Opening extract from

Titanic: Disaster At Sea

Written by

Martin Jenkins

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AT NINE O'CLOCK IN THE EVENING ON THURSDAY 18 APRIL 1912, IN THE MIDDLE OF A TREMENDOUS THUNDERSTORM, AN OCEAN LINER PULLED SLOWLY INTO NEW YORK HARBOUR AND PREPARED TO DOCK.

The ship was the *Carpathia*, one of dozens that regularly plied to and fro across the North Atlantic. Normally her arrival would have attracted little attention among the hustle and bustle of the busy port. But this time it was different. Tens of thousands of people had crammed themselves onto the quayside and were waiting expectantly. For the *Carpathia* carried not just her own passengers and crew, but the traumatized survivors of a terrible calamity. Four days earlier, on the night of Sunday 14 April, the world's largest ship, the *Titanic*, had hit an iceberg in the middle of the ocean and sunk. Nearly fifteen hundred people had died. It was the worst ever single shipwreck at sea.

Thanks to wireless technology, news of the event had begun to spread almost immediately, so that the late editions of the Monday newspapers in Europe and North America were already reporting that the great ship had suffered some kind of accident. Many of these first accounts, though, turned out to be wildly inaccurate. Some said that the liner had been badly damaged but was still afloat and was being towed to Halifax in Canada for repairs. Others reported that the *Titanic* had indeed sunk, but that all the people on board had been rescued. By Tuesday, as more detailed reports filtered through from the *Carpathia* and other ships that had rushed to the scene, the scale of the disaster and the awful loss of life had become clear. The world was in shock. The *Titanic* was a

◀ TITANIC SURVIVORS ABOARD THE CARPATHIA

brand-new ship – this was her first voyage across the Atlantic – and she incorporated the latest innovations in shipbuilding technology. Her builders, and virtually everyone else, believed that she was practically unsinkable.

Over the next few weeks official inquiries into the accident were held in New York and London. Survivors were interviewed and dozens of expert witnesses cross-examined. Both inquiries had the same aims: to find out exactly what had happened, why it had happened and who, if anyone, was to blame.

▲ **POSTER ADVERTISING THE PRESTIGE OF OCEAN TRAVEL**

THE AGE OF THE OCEAN LINER

The *Titanic* began her short existence on 31 March 1909 when her keel was laid down in the shipyards of Harland and Wolff, a shipbuilding company based in Belfast, Northern Ireland. She had been dreamed up just under two years before, in the summer of 1907, by Bruce Ismay, managing director of the White Star Line shipping company, and Lord Pirrie, chairman of the board of Harland and Wolff. At that time, mass air travel was still decades away and the only means of carrying people and cargo across the sea was by ship. During the previous half-century, steam had been taking over from sail as the main way that ships were powered. The White Star Line was one of many steamship companies that had sprung up, all competing for a share of the trade, particularly on the most profitable route – across the Atlantic between Europe and North America.

THE BLUE RIBAND

In the 1860s a rivalry developed between the different companies as to who could cross the Atlantic the fastest. An unofficial prize, the Blue Riband, was awarded to whichever ship held the record, bringing with it great publicity for the shipping company concerned.

▲ BRUCE ISMAY

Among the main companies competing for the Blue Riband were the White Star Line and its arch-rival, Cunard. Thomas Ismay (Bruce Ismay's father) owned the White Star Line at this time. He realized that there were more and more rich people wishing to travel, and that they didn't just want speed – they wanted luxury as well. Ismay commissioned a new kind of liner from Harland and Wolff, which was both very fast, and very, very comfortable (especially in First Class).

The new liners were a great success, but eventually Ismay decided that it was simply too expensive to build liners that were *both* the most luxurious *and* the fastest afloat, and he chose to leave the race for the Blue Riband to Cunard and the others. Though no longer competing for the prize, White Star ships would still be fast, and they would certainly be the most comfortable.

