DECEMBER

25 CENTS
30c IN CANADA

POPULAR MECHANICS MAGAZINE

SEE PAGE 880

T-6 The Latest GIANT of the SEA

By D. N. GLASS

THE largest moving object on this planet has been launched into the sea. It bursts with strength, but responds to a man's touch; it looks colossal, but moves with the grace of a greyhound. It is a ship.

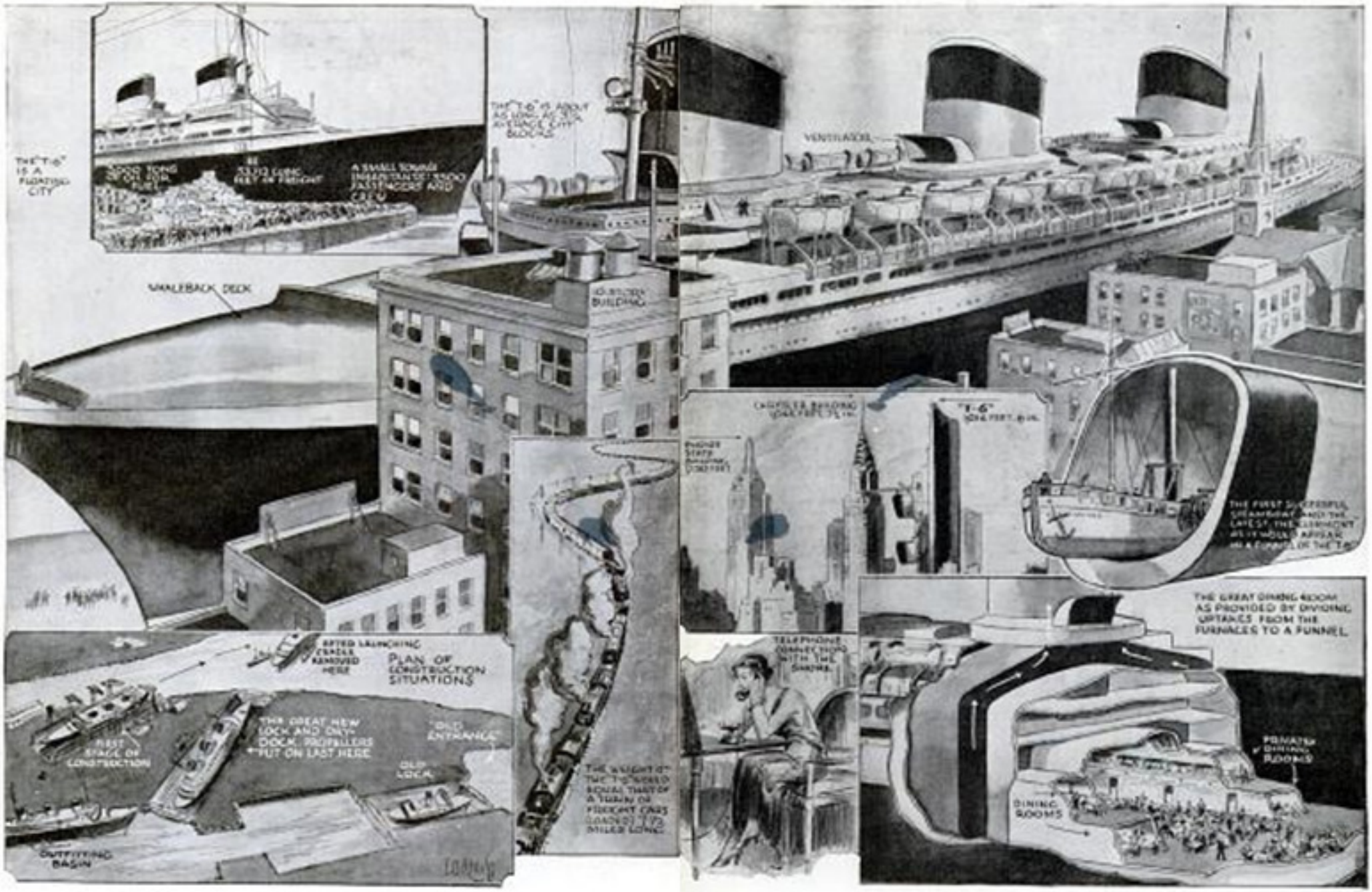
This ship is the answer to the demand for more speed, endurance, safety and comfort on the transatlantic boulevards. Her activities will be confined to one ocean, where she will swim between two ports like a whale within a tank. To the west, the Panama canal shuts her out of the Pacific, and to the east, the Suez canal bars her from the Indian ocean. No such colossus was ever imagined by the engineers who designed these important sea links.

