

The Quest for Jules Verne's Amazing Machines

JULES VERNE, THE SCIENCE FICTION WRITER AND INVENTOR OF NUMEROUS MECHANICAL WONDERS... OR WAS HE? OMEGA LIFETIME ASKED JULES VERNE SPECIALIST WILLIAM BUTCHER TO TAKE A CLOSER LOOK AT THE MACHINES AND AMAZING TALES OF JULES VERNE.

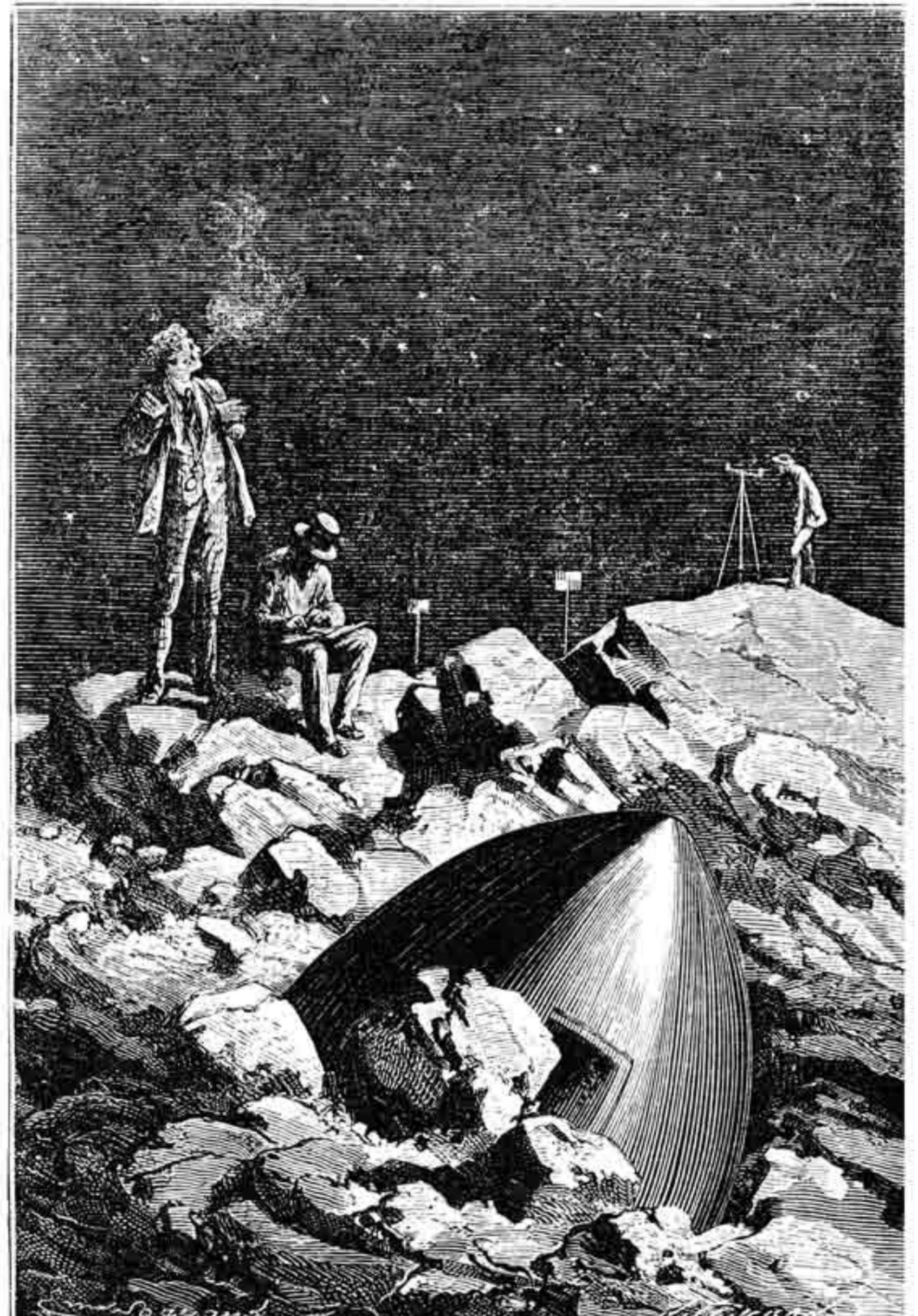
Jules Verne's name is inextricably linked with innovative machines, but I have several reservations about this. Indeed, if asked exactly what machines Verne describes, the person in the street may flounder a little. He or she may easily come up with Captain Nemo's submarine, the Nautilus, probably based on the inaccurate Hollywood version, but will then often be at a loss for a follow-up, at best mentioning balloons or flying machines. He/she will somehow try to work **Journey to the Centre of the Earth* or *Around the World in Eighty Days** into the conversation, while frantically trying to remember a single advanced machine in any of the numerous films supposedly based on these books.

