

STEAMAGE

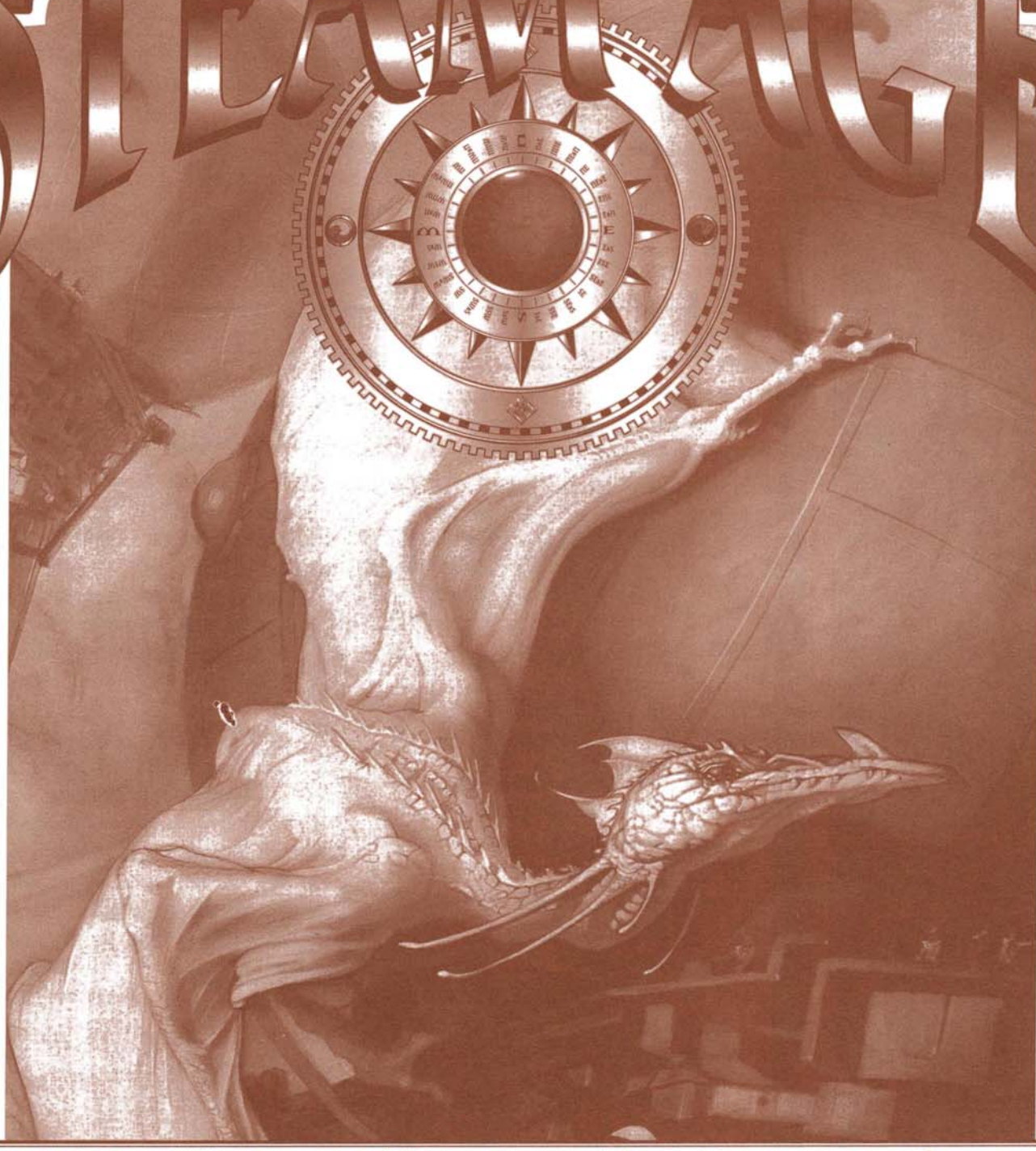


AMAZING WONDERS THROUGH THE POWER OF STEAM

Castle
Falkenstein

R. FALSORIAN
GAMES, INC.

STEAMWRIGHT



AMAZING WONDERS THROUGH THE POWER OF STEAM

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Introduction by Tom Olam

Dear Mike. A *lot* has happened since I last wrote you. In the interim, I've been keeping busy with the usual stuff: saving swan princesses, uncovering Plots to Overthrow All Humanity, and even (at some later point, I hope to have time to explain further exactly *how*) thwarting the evil Dr. Fu Manchu!

But in the meantime, as we both wait for me to get my latest Journals in order and convince the Faerie to deliver them to your doorstep, I thought you might be amused by the following edition of *Popular Invention* magazine that's currently on the stands here in New Europa.

It seems that every so often, the *Popular* editors like to get together and do an issue on all the nifty new Steamtech inventions that are making the headlines. This issue is particularly interesting, since it actually includes *pictures*—etchings, really—of many of the strange and bizarre creations I've previously described in my Journals. Here's where you'll actually *see* a Vane Clipper, a LandFortress, or one of the Aerobattleships that are the backbone of Bayern's (aka Bavaria's) strategic clout among the nations playing the Great Game of Empire.

But not everything in this issue is battlewagons and Landforts. There are pictures and descriptions of all of the most popular new Steam Automotives. There's Giant Robots. There's Infernal Devices and Submarine Walkers. There's even a *Hangar*

13-like twist—I was blown away to discover that *here* the Martian Tripods had *already* landed and the whole thing was hushed up by the British Government (I wonder how H. G. Wells found out about it later?)

This particular issue's also unique in that, for the first time, the editors of *Popular Invention* have included interviews with many of the Inventors, Scientists and

Masterminds who have such an impact on the daily technology of the Steam Age. There's profiles of little known people like the inventor of the Steam Unicycle (!?), as well as personal interviews with noted Masterminds like Japan's Lord Tomino (of Giant Automaton fame) and the redoubtable Captain Nemo.

So grab a comfortable chair and get ready to take a trip through the twisted technology of a long lost Age that never quite was. I've even taken the liberty of throwing in some Game information where I thought it might be applicable. All in all, I hope you'll have as much fun reading this as I did!

—Tom Olam
(at Castle Falkenstein)
August 10, 1872

ONE VERY IMPORTANT NOTE:

In the manuscript for the Roleplaying Game [see *Castle Falkenstein*—Mike] I sent back, I neglected to catch a mistake that crept into the section (pg. 208) on CONSTRUCTING STEAMTECH INVENTIONS: to wit, the **time** it takes to create one of these things.

The passage should read:

“The Result is the number of DAYS required to build the device.”

Not weeks. As a general rule, the first time it takes this long to build the device, although the R & D may take far longer, depending on whether it's been done before, how hard it is to get information on the processes, and other variables too numerous to mention. My rule of thumb is, research should take as long as it makes a good adventure!

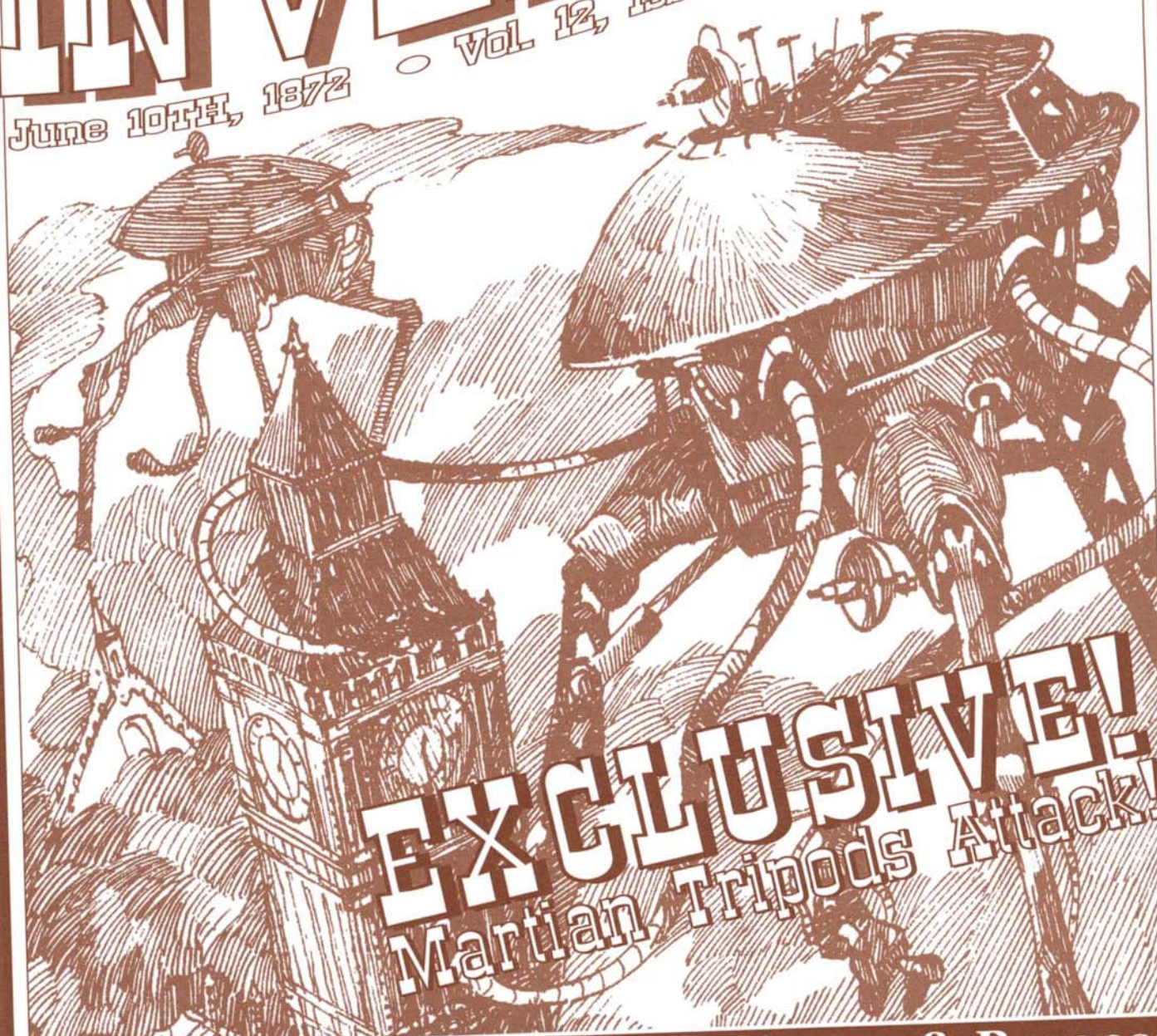


POPULAR INVENTION

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Vol. 12, Issue 6

June 10TH, 1872



EXCLUSIVE!
Martian Tripods Attack!

The Journal of Modern Science & Progress

An Introduction from the Editors of Popular Invention

Welcome, Intrepid Voyager into the Future! Once again, we, the Editorial Staff of *Popular Invention*, take great Pride in presenting to you, the Discerning Observer of Technological Progress, our Annual Issue concerning the Amazing Strides Science and Industry, working hand in hand for the Betterment of All, have brought forth to astound our Wondering Eyes.

Yes, we do live in an Age of Marvels. Imagine! Within only the scant span of recent memory, all Humanity and the great Empires and Civilizations it had raised up were merely limited to the power applicable through the efforts of Wind, Water and the Horse. Now, even the poorest

citizen can, for a mere few pennies, afford to harness the Mighty Force of Steam itself, in the form of the *Locomotive Engine*, the *Iron-hulled Passenger Liner*, or even the speedy form of the *Steam Automotive*! Truly, we are blessed to have lived to achieve the Highest pinnacle of Progress possible!

So join us now, as we take you upon a wondrous tour of the newest Marvels of our time—the mighty Age of Steam!

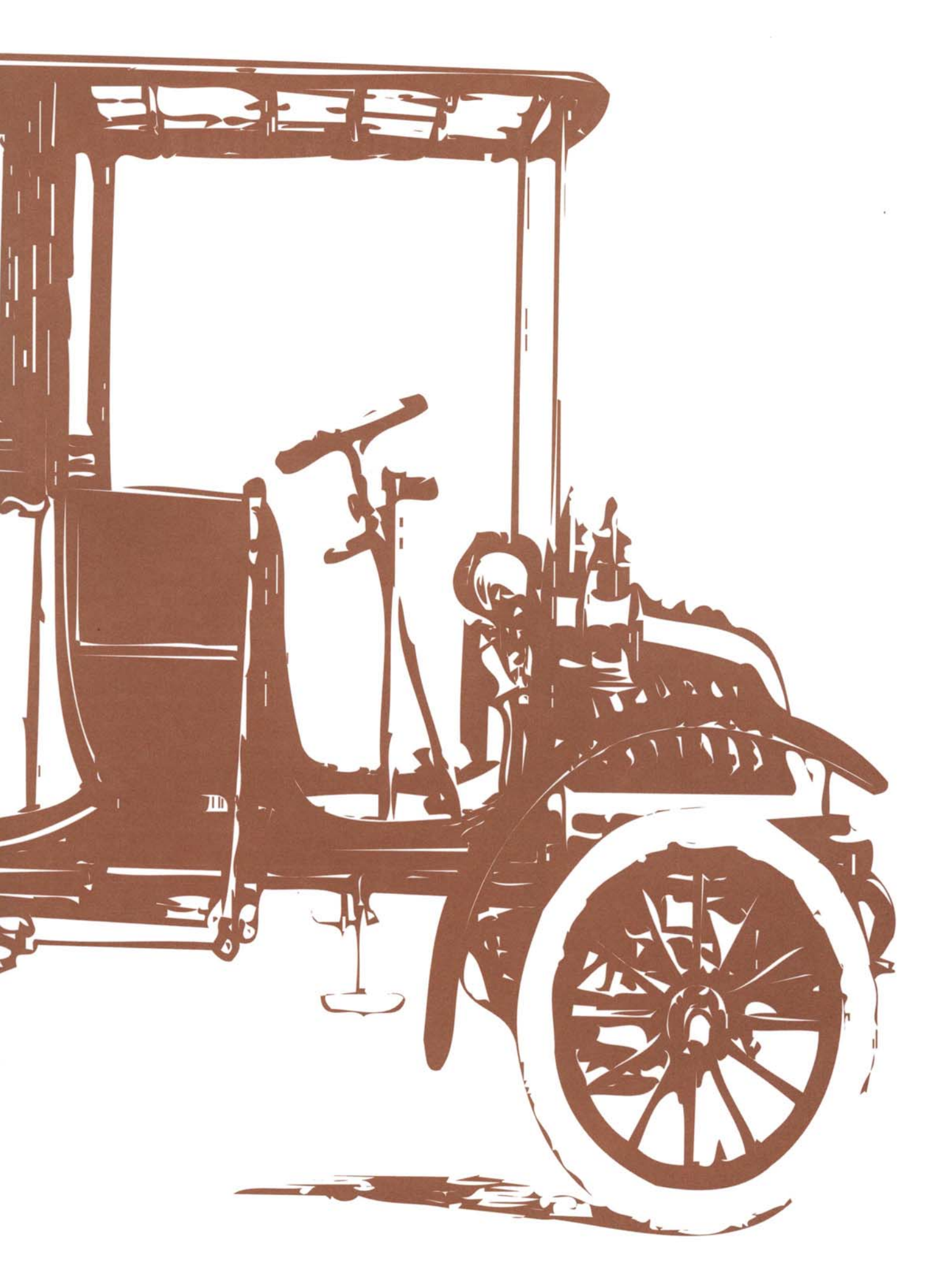
—The Editors



STEAM on LAND

If one is seeking the signs of how this Age has been transformed by the galvanizing Power of Steam, one need look no further than in the very cobblestones and country lanes of our own neighborhoods. For it is upon the vast lands of the Earth that Steam is most fitfully employed, whether in the great Railway Engines that bring the fruits of Industry to our shops, or in the hissing "teakettles" that scare horses and bring the blinding velocities of Modern Automotive travel to our streets. In this First Chapter, we at *Popular Invention* shall endeavour to examine the Role of Steam in Land Transportation and Warfare.





Steam Uniped



A miracle of the Modern Age! A personal conveyance that can carry a man easily, yet does not cost your life's savings. A wondrous device indeed, the Steam Uniped is capable of speeds in excess of 5 miles per hour! Its comfortable seat, spacious cargo area, and handily placed control stick make this the best choice for the modest businessman's personal transport. Its utilitarian design makes it perfect for use by couriers, as well as the younger members of the family.

The frame is constructed of durable iron, covered with fine brass and a quality enamel finish. The engine can run for over an hour without refuelling, and the boiler can operate from nearly anything combustible. The seat of the Uniped is fine tooled leather, with appropriate brass edgings and fittings. The wheel is constructed from a cast iron frame, making it durable on even the worst roads, and has a 1" thick India Rubber tyre.

What makes the Uniped unique is its ability to operate with just one wheel. The Uniped utilizes a high quality, hand crafted gyroscope. This gyroscope helps keep the Uniped level on the flattest roads and the steepest hills.

We at *Popular Invention* expect to see the streets literally clogged with these Unipeds within just a few short years. Their utility, size, and quite reasonable price lead us to believe that the Steam Uniped shall be in mass production before the end of the year.

Steam Unicycle

Cost: 10 days at 1,000c

Size: Small [30 wounds]

Description: The Wheel is cast iron. The Seat and Engine Frame is constructed from light wood. The finish is done over in a high quality gloss enamel. The control stick is Cherry Wood, with a Brass knob.

Powered by: A spherical brass boiler covered with hundreds of tiny rivets, hissing quietly

Operation Time: 1 Hour

Controlled by: The Control Stick, attached to the Wheel, and the Gyroscope

Moves with: Cast Iron Wheel, with a 1" India Rubber Tyre

Alvin Dumont



Whatever possessed Alvin Dumont, expatriate Frenchman, to become an inventor we shall never know. But his contributions to modern technology, from his work at Rolls-Royce on their Steam Automotive Project to the Steam Uniped (described earlier), have helped shape our modern world.

From his days as a school teacher outside Paris, to his life on the run from the government of Napoleon the Third, Alvin has spent a lot of time saying things others didn't believe. Many didn't believe that a teacher of literature knew enough about politics to foresee the rise of Napoleon the Third. Many didn't believe that a political dissident knew anything about engineering, yet you only have to look at the

wonder and elegance of the Rolls-Royce Steam Automotive to know that they were wrong.

The development of the Steam Uniped, according to Dumont, came when he saw the look in people's faces as the first Steam Automotives went by. *"They were filled with wonder, with jealousy, with envy ... it was an interesting mix."* He set out to build the Uniped immediately.

As with so many things in his life, the Uniped project was not universally praised when made available. In fact, it became the object of derision and ridicule from all quarters including, I'm sorry to say, this magazine. But when the utility of that invention was discovered, and the public fell in love with it, it was as though a light had been turned on.

People literally came out of the woodwork to congratulate the former Frenchman on his great ideas. Others came to ask his advice, or attempt to hire him to work on projects for them. Still others came to try and take advantage of his newfound success.

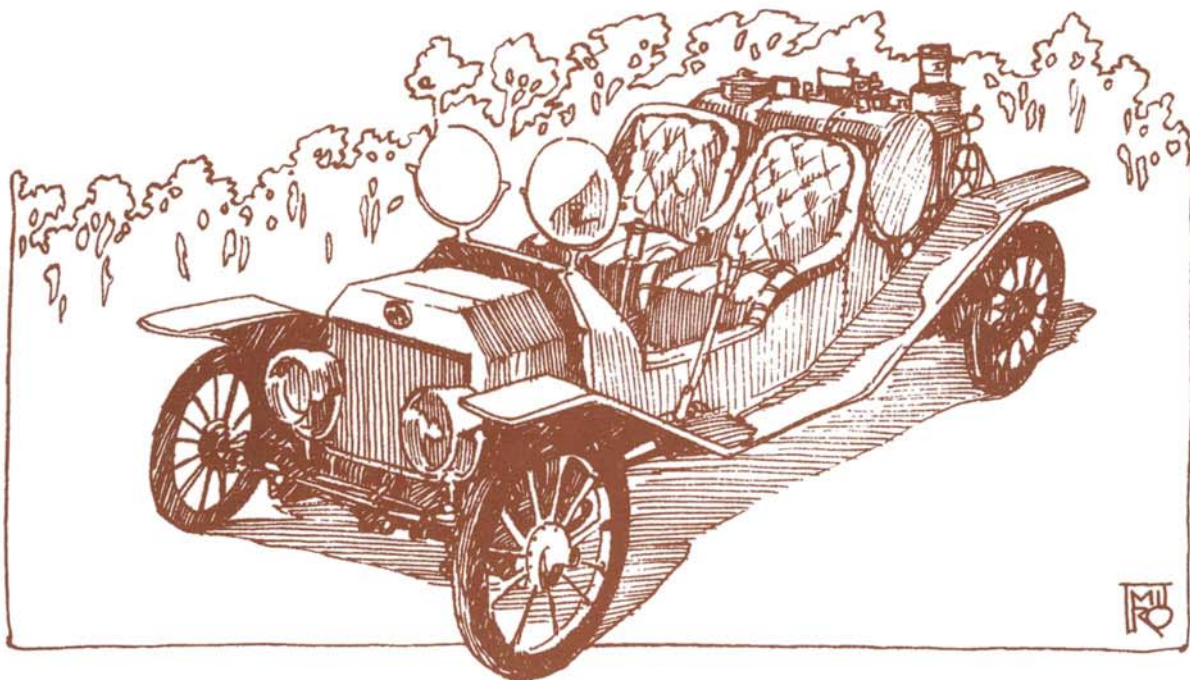
Alvin Dumont now takes all of this in stride. He and his wife of two years live in a small house outside Sussex, and plan to start a family. He is currently writing a book on his engineering ideas, and hopes to sell it to a publisher.