In order to visit the far east this new ship, tentatively called the "T-6," will have to go via the Arctic or Antarctic seas. And only New York and Havre will accommodate her with a berth and provisions.

The great "T-6," which will require about five years to build, is sponsored by the French line and the French government. Dimensions alone do not make her a ship for history. But it is her size which allows the multiple wonders which form the "T-6." Her length over all is 1,014.6 feet; her beam, 117.81 feet. The ten decks between the engine room and sun deck are served by ten elevators, each with a capacity of thirty passengers. The four turbines will develop 160,000 horsepower, capable of driving forward the "T-6's" 75,000 tons at a speed of 34.54 miles per hour.

Not a piece of coal will be found on board. The power plant consists of four steam turbines coupled directly to generators which will supply electricity to four motors. Each turbine runs independently. All the ship's accessory machinery is electrified.

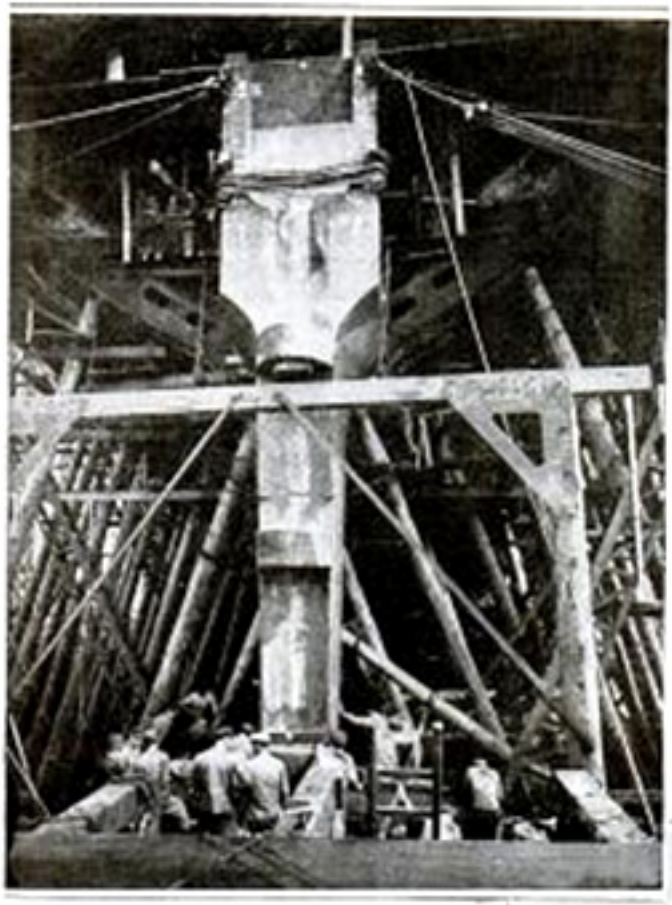
The "T-6's" staggering dimensions are made possible by an intensive application of the most modern practices in science and marine architecture. To wit, in planning the interior, her designers realized that no dining room worthy of such a ship could be built unless the funnels 'tween decks were removed from their traditional place. In order to have sweeping, unobstructed interiors, it was necessary to run the funnels up near the port and starboard sides of the ship, instead of through the ship's center line. By such ingenious planning, they achieved the largest room afloat, and what is probably one of the world's largest dining halls. It is three stories high from end to end and commands a clear view for 400 feet. Without the least crowding, the "T-6" could trans-



port a city of 125,000 people across the Atlantic in fifty weeks. If stood on her end, she would soar above the Chrysler tower and dwarf the Woolworth building.

The "T-6" will carry enough oil and water in her double bottom to float a large Mississippi river passenger steamer.