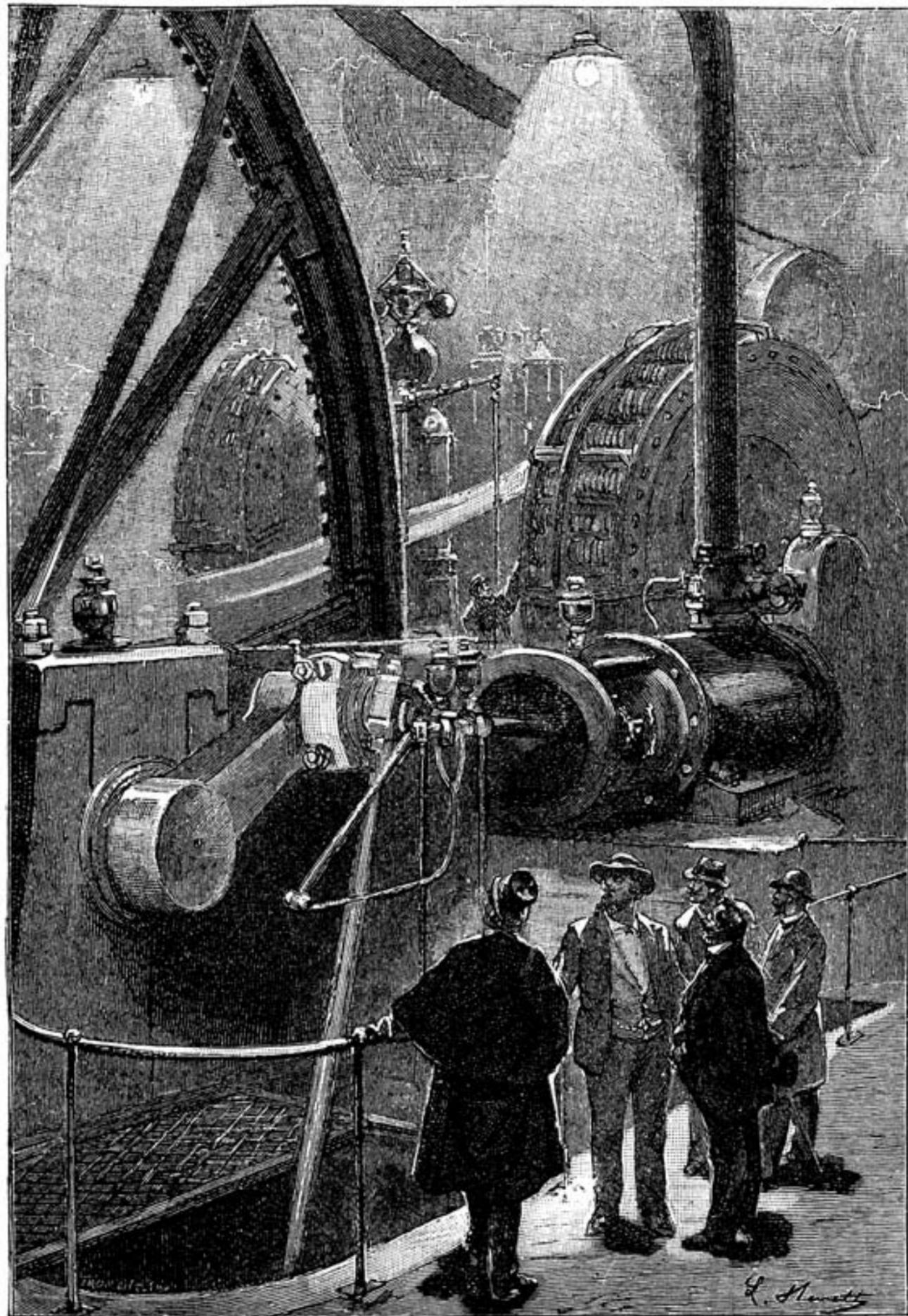
THE REAL VERNE

The authentic Verne may still, in the second

decade of the twenty-first century, remain the most unknown of men, certainly the classic author whose popular reputation is the least well-founded. Only by going back to primary sources, by stripping away the onion layers of mistruths that have grown around his name, can we hope to near an understanding of the man and his works.

His machines, too, will require careful study. We clearly need to remove from our minds any subliminal imprint of the films, invariably far from Verne's real thinking. But surely the volumes in the world's bookshops contain an authoritative account of his machines? Unfortunately, this apparently attractive view contains two more traps. First, the translations of his books have generally been middling; those in English, now the universal **lingua franca**, have ranged from reasonable to calamitous,





the worst attempts — unfortunately those most often reprinted — cutting a quarter or more of the text and sometimes inventing whole chapters.

And how about the increasing number of faithful translations, or better, the French editions? Even here we are some distance away from finding the real Verne. For a start, the French editions, both the modern reprints and the original nineteenth-century publications, have suffered from poor copyediting and contain a fair number of misprints, grammatical mistakes and factual errors. More seriously, the novels, as brought out between 1863 and 1905 by the publishing house of Pierre-Jules Hetzel, were not what Verne actually wrote. The publisher himself wrote sections of some of the books; he deleted innumerable pages and quite a number of chapters; he insisted that the author change the meaning of many of his novels; and he generally imposed his own vision on the works, camouflaging in the process that of the author. While the letters Verne and Hetzel exchanged do provide some indirect information about these changes, their scope — and, crucially, the original versions — can only be appreciated by deciphering the manuscripts of the novels, a task sadly and inexplicably ill-addressed to date.

PLANES AND BOATS AND TRAINS