What is next for this bon vivant jack-of-all-trades? Who can tell? But Alvin Dumont has certainly earned his place among the world-class inventors.

Alvin Dumont, Inventor

Abilities: Education [GR], Exchequer [AV], Fisticuffs [PR], Perception [GR], Physique [AV], Tinkering [EXC]





BMW i-3 SteamMobile

From deep in Bavaria comes the first of the mass-production Steam Automotives. But let that not deceive you, the Reader, as to its value and craftsmanship. Hand-built by the talented Dwarfish Engineers of the Bavarian MotorWerks, we consider the BMW i-3 SteamMobile certainly to be the very height of modern automotive technology. Indeed, the BMW SteamMobile has become something of a minor status symbol among the upper middle class members of society, and it is said among certain circles of Society that one can tell who happens to be on his way to the top by how soon he buys his first BMW.

The BMW SteamMobile features two luxurious seats, mounted high up in the front to afford the riders the best view of the road. The Steam Engine is located in the back, with a large capacity boiler designed for long minutes of uninterrupted driving. The coach almost floats along on a combination of an advanced technology set of coach springs, and thick India Rubber tyres over sturdy wood and steel wheels.

A mere two scuttles of coal (and a bucket of water) will allow this vehicle to operate for near-

ly an hour! The BMW SteamMobile is capable of speeds in excess of 40 miles per hour, and can go faster when heading down an incline! The fine quality seats make this vehicle a joy to ride in. The passenger carriage also features a spacious cargo area, which can hold a medium-sized lady's steamer trunk or equivalent cargo.

The only drawback to this fine example of automotive design that we could readily see is the lack of a bonnet for the car. While this is not a problem on a sun-filled day, a stormy or drizzly day (as if often the case here in London where the office of *Popular Invention* reside) will make this vehicle less likely to see use.

BMW Automotive

Cost of Construction: 20 days at 2000c

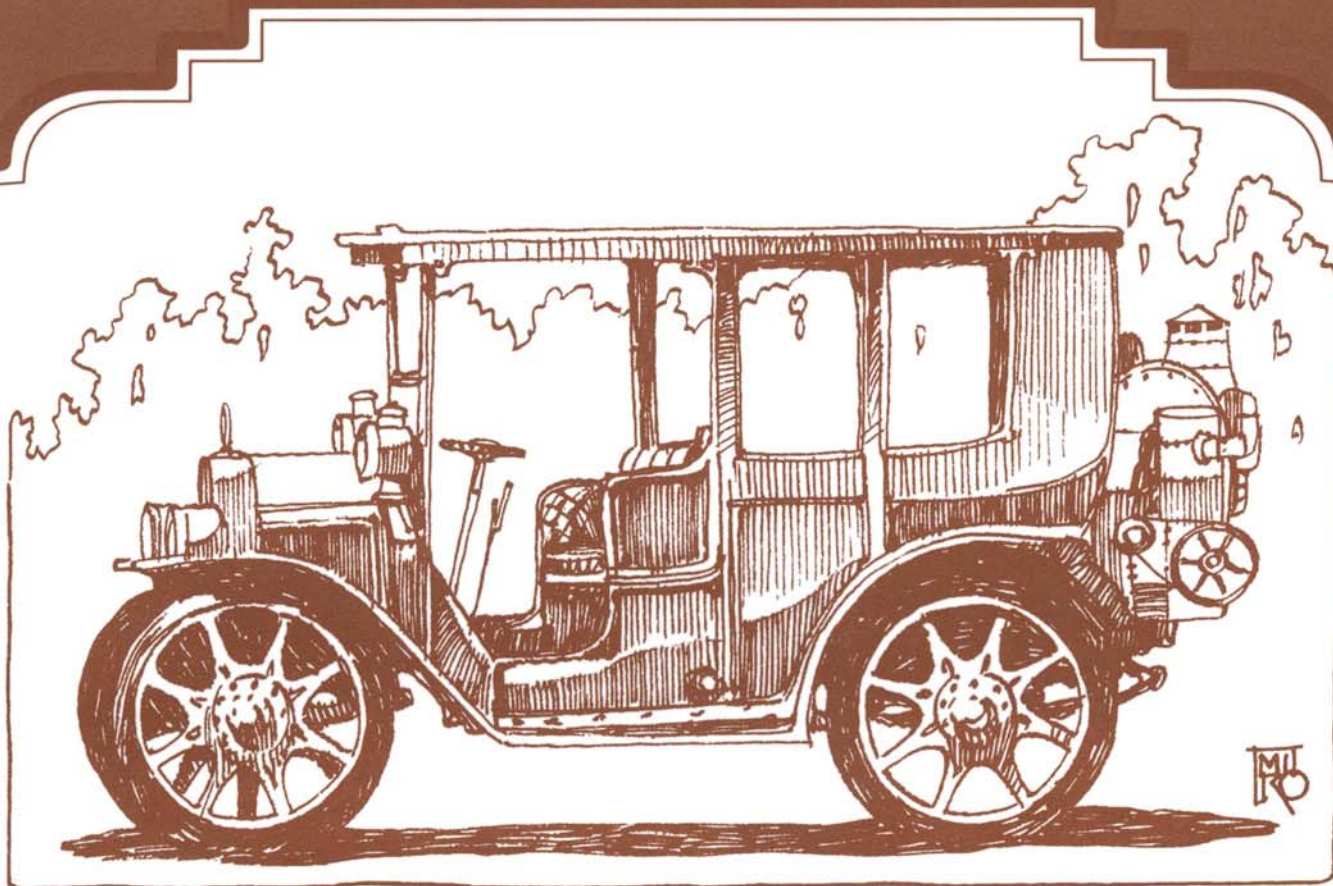
Size: Medium [60 wounds]

Powered by: Steam Engine

Operation Time: 1 Hour

Controlled by: Long metal levers that crank incredibly complex arrangements of Gears

Moves with: Spindly metal and wood wheels with India RubberTyres



Mercedes SL Automotive

The fine Austrian engineers at Mercedes have brought us another remarkable entry in the Steam Automotive field. The Mercedes SL (Steam Loco-automotive) Automotive is practical, affordable, and luxurious.

The Mercedes shows what can happen when engineers that truly enjoy their work create something they very much wish to create. From the fine quality interior to the precision-crafted components on the highly intricate and efficient Steam Engine, this quality workmanship definitely shines through.

The coach is filled with fine quality details, such as overstuffed leather seats, glass windows, a large cargo area, and enough room for four people (including the driver). Another unique feature of the Mercedes is the Music Box. Built into the control panel of the Automotive, the Music Box has four selections available.

Simply wind it up, and enjoy your drive in style.

The engine has been ingeniously housed out of sight, making the Automotive sleeker and

more aerodynamic. The Automotive is capable of speeds over 30 miles per hour in the urban areas, and can exceed 35 miles per hour if allowed to travel on smooth open roads without the need to stop.

Craftsmanship like this does not come cheaply, and this Automotive is currently priced very competitively. Only time will tell if the Mercedes organization plans to continue in the business of affordable transportation, or if they will choose to move themselves into providing high quality and expensive transportation to upper crust society.

Mercedes SL Automotive

Cost: 22 days at 2,200c

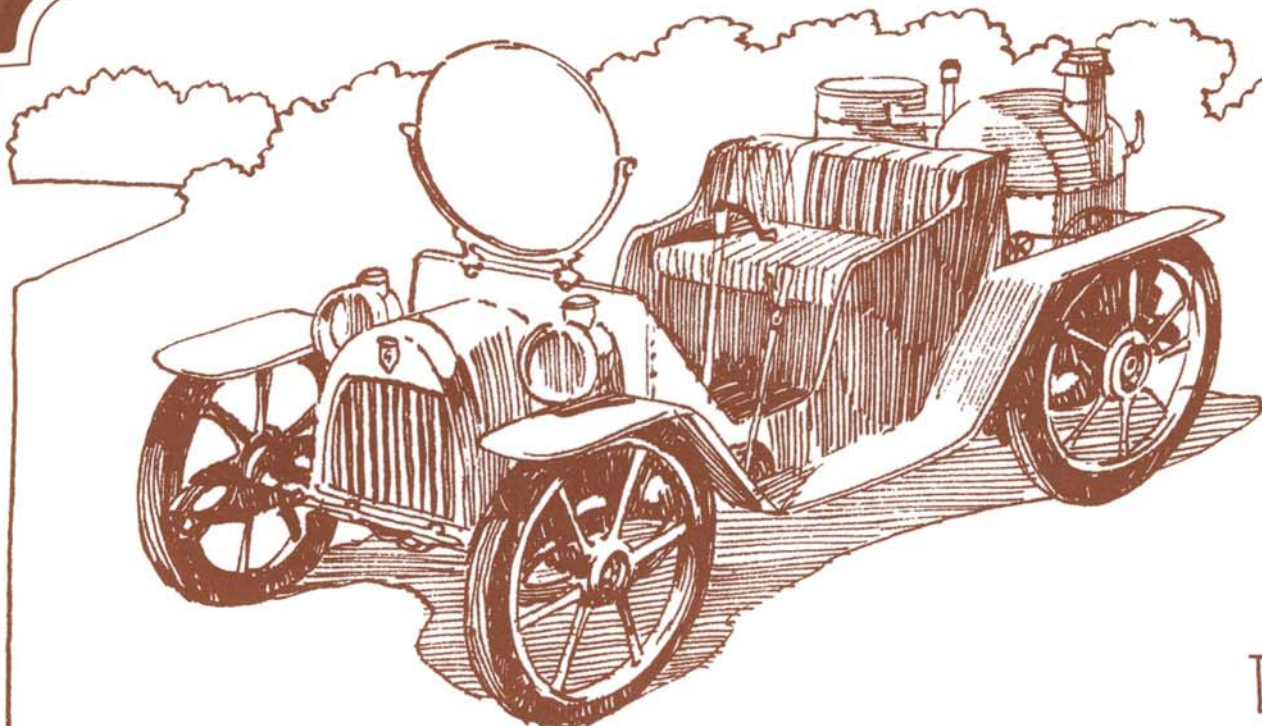
Size: Medium [50 wounds]

Powered by: Steam Engine

Operation Time: 3 Hours

Controlled by: A Complex Arrangement of Levers

Moves with: Sturdy India Rubber-Shod Iron Wheels



Renault Automotive

From the French, we bring you this formidable entry into the Steam Automotive Industry. The Renault Automotive is both practical and affordable.

The engineers at Renault set out to make the Automotive they believe will be the most popular in the years to come. Their emphasis was on reliability and ease of repairs. This they have accomplished, with only a few minor drawbacks.

The biggest of these involves replacement parts. While they did build the Automotive as much as possible from things readily available, their primary concern was availability in France. While this is not a problem for the average French buyer of this vehicle, it greatly reduces its utility beyond the borders of that country.

The Renault features a medium-sized boiler, making it capable of more than an hour of continuous operation without stopping to refuel. The steering bar is located in the centre, between the two seats, making it easily operable by both right- and left-handed individuals. They have also

thoughtfully attached the throttle to the steering bar. Located on each side of the vehicle is the brake, modelled after the brake on a horse-drawn coach.

The workmanship on the overall vehicle is competent, but nothing spectacular. It seems the French cared more for their afternoon wine break than the vehicle, as we found numerous small problems and imperfections in the finish. If the company would spend some time working on quality, and less on their advertisements, they will find themselves with more business than they can handle.

Renault Automotive

Cost: 20 days at 2000c

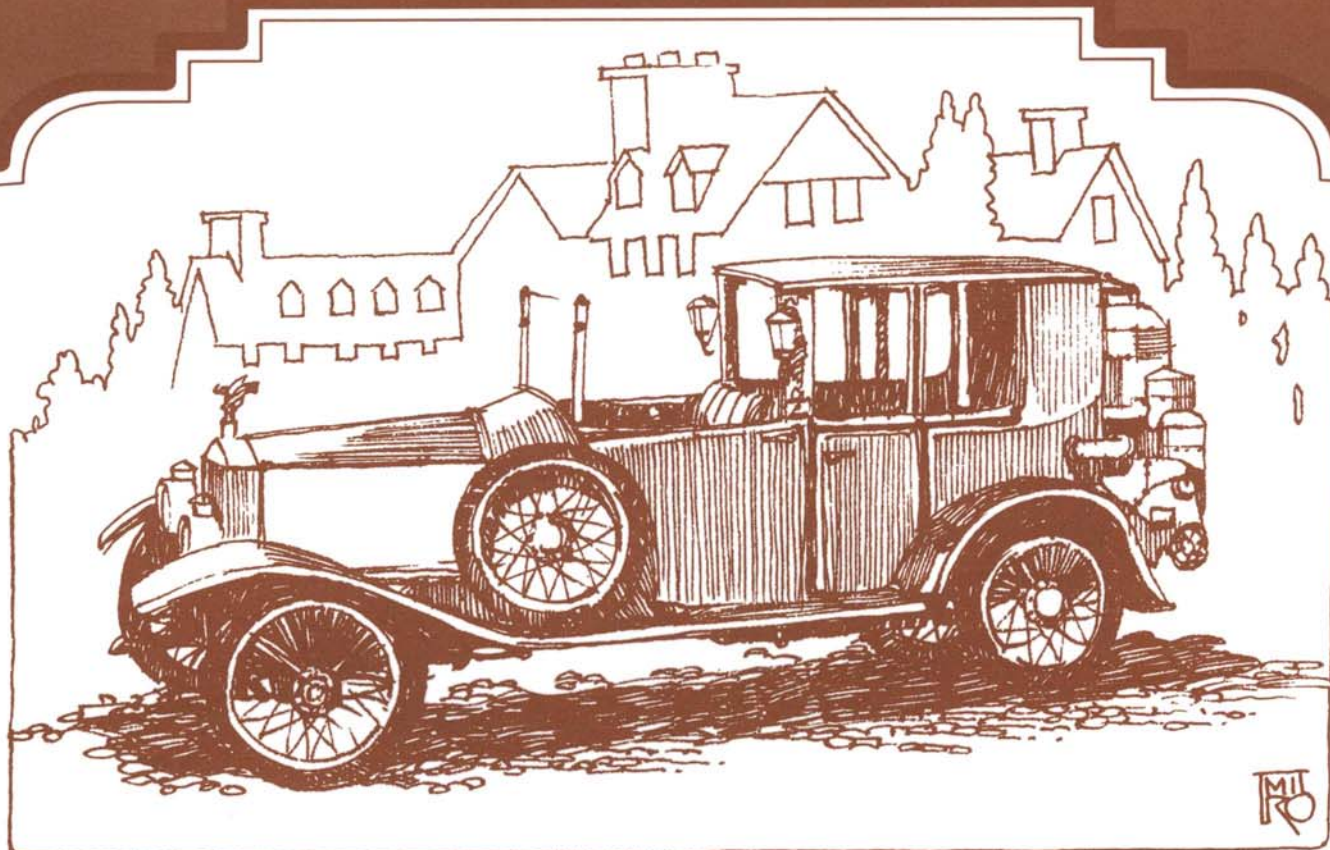
Size: Medium [60 wounds]

Powered by: Steam Engine

Operation Time: 1 Hour

Controlled by: A Complex Arrangement of Levers Attached to a Steering Bar

Moves with: Metal-spoked Wooden Wheels covered with Indian Rubber Tyres.



Rolls-Royce Automotive

The finest in British luxury — a Rolls-Royce Steam Auto! In the grand tradition of British engineering, the craftsmen at Rolls-Royce have truly outdone themselves in the creation of this beautiful vehicle. From its fine leather interior to its easy access boiler, no detail has been left to chance.

Starting from scratch, the engineers at Rolls-Royce developed the Steam Auto in a mere eighteen months. Every attention was paid to detail, from the door knobs to the number of rivets in the main boiler. From the seats to the doors, the interior has been upholstered in the finest, softest calf leather. The knobs and controls are fashioned from brass, and then plated in 24-karat gold.

The suspension of the Rolls is one of the more interesting features of this Auto. Rather than start with the spring steel suspension common in the other Steam-Mobiles, Rolls chose instead to hang the passenger compartment from a series of Heavy springs. Instead of the passengers taking the brunt of a particularly

poorly maintained roadway, the lower carriage absorbs it, leaving the compartment stable and smooth.

Currently, there are few of these Autos available. Since each one is handcrafted (as opposed to the sweatshop conditions of many of the other mass-production "auto" makers), the number the company can produce each year is limited. Add to this the cost of the high level of craftsmanship in each car, and you soon discover that this car is built primarily for the upper classes. Queen Victoria owns one of these cars, as do many of the aristocrats in London.

Rolls Royce Automotive

Cost: 23 days at 2300c

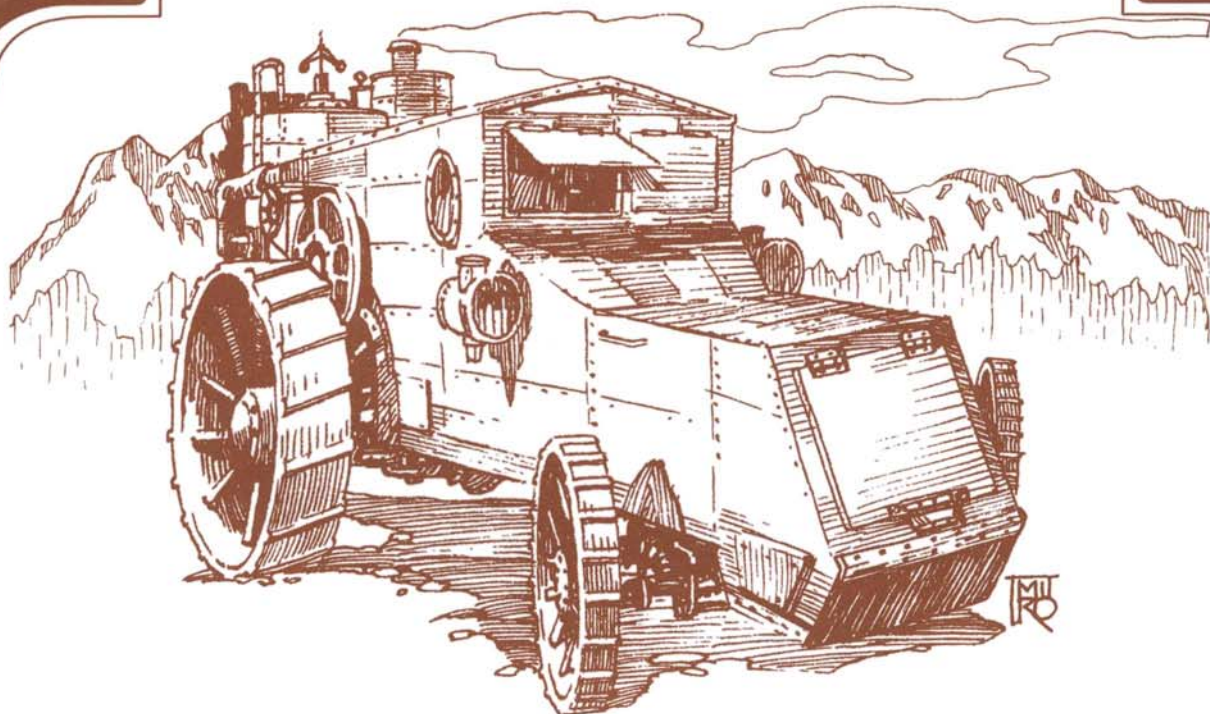
Size: Medium [60 wounds]

Powered by: Steam Engine

Operation Time: 6 Hours

Controlled by: A Captain's Wheel in conjunction with a series of Foot Pedals

Moves with: Wood and Steel Wheels shod with several inches of India Rubber



Steam Explorer

From the mind of one of this world's most intrepid adventurers comes this exciting entry into the Automotive trade — The Steam Explorer.

Designed and built by Sir Everett Q. Hollingsworth III, the Steam Explorer is truly remarkable. Constructed from the sturdiest materials yet devised, capable of withstanding immense torture from driving conditions the world over, it nevertheless is well suited for the so-called "urban" adventurers as well.

Sir Hollingsworth's work began with the frame from a Rolls-Royce SteamMobile. He added thin steel armour plate, then replaced the suspension with a system that was a bit more rugged, and reinforced it with additional spring steel more appropriate to a wagon. He also replaced the luxury-minded wheels (with their 2" thick India Rubber tyres) with sturdy steel-clad wooden wheels. He created an additional set of tyres featuring protruding steel spikes.

These are well suited to jungle and wilderness, we are told.

The boiler from the Rolls was replaced with an industrial model, in the belief that it would stand up better to the rigours of exploration. The vehicle is now capable of sustained driving of more than three hours without stopping to refuel.

But he wasn't content to leave it at that! Sir Hollingsworth replaced the plush, luxury interior of the Rolls with a heavy duty one of durable canvas. He also reinforced the glass of the front window to ensure that it was less likely to break in a crisis.

The Steam Explorer: for the man about the jungle, or around town. No adventure is too small for this little wonder.

Steam Explorer

Cost: 22 days at 2200c

Size: Medium [120 wounds]

Powered by: Steam Engine

Operation Time: 3 Hours

Controlled by: Complex lever and pedal arrangement

Moves with: Sturdy Steel-clad Wooden Wheels



Steam Velocipede

Just when you thought the truly original ideas had been tapped out in this Age of Invention, a clever inventor comes back with something that truly amazes and astounds. The Steam Velocipede is just such a vehicle.

Combining elements of both the Steam Automotive and the many new-fangled riding devices now appearing on the streets of our cities, the Steam Velocipede allows almost anyone of modest means access to swift and reliable Modern conveyance.

Like the common velocipede (also known as a bicycle in the Americas), the frame of the Steam Velocipede is constructed of sturdy wood, with thick India rubber tyres for maximum traction. Beneath the large leather saddle is mounted a small boiler, which drives a chain that propels the large front wheel. The driver rests his feet upon two pedals afixed to this wheel's hub, which act both as foot rest and as friction brake.

Unfortunately, the low cost and relatively easy availability of these machines has made them quite popular among lower class youths who fancy themselves to have a mechanical bent, but who cannot afford a true automotive. Bands of these velocipedal hooligans have taken to travelling in massed groups, sporting luridly painted vehicles and subjecting innocent travellers to taunts, blasts of steam exhaust, or worse, only to escape in a cloud of steam when the Constabulary arrives to arrest them, a deplorable commentary on the Youth of Today.

Steam Velocipede

Cost: 20 days, at 2000c

Size: Small [40 wounds]

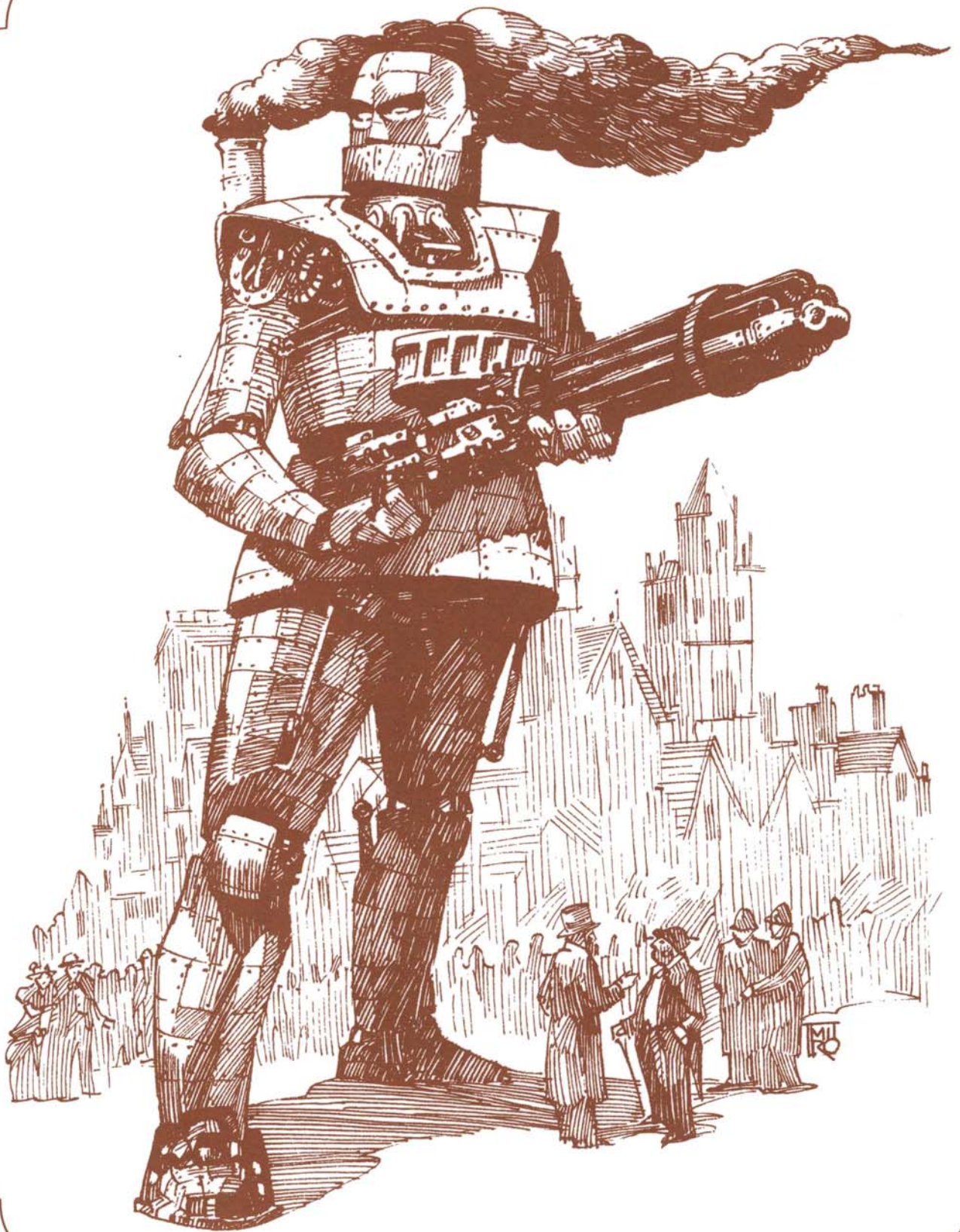
Description: Wooden frame with a leather saddle

Powered by: A spherical brass boiler

Operation Time: 1 Hour

Controlled by: A Control rod

Moves with: A 1" thick India Rubber Tyre



Giant Steam Automaton

Towering over the skyline of Tokyo, the arrival of the world's first Giant Steam Automaton was welcomed with fear and trepidation.

Constructed by the mysterious Lord Yoshikazu Tomino (see his biography later in this issue), the Giant Steam Automaton is a true Wonder of the Age. Standing nearly 100' high, the Automaton caused sheer panic on its first appearance in Tokyo. And justifiably so. Lord Tomino used this initial shock to quickly destroy key military and police units, and declare himself Lord of the city. It was only through the diligent work of two agents of the United States Secret Service (who happened to be in the area following up on an unrelated lead, or so they reported to us) that Tomino was stopped, and the Automaton destroyed. Tomino escaped, however, and it was hoped that he would not return.

That hope was dashed when another Giant Automaton was soon sighted, this time in northern Japan. The effect of this automaton on the local unsophisticated populace was even better than in Tokyo, and he quickly swept away all resistance. Now Lord Tomino truly has become a Lord, and has started to plan his consolidation of all of the Northern Japanese islands.

Lord Tomino's new automaton stands more than one hundred feet in height. It is constructed from a combination of wood, iron, and steel, and is highlighted by brass fittings.

It is powered by two large steam engines that may have come from a commercial vessel. Both are served by a large central boiler, and the automaton carries enough wood for an extended battle. The area around the boiler is heavily armoured with steel plate. The automaton is operated from a control room located in the "head." There is comfortable room in the head for an operator and one other individual. Lord Tomino has

spared no expense in making the control room a true showpiece, and it truly looks magnificent.

There is a drawback, however. The steam lines pass close enough to the head that it gets hot inside there very quickly. To combat this, huge buckets of ice are brought in before a fight, but that does little to alleviate the problem.

The arms and legs of the huge automaton are constructed with a framework of steel girders covered in wood. The edges of the wood are covered in decorative brass fittings. The effect is quite pleasing. The hands of the automaton are articulated, and can operate like a human hand. The joints of the fingers are made with flexible India Rubber gaskets, joined on each side. The feet of the automaton are cast from Iron, and are knobbed on the bottom for greater traction.

The most amazing thing about the Giant Steam Automaton is the crew, or rather, the lack thereof. The automaton is operated by Lord Tomino personally, using a complex series of clockworks and levers leading to the Control Throne and central Captain's wheel. It is rumored that only one other person, Lord Tomino's daughter, Ai, also knows the secret of this infernal device's operation, and the knowledge of this secret has driven her quite mad.

Tomino's Giant Steam Automaton

Cost: 360 days at 36,000c

Size: Huge [140 wounds]

Powered by: Steam Engines and Complex Clockwork

Operation Time: 6 Hours

Controlled by: An Intricate and Complex Arrangement of Levers, Metal Cables and a Captain's Wheel

Moves with: Articulated Iron and Wood Legs

Armed with: Gatling Cannon, Self-Guided Rockets (x10)

Lord Tomino



Soon after Lord Tomino's conquest of Northern Japan, we here at *Popular Invention* dispatched a reporter charged with gaining information about Lord Tomino's Steam Automaton. What he came back with was even more remarkable, as the stern Japanese Lord was so impressed with our interest he granted the magazine an exclusive interview. What follows is an abridged version, with an extended interview planned for next issue.

PI: Thank you, Lord Tomino, for granting this interview. I must say that I am impressed with your mastery of English.

LT: It is nothing. A mongrel language.

PI: Er, yes, of course. Lord Tomino — may I call you Yoshikazu?

LT: Lord Tomino will be acceptable.

PI: Er, yes. We were curious as to your past. We can find no record of you before twenty years ago, when you arrived at Oxford to study.

LT: That is none of your concern. The Tomino Clan is an old and respected clan. My family has been very active in trading throughout Asia, and became very wealthy. My father decided to send me to England to study after meeting a British Missionary.

PI: What did you study at Oxford?

LT: Many subjects, including engineering, physics, and the works of da Vinci.

PI: Was that what gave you the idea for your Giant Steam Automaton (profiled earlier in this issue)?

LT: In part. The mechanisms of da Vinci were very complex, and very advanced for his day. I was inspired to build my ultimate creation by his work.

PI: What happened in Tokyo? We understood your plans were thwarted by ...

LT: That is not a subject I care to discuss.

PI: Sorry. Do you have a base of operations? Most Masterminds do, after all.

LT: Yes, and it is staffed and protected by men loyal to me.

PI: Care to tell our readers where it is ...?

LT: You must be joking!

Lord Yoshikazu Tomino, Mastermind

Abilities: Athletics (AV), Automaton Design (EXT), Charisma (GD), Fencing (GD), Fisticuffs (GD), Perception (AV), Physique (GD), Stealth (AV), Tinkering (EXT)

Prussian LandFortress

The Prussian LandFortress represents the peak of technology for modern engines of land warfare. Requiring a crew of more than fifty men to operate, and an additional fifty men just to maintain its performance, this vehicle is truly an awe-inspiring sight. It is literally a "land battleship" in every way — armament, armor, and speed (or lack thereof).

A LandFortress is over 50' high, 50' wide, and 100' long, and travels on a series of massive *tracks*, highly tooled metal plates linked together in a loop and placed around metal wheels, which have sprockets on them to engage holes cut into the plates. These tracks conform to the terrain, making it much easier for the LandFortress to cover uneven territory. The nature of the tracks, combined with the length of the LandFortress, also means that it can even cross gullies and crevasses up to forty feet in width. Once a LandFortress gets rolling, it is very difficult to stop it.

The exterior of the LandFortress is covered in immense iron plates. These plates are quite thick, and can withstand the blasts of several large artillery rounds. This is quite fortuitous for the crew, as the mortality rate amongst crew was very high in the earlier models, when the armour plating was not quite so thick. In newer models, armoured skirts have been added to protect the treads (recently, enemy artillery crews have taken up shooting at them to knock the LandFortress out of the action). Despite this vulnerability, and an imposing size which makes it an easy target, the Prussian LandFortress is almost always the safest place to be on the battlefield.

The impressive array of armament the LandFortress carries also ensures that enemy units will think twice before approaching the behemoth. The main guns are mounted on the top, in each of four rotating turrets. Each packs the firepower of a modern Dreadnought cannon and can be rotated 360° in any direction, and elevated 45° above or below horizontal. In addition, four Gatling Guns ring the lower sections of the Fortress to keep infantry at bay or to disable lightly armoured vehicles or emplacements.

The LandFortress is piloted from a Command Bridge located in the front near the top. Slitted windows containing armoured glass and a series of periscopes give the Command Crew a relatively complete view of the battlefield. The Command Crew of four officers are responsible for all the actions of the vehicle. The Drive Train Officer is responsible for the Engines and the condition of the tracks. It is quite common for the

Drive Train Officer to do his work from below, rather than stay on the Command Bridge, as the bridge of a LandFortress is even more crowded than that of an Aerovette (*see article, page 42*).

The Fire Control Officer is in charge of all the weapons on the LandFortress. He directs the crew to fire its weapons on the orders of the Commander or his Adjutant. The other two members of the Command crew are the Commander and his Adjutant. They are in overall command of the LandFortress, and make all decisions for its operation.

The Command Crew communicates with the members of the crew using speaking tubes, as on many ocean-going ships. Each tube is clearly labelled to avoid confusion in battle (many an early battle was lost because the commander found himself out of touch with his gunnery crews).

Although it is now a resounding success, initially the LandFortress program was fraught with problems. The armour, as originally designed, was not thick enough to protect the crew, and the early tracks kept falling apart, stranding the vehicle in less than tenable positions. The guns also could not be operated unless the LandFortress was stopped. And (most difficult to overcome) the crews could not hear their orders over the speaking tubes due to the loud nature of the large steam engines, making it impossible to control the vehicle.

Eventually, these problems were overcome by perseverance, hard work, and determination that what they were doing was right. The Iron Chancellor is justifiably very proud of his demons of the battlefield. They have proven their mettle against human and Seelie forces, and he sees little in the way of opposition to his plans of New European, and eventually world, domination.

Prussian LandFortress

Cost: 268 days at 26,800c

Size: Huge [180 wounds]

Powered by: Steam Engines

Operation Time: 24 Hours

Controlled by: A Complex and Intricate Arrangement of Levers, Metal Cables, Punch Cards, and a Captain's Wheel

Moves with: Clanking Metal Treads with lots of Gears and Driving Wheels

Armed with: Gatling Guns (x4), Artillery Guns (x4)

Early in the day, all of Benedek's carefully laid plans had fallen apart as the Prussian's LandFortresses rumbled easily across the shallow river the old General had counted on to bog them down. Inch by bloody inch, the Bayernese forces and their allies had been driven back against the hill they were defending; now there was no place to run, and no future other than defeat.

—The Battle Of Königsieg, vol. 4, "The Tides Of Battle Run Swift", by Heinrich Wolfgang Schwartz





Land Fortress

Adolf von Shrakenberg



An Austrian by birth, a Prussian by choice, Count von Shrakenberg is a military genius or a monster, depending on your point of view. His dream, however, of a mobile fortress, capable of bringing incredible defenses along with its immense firepower, has come true. And his thoughts on the future make some quake with fear.

Von Shrakenberg was born outside Vienna in 1816. His family was well to do, so his life was not particularly harsh. At an early age he joined the Austrian military, like his father before him. He rose rapidly and gained much responsibility.

Von Shrakenberg was always a dabbler into improving things—methods, arrangements, schedules, and the occasional mechanical contrivance.

During the end of a military exercise, a colleague commented, "Would it not be grand to be able to bring our large artillery in close, with little to fear from enemy fire?" This comment would continue to haunt Adolf's life for many years.

With the development of a more reliable steam engine for use in a vehicle, Adolf began to formulate ideas for the construction of this armoured artillery. His first efforts proved quite successful—the von Shrakenberg Armoured Steam Car is a legend among certain circles as the first armoured fighting vehicle—and the work continued.

Then disaster struck! Von Shrakenberg was secretly approached by high-ranking members of the Prussian Military. They wanted him to build armoured vehicles for them. He continually refused, and eventually they gave up. Unfortunately, the Austrian Secret Police found out what had happened.

Convinced he had betrayed the Austrian Forces, they began to harass his family and meddle in his affairs. When this did not appear to rattle him enough to run, they arrested his family. During the arrest, his father and mother were killed trying to escape.

This was too much for Adolf. He contacted the Prussian Military. Using agents under their control, Adolf was able to rescue his wife and his brother and spirit them out of Austria. Because of the betrayal of the Austrian military, Adolf broke his Oath of Loyalty to Austria, and joined with the Prussians.

Count Adolf von Shrakenberg, Inventor

Abilities: Athletics [AV], Charisma [PR], Connections [GD], Education [GD], Exchequer [GR], Fisticuffs [GD], Physique [AV], Tinkering [GD]

LandFortress Werks

Located in an underground bunker known as *Tief Dreizehn* near Dresden, the LandFortress Werks is one of the most feared installations in all of New Europa. It is here that the dreaded LandFortresses used by the Iron Chancellor are built, and it is here that additional research into the construction of larger and more powerful mobile weapons of war continues today.

The LandFortress Werks is divided up into three major sections—the Iron and Steel Werks, the Fabrications Werks, and the Assembly Werks; and two minor ones—the Storage Yard, and the Training Academy. These are all located around the administration facility, arranged much like a large horseshoe shape. The entire facility is surrounded by multiple fences, and is patrolled by soldiers of the Iron Chancellor's Personal Guard.

The Iron and Steel Werks is one of the most complete, advanced, and certainly highest producing Iron & Steel facilities in New Europa. Raw stock is brought in by the trainload, and converted rapidly into iron and steel. Using the latest methods developed in the Dwarfholds, the Iron and Steel produced here is of the highest quality. This is important to the Prussian Forces, as flawed materials would reduce the value of the LandFortress in combat.

The Fabrications Werks is nearly the size of the Iron Werks and Assembly Werks combined. It is in here that all the parts of a LandFortress are created. Some of the work is accomplished using patterns and jigs, producing the kind of "interchangeable parts" that American gunsmith Mr. Colt uses in his famous revolvers, while other parts are hand tooled. The hand tooling is usually done by Dwarfs, as they are far superior at this kind of work.

The real key to production here is the use of something called an "Assembly Line." An assembly line is a large conveyor belt that transports the pieces of the LandFortress from the beginning of the line to the end. Along the way, each individual worker is responsible for performing one specific task as the Fortress rolls slowly past him. This allows the work to proceed at a much faster rate than would be otherwise expected. This facility turns out a LandFortress in just under twelve weeks, and they can build six at a time.

This leads to an annual production of twenty-four. Very impressive indeed.

Located adjacent to the Assembly Werks is *Tief Zwolf*, the storage bunker where completed machines are kept until their crews are assigned, and they go to join their regiments. At any given time, there are two or three LandFortresses in the bunker.

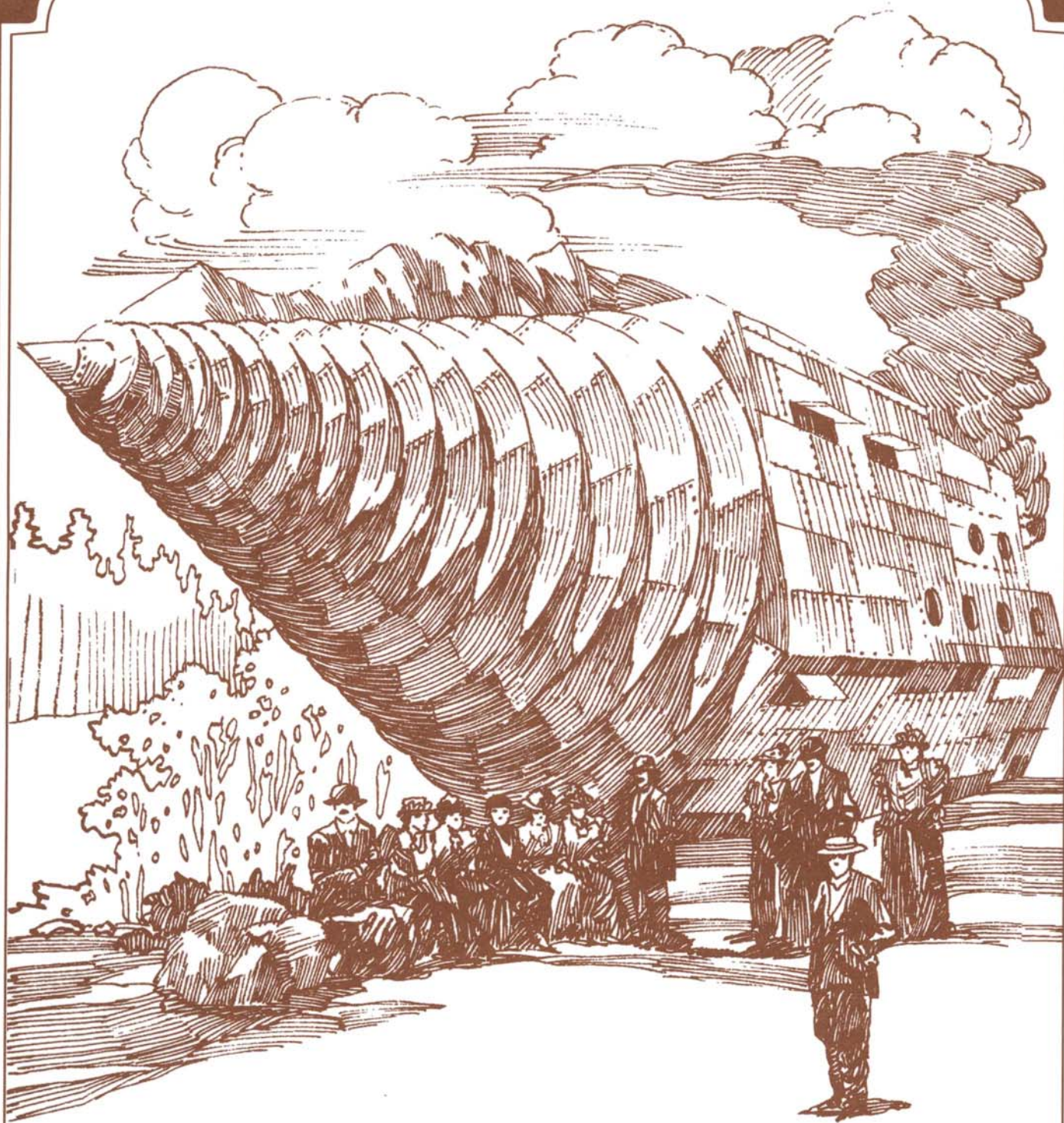
The only part of the LandFortress Werks located above ground is its other great advantage — the Training Academy. This is a recent addition to the grounds, and is already quite busy turning out troops to operate the massive LandFortresses. In fact, the complete crews for four LandFortresses can undergo training at once.

The training process is broken into several sections. The first part is a basic overview of the operations of the LandFortress. Each crew member is given enough knowledge of how the machine works so that, in a crisis, he can jump in and assist in any operation. After the overview is completed, the crew is split up, and the specific training is started. Crews are trained in operations, engineering, gunnery, repairs, maintenance, and command.

The Operations Crew is responsible for day to day duties: making certain the crew maintains the LandFortress, covering the various minor duties, &c. The Engineering Crew is responsible for the maintenance and upkeep on the Engines. The Gunnery Crew operates the guns. The Repair & Maintenance Crew are responsible for repairs before, during, and after a battle. The Command Crew are responsible for the lives and safety of the crew, and the safety of the LandFortress.

The final area of the LandFortress Werks is the Research Facility. It is here that researchers and inventors are sequestered in research. While we were not allowed to tour that particular building, we did hear stories about super explosives, a Prussian Counter to the Verne Cannon, a Giant Steam Automaton (not unlike the one used by Lord Tomino in his Asian Conquests), and much more.

Will all this be enough to allow the Prussians to continue their attempted conquest of New Europa? Only time will tell, and we here at *Popular Invention* are hoping against it.



FR

Steam Mole

The Steam Mole represents the pinnacle of Exploration Technology, combining an efficient steam engine, durable English workmanship, and the desire to travel beneath the surface of the Earth. Created by Professor Dominic Wheatley of Chatsford-on-Stoke, the Steam Mole is designed for use in any number of different subterranean applications.

The most prominent feature of the Mole is the large Iron Drill mounted on the front. Reinforced with high-grade steel, the Drill can cut through the Earth easier than a knife can move through butter. Directional changes are managed by minor adjustments in the attitude of the Drill. It cannot turn quickly, but it can turn.

The Drill is powered by not one, but two powerful Steam Engines. These Engines deliver an immense amount of power to the Drill. Each is powered by its own massive boiler, with a special heating arrangement.

Rather than use wood or coal, Professor Wheatley has chosen to fuel his boiler with a special high-concentrate fuel of his own devising. This fuel has the potential to burn at a much higher temperature than coal or wood, making the fire hotter and pumping the steam at an accelerated rate to the engines. The formula for this fuel is a closely guarded secret, and we were unable to obtain even a hint as to what it could be compounded from. It is our hope that the Professor shall choose to share this particular invention with the world, as we believe it will have many applications beyond the Steam Mole.

The actual cabin of the Mole has been ingeniously mounted inside the body of the craft. It sits as a separate cylinder inside the body, and can rotate up to 90° in either direction. This allows the cabin to make itself level

beyond the force of gravity and the torque of the massive engines.

Inside, the cabin has been luxuriously appointed. With a special seat for the driver, and couch seating along the side for up to eight additional passengers, the Mole would seem more like a special car on the London Express than a burrowing conveyance. The floors are covered in a plush carpeting, and the walls have been panelled in fine quality cherrywood. The control levers have been fashioned out of oak, with brass fittings, and the dials and gauges are done in brass as well. Everywhere is the touch of quality craftsmanship.

The Professor has related to us his feelings on the success of his invention. At one point on the maiden trip of the Mole, he found himself inside a large, previously undiscovered cavern beneath the town nearby. Upon further exploration, he found a race of people that, while they appeared human, did not apparently speak English. They were not hostile, and he was able to communicate with them after a fashion. After making several trades with them for some of their jewelry, he left.

The Professor has informed me that he made Her Majesty's Home Secretary aware of the village, and they will be visiting them again soon.

Steam Mole

Cost: 52 days at 5200c

Size: Large [120 wounds]

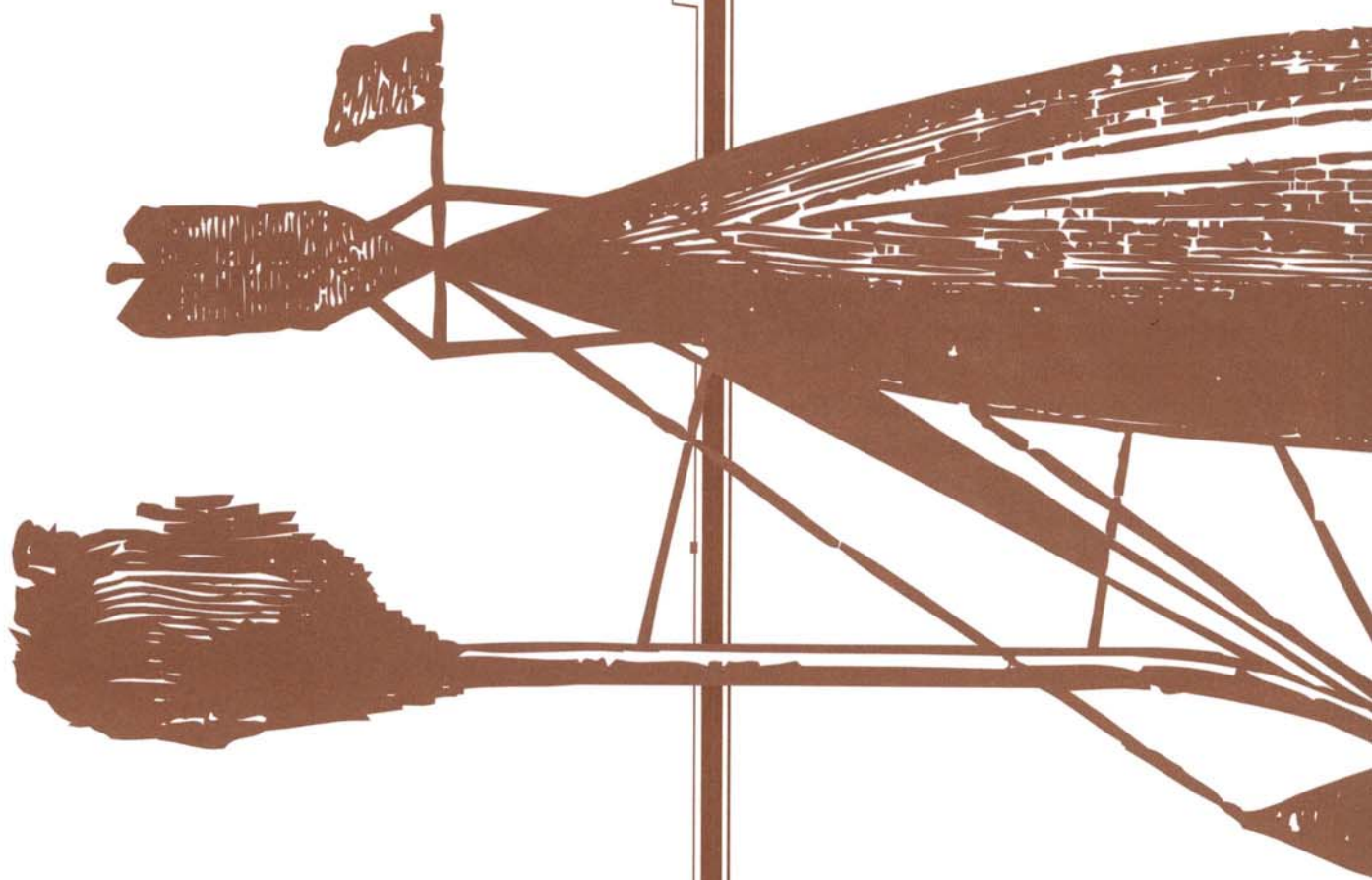
Powered by: Steam Engines, with huge metal boilers studded with brass and iron rivets

Operation Time: 24 Hours

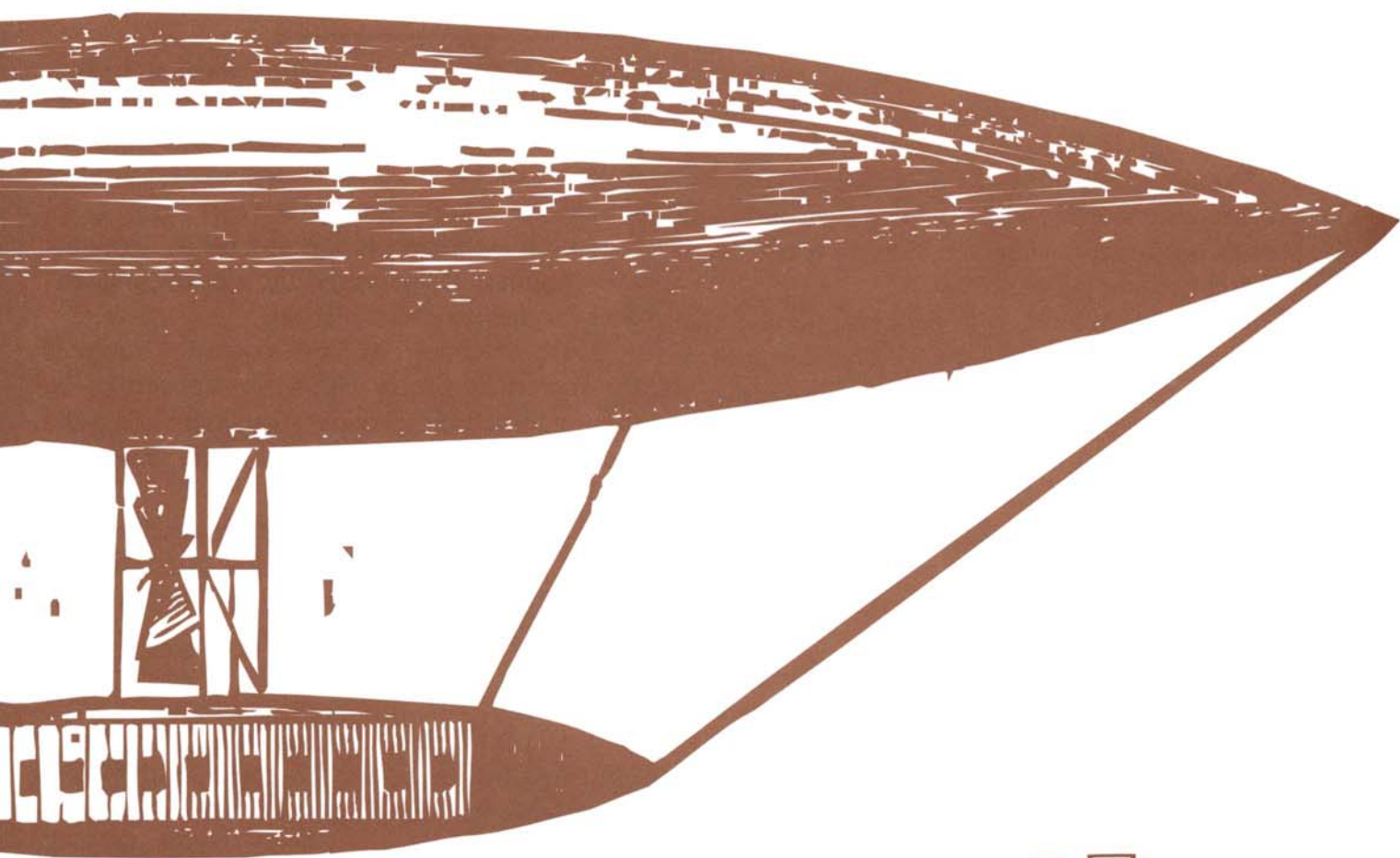
Controlled by: A Complex Arrangement of Levers, Cables, and a Captain's Wheel

Moves with: A Large Iron and Steel Drill Bit and dozens of small wheels on the circumference of the hull





The Power of Steam not only can be employed to the conquest of the land, but also to the Mastery of the Aether as well. In this Chapter, we shall examine the unique challenges facing those who dare to Pioneer this lofty Frontier, and the many ways in which they have used the Forces of Technology to stake their claims upon the Realm that once defeated fabled Icarus.



Aeronautic STEALMI

Steam Helicopter

Originally developed in 1867, the Incredible Steam Helicopter was an instant sensation in New European Scientific circles. Finally, a craft had been designed that utilized Leonardo da Vinci's work on rotating wing craft. Several years later, it is still exciting people.

Standing 12' tall, with rotating "wings" that are each 20' long, the Incredible Steam Helicopter is an impressive sight. The vehicle is constructed primarily of wood, with sparse steel reinforcement only where necessary. The Steam Engine is highly efficient, and can operate for extended periods between fuellings. The helicopter also features a large open coach compartment, designed to give the passengers and pilot the best possible view.

The Helicopter can carry four passengers in addition to the pilot. Two of these passengers travel in a separate compartment between the pilot and the engine.

The Helicopter is operated using three controls — an altitude knob, a direction control, and a control stick. The altitude knob is turned right to increase the speed of the engine, and thus increase the rate of altitude gain. The direction control is used to change the direction the helicopter is facing. The control stick is pushed in the direction that one wishes to go.

The most recently available model has made a few refinements in the original design. The controls have been simplified, placing the direction control on the control stick, making it much simpler and easier to operate the vehicle. The accommodations for the passengers have improved as well. Increased insulation in the walls of the coach has greatly reduced the amount of noise, making it much easier to shout instructions to the pilot.

The original purchasers of the Helicopters were the military forces, using

them to survey potential battlefields, and other activities that required extended hovering. The helicopter provided them the opportunity to make observations, and escape in short order should there be a threat. However, these units were both cumbersome and unreliable, with only a few minutes of flight time and a distressing tendency to fall prey to sniper fire.

Now, of course, another common buyer of the Incredible Steam Helicopter appears to be the up and coming young aristocrat. It is quite the status symbol, in fact, to own your own Helicopter.

Helicopters are currently being assembled by quality craftsmen working for the Hughes Aeronautical Vehicle Company of Trenton, New Jersey. In the last eleven years, four other manufacturers have also attempted to build these intriguing vehicles, but were thwarted by a series of legal entanglements regarding the patent rights to this invention. (It seems another individual, whom we will not do the courtesy of naming, is claiming to have designed the helicopter some time before, and that the design was stolen. Several legal actions are in the offing, and it is not altogether certain if they will be completed before these problems add another casualty to the list of failed manufacturers of these clever and useful craft.)

Steam Helicopter

Cost: 22 days at 2,200c

Size: Medium [60 wounds]

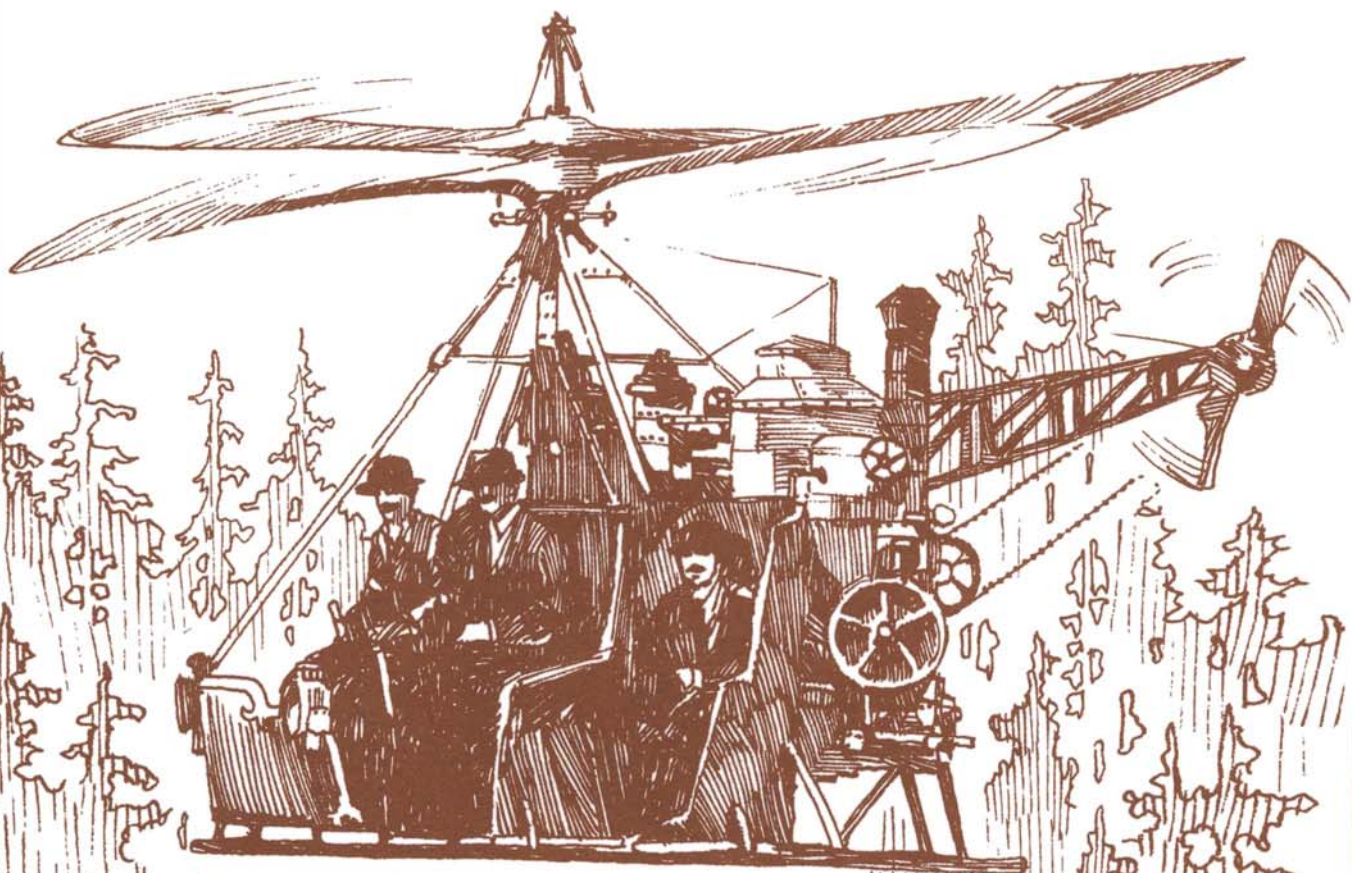
Powered by: Steam Engine and large alcohol-fuelled Boiler covered in rivets and brass tubing

Operation Time: 6 Hours

Controlled by: A Complex Arrangement of Levers

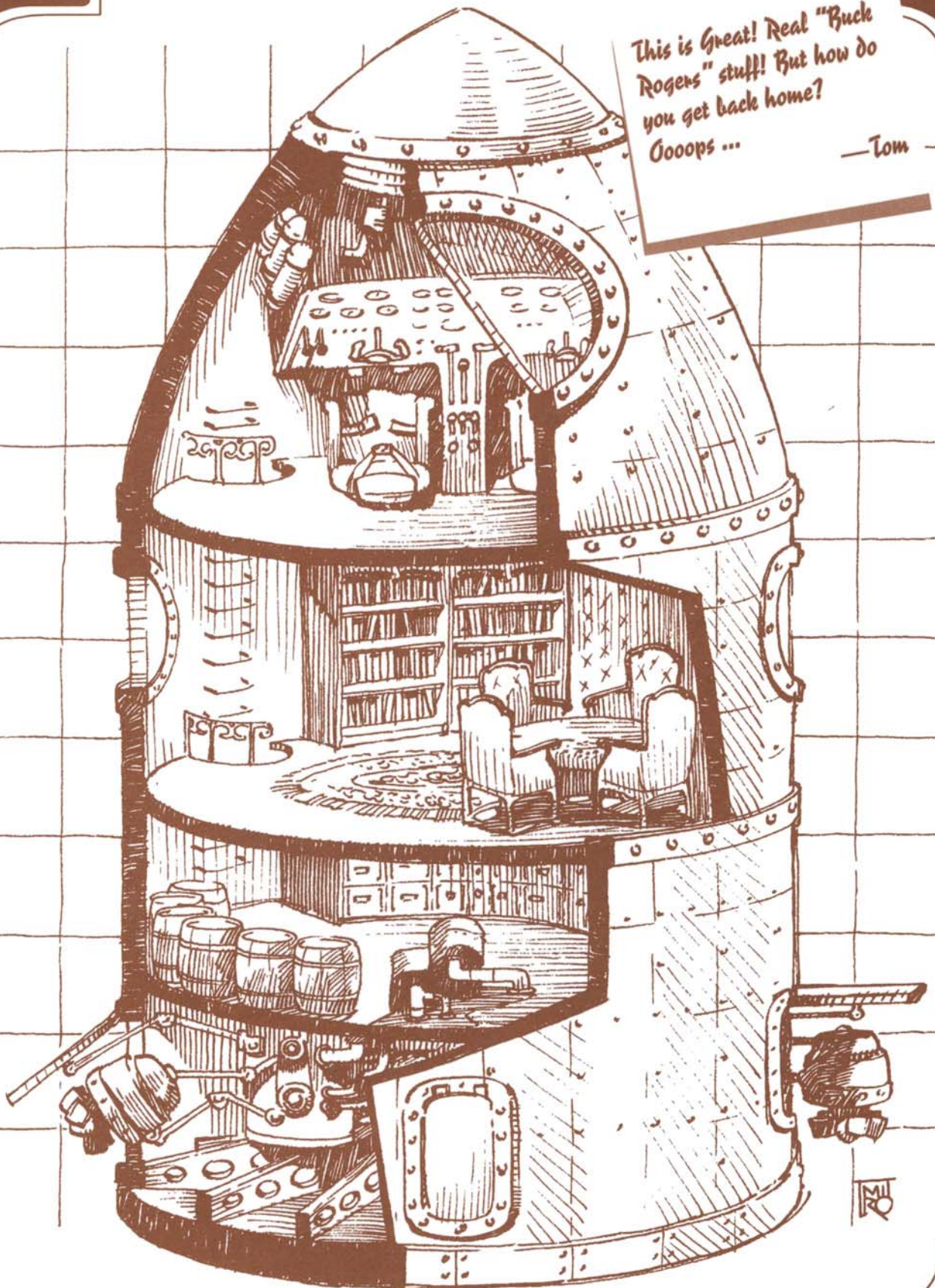
Moves with: Long Thin Rotating Wings run by a Powerful Steam Engine

*Yup. This is the state-of-the art
in helicopters here. Far cry from
an Apache, huh? All the dashing
gents here want one, but you
wouldn't catch me dead in this!*
—Tom



This is Great! Real "Buck
Rogers" stuff! But how do
you get back home?
Oooops ...

—Tom—



Lunar Shell

As I write this report, the Lunar Shell is being prepared for its maiden launching to our sister heavenly body, the Moon. Created by the renowned researcher Baron Adam von Richten, the Shell is this planet's first attempt to leave the bounds of Earthly existence. The goal — to brave the reaches of the Ether and land on another planet.

The Lunar Shell is a unique device. Constructed with the sturdiest materials, it most strongly resembles a much oversized bullet. Its long body ends with a tapered nose, making it slip through the air and the Ether. The Shell also has three windows — one on the front, and two along the sides. The windows are constructed of layers of lead crystal that have been glued together with sap from pine trees. This gains the most strength, and the most visibility, according to von Richten.

The interior of the Shell is truly remarkable. Located in the front are two seats for the pilots, facing toward the window. Controls and instruments constructed of wood and brass are arrayed in front of the seats, making them accessible to both pilots. Behind all of this is the passenger and supplies section of the Shell. It has been built to carry four passengers, and enough supplies for all six persons for two full weeks.

The rear of the Shell is flat and heavily armoured, to withstand the charge of the Launching Cannon. The Launching Cannon has been built along the side of a small hill. The bore of the cannon is 20' across, large enough to allow the shell to pass through. The cannon itself is roughly 300 yards in length. Like modern hand weapons, the "barrel" of the gun is rifled, to ensure the shell will fly straight. The effect this will have on the pilots is not completely known, although similar efforts with the French Verne

Cannon upon volunteers appear to have yielded no deleterious effects.

The charge that will launch the ship consists of three primary materials. First, a lit fuse will be used to set off a charge of ordinary gunpowder. This in turn will set off a much larger quantity of the new explosive, Nitro Glycerine. This greater explosion will be used to set off an even larger quantity of dynamite. It is believed that the three charges are the best way to assure the Lunar Shell of breaking the bounds of the Earth.

Once in Space, the Shell will deploy several electrically driven motors, each with a small Etheric propellor. These will be used to correct the course of the Shell on its way to the Moon.

It seems to us, here at the magazine, that not every problem has been thought out. How, for instance, will the Shell return to Earth? Or do they plan on staying Moonbound indefinitely? What happens if they are forced to remain there for more than the two weeks of food they have brought along? And what of the spinning of the shell? Will this incapacitate the crew? Will they be permanently in a state of vertigo?

All of these questions, in our opinion, need to be answered before this ship is ready to launch. Still, we wish them the best of luck in their planned endeavour!

Lunar Exploration Shell

Cost: 62 days at 6200c, plus 185 days and 18,500c for the Launching Artillery if you do not have a Verne Cannon handy

Size: Large [160 wounds]

Powered by: Massive Explosion (initially) and Electric Motors (in the Ether)

Operation Time: 24 Hours

Controlled by: A Complex arrangement of Levers, Metal Cables, Punch Cards, Knife Switches, and a Captain's Wheel

Moves with: Small Electrically Powered propellers (in the Ether)



Adam Von Richten



Baron Herr Doktor Adam von Richten was born in 1841 outside of Berlin. His parents were very important in the Berlin social circles, and his father was pivotal in the industrialization of the Berlin region. Being a child born of privilege, Adam wanted for nothing. His education was conducted at the finest institutions in New Europa, calling upon the best teachers that money could buy.

But young Master von Richten was not interested. Adam looked to the stars. He was obsessed with trying to travel in the Ether, no matter what it took. He was constantly looking for books, newspaper articles, and anything else about travel into space. It consumed all of his time. Adam's teachers were uniformly

disappointed in his studies and his lack of interest in bettering himself.

Laird Anson McDonald of Ireland changed all that. Traveling in New Europa, the Laird was giving a talk to the Berlin Geographic League when the young Von Richten met him. The chemistry was immediate. The Laird spoke of adventuring beyond the edges of space, and of creating a conveyance that could break free from the bounds of Earth.

Starting with short letters, the correspondence between the Laird and Adam continued at an incredible pace, growing to much longer letters, and later to massive intricate diagrams as the two planned the craft they would build.

Adam enrolled at Berlin University, and soon found himself holding a doctorate in Engineering. When Adam's parents died suddenly in a Zeppelin accident, he found himself Baron and in charge of his father's vast holdings. He sent word to the Laird, and they began work on the shell.

A fabrication facility was constructed across from one of his father's Steelworking foundries. Work began almost immediately. The launching cannon was constructed behind the family home, alongside a mountain on the estate. And the rest shall soon be history!

Baron Adam von Richten, Inventor

Abilities: Athletics [GR], Charisma [PR], Comeliness [PR]

Connections [GR], Education [GR], Fencing [GD], Fisticuffs [GD],

Physique [GD]

Ether Protective Garment

Developed for use with the Lunar Shell, the Improved Ether Protective Garment is well suited to the rigours of travel beyond the envelope of our understanding, and into the vast reaches of space.

The Suit is constructed for maximum protection coupled with maximum freedom. The fabric of the suit is a heavy cotton fibre interwoven with a fine metallic thread. There are two layers of this fabric, with a layer of India Rubber sandwiched in between. This allows for greater flexibility, with a reduction in the nasty smell the original had (from a lining made of pitch). The joints of the suit are made from reinforced India rubber.

The boots that are a part of the suit are simply a reinforced version of a commonly produced industrial boot. The interior of the boot has been coated in the ever-present rubber, and the exterior of the boot has been shod in a steel jacket for improved structural integrity. Since little is known about what awaits us in the far reaches of space, every precaution has been taken. The suit also features a three-hour air supply, courtesy of compressed air bottles developed in Ireland.

The helmet of the suit is constructed from a steel frame, with panes of glass placed in it like windows, and sealed with rubber. The field of vision this offers is immense, almost as good as if you were not wearing the helmet at all.

Ether Protective Garment

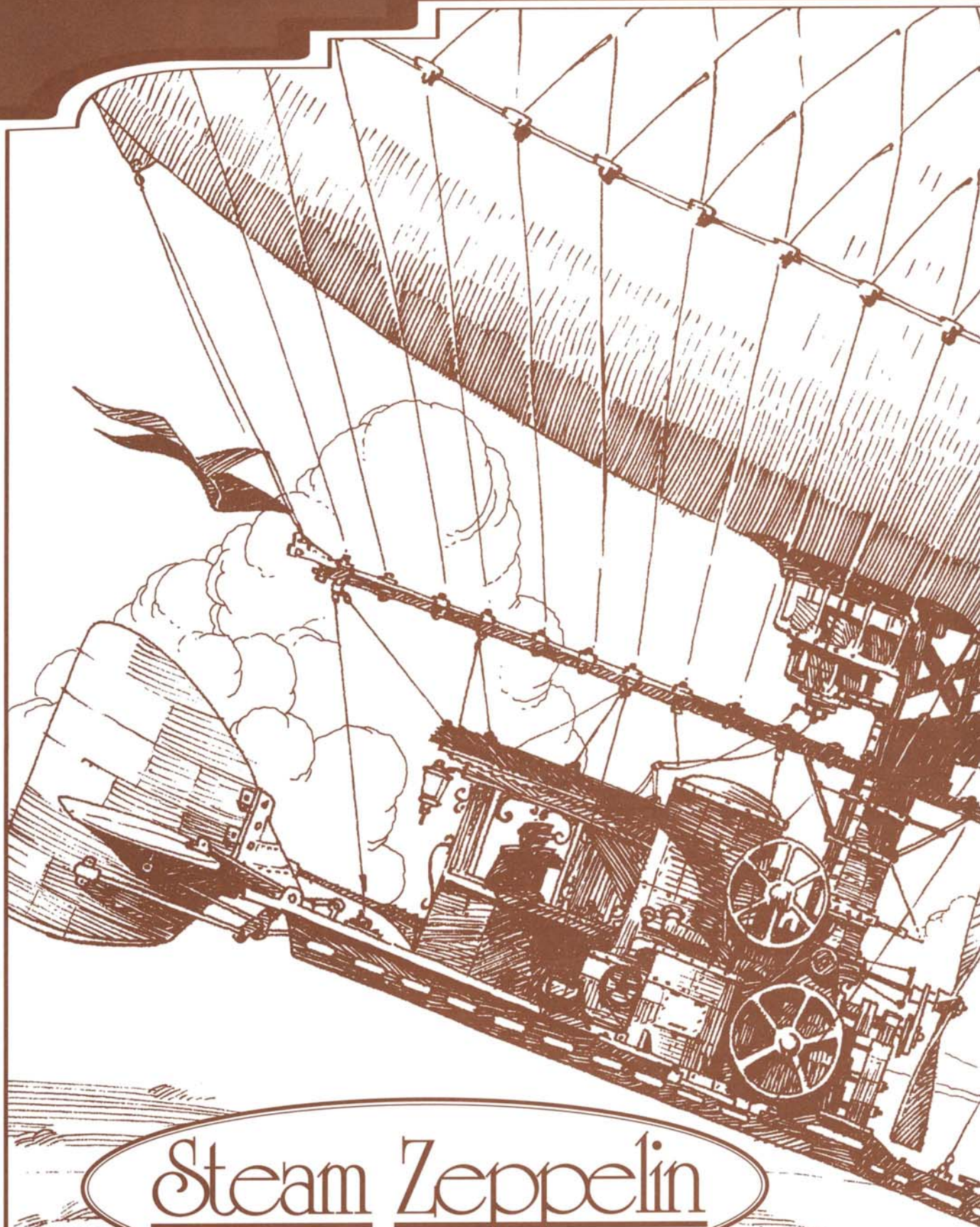
Cost: 2 days at 200c

Size: Slightly larger than a man [15 wounds]

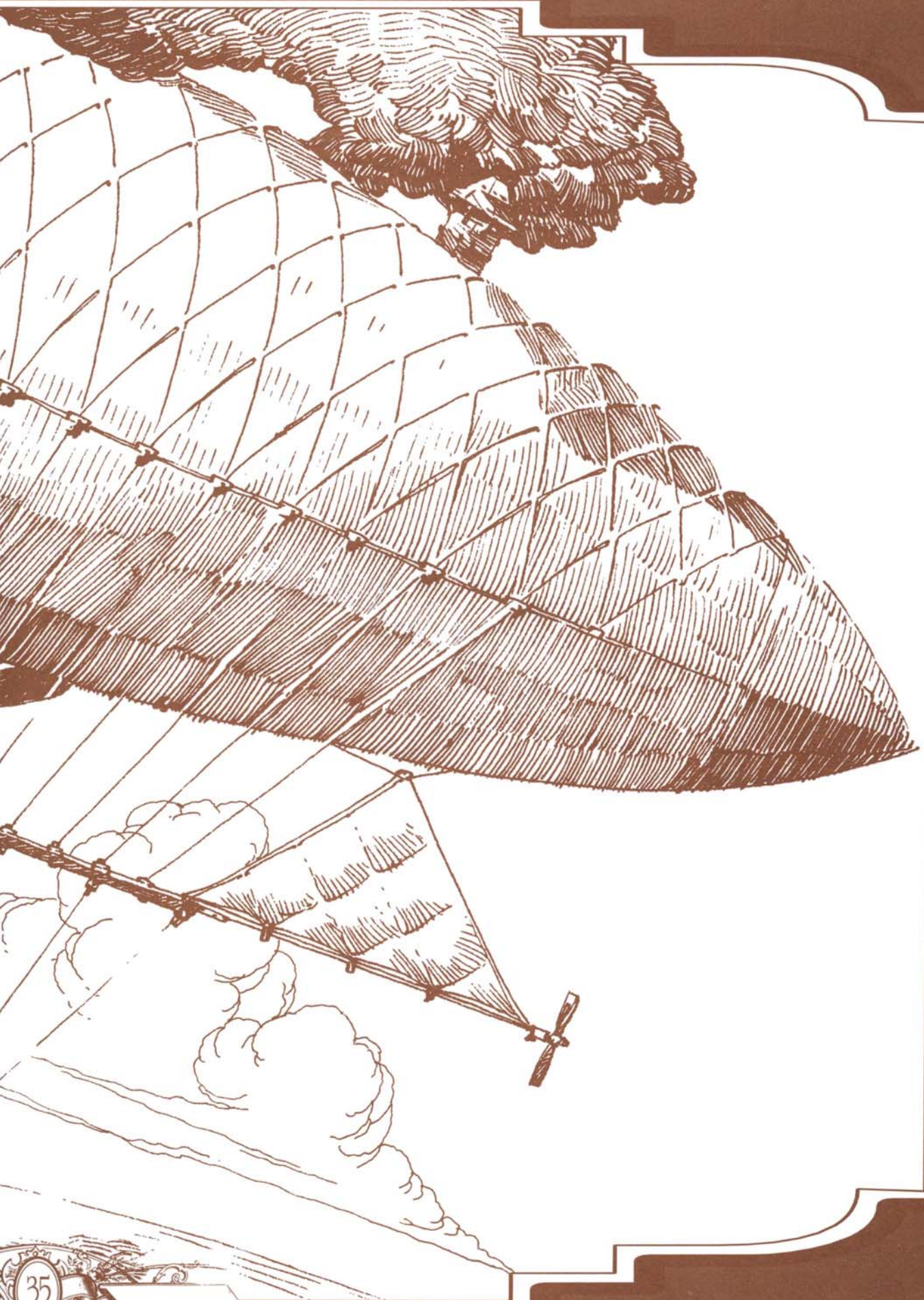
Operation Time: 2 Hours

Controlled by: A knob on the side of the air tank





Steam Zeppelin



Steam Zeppelin

Developed by Count Ferdinand von Zeppelin, the Steam Zeppelin represents the pinnacle of modern aeronaval capability (or at least did until the development of the Aero Battleship by the Bavarian Aeronavy

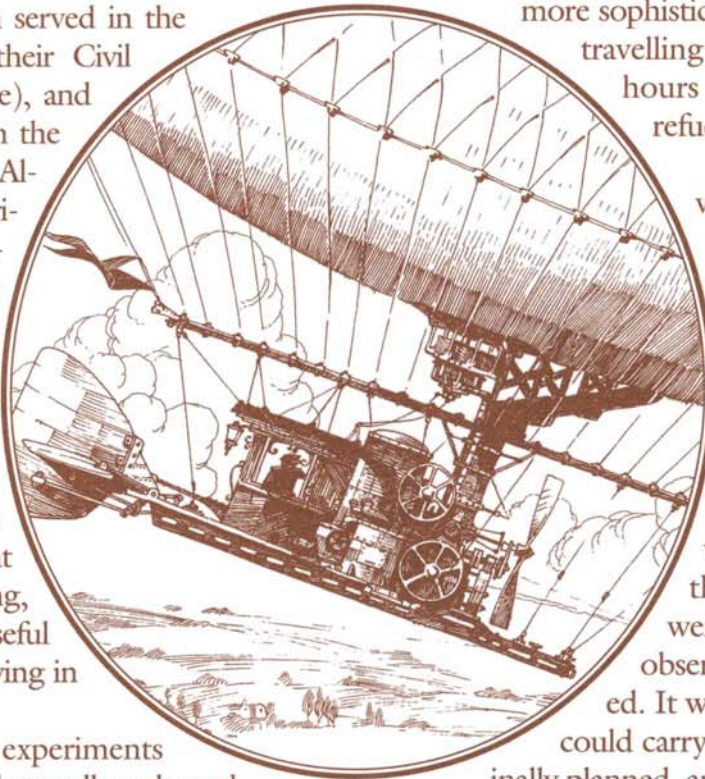
Count von Zeppelin served in the United States during their Civil War (on the Union side), and while there worked with the Army's balloon forces. Although these were primarily used for reconnaissance over the enemy lines, and proved somewhat useful in this limited role, the Count was soon perturbed by the limitations of the balloons, as they could not be sent out on a specific heading, and were not very useful when the wind was blowing in the wrong direction.

After a series of experiments involving a hand-cranked propellor salvaged from a captured Confederate submarine boat and attached to a tethered balloon, the Count eventually developed what was needed—a streamlined hot-air balloon capable of travelling against the wind.

Inspired by this success, Zeppelin returned home to redouble his efforts. The Count chose to retain the cigar-shaped gas bag, but this time, to ensure that it would have greater lift and longer flight duration, he filled it with hydrogen instead of hot air. The further addition of a lightweight internal frame (at first constructed from bamboo and later of aluminum) also gave the unwieldy device greater airworthiness.

To carry the pilot, Count von Zeppelin constructed a wooden cabin, light enough to be carried by the balloon. It also contained his latest innovation—an alcohol-fuelled boiler and steam engine to replace the hand crank which drove the propellers controlling speed and direction. This more sophisticated craft was capable of travelling for more than three hours without stopping to refuel.

The first trials of Count von Zeppelin's invention (using money from his own family's fortune) were conducted outside Berlin soon after he returned from the Civil War. Representatives from the Prussian Government were invited to watch the first flight, which went far better than any observer could have expected. It was also discovered that it could carry more weight than originally planned, and was modified to carry bombs. The "Zeppelin" (as it was soon dubbed) had become the first aerial weapon of war.



Steam Zeppelin

Cost: 60 days at 6000c

Size: Large [60 wounds; it's mostly fabric]

Powered by: Boiler powering a Steam Engine

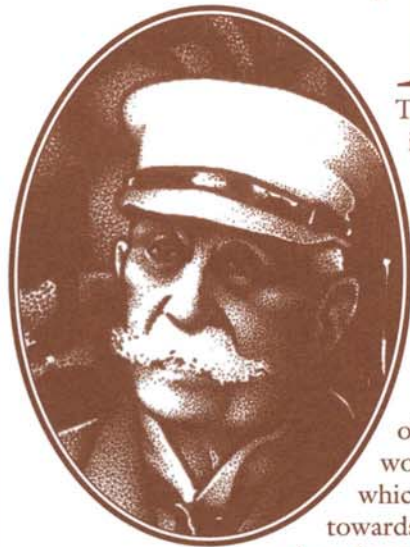
Operation time: 6 Hours

Operates with: A complex clockwork and attendant Levers

Moves with: Shiny Propellers on Intricate Shafts

Armed with: A Bomb Rack

Ferdinand von Zeppelin



The father of the Prussian Aeronautical Program, Count Ferdinand von Zeppelin has been obsessed with lighter-than-air travel for many years. This fascination led him, as a young Prussian military officer, to ask for permission to visit the United States as a military observer during the Civil War, a theatre of action in which he had heard hot air balloons were actually being used in warfare. Once in America, he joined with the Observer Corps, the only force in the Union Army charged with using balloons to observe enemy formations.

Zeppelin was soon disappointed at what he observed, however. At the time, most aerial work was limited to unpowered hot air balloons, which were allowed to drift at the mercy of the wind towards (one hoped) the enemy lines. It was Zeppelin who, observing the use of a hand-cranked propeller aboard a captured Confederate submarine-boat, suggested that a similar type of system be employed upon a hot air balloon, only this time moving a large propellor. Further experimentation led to the adoption of a teardrop-shaped balloon for greater maneuverability. With these adaptations, the first Union Air Corps was soon established. It did not take long for the Confederacy to follow suit, so that by the end of the war both sides possessed their own small but surprisingly sophisticated "Zeppelin balloon" forces.

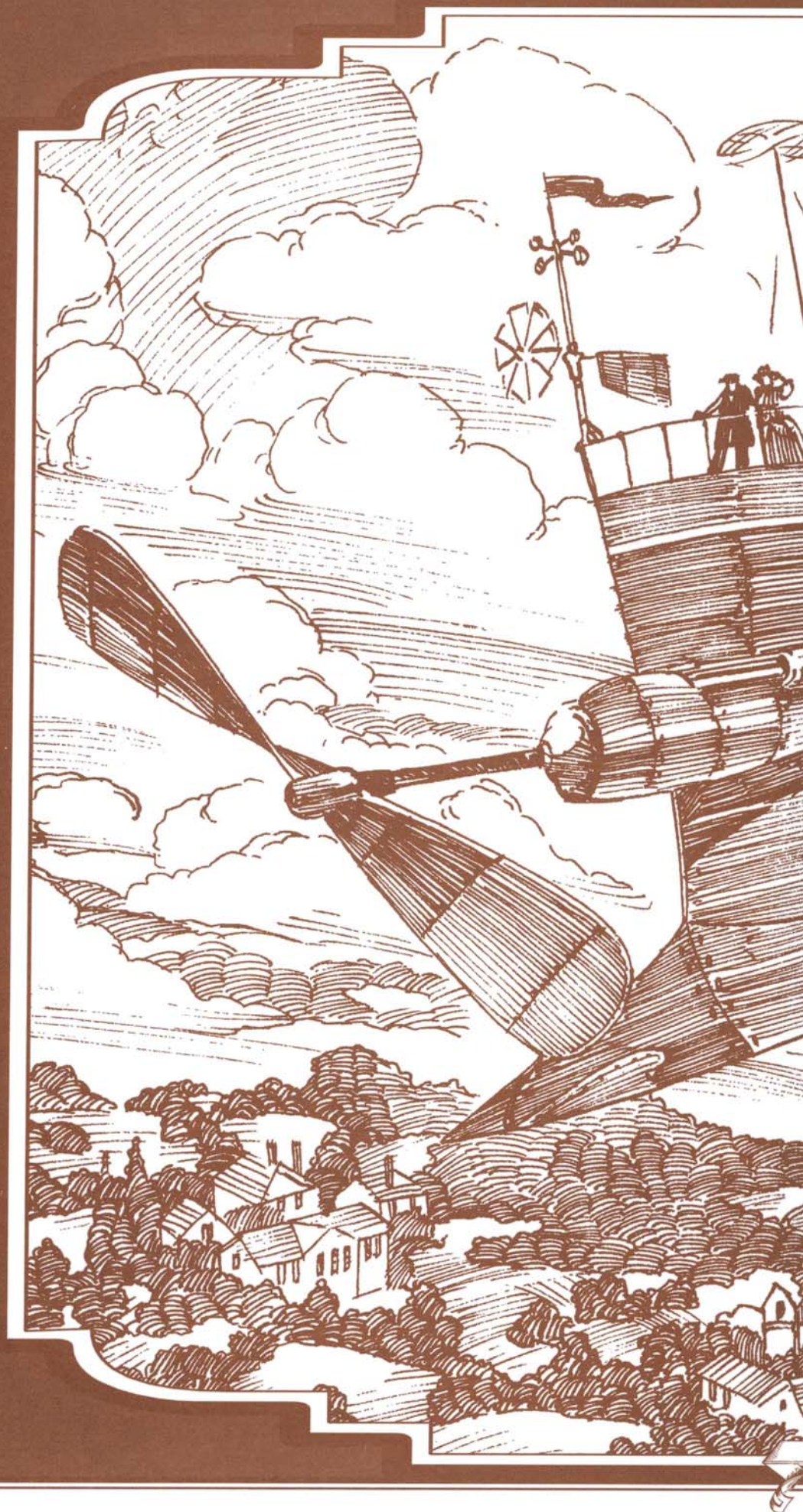
After the war, Zeppelin returned to Prussia obsessed with the possibilities of larger lighter-than-air vehicles and the uses they might have in combat. Realizing the limitations of hot air, he struck upon hydrogen as a lifting medium, as well as a method of strengthening the envelope with an internal framework of bamboo (later replaced by aluminum). After several false starts (and not a few crashes), the Count found the right mix of frame, gas and a small steam engine to drive the crank to create an airworthy craft.

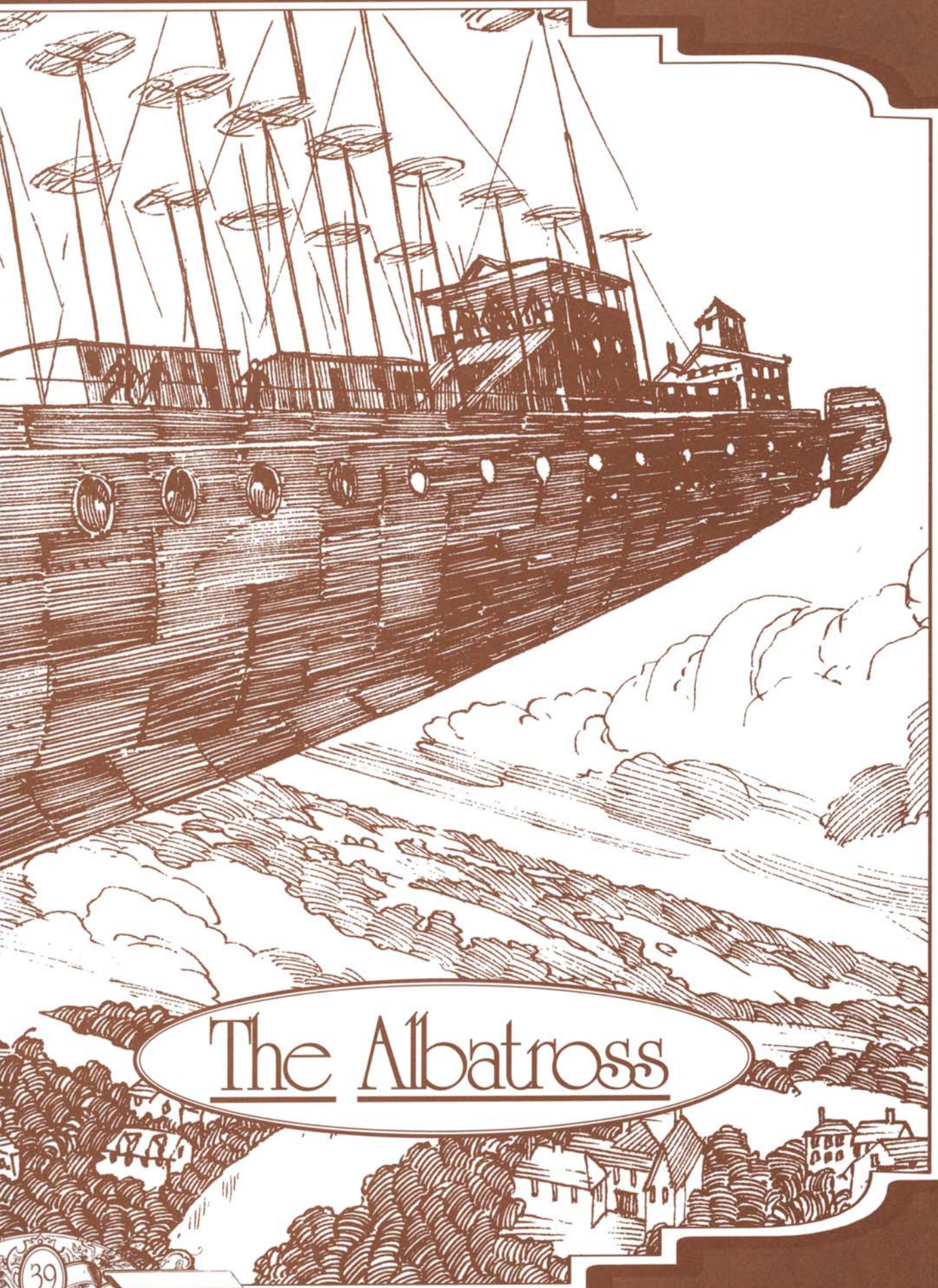
Zeppelin's project soon came to the attention of Prussian Chancellor Otto von Bismarck, who had been seeking a counter to the recently developed Aeroships of Bayern. Bismarck was very impressed by the Count's work, so much so that he created a program to continue the research. He named Zeppelin as the head of the newly formed Luftwaffen Corps, where he still works today developing larger and more powerful airships for the Prussian military.

Count Ferdinand von Zeppelin, Inventor

Abilities: Athletics [AV], Charisma [GD], Fencing [GD], Fisticuffs [GD], Perception [AV], Physique [GD], Stealth [AV], Tinkering [EXT], Zeppelin Science & Design [EXT]

As for the
future of
aerial loco-
motion, it
belongs to
the aeronef
and not the
aerostat.
It is to the
Albatross
that the
conquest of
the air will
assuredly
fall.





The Albatross

The Albatross

When the self-styled “Master of the World”, Robur, first broke onto the aeronautical scene, he was not to be taken altogether seriously. His flying craft appeared to be of a more than ludicrous design, and his rhetoric was of the most insane caliber. As such, he was dismissed by people the world over as a harmless lunatic. But after he was able to swoop in, bomb Paris, London and Rome with incendiary devices, swoop back out, and escape without any possible pursuit, his designs were taken a bit more seriously.

For all of its creator’s failings (and they are many), his machine is quite a wonder of Modern Science. It is capable of hovering like a Steam Helicopter, and moving quickly across the sky with great dexterity. It is quick enough to elude pursuit by anything in the skies, with the exception perhaps of a Bavarian Aerovette (this is not known for certain because Robur has yet to tangle with the Bavarians). While it mounts no heavy ordnance, his machine, ominously named the *Albatross*, has hardpoints upon which Maxim guns can be mounted for anti-airship and anti-personnel fire. Moreover, it is powered by an unknown type of electrical batteries, releasing it from the requirements of coal or fuel oil.

The design of the *Albatross* is a simple concept executed in a complex manner. The individual systems are all quite simple, and based in technology already seen today. The real trick is in how the various abilities have been combined together to make a cohesive vehicle. For example, the *Albatross*’ hovering and flight abilities are due to the many helicopter-style propellers Robur has located above the craft — 74 in total. These propellers have enough lifting power that, should a few of them fail for any reason, the overall movement ability of the craft will not be adversely affected. Forward and backward movements are accomplished using special fore and aft screws.

As mentioned earlier, power for the *Albatross* comes from electricity. It is channeled from accumulators, which are an odd sort of battery. How they are charged and how fast they do so is unknown. What is known is that the range of the *Albatross* is great, and that it has never been seen to run down. Realistically, the only reason to land would be food and water.

The most incredible part of the *Albatross* would have to be the materials it is constructed from. The entire ship is built from paper. Not completely normal paper you understand, but especially

treated paper that has gained the strength of steel. This material is extremely well suited to the construction of a flying machine due to its incredible strength and very light weight. Gears and other moving parts have been created from gelled fibre, making them very resistant to repeated stress. The windows of the craft are a thin glass reinforced with a gel substance. This reduces the weight of the craft and increases its utility. Visibility is not hindered by the gel reinforcement. To the best of our knowledge, the paper construction of the *Albatross* is as vulnerable to fire as normal paper, but this has not been put to the test yet.

The *Albatross* carries a crew of eight. Facilities are provided for them all, including adequate food and water as well as living quarters. From what we’ve been able to ascertain, the ship can be operated by as few as two people.

The top speed of the *Albatross* is over 185 miles per hour, and it can go faster if it has a tail wind. It can drop altitude at quite a fast clip and still operate safely. The maneuverability of this craft is equally impressive. After Robur bombed Rome, the Italians actually managed to pursue the *Albatross* to the Alps, where the wily mastermind lost them by flying through the narrow, treacherous passes at speeds approaching 190 miles an hour! We at *Popular Invention* surmise that Robur let the Italians keep up with him, just for the purpose of giving them this demonstration of the *Albatross*’ capabilities.

All in all, the *Albatross* is a most impressive creation. Our greatest regret that it should be pressed into service by such a diabolical master!

Albatross

Cost: 80 days at 8000c

Size: Large [60 wounds; it’s paper!]

Powered by: Batteries (Accumulators)

Operation time: Unlimited

Operates with: A complex arrangement of Levers, Cables, and a Captain’s Wheel

Moves with: A series of Helical Rotors, spinning madly in opposite directions

Armed with: A Bomb Rack (10 bombs)



Robur The Conqueror



Robur The Conqueror ... Robur The Madman ... Robur The Inventor ... Robur The Criminal ... All of those are equally true. But what is the real motivation of the so-called "Master of the World?" What does he want? And how does he plan to accomplish his extravagant goals?

Little is known of him from his first dramatic appearance. A tall man with flashing dark eyes, he came as a mysterious visitor to the esteemed Weldon Institute in America, and announced grandly to the astounded assembly that the science of balloon aeronautics was a waste of time and money. Powered flight, he contended, was the wave of the future. Unfortunately, he was laughed from the building, and left in anger. One wonders what would have been different if the ideas of this raving lunatic had been listened to rather than dismissed.

Coldly spurned, the monomaniacal genius who styles himself "Robur" embarked upon a life of adventure and high crime. Employing his highly advanced flying craft, the *Albatross*, in his quest for power and recognition, he has been involved in a series of daring escapades and piratical acts spanning the civilised world. Due to its swiftness and dexterity, the *Albatross* is nearly impossible to capture or shoot down, and thus the authorities have found themselves unable to stop him to date.

To compound his perfidy, he has even stooped to acts of terrorism, hurling infernal incendiary bombs on Paris, London, and Rome with impunity, each time with little apparent motive other than possible extortion. Recently it has come to light that Robur has been or is currently working with Professor Moriarty and the World Crime League. If this is the case, it is a serious cause for worry; as the World Crime League are nefarious in their intentions, and a man like Robur would fall in well with them and their dark criminal ideals.

Robur's rhetoric is of the worst stock, worthy of the worst penny dreadful or melodramatic play. His claims to "rule the world" from his aerial platform are ludicrous at best, as none of the world's governments appear to be willing to give him the time of day, let alone let him take a superior role. While most will admit that his flying craft is a true wonder, they still hesitate to say that he is a credible threat to any except those luckless enough to be under one of his bombs.

Robur The Conqueror, Mastermind

Abilities: Athletics [AV], Charisma [GR], Fisticuffs [GD], Perception [EXC], Physique [GR], Stealth [PR], Tinkering [EXT]

Aerovette

The Aerovette is the most successful effort in developing a Zeppelin-like craft that is agile enough for an active combat role. Whereas a Prussian Steam Zeppelin is capable of aerial bomb runs, it often finds itself somewhat vulnerable when confronted with anti-aircraft fire. The Aerovette, however, not only fills the “bomber” niche (as it did to the ultimate defeat of Otto von Bismarck’s armies at the Battle of Königseig), but is also quick enough to avoid enemy fire, and heavily armed enough to fight back.

Developed in secret by the Bavarians and their Faerie Allies, the Aerovette is truly a marvel of modern engineering. Starting with a design similar to the Prussian Steam Zeppelin, the Aerovette’s Inventors were able to shrink the size of the gas bag while increasing the hull size and the relative speeds and maneuverability, all by using a sophisticated combination of Dwarfish engineering, secret Sorcerous Engines and the advanced Futurian knowledge of Thomas Olam, the famed *Man From Beyond the Faerie Veil*.

The Bavarian Aerovette fairly bristles with formidable weapons, including a bomb rack, an American-made Gatling Gun, two light rapid-fire cannon and a specially modified crossbow gun. The crossbow is of especial interest, as it was found to have many advantages, including a lighter firing mechanism and the ability to fire many especially tipped bolts suitable for many applications. These include flaming bolts, exploding bolts, and a snare bolt that trails a long wire designed to wreck an opposing aerial vehicle’s propellers. The bomb rack holds bombs of several types, including explosive, flaming, and concussion bombs.

The gas bag of the Aerovette is different than most of the larger Zeppelin-style aerial vehicles. Amongst these larger vessels it is quite common to include a rigid wooden frame for the bag, reinforcing it every two to three feet with another rib. On the Aerovette this has been reduced to just three rings of Dwarfish alloy, with a single horizontal rib around the circumference. This allows the craft to carry more weight, since less is taken up by the frame.

The cabin of the Aerovette is also very efficiently designed. Little space has been wasted in

determining where each crew member will operate, and what functions will be done by each one. In fact, it bears more resemblance to the bridge of a submersible vehicle than the cabin of a Zeppelin. Instead of the open framework and large-windowed cabin of a Zeppelin, on an Aerovette you find viewing slits of armoured glass and men working elbow to elbow in cramped conditions.

The Aerovette is designed to operate for more than a week without landing to refuel. When refuelling is necessary, it is also often required to top off the hydrogen in the gas bag, as the less rigid bag appears to be more prone to leaks.

Since the Aerovette has been in use for a couple of years, the Bavarians have taken it upon themselves to make improvements in the design. Variants that have seen service in the Bavarian Aeronavy include a dedicated bomber; an “interceptor” variant that has been stripped down, sacrificing some armour and most of the weapons for speed; and a “sniper” version mounting a long-range artillery cannon, firing bursting shells that fill the air with black smoke and shrapnel. Of particular interest is the model flown by the Bayernese Secret Service, which is an Interceptor model that has been modified to be flown with a crew of just five, using a cleverly designed series of clockwork devices to do the work of many men. This has been particularly useful in combat, as it greatly reduces the number of men at risk in a given aerial engagement.

Whichever version is used, the Aerovette has certainly proven its mettle. Look for it to continue to see use into the next century.

Bavarian Aerovette

Cost: 78 days at 7,800c*

Size: Large [140 wounds; from Dwarfish metals]

Powered by: Boiler and Steam Engine

Operation time: 1 week

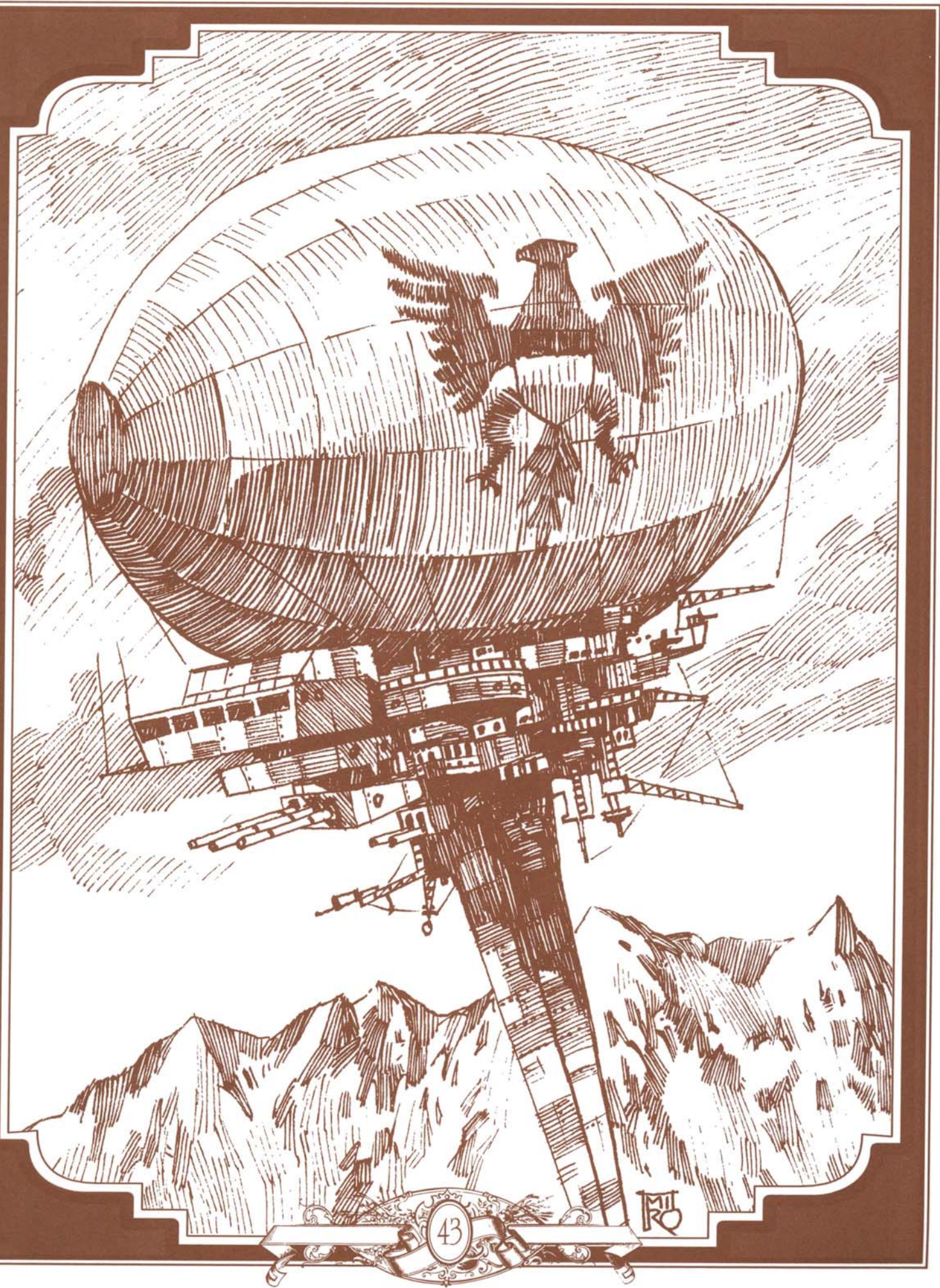
Operates with: A series of complex Levers

Moves with: Sorcerous Engine [cost = 10]

Armed with: 1 Bomb Rack, 1 Gatling Gun, 2 Light Cannon and a Heavy Crossbow

*Available only to Special Members of the Bavarian armed forces





Rhyme Enginemaster



Tinkerer to the King of Bavaria and co-designer of the Aerial Battleship: To say that Rhyme Enginemaster was an important Dwarf would be understating the obvious immensely.

Born in the Dwarfhold of Kazak Corom, there was little in Rhyme's early background to foreshadow the effect he would one day have upon New European society. It was only after living and working among his people for many years that he abruptly left (under rather murky circumstances) and struck out on his own on the celebrated career that earned him the Name *Rhyme Enginemaster*, Creator of Sorcerous Mechanisms.

With a strong love for working with metal and a penchant for unauthorized tinkering, Rhyme soon stumbled into a position as handyman for a decrepit and abandoned border fortress on the edge of the Bavarian frontier—Castle Falkenstein by name. He quickly developed a reputation for being a sour, but gifted, engineer. He also seemed to have a tendency to blow out the occasional wall of the castle while trying out some new piece of equipment, or testing some new theory. While this caused alarm initially, it soon became routine for the other residents of the Castle.

Fortune smiled upon Rhyme soon after the arrival of Thomas Olam at the court of the recently returned King Ludwig. Using secret knowledge brought from beyond the Faerie Veil by the redoubtable Olam, he was able to build the first magick-generating Engine. Rhyme's new knowledge was quickly applied to the construction of many marvelous creations, chief among these being the Sorcerous Engine that propels the Aerial Battleships which Bavaria is so proud of. With a helium-filled gas bag constructed from spun metal thread, and the rest of the craft built from various metals including iron, steel and Dwarfish alloys, these mighty ships allow the Southern German Kingdom to project its force throughout the world with a devastating effectiveness.

With the awarding of his Dwarfname, Rhyme has brought his two sons back to Castle Falkenstein to work as his apprentices. Both have taken to the work with great gusto.

Rhyme Enginemaster, Dwarf Tinkerer

Abilities: Athletics [AV], Education [GD], Fisticuffs [GD], Love of Metal [GR], Perception [GD], Physique [GD], Stealth [AV], Tinkering [GR]

Popular Invention Visits an Aeroship

Undeniably, the most astounding Invention of our Modern Age must be the amazing Aeroships of the newly fledged Bavarian Kingdom. Treated as Most Secret by the Munich Government, the actual nature of how one of these leviathans of the sky performs has long been a topic of speculation among all keen observers of Mechanical Progress.

So when a formal note arrived at the Offices of *Popular Invention*, inviting us to tour a Bavarian Aeronavy ship currently in London, we were quite delighted. Understandably, we were also quite taken aback to receive an invitation to such a secure facility. Yet Captain Thomas Olam (who greeted us at the ship's mooring) set us at ease with a grin and a wry comment: "I know you've been trying to snoop around an Aeroship for the last year, so I figured I might as well be able to watch you do it." Faced with his open amusement, we could not deny the truth of that!

Let us begin with the construction of the Aeroship. We were not surprised to discover that Dwarfish construction and materials comprise the majority of the vast frame. The **gas bag** itself is woven from a light spun Dwarfish wire quite similar to silk, yet with a tensile strength that exceeds the strongest steel. This material is stretched over a light **frame** which comprises three great circular hoops set in the vertical axis and six spars of alloy longitudinally bracing the hoops from stem to stern. Frame and covering combined can, according to Olam, resist hurricane winds without bending.

The gas that provides lift (generated by Bavarian court sorcerors) is actually contained in gigantic rubber and silk "**envelopes**" that entirely fill the inner chambers of the frame. Catwalks along the longitudinal members and ladders on the vertical hoops provide access to each of these envelopes. The lower superstructure of the Aeroship is constructed much as the frame, but with thin plates riveted over it. The decks are of thicker alloy plates, covered with India rubber. Large brass and crystal portholes dot the superstructure, while all doors are of brass-plated alloy.

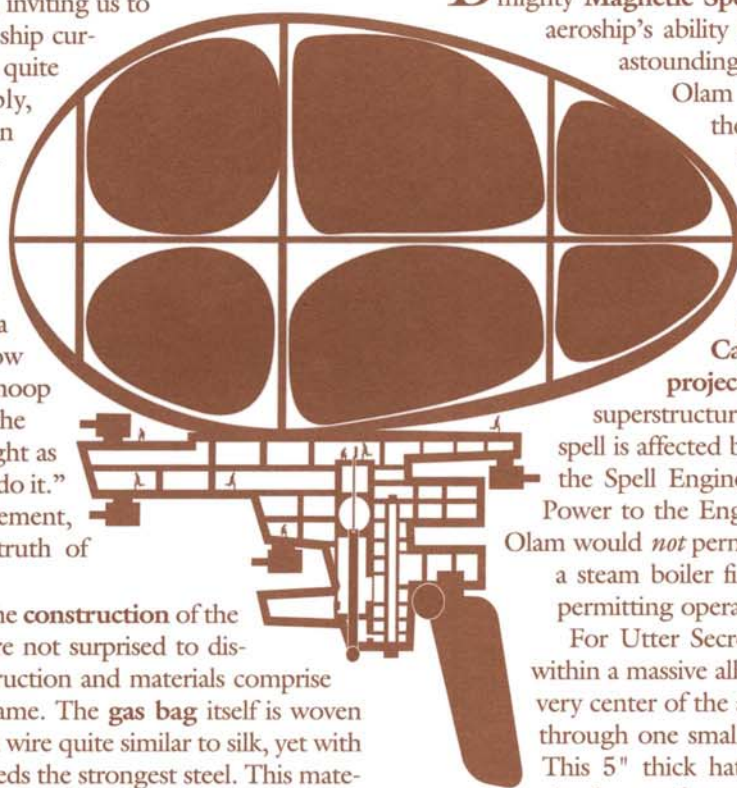
More mundane aspects of this great craft are quite similar to those of a Dreadnought of His Majesty's own Navy: bunkrooms, galleys, a small sick bay and an Officers' Wardroom. **Incendiary bomb racks** line the lower fantail, while superstructure-mounted **1.46 caliber cannon** and **Gatling guns** (both American Civil War designs) provide formidable armament.

But the most astounding part of the Aeroship is the mighty **Magnetic Spell Engine** that provides the aeroship's ability to move at speeds up to an astounding 200 miles per hour! Captain Olam explained that the Spell of the Engine allows it to generate a powerful beam of magnetic force that drags the aeroship along similar lines of magnetism that girdle the Earth. The magnetic beam is directed by using a large **Captain's wheel** that swivels a **projector crystal** in the base of the superstructure, while the power of the spell is affected by levers that control the rate the Spell Engine's mechanisms are turning. Power to the Engine (the only thing Captain Olam would *not* permit us to see) is generated by a steam boiler fired by a supply of kerosene permitting operations for up to a month.

For Utter Secrecy, the Engine is mounted within a massive alloy cylinder that traverses the very center of the airship, and is accessible only through one small opening in the upper part. This 5" thick hatch can only be opened by *simultaneously* turning two special keys (one held by the Captain, the other by the Chief Engineer), similar to a system used by the Bank of England to protect its railway safes. Each airship, of course, has its own set of keys.

In due time our tour, sadly, came to an end. However, upon parting, Captain Olam graciously extended an invitation to visit the Bavarian AeroTechnical Institute in Munich at a later date. His parting remark, however, was as typically cryptic as any that have been attributed to the quirky humour of this celebrated Man From Beyond the Faerie Veil. "If you like this," he smiled, "you're gonna love our new Stealth Fighter." Leaning down to confide in a conspiratorial whisper, he added wickedly, "It doesn't look anything like the model Revell put out."

Who? Needless to say, we left nonplussed.



Aerobattleship

The pride of the Bavarian "Navy", the Aerobattleship is easily the equal of the British Navy's Dreadnought class ironclads. Although not anywhere as well armoured as the latter, the Bavarian Aerobattleship makes up for its lack of protection with its extreme mobility and the ability to fly high above the gunnery range of most surface cannon. This, of course, has little or no effect on the Aerobattleship's most powerful weapons: its racks of incendiary and explosive bombs, which can be dropped with lethal accuracy on unsuspecting targets.

In addition to a load of eight bombs, the Aerobattleship is also well armed. Three rapid-fire cannon mounted in turrets capable of traversing the entire lower area of the dirigible gas bag and four Gatling Guns mounted on both superstructure and upper gas bag provide more than enough firepower to deal with any mere Steam Helicopter or Zeppelin that may be encountered.

Bavarian Aerobattleship

Cost: 368 days at 36,800c*

Size: Immense [170 wounds, w/Dwarf metals]

Powered by: A series of Boilers powering several Steam Engines

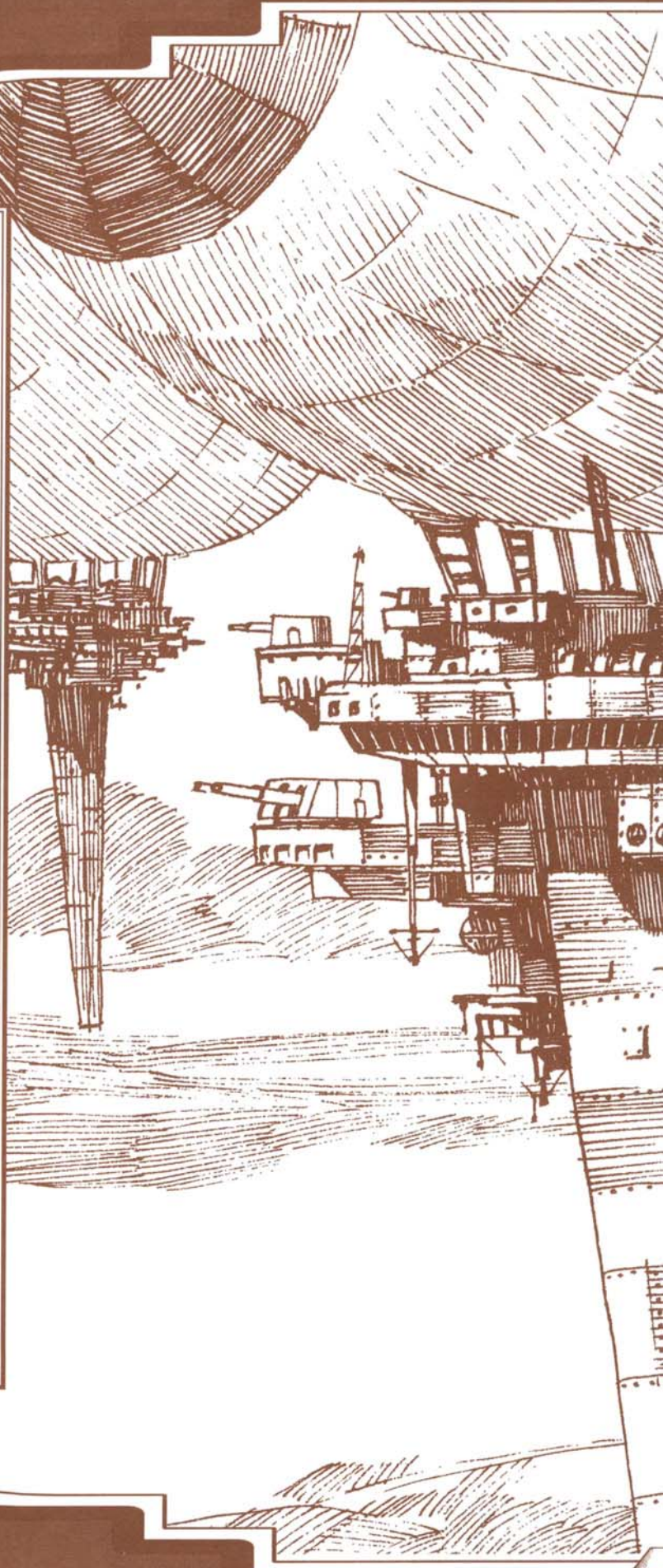
Operation time: One Month

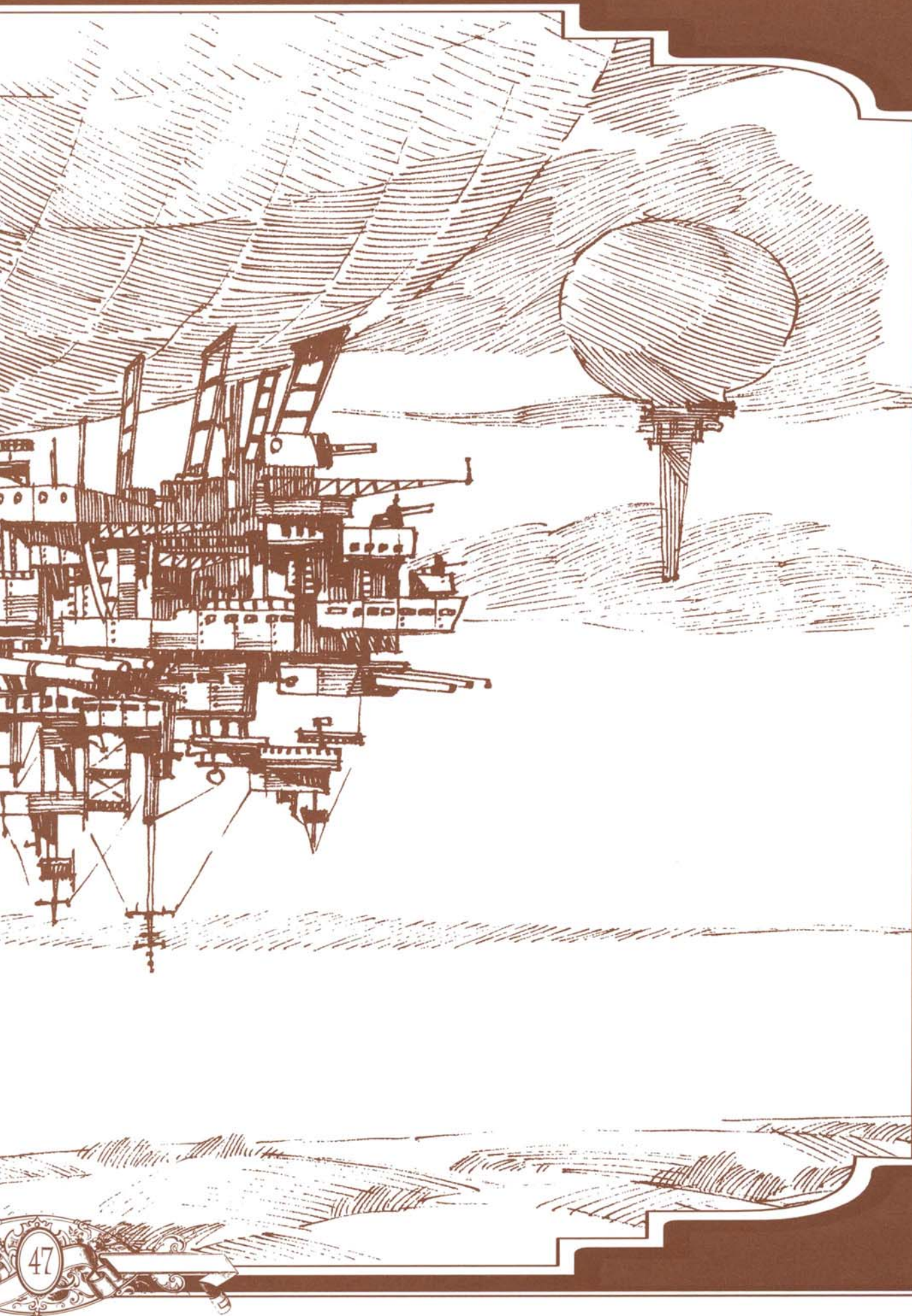
Operates with: A complex arrangement of Levers, Cables, and a Captain's Wheel

Moves with: Sorcerous Engine [cost=10]

Armed with: Bomb Racks (2), 6 Gatling Guns, Turret-Mounted Guns (x3)

*Available only to Special Members of the Bavarian armed forces





Aeroliner

Not all of the formidable power of the Bavarian Aeroship Engine is concentrated in its awesome fleet of aerial warships. The Swan Throne has also recently commissioned a fleet of aeronautical passenger ships to navigate the oceans of the Air as well. Although small in number (four in all), these mighty leviathans of the skies promise to make Bavaria a major contender in a field previously unavailable to the landlocked nation—the international maritime shipping trade.

The *Princess Sophie* (pictured here on her maiden passage through the Southern Alps) is perhaps the best example of this new breed of luxury craft. Nearly two hundred feet long, her twelve well appointed decks provide ample space for passengers, cargo and crew; yet, powered by her Sorcerous Engines, even the most treacherous passages can be navigated from the absolute comfort and safety of the higher atmosphere. With fifteen first class cabins, an extravagant four-room *Königs Suite* in the stern, thirty roomy second class staterooms, a fully appointed dining room (that can be converted to a ballroom), and a full staff of stewards and chefs, the *Princess Sophie* is certain to become the standard for all discriminating travellers in this Age of Marvels.

Bavarian Aeroliner

Cost: 108 days at 10,800c

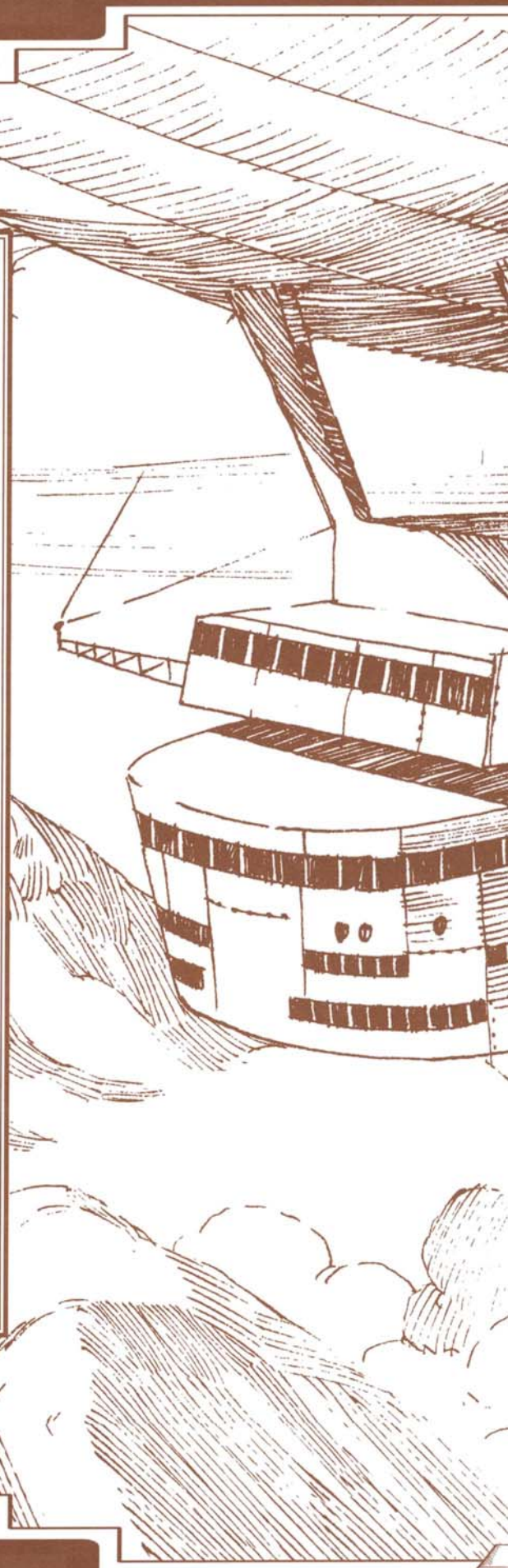
Size: Huge [120 wounds]

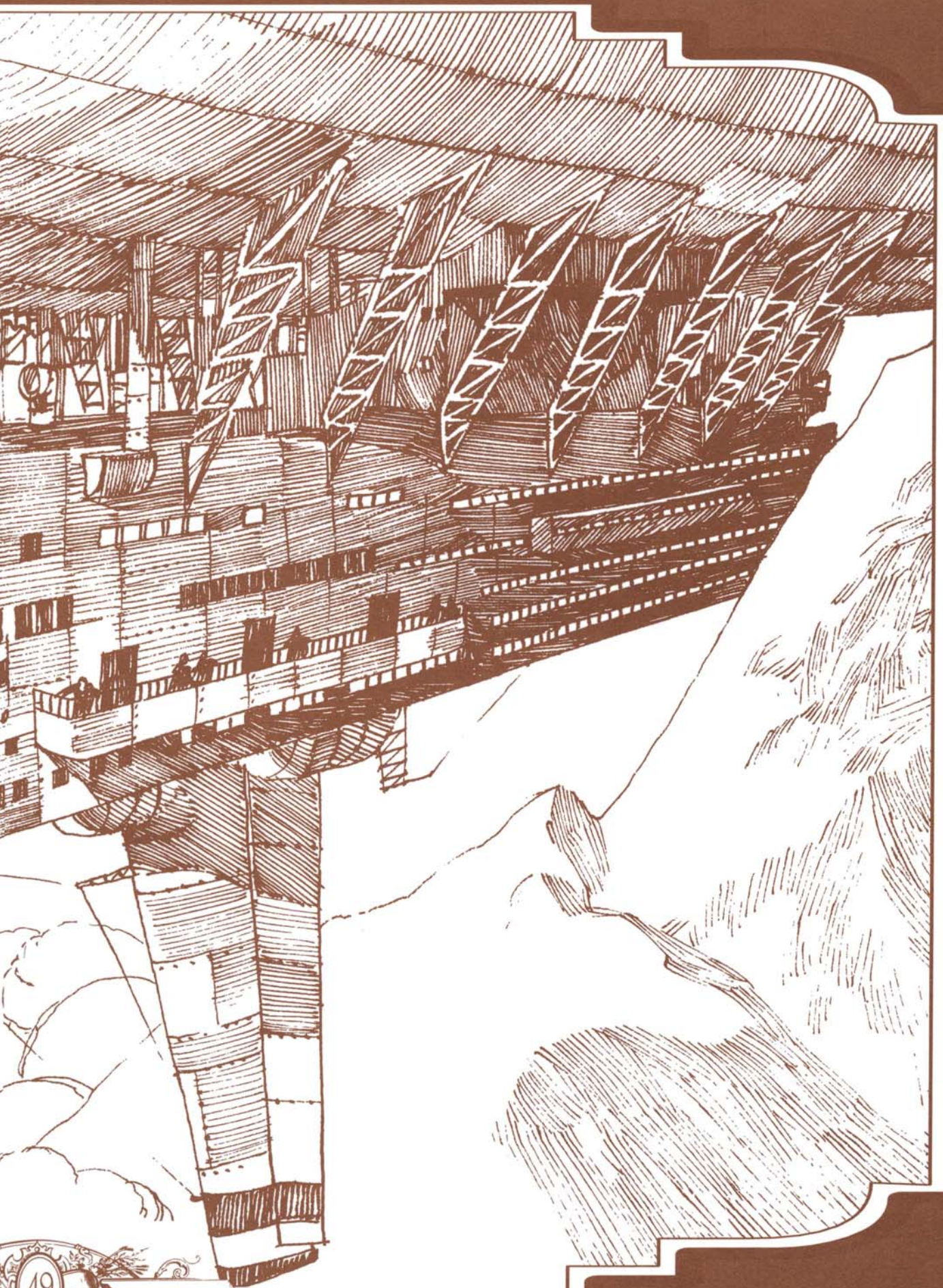
Powered by: A series of Boilers powering several Steam Engines

Operation time: One Month

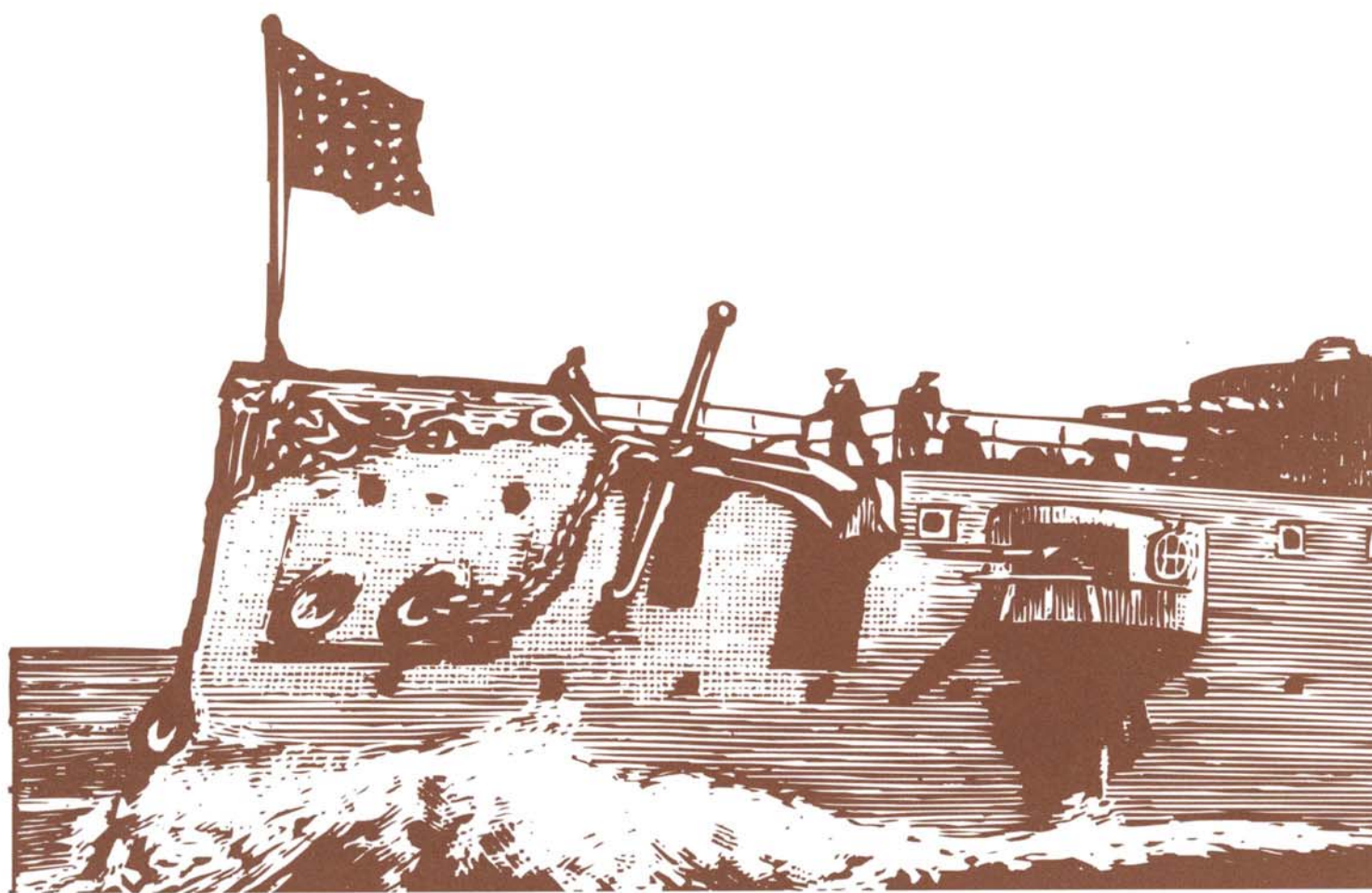
Operates with: A complex arrangement of Levers, Cables, and a Captain's Wheel

Moves with: Sorcerous Engine [cost=10]

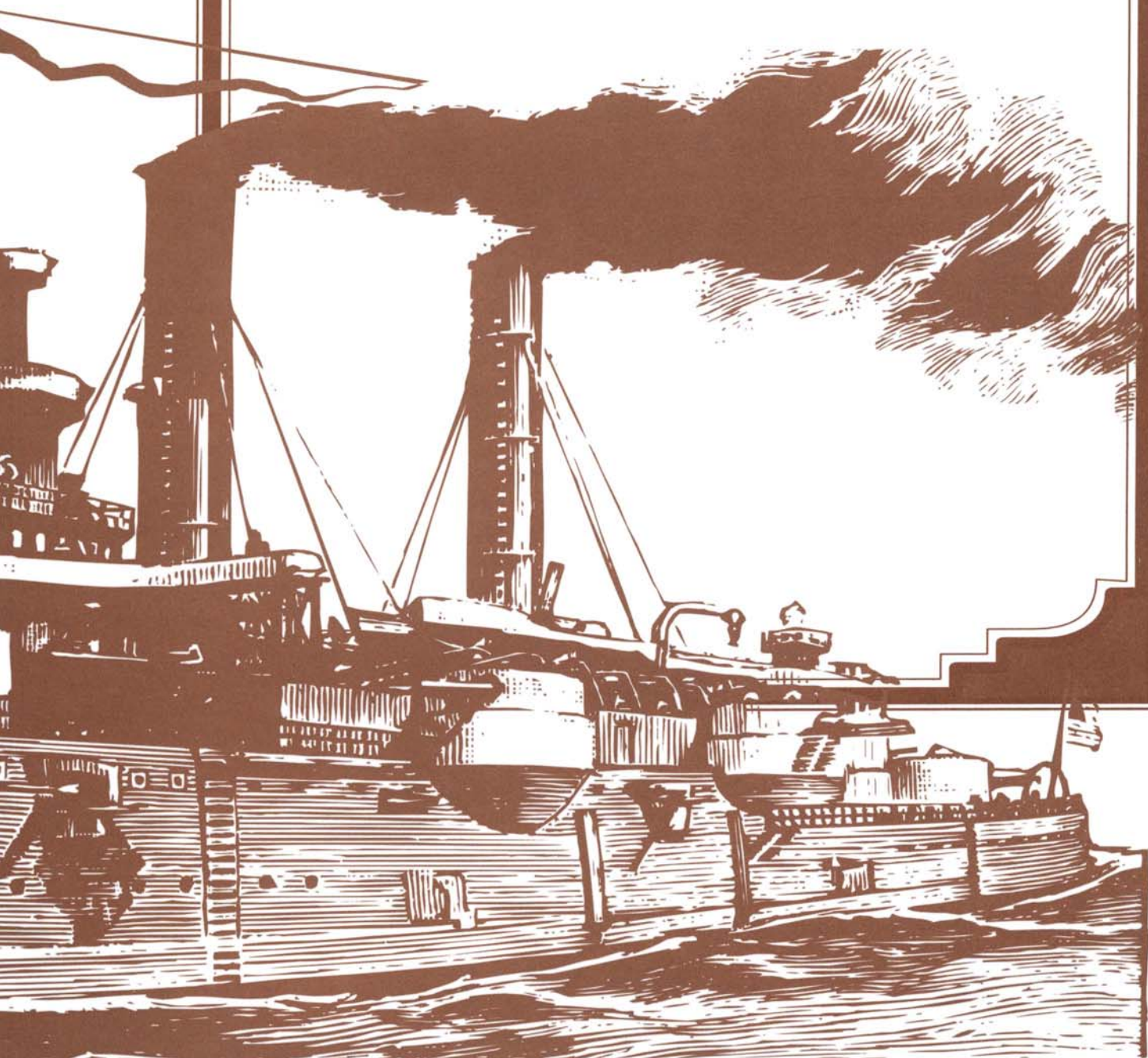




Nautical STEAM



Nowhere is the mighty power of Steam felt in greater application than upon the Eight Seas. It is here that the great leviathans of naval might (as well as their lesser merchant cousins pressed into service in the noble name of Commerce) ply the waves driven by the force that shapes our very Age. In this Chapter, we of *Popular Invention* shall examine the maritime marvels of a new world scarcely removed from the pages of the most lurid of Mssr. Jules Verne's novels of the fantastic.



Advanced Diving Bell Apparatus

In this Age of Technological advancement, we must not forget the most unearthly of frontiers — The Ocean! Once one descends and the cobalt depths close upon you, you are truly an intruder in a different world. The explorer in this realm must deal with life-robbing cold, crushing pressure, and the predations of sharks, giant squids, and other monsters of the deeps. In this vein, the invention of the Advanced Diving Bell Apparatus must stand as a crowning achievement.

The Diving Bell is like no other before it. It is capable of descending to never before penetrated depths of nearly 5,000 feet. By employing a small electric motor attached to an iron screw, the Diving Bell can also maneuver in a limited fashion. It also has some control over when it comes up — located beneath the Bell are two cannisters of compressed air. When released, uncompressed, into flooding tanks around the circumference of the Bell, this air drives out the water within the tanks to provide incredible buoyancy. The occupants of the Bell can jettison the weights on the bottom to increase this buoyant force. Care must be taken, however, as this maneuver can cause the bell to literally rocket to the surface and temporarily become an uncontrolled aerial vehicle. If the Bell were to come down on its top, it would immediately, irrecoverably sink as the flood tanks filled with water.

The main body of the Bell is cast as a whole in Armour plate. Using great torches, the holes for the windows and the hatch are knocked out and replaced with great armoured windows formed from a 6" thick piece of leaded crystal. The egress hatch is fashioned from brass and is inserted as a single unit for maximum strength. Holding two passengers comfortably (and four in a pinch), the Diving Bell can stay submerged for more than six hours continuously. This is useful, as the descent to 5,000 feet takes more than an hour. It also features a rudimentary telegraph used to signal back and forth from the surface to the Bell via a long cable, insulated with India Rubber, which runs from the top of the Bell to a surface ship.

The most notable employment of the Advanced Diving Bell Apparatus has been led by an American aquanaut, one Jacob T. Hollister of the

Republic of Texas. As Hollister was convinced that a mighty civilization had once existed on a now-sunken Island in the Atlantic, he recently put together an expedition to prove his theory.

Upon arriving at the chosen spot in the Atlantic, Hollister and his associate, a Mr. Alphonse Cousteau, took to the depths. The Bell stayed down quite a while, and it was evident that it was maneuvering. Then it stopped.

At this point the story of their adventures becomes quite odd. When the crew of the Bell began to reach a point where their oxygen would surely be exhausted, their surface tenders sent warning messages down the wire to no avail. Fearing the worst, the frantic crew next tried to bring the Bell up, but found it to be inexplicably wedged in some unseen manner.

With growing horror, the tender crew waited more than ten hours, hoping for some sign of life from their trapped compatriots. Finally, the captain decided that all hope was lost; Hollister and Cousteau must be dead. But as he was about to give the order to cast off, a signal was received — "*Pull us up!*" Those crew members not in shock immediately began the process of recovery. The Bell came up quickly, and was speedily brought on board.

Hollister and Cousteau came out of the Bell, haggard, exhausted, but otherwise none the worse for the wear. When asked what had happened, Hollister would only reply, "I was right, but I can't tell you anything further than that!" Thus the matter stands until this day.

More remains to this mystery, it is certain, and all New Europa hopes that in the near future the intrepid Mr. Hollister will reveal all.

Advanced Diving Bell

Cost: 23 days at 2300c

Size: Medium [140 wounds]

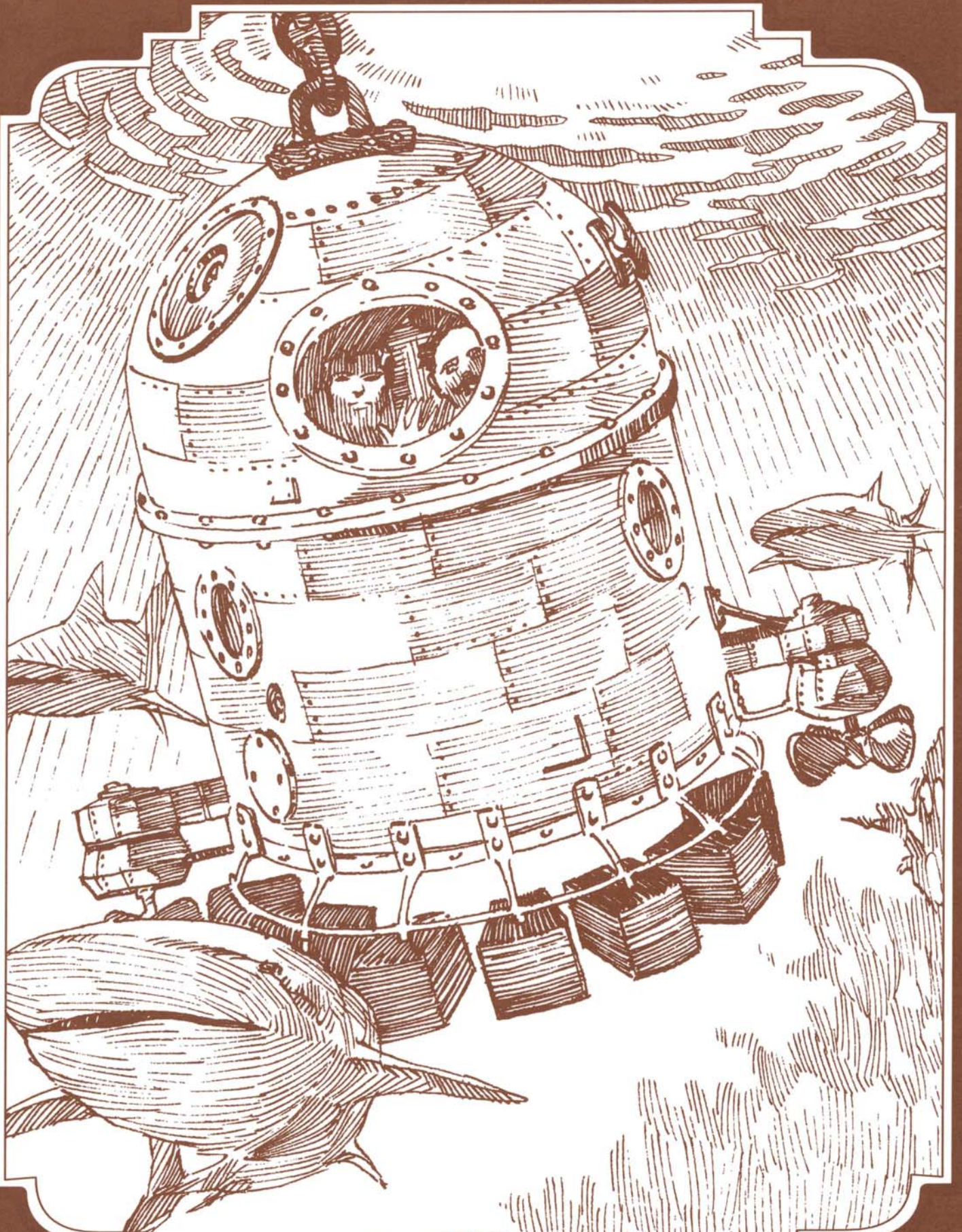
Powered by: Fuming Lead/Acid Batteries

Operation Time: 6 Hours

Controlled by: A Complex Arrangement of Levers and Cables

Moves with: Small Brass Propellers on Ornate Shafts





Undersea Suit

Recently invented by a group of Portuguese fishermen, this Undersea Suit is just the thing for explorations beneath the waves. Capable of independent operation at depths of more than 100', this Suit is a true Wonder, featuring nearly unobstructed views in three directions and a self-contained air supply that can last for as much as an hour. The fabric of the suit is a mesh made of the finest Spanish cotton and a very light steel wire. The wire is used to make the suit durable under the most trying of situations beneath the sea. It will even offer protection against small sharks and other aggressive sea creatures. The inside of the suit is coated with a special tar and pitch mixture to make it proof against the water. The suit also features durable boots, coated with the same tar and pitch mixture and jacketed with thin steel plating for extra protection.

Our offices recently obtained a test model of one of these suits, and we couldn't wait to examine it. After determining that it would fit Anton (one of our copy boys), we set out to the docks.

Anton suited up, and he cut an amazing figure when standing in the full outfit. After an initial false start (we had neglected to fully fasten the collar of the suit, and the poor boy almost drowned), he was lowered into the water. We waited tense moments while Anton put the suit through its paces. Finally, Anton returned to the surface, his test a success.

We unreservedly recommend the use of this suit for any and all undersea explorations.

Undersea Suit

Cost: 2 days at 200c

Size: Slightly larger than a man [14 wounds]

Description: A baggy suit of cotton/wire mesh, coated with tar. The helmet is a brass globe with an air bottle on the back. The boots are steel plated.

Operation Time: Up to 1 hour

Controlled by: The operator's breathing



Dreadnought

From out of Her Majesty's Naval Yards at Barrow comes the most incredible weapon of war ever to traverse the oceans — The Turbine Dreadnought (as named after the first of this class to be commissioned). An awesome monster formed of iron and steel, the Turbine Dreadnought has rapidly become the Terror of the Seas. The Turbine Dreadnought has yet to meet its match, and even Captain Nemo (*see article on page 72*) has proven reluctant to tangle with it. It has also made England the undisputed Master of the Oceans.

The Naval Design Firm of Vickers based the design of the Dreadnought on the first American Ironclads — ships built of wood, powered by a steam engine, and armoured to the waterline in an effort to deflect enemy fire. However, the improvements and differences from those early designs and current designs are staggering. The beam and support structure of this Dreadnought are constructed from a combination of wood and steel, while the keel is steel reinforced with armour plate. Several massive boilers power huge steam turbine engines. These, in turn, power large screws that move the ship. The new Dreadnoughts are also more streamlined than early Ironclads, making the engines more efficient.

The most exciting features of this modern monstrosity of warfare include the unique arrangement of the armour and the turrets. The armour is thick iron plate, and is sloped in from the waterline. This allows the armour to act in two ways. First, its thickness will withstand much of today's seagoing firepower, making the ship virtually impervious to all but the most powerful shells available. Second, the slope is useful in deflecting a shot. Most shells fired against a ship do not come in straight down, but rather horizontally. When a shot comes in that way against the sloped armour, there is a strong chance the shell will not explode, but instead will skip off the armour, and into the sea beyond.

The Turrets are the other main achievement that makes the Dreadnought as formidable as it is. Built from iron and steel, the turrets house the powerful Main Deck guns. Each of the Turrets has a wide traverse, allowing it to fire on targets in a

180° to 270° arc, rather than requiring the ship to change course to bring a shot against the target. The second main feature of these Turrets is their ability to be lowered down behind the armour, making it harder to damage them. Power from the massive Steam Engines is diverted to huge pistons to raise the Turrets, and a combination of gravity and clockwork are used to lower them.

Nestled in between the forward and rear batteries is the ship's conning tower, which contains the main bridge and observation deck. The main bridge is where the ship is normally commanded from. The observation deck is used for supervision, fire control, spotting, and occasionally as a meeting area for the ship's officers.

The Dreadnoughts are not fast movers. They sacrifice mobility for massive defense and awesome firepower. Due to their lack of speed, they are often deployed with a protective screen of smaller ships, normally destroyers, