, 18.9 feet; draught, extreme, 16.3 feet; horse power, nominal, 223. Triple expansion engines, 21½, 34, 56 inches diameter by 34 inches stroke. Two boilers, Scotch type, built for a working pressure of 160 pounds. Bunker capacity, 215 tons.

She has a shade deck which, as shown in the photograph, extends aft to the engine room skylight. On this deck is a commodious room, the forward part of which is used as a chart room; the rest is what might be called an observation room for the owner and his friends. On the top of this house a navigating bridge has been added, with wings extending out to the rail line. On the main deck in the forward end of the house is the forward sitting room; just aft of it is a vestibule leading down into the quarters below, which consist of, just forward of the machinery bulkhead, a large pantry with lift and stairway to the galley above. Forward of the pantry is a large dining-room extending the full width of the ship. On the starboard side forward is Mrs. Vanderbilt's suite, consisting of a roomy stateroom, forward of which and communicating, is a large bath and dressing room. On the port side is the owner's suite, consisting of two rooms and bathroom; forward of which are four guests' rooms, dress closet, maid's room,



STEAM YACHT "NORTH STAR," FORMERLY "CHEROKEE," NOW OWNED BY CORNELIUS VANDERBILT, ESQ

Length over all, 243 feet. Length on waterline, 219.5 feet. Beam, 29.15 feet. Draught, 16.3 feet.



THE NEW TURBINE YACHT "EMERALD," OWNED BY GEORGE J. GOULD, ESQ.

Length over all, 236 feet. Beam, 28.6 feet. Molded depth, 18.5 feet. Driven by turbine engines and five propellers on three shafts.