The main dining room will accommodate 1,000 people at one sitting; the combined capacity of all her dining rooms is 2,300 people for one sitting. The kitchens will be equipped to serve 10,000 meals per day and 40,000 to 50,000 meals on the average crossing. Four hundred waiters will operate out of the main kitchen at one time, and 165 chefs will prepare food for



the 2,300-odd passengers. The crew of 1,000 will be served from a separate kitchen. About 60,000 pieces of chinaware and crockery will be necessary to serve passengers. For the dining service alone, 150,000 pieces of linen are necessary; for all services, the ship will need 400,000 pieces.

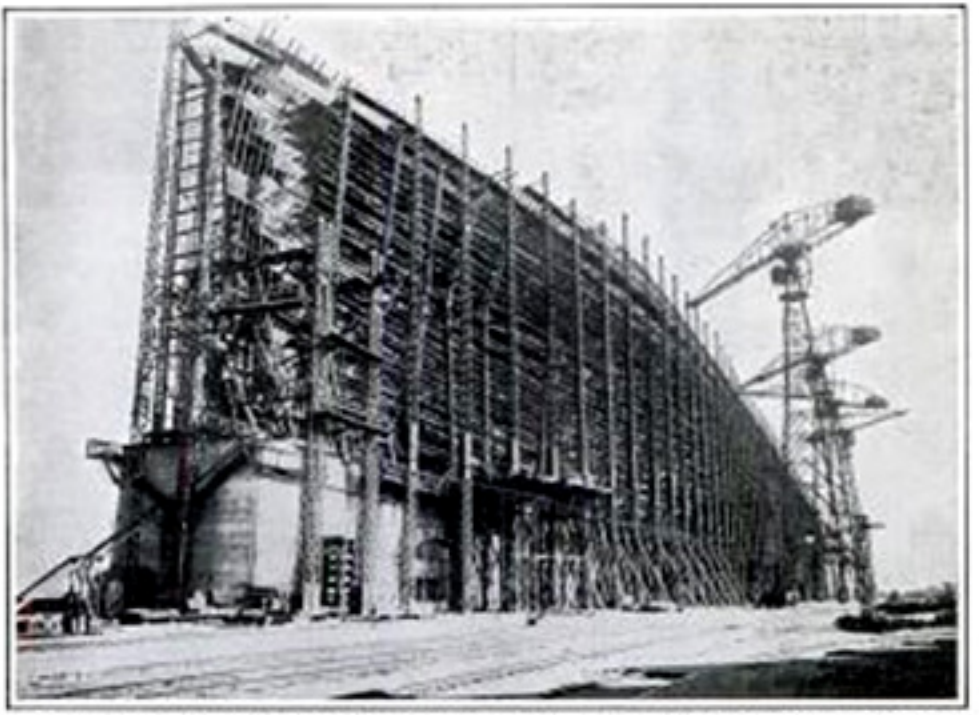
Robert Fulton's first steamship, the "Clermont," could easily fit inside one of the new ship's three funnels. Henrik Hudson's flagship, the "Half Moon," could fit into a small corner of the engine room.

The "T-6" does not represent an attempt to build a ship in order to establish or beat a record. The economics of shipping demand, first, that the ship pay back the $28,000,000 cost of construction as well as provide for maintenance and a reasonable profit. A careful analysis of shipping data and public habits proves the practicability of a 75,000-ton ship, according to Pierre Malglaive, director of the French line, in charge of building the "T-6."

If Columbus in his flagship and the "T-6" had started across the Atlantic simultaneously, the latter would have arrived in America when Columbus had covered only 500 miles! The "T-6" could circumnavigate the globe at the equator in thirty days of running time. In a race around the equator between the Twentieth Century Limited and the "T-6," the famous train would beat the ship back to the home plate by only ten days.

The ship's bow presents a number of unique and promising characteristics. It is neither like the full bulbous bow on the "Ile-

Above, Close-Up of the Hugo Rudder Post; Below, Sectional View of the Ship; Note the Divided Uptake from Engine Room to Funnel



Hull of the "T-6" under Construction; One of the Unusual Features Is the "Whaleback Bow" with a Curved Deck Designed to Throw Off the Crushing Weight of Water and Decrease Wind Resistance

men," nor like the old-fashioned knife-edge type, but is clipper-shaped with a very graceful semibulbous effect near the keel; it curves up into a rounded, streamlined rigid deck covering such as no ship is known to have.