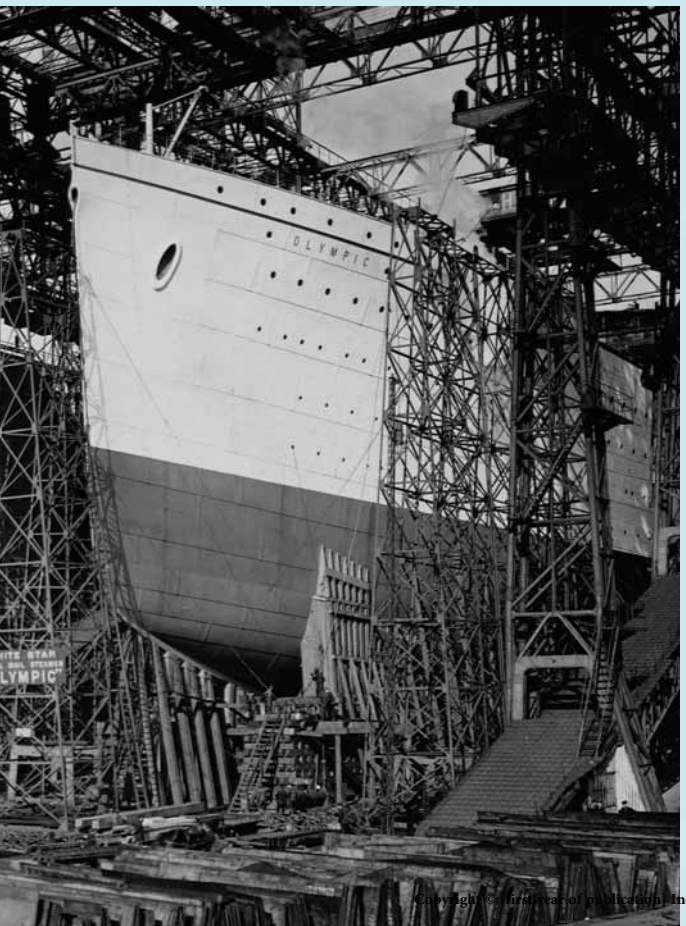
Thomas Ismay died in 1899 and his son Bruce took over the firm. Then in 1902 the American tycoon J. P. Morgan gained control of the business and made it part of the shipping combine International Mercantile Marine, though Bruce Ismay continued to run the White Star Line. Ismay launched a range of

THE TITANIC (LEFT) AND THE OLYMPIC (RIGHT) UNDER CONSTRUCTION IN BELFAST ▶

increasingly large ships, culminating in the *Oceanic* in 1899, and the *Celtic* in 1901 – at the time the biggest ships ever to have been built. Then in 1906 the company's pride was dealt a terrible blow. Their rivals Cunard launched the *Mauretania* and the *Lusitania* – liners that were even bigger, faster and more luxurious. They could complete the transatlantic journey in under six days and, not surprisingly, they quickly grabbed the lion's share of the passenger trade.

OLYMPIC, TITANIC & GIGANTIC

Bruce Ismay and Lord Pirrie knew they had to respond to the challenge and decided they would go one better by building three new liners, to be called the *Olympic*, the *Titanic* and the *Gigantic* (later renamed the *Britannic*). They would be bigger than the Cunard ships, carry more passengers, and be even more luxurious (if not quite as fast). Designs were quickly sketched out and preparations made to start building. It was decided to stagger the construction so that experience gained with the first ship could be applied in the building of the others. First would come the *Olympic*, then the *Titanic*, then the *Gigantic*.