So what do we mean by Verne's machines? Let's agree, for the purpose of this article, to include only his large machines, essentially those used for transport purposes, and hence to exclude, for example, the timepieces and scientific instruments, despite their importance. We should concentrate on the vehicles that, at the time, displayed advanced or innovative features. At a stroke, we have greatly narrowed down our search, as Verne's balloons, sailing-ships, steamships or trains, even in the nineteenth century, already seemed slightly **passé**.

Surely the Steam House, in the novel of the same name (1880), must constitute an innovative vehicle? On closer examination, however, the Steam House turns out to be simply a road-going steam locomotive. Admittedly, it is disguised as an elephant, with the trunk serving as chimney and eyes as headlamps; it hauls two cars, one for the passengers and one, as is appropriate, for the servants. By some sleight of hand, Verne manages to get its massive weight up into the Himalayas.

Similarly, Propeller Island, again in the novel of that name (1895), is essentially just

a ship, albeit of exceptional size. Regretfully, then, this satire on the lifestyle of rich retirees cannot really be included. Even in the technological-sounding **Lighthouse at the End of the World** (1905), there is no innovation whatsoever, the design of the lenses being about sixty years old at the time of writing, and the book being instead an unputdownable pirate and sea yarn.

The real thrust of Verne's writing, where he puts his heart and soul, is instead the unexplored areas of the globe or, occasionally, below and beyond. The novels of the first decade all involve discovery of unknown parts, with machines coming into play only when there is no alternative. For the remainder of his career, Verne, having exhausted the virgin domains, is reduced to the already known, as reflected in the series title, **Extraordinary Journeys in the Known and Unknown Worlds**.

His method of getting his characters to the interesting parts of the universe is to use the means at hand. Eminently pragmatic, obsessed with realism, or rather plausibility, he scoffs at HG Wells for straining the credibility of the reader, for simply snapping his fingers and saying, in effect, let's have an anti-gravity device or a time-travel machine. Verne always opts for low- or no-tech solutions, when given the choice. Landslides, footpower, volcanic eruptions or wind-driven wheelbarrows are his preferred means of transport. Only when the destination is out of this world, does he, in the very last resort, consent to bring in exceptional vehicles.