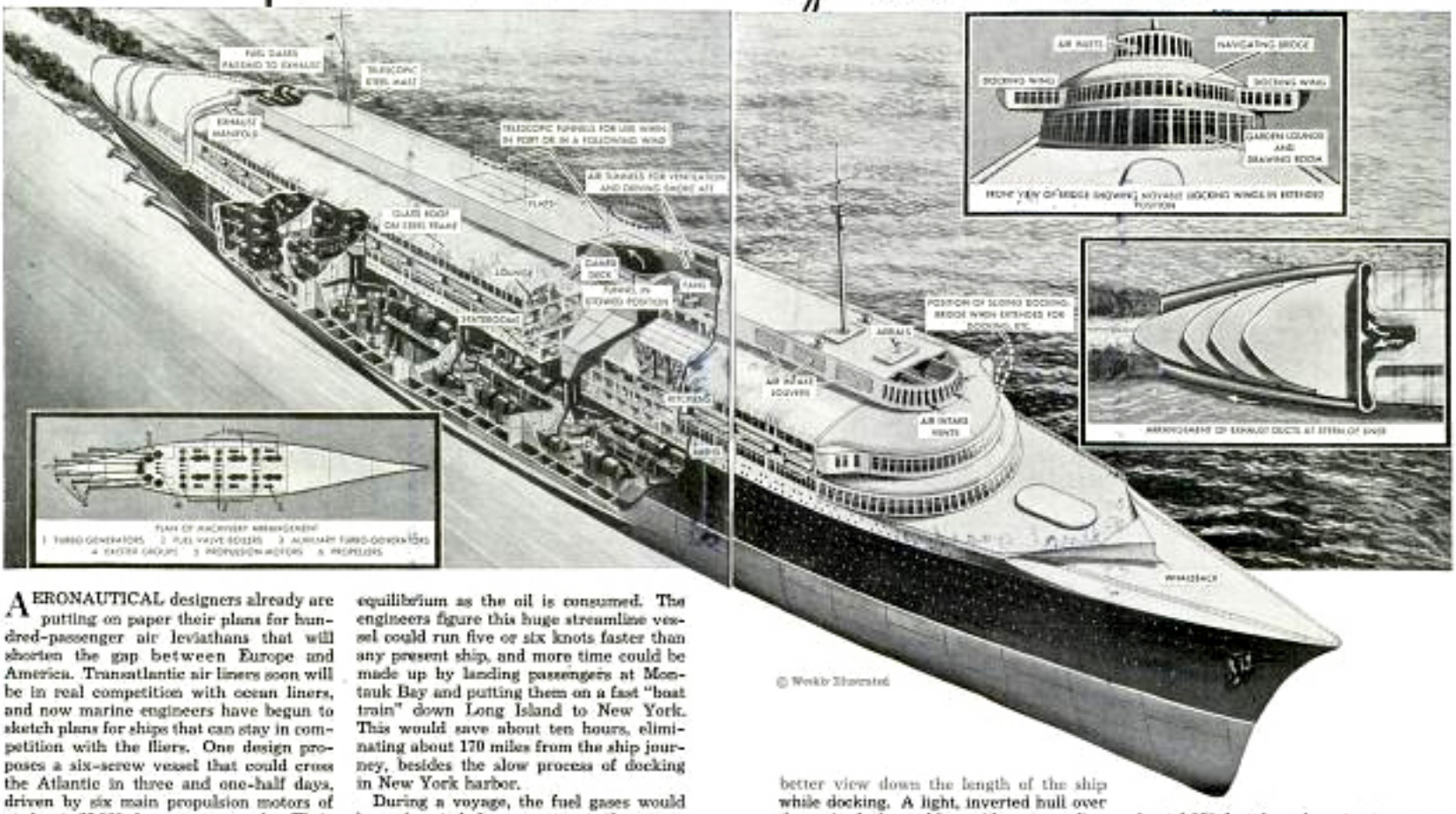
Passenger recreation is provided for by numerous deck sports such as tennis, clay-pigeon shooting, and squash. Besides, there is a large swimming pool, a first-class gymnasium, a Punch and Judy show, and the first fixed theater ever built into an ocean vessel. This theater will have permanent seats accommodating 400 persons. The stage will be large enough for the production of full-length plays, musical revues, operettas and tableaux.