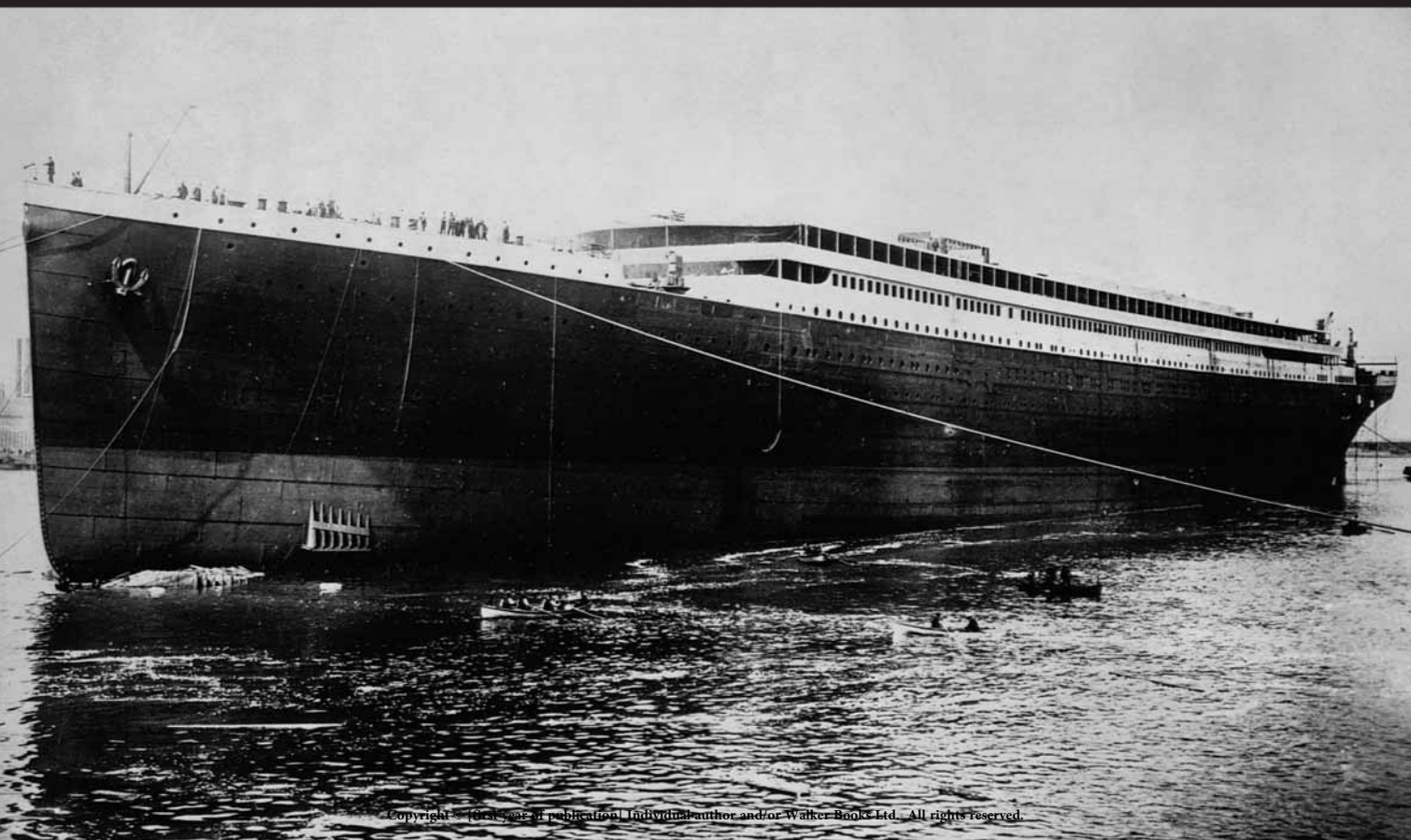
The keel of the *Olympic* was laid down in December 1907. She took three years to build, and was finally ready for launching in October 1910, by which time work on the *Titanic* was already far advanced. Although the original plans for the two ships had been almost identical, as building went on, various changes were made to the *Titanic*'s design. In particular it was decided to make some of the First Class facilities even larger and more luxurious. This meant that the *Titanic* would end up weighing around 1,000 tons more than the *Olympic*, making her the world's biggest ship.

LAUNCH DAY

The *Titanic*'s launch date was eventually set at 31 May 1911, the same day that Harland and Wolff were due to hand over the *Olympic* to the White Star Line. It was a great occasion in Belfast, where shipbuilding was by far the most important industry, and it seemed as if half the city turned out to see the two ships. Lord Pirrie was there, of course, as were Bruce Ismay and his wife and children. Even J. P. Morgan himself turned up. At the centre of them all was Thomas Andrews, the managing director of the shipyard, who had personally overseen the construction of the two ships and had played an important part in their design.

Although the *Titanic* was now afloat, she still needed a lot of work before she was ready for service. Her interior needed to be fitted out, her funnels built and engines and other machinery installed. All this took nearly a year, but gradually the ship neared completion. She really was awe-inspiring. Everything about her was big, from her propellers to her First Class dining room.