Verne's life is another area where his reputation as a writer of science fiction — essentially false, I would claim — has distorted nearly all publication on the subject. Even the encyclopaedias continue to derive much of their material from the first major biography (1928), written by a certain Marguerite Allotte de la Fuÿe. They not only repeat her mistakes, but continue to propagate inaccuracies about the novelist's attitude to advanced technology. They thus twist his reputation to a degree that he himself would have objected to — and indeed did so, vociferously and at every possible opportunity.

If we look instead at the reality of Verne's life, we discover that science **per se** never really interested him. From his earliest years, his dreams were of journeying to exotic places, by decidedly conventional means. No science was included in his education at primary and secondary level in Nantes, or in his training to be a barrister in Paris, his favourite subjects being Latin and Greek,



French and geography.

If we really wish to understand Verne's attitude to technology, the place to start is his early writings, before pressure from publishers and the public came into play. His first known attempts, at the age of six or seven, in swaying treetops on his favourite uncle's bucolic country estate, involve dreams about travel. The earliest eyewitness account, in poems published by his father, emphasise the boy's love of the River Loire and yearnings for escape from humdrum reality. In the young Verne's scores of poems, dozens of completed plays, single unfinished novel, handful of short stories, book of art criticism, autobiographical accounts of journeys to Scotland (1859) and Norway (1861), balloons, trains and boats sometimes appear, with a few dramatic descriptions, but there are no futuristic machines. Amongst the books he submitted to Hetzel, the three that were not rejected continue this pattern – after undergoing removal of what we today might find amongst the most interesting parts. In **Five Weeks in a Balloon** (1863), **The Adventures of Captain Hatteras** (1864-6) and **Journey to the Centre of the Earth** (1864), the travel is the whole point of the venture; the only machinery used, the burner for the balloon, is well past its sell-by date. Even dogs are considered too unreliable to get Hatteras to the North Pole.

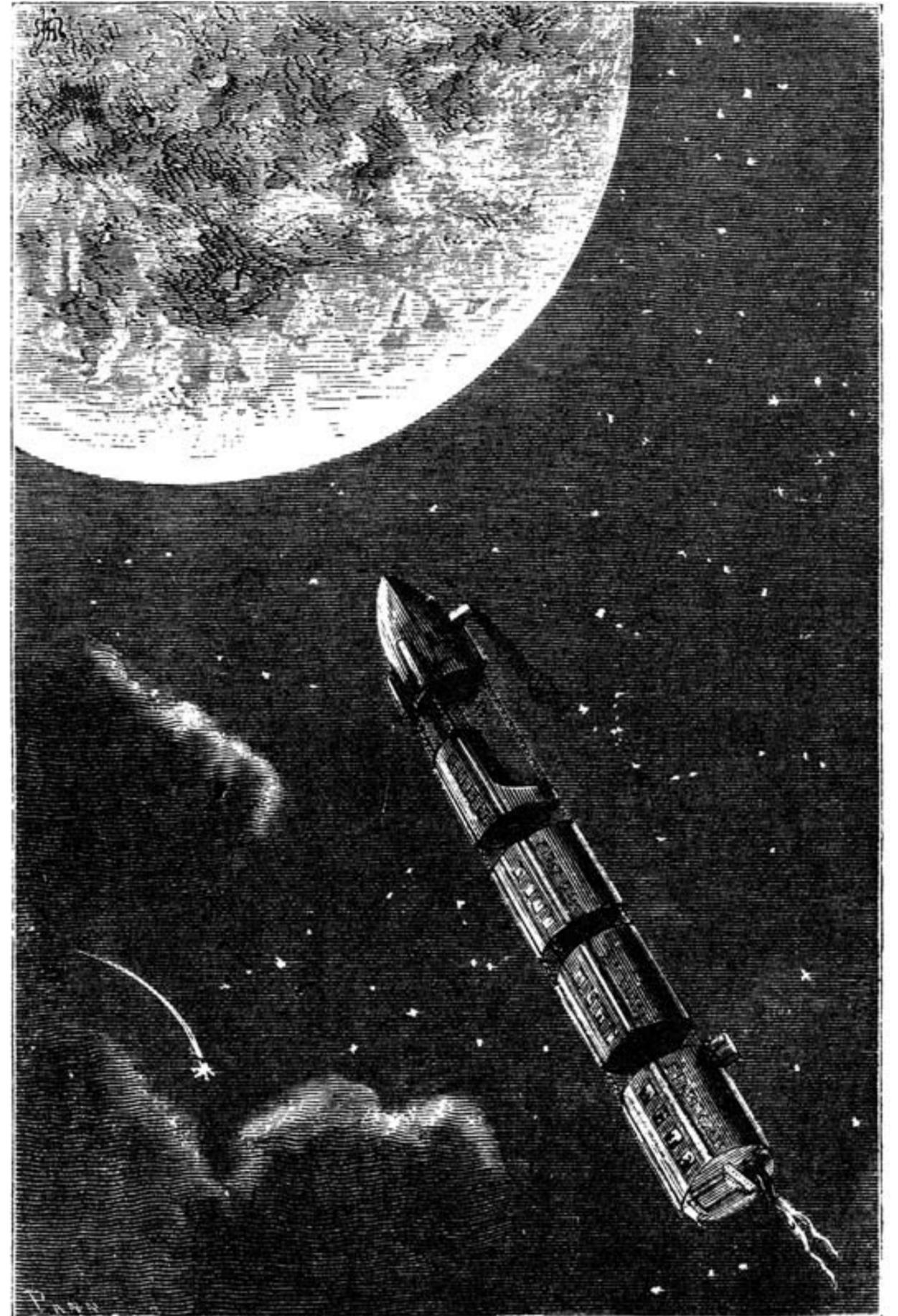
If Hetzel seems to have initially accepted the book about travel to the Scottish Highlands, only changing his mind at proof stage, his reaction to **Paris in the Twentieth Century** (written in 1860 and 1863) was more clear-cut. In this book set in 1960, more than any other, Verne presents a world submerged in scientific and technological innovation of every sort: a huge canal linking Paris to the sea, overhead trains, cars, faxes, industrialised education, the increasing dominance of Mandarin, pollution, the Americanisation of the language and lifestyle – in a word, the loss of France's soul. The hero, a romantic, a writer depressed by the disappearance of his literary heroes, hates his job churning out superficial vaudevilles. He apparently dies at the end from cold, hunger and a broken heart. This anti-science fiction novel, warning of the dangers of technology, was brutally and dogmatically rejected by Hetzel; it was translated into English in 1996, when it became the most successful French novel ever in the United States.

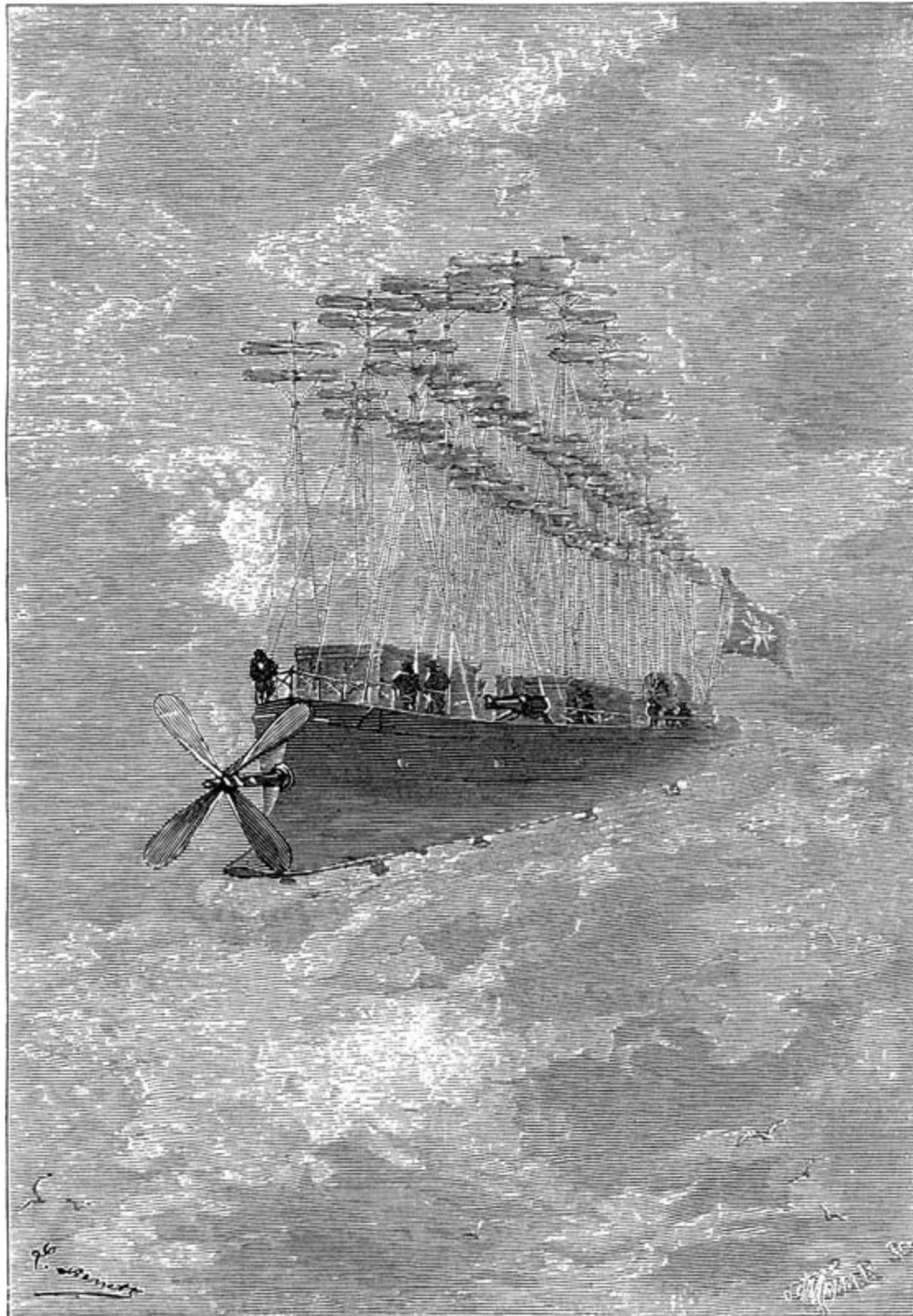
FROM THE EARTH TO THE MOON

The first writing where Verne shows any vague liking for futuristic machinery is **From the Earth to the Moon** (1865). In this novel, American warmongers, pining for the weapons of the Civil War (1861-5), turn to launching a projectile as a way of proving they still have the biggest and the best guns. Only at a second stage do they think of travelling in it themselves, inspired by a late addition, the Frenchman Michel Ardan. A twelve-foot-long projectile, complete with manhole entrance and removable portholes, is duly made of aluminium, a construction material recently perfected by one of Verne's friends. The interior, designed for three men and two dogs, is a delight of high-Victorian, Walter-and-Gromit-style comfort, with leather-lined walls, full cooking facilities and gas lighting. The air is replenished by chemical means, but there are no toilet facilities. The vessel is to be launched by two hundred tonnes of explosives crammed at the bottom of a nine-hundred-foot-long cannon hollowed out of the ground. Verne himself fully realised that the basic idea was ridiculous, for the acceleration from the explosion would instantaneously crush the passengers to smithereens, but he had no other method of getting them away from the earth's pull.

But even here – as the reader may have realised – I have reservations about where the novelist's heart really lies. The book was set a decade in the future, a sure sign that Verne did not really believe it to be plausible. In the event, just as the novel was coming out, Lincoln was shot, meaning that the book's iconoclastic description of a stubborn ageing president had to be changed, as well as the date of the action.

Verne himself had doubts about the book. In his original version the travellers, once launched in the general direction of the moon, have no thought of return and are indeed described as martyrs to exploration. Having seemingly been made to substitute an ending which, absurdly, emits the hope that two-way communication with earth can somehow be established, the poor author then has to belatedly imagine some way of getting the spacemen home again. The idea of a sequel may have been the publisher's; certainly the novelist himself never accepted it, repeatedly insisting that **Around the Moon** (1869) was merely the second volume of the Moon novel, although in the event his view was ignored by all and sundry. In any case, when it finally came out, this new volume seemed to betray the non-consensual nature of its conception by





being much less inspired and good-humoured than its older brother.

TWENTY THOUSAND LEAGUES UNDER THE SEA

Scores of forests have been laid waste to describe and depict Verne's famous submarine, but it must be pointed out that the vessel is hardly innovative. Both the name *Nautilus* and the concept of underwater navigation were clichés at the time, leading the novelist himself to state: "I am not in any way the inventor of submarine navigation." Captain Nemo's description of his vessel is generous with information about its length and width, but says only that its electrical power is "not the commonly used sort", enhanced by "a system of levers"!

The shape of the submarine has similarly spawned an entire industry, constructing immensely detailed models, more often than not, however, based on the erroneous Hollywood version. What Verne himself wrote was of an approximately cylindrical form with conical ends and a flattened platform, together with a pilot's dome and a couple of hatches – although this is hard to reconcile with the triangular profile the *Nautilus* cuts in one of the ships it tangles with. The original French illustrator clearly also had difficulty with this point, wisely not attempting to show the whole ship very clearly.

The real control room of the *Nautilus* is the library and museum, in chapters unfortunately only too often cut by unscrupulous publishers. It is here that the enigmatic captain comes closest to revealing his soul, and that Verne opens up the most about his artistic and literary preferences. Or at least he does until the editor cuts a swathe through the books and paintings on show, before dumping large numbers of tedious scientific works on the now largely empty shelves.

The submarine is the true hero of the novel, with its own personality and habits, its constant desire to thrust its way into narrow passages, to rub against its fellows, even penetrate them. It constantly defies the natural forces, braving the worst hurricanes, venturing fearlessly into the ice fields of the Antarctic and the superheated water of Atlantis. We feel a decided pang when the *Nautilus* finally disappears, perhaps voluntarily, into the dreaded Maelstrom whirlpool.

ROBUR THE CONQUEROR

In *Robur the Conqueror* (1886), Verne,

perhaps trying to conform to his own increasing public reputation for "anticipation", finally designs a machine with slightly more technical detail. Having realised, ever since *Five Weeks in a Balloon*, the weaknesses of the lighter-than-air, namely the difficulties of going where you want, Robur's design for the Albatross, despite its name, comes decisively down on the side of the heavier-than-air. Its cabins, deck, shape and two huge propellers are directly copied from seagoing vessels, with even a lifeboat and a bosun. Its lift comes from seventy-four horizontal rotors – which do not ruffle the passengers' headgear in the corresponding illustration. Rotors and propellers, producing a speed of a hundred and twenty miles an hour, are driven by electricity, which comes from accumulators, which gets it in turn from batteries "of extraordinary capacity" and "virtually infinite horsepower". As to how the batteries themselves work, this is a closely-guarded commercial secret!

Verne provides plenty of information about previous attempts to fly, about the internal layout, the shock absorbers, the shape, size and direction of the rotors and propellers, the manoeuvrability, the low centre of gravity, the instruments and equipment, or the fine food and drink. All in all, it is an impressively credible sailing ship, where Verne employs to the utmost his highly-developed common sense and considerable reading on the subject. The narrator rushes the reader past the holes in the substructure and the leaks in the superstructure to concentrate on the picturesque, the exotic, the anecdotal, and the human. That the description is largely tongue in cheek, self-consciously a literary machine, is shown by the ship's construction material: "paper, nothing more, nothing less". Or, as Verne remarked to Hetzel: "Just between you and me, I'd advise you never to board such a machine."

MASTER OF THE WORLD

In *Master of the World* (1905), Robur returns, now on the Terror, a combination of motorcar, aeroplane, surface vessel and submarine, compared variously to a gigantic bird of prey, an aerial monster and the devil's chariot. Electrically driven, made of aluminium, cylindrical but with the front more pointed than the rear, with wire wheels and wings of "a mysterious substance", it can fly at a hundred and fifty miles an hour. Robur himself has now become a paranoid megalomaniac.

Like all the other vehicles, the *Terror*