A new method of addressing audiences at sea will be found on the "T-6." By talking into a microphone in his cabin, the captain, or any other person, will be heard in all the public rooms. Concerts and radio talks picked out of the air can be rebroadcast likewise. In emergencies, the captain can talk directly into the ear of every person on board, even though the "T-6" is almost one-fifth of a mile long.

Passengers may speak with friends through an inter-cabin telephone system such as prevails in hotels on land. They will also carry on two-way conversations with phone subscribers in Europe or America—without leaving the confines of their respective cabins.

July, 1938

THE LINER *of the* FUTURE



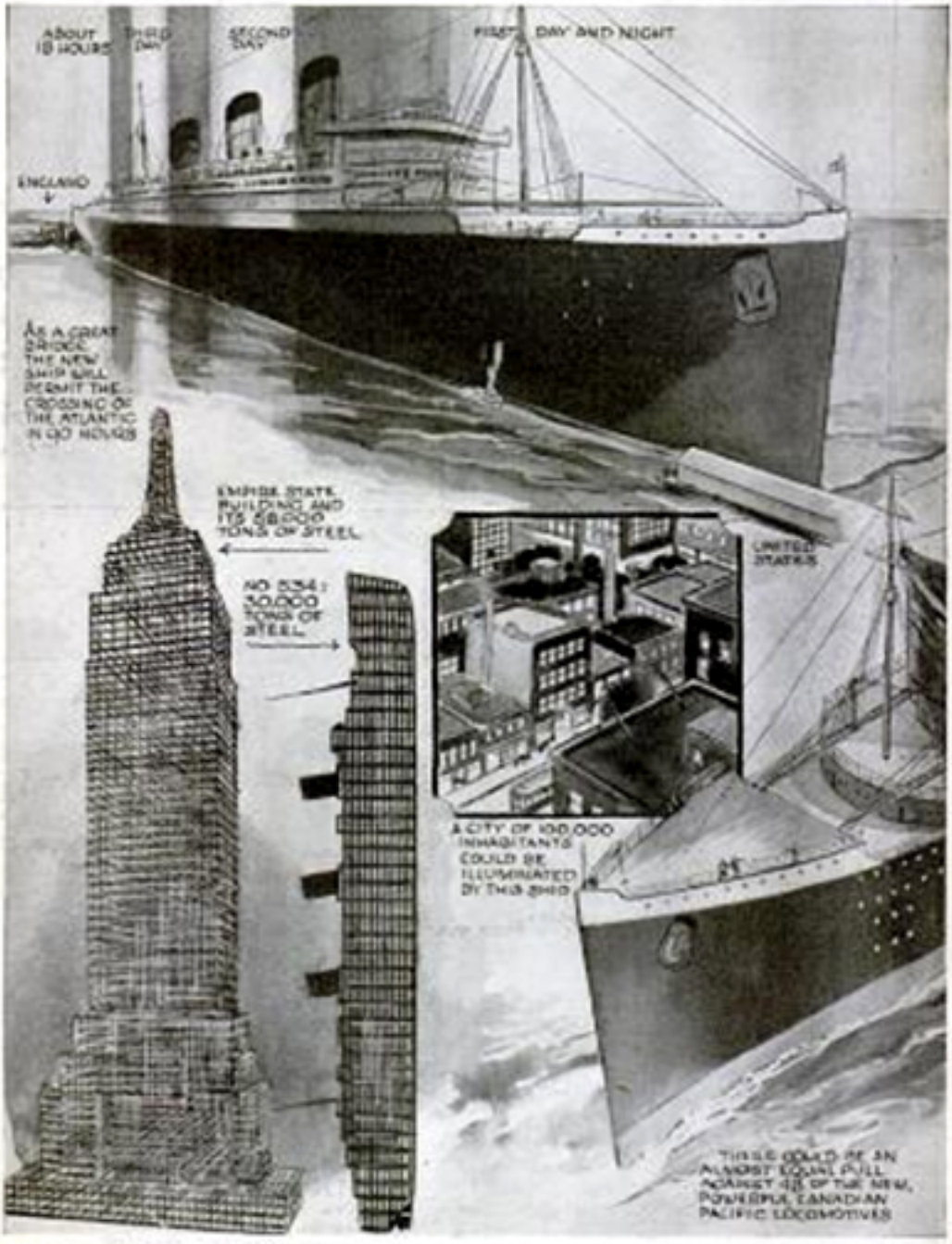
© Weekly Illustrated

AERONAUTICAL designers already are putting on paper their plans for hundred-passenger air leviathans that will shorten the gap between Europe and America. Transatlantic air liners soon will be in real competition with ocean liners, and now marine engineers have begun to sketch plans for ships that can stay in competition with the fliers. One design proposes a six-screw vessel that could cross the Atlantic in three and one-half days, driven by six main propulsion motors of at least 66,000 horsepower each. Their current would be supplied by six turbo-generators with a capacity of 51,000 kilowatts each. Such a power plant, developing a total of around 400,000 horsepower—the "Queen Mary" rates about 200,000 horsepower—would consume 2,150 tons of fuel oil a day, requiring vast storage tanks and some method of ballasting to maintain equilibrium as the oil is consumed. The engineers figure this huge streamline vessel could run five or six knots faster than any present ship, and more time could be made up by landing passengers at Montauk Bay and putting them on a fast "boat train" down Long Island to New York. This would save about ten hours, eliminating about 170 miles from the ship journey, besides the slow process of docking in New York harbor.

During a voyage, the fuel gases would be exhausted from vents at the stern. However, in harbor or in case of a strong following wind the gas would be diverted to two funnels, situated in the conventional place amidships but telescoping, when not in use, through flaps in the top deck. Another suggested innovation is a control bridge provided with movable wings which can be extended from either side for a better view down the length of the ship while docking. A light, inverted hull over the main deck would provide a streamline superstructure. As much as possible, the designers propose to eliminate external gear; the lifeboats are under cover, and the steel masts telescope into the deck. The glass roof of the top deck is strong enough to resist the battering of Atlantic gales.

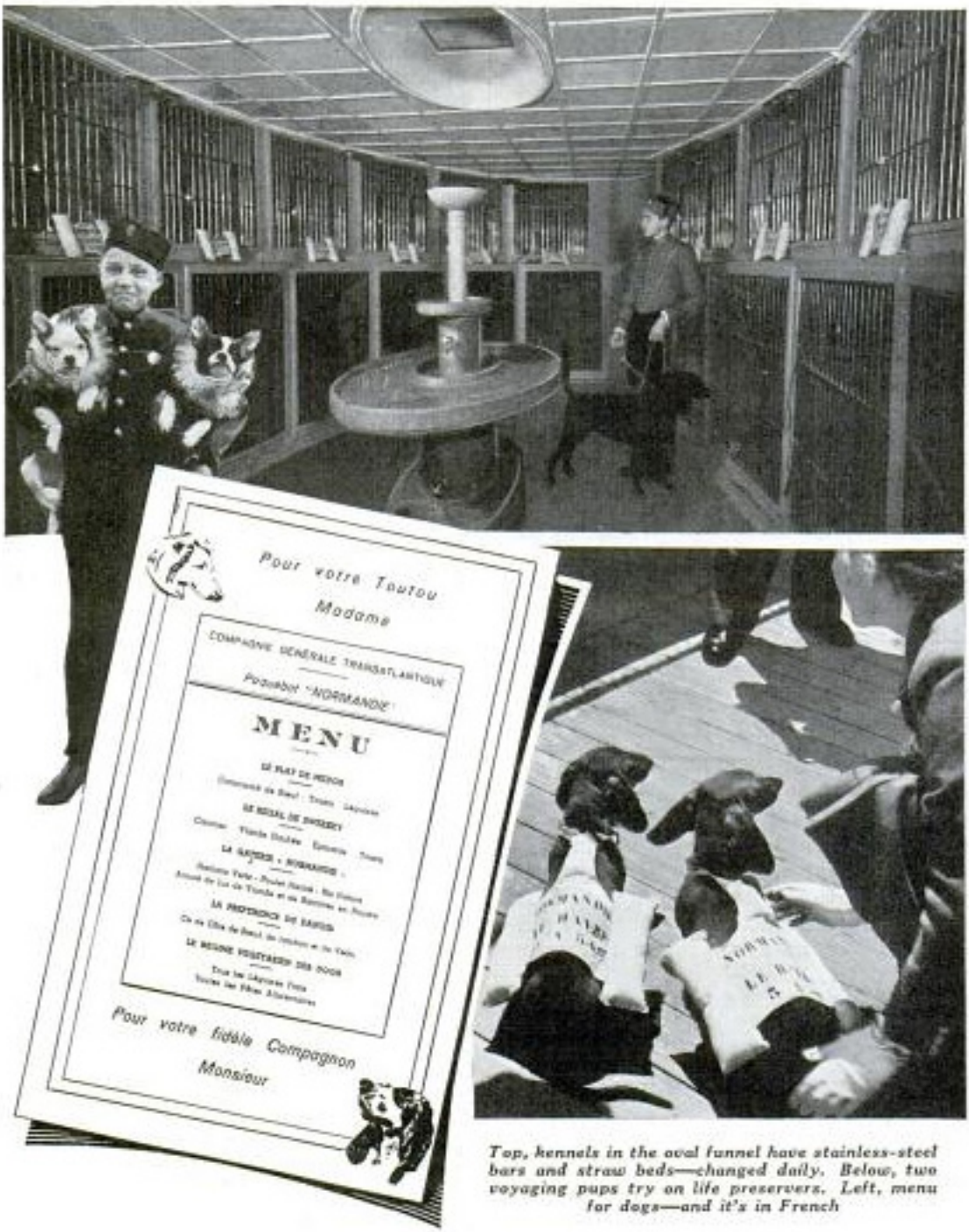
The superliner as planned by A. C. Hardy and Pierre de Malglaive would be about 1,350 feet from bow to stern, compared with the 1,208-foot length of the "Queen Mary." Its cost has been estimated between forty and fifty million dollars—considerably under the figure to be spent on each of the superdreadnaughts projected for the U. S. navy. Construction would take three years or more, and provide work for thousands of men.

Thirty-Million-Dollar Super Liner Is Built



Top, Diagram Showing How the World's Largest Liner Will Virtually Form a Bridge across the Atlantic; Below, Comparison of Steel in Empire State Building and in the "534"

Dogs Ride in "Normandie's" Dummy Funnel



Top, kennels in the oval funnel have stainless-steel bars and straw beds—changed daily. Below, two voyaging pups try on life preservers. Left, menu for dogs—and it's in French

That dummy funnel on the "Normandie," which is probably a concession to the old popular fancy that the more funnels, the more power, is not entirely a dummy after all. Inside it are recreation rooms, a theater and kennels for the passengers' pets. The dogs live comfortably aboard ship behind stainless-steel bars that surround their oval room, at the center of which is a drinking fountain. The kennels are steam-heated and ventilated, fresh beds of straw are provided daily, and the dogs are allowed daily exercise on a top deck. There are even life preservers for the pups in large, medium and small sizes, and a special menu printed in French offers choice bones, soups, biscuits and vegetables. In case the canine tourist is indisposed, a veterinarian aboard helps him win back his sea legs.

FLYING COWBOYS OF THE WEST

POPULAR MECHANICS ★

MAGAZINE

WRITTEN SO YOU CAN UNDERSTAND IT

SEPT.
25 CENTS

SEE PAGE
377

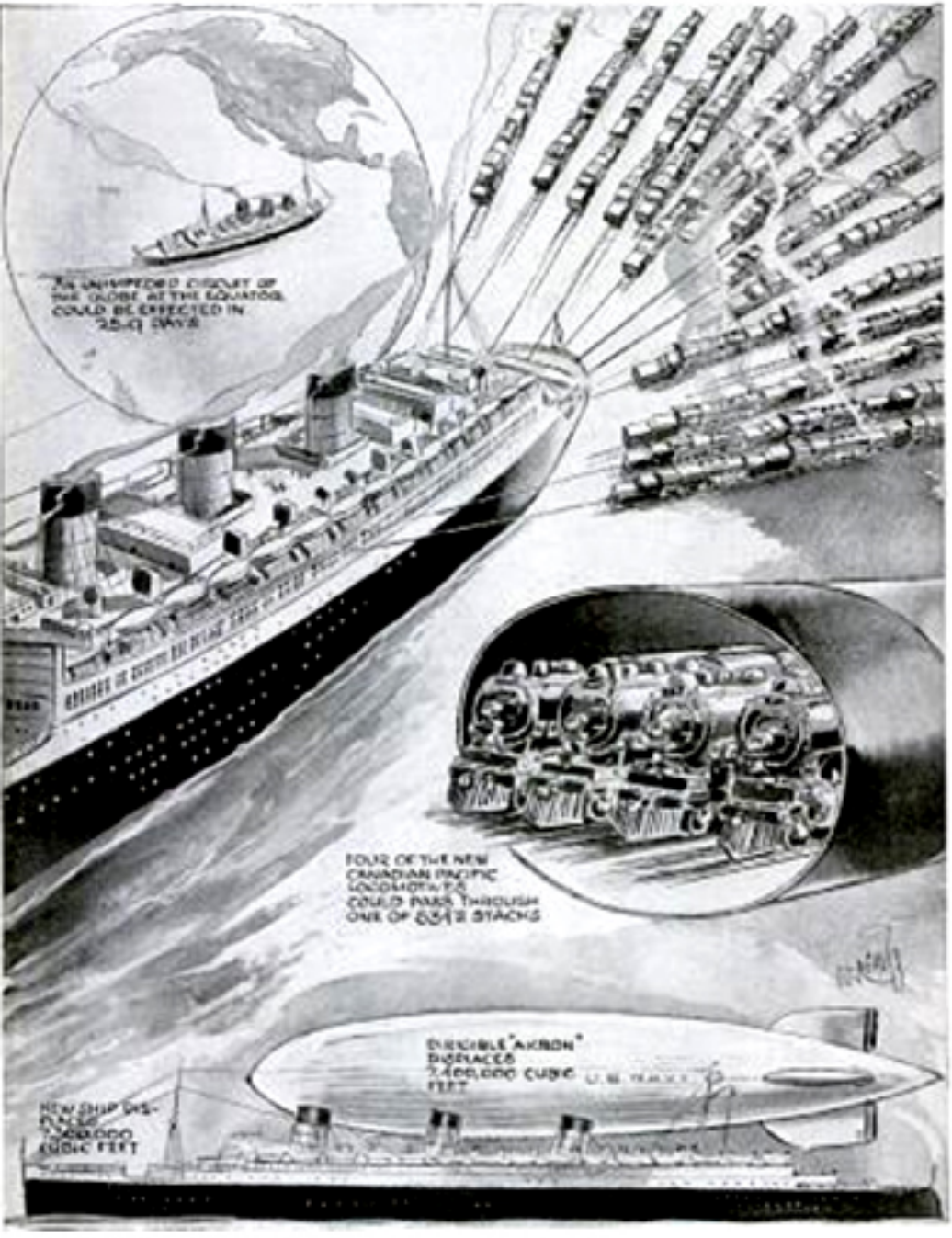
Tricks of the Speedboat Aces

Ocean-Going Ferry Designed in Wind Tunnel

This drawing shows some of the features of new ferry. Note extent to which streamline design is carried, even to the funnel. A conditioning system keeps air clean, despite the inclosed decks

Presenting a virtually unbroken line from bow to stern, an ocean-going ferry designed in a wind tunnel has been completed recently. It operates across the entrance to Chesapeake bay. The design was selected after exhaustive tests by Raymond F. Loewy with models. Every possible weather condition that the craft would encounter was duplicated artificially in the tunnel. After the best contour for the superstructure had been chosen, other problems were solved by the same method. These included requirements that the ferry carry sixty to eighty autos and trucks in six lanes of traffic and that there be proper space for passenger quarters, dance floors and special cabins for truck drivers. Vehicles are driven in through doors in the bow and out through doors in the stern. The doors in the bow are operated electrically but those in the stern are controlled by hand. The inclosed decks are supplied fresh air by an elaborate ventilating system. The ferry is 260 feet long. Its engines propel the craft at eighteen miles per hour.

To Cross Atlantic Ocean in Ninety Hours



The "134" Will Develop as Much Power as Forty-Eight Locomotives, and Four Engines Could Pass Abreast through a Stack; Below, Displacement of "Akron" and Liner Compared