▼ **THE TITANIC DOCKED IN BELFAST, READY FOR FITTING AND INSTALLATION**

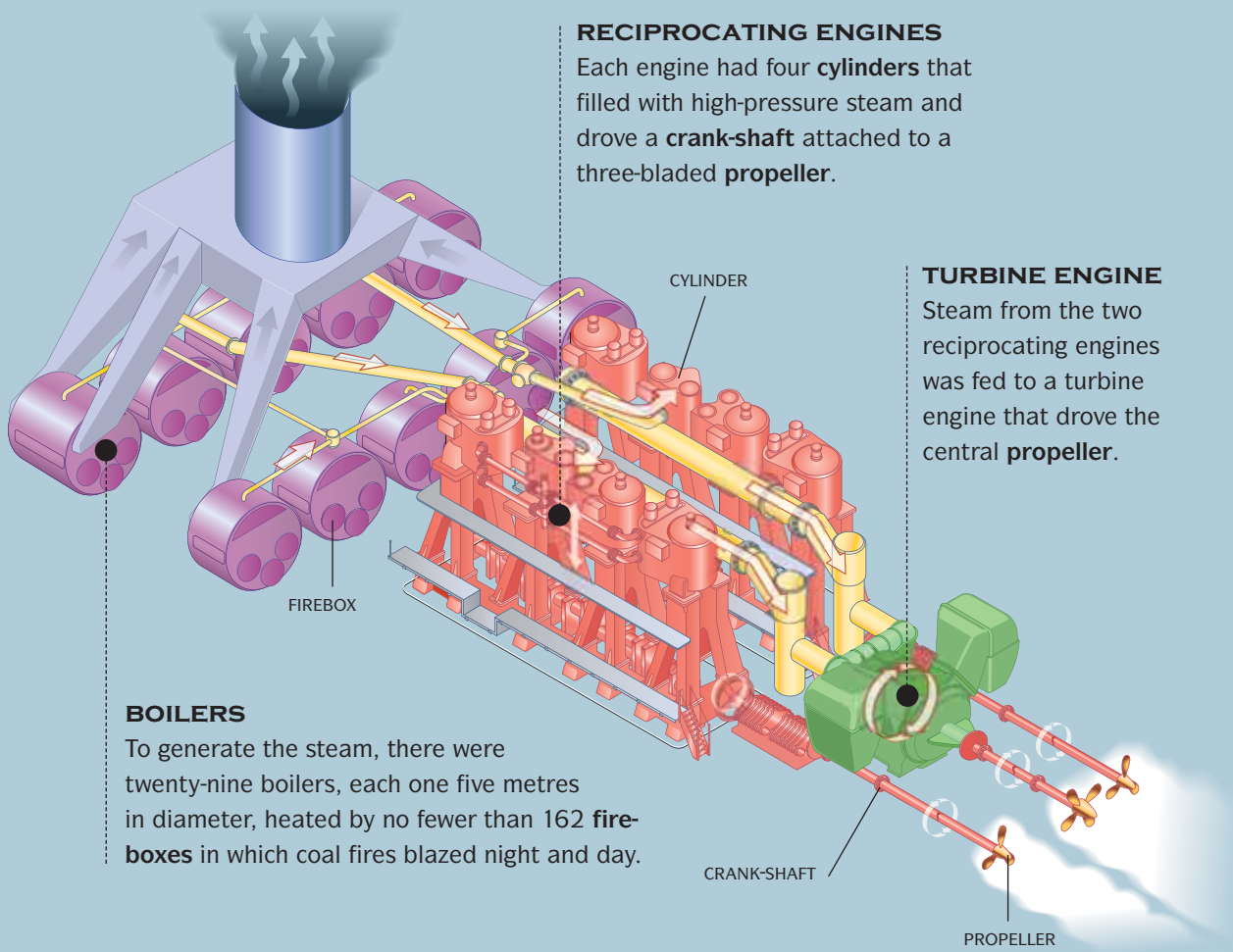


STEAM POWER

THE *TITANIC*'S POWER CAME FROM THREE huge steam engines. To the left and right sides of the ship were two traditional-style piston or reciprocating engines, the largest of their kind ever built, nearly 12 metres tall. The third, central engine was a turbine, powered by used steam from the two reciprocating engines.

Two hundred men were needed to keep the fires alight, and when the ship was travelling at cruising speed they got through nearly 600 tons of coal every twenty-four hours. Smoke from the fireboxes escaped through the first three of the ship's funnels. The fourth funnel wasn't, in fact, necessary, but was there because the ship's designers thought that the ship would look a bit odd without it. It was used as a giant ventilation shaft, carrying cooking smells away from the ship's galleys.

THE TITANIC'S BOILERS AND ENGINES



RECIPROCATING ENGINES
Each engine had four **cylinders** that filled with high-pressure steam and drove a **crank-shaft** attached to a three-bladed **propeller**.

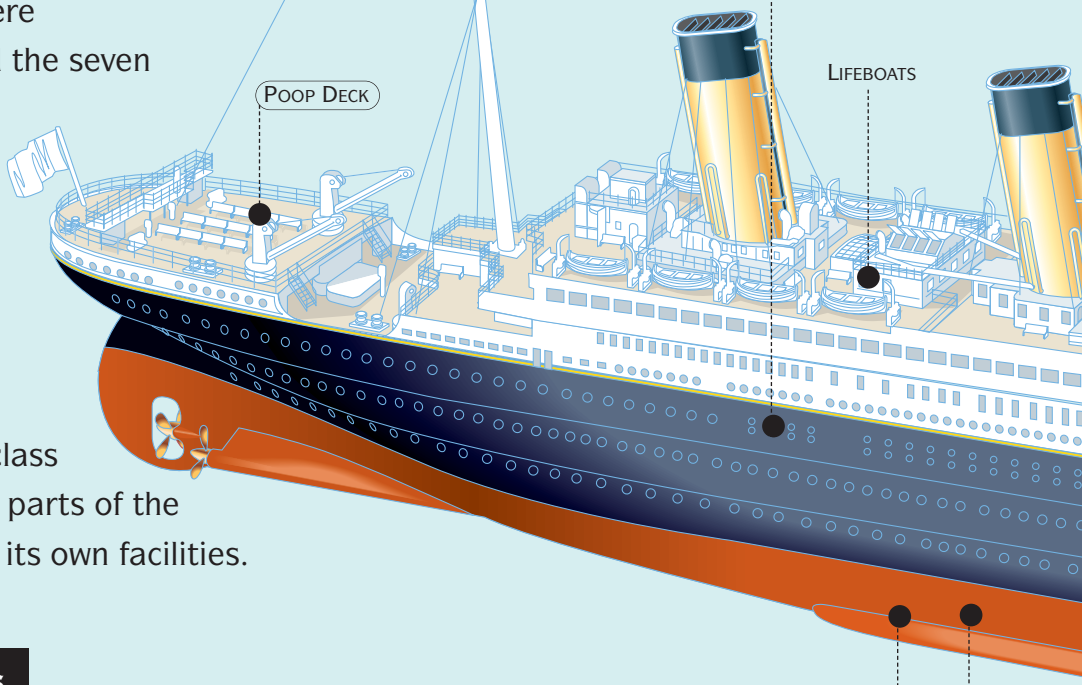
TURBINE ENGINE
Steam from the two reciprocating engines was fed to a turbine engine that drove the central **propeller**.

BOILERS
To generate the steam, there were twenty-nine boilers, each one five metres in diameter, heated by no fewer than 162 **fire-boxes** in which coal fires blazed night and day.

ACCOMMODATION AND FACILITIES

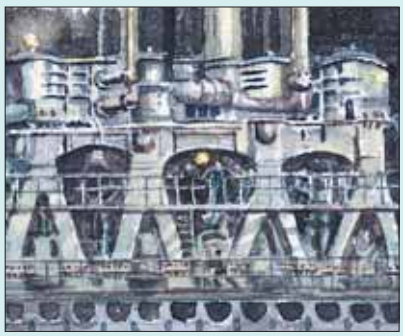
Built around the engines and the boilers were the decks, all nine of them, with the accommodation and facilities needed to house the passengers and crew – over 3,000 people if the ship was full. The topmost deck, the Boat Deck, housed the ship's officers while the bottommost, known as the Orlop, only contained store-rooms. The passengers and the rest of the crew were distributed around the seven decks in between, labelled from A to G. Passenger accommodation was divided into First Class, Second Class and Third Class. Each class occupied separate parts of the ship and each had its own facilities.

First and Second Class Galleys
Equipped to prepare 62,000 delicious meals during the ship's first voyage.



SECOND CLASS

WHERE: Decks B to G, with some facilities on the Boat Deck.
NUMBER OF STATEROOMS: 162
FACILITIES: An electric elevator reserved exclusively for Second Class passenger use, a promenade on the Boat Deck, a smoking room, a library, and a large dining saloon on D Deck.
COST: £13 10s for a one-way fare (the equivalent today of about £900).



Reciprocating Engine Room
The height of four decks, and containing two huge engines that drove the outer propellers.

First Class Dining Saloon
With seating for over 500 diners and its own reception room.

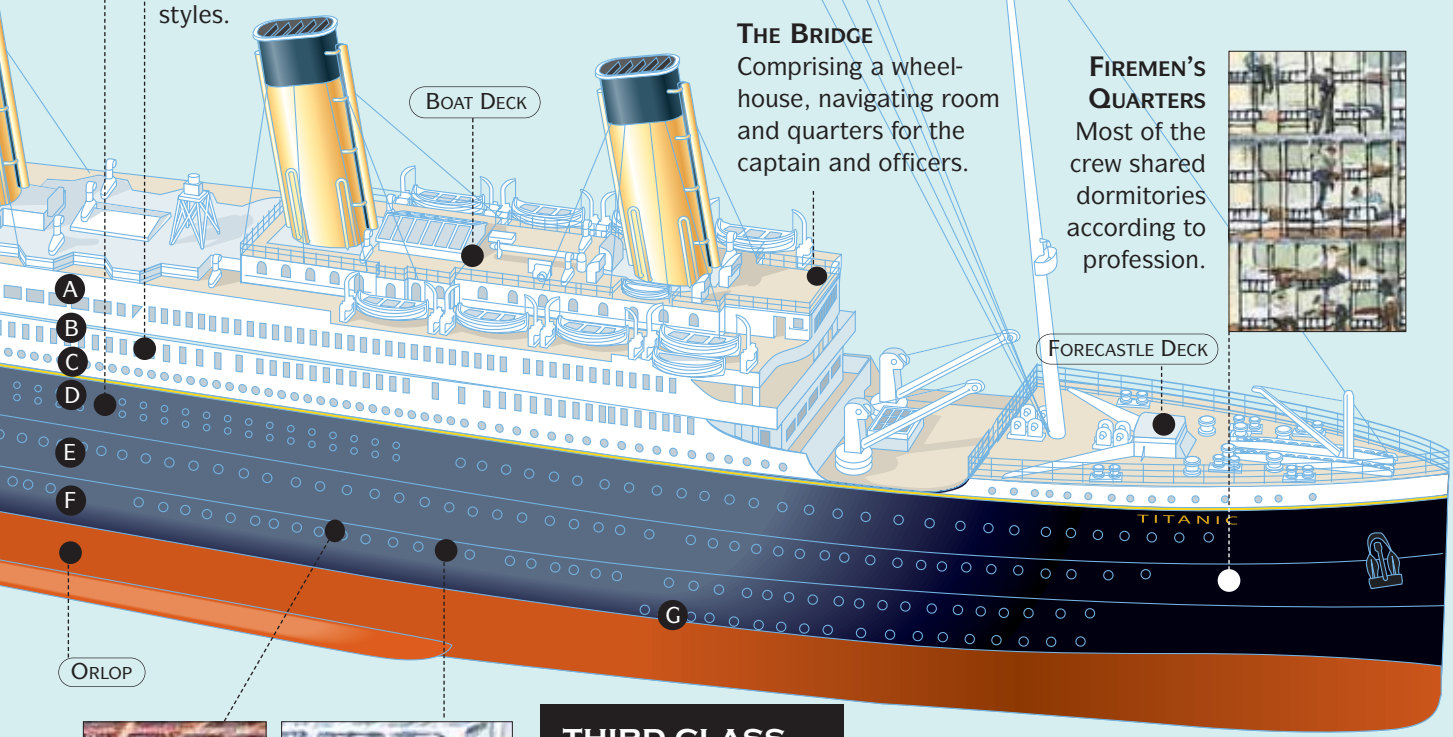
First Class Bedrooms
Containing every luxury and decorated in a range of period styles.

FIRST CLASS

WHERE: Decks A to D, with some facilities on the Boat Deck.
NUMBER OF STATEROOMS: 416
FACILITIES: Turkish baths, electric baths, a swimming pool, a gymnasium, a squash court, a barber's shop, a darkroom, a clothes-pressing room, a smoking room, a reading and writing room, a lounge and a lending library. For eating, a huge First Class dining saloon on D Deck, and a separate à la carte restaurant run by Luigi Gatti on B Deck. First Class passengers also had exclusive access to the glassed-in promenade on A Deck and three electric elevators, and could send telegrams from the Marconi wireless room to friends and family.
COST: £870 for the most exclusive First Class staterooms on B Deck (the equivalent today of about £60,000), on a one-way crossing in high season. However, a standard First Class room could be had for £30 (almost £2,000 today).

The Bridge
Comprising a wheel-house, navigating room and quarters for the captain and officers.

Firemen's Quarters
Most of the crew shared dormitories according to profession.



Turkish Baths and Swimming Pool
Reserved exclusively for First Class passengers.

THIRD CLASS

WHERE: Decks D to G, with some facilities on C Deck.
NUMBER OF STATEROOMS: 262, plus 40 open berthing areas.
FACILITIES: A promenade on the Poop Deck, a smoking room and general room on C Deck, and a dining saloon on F Deck. Third Class passengers were kept strictly apart from those in First and Second Class.
COST: £7 15s for the cheapest one-way fare (the equivalent today of over £500). The average working man was lucky to earn £1 a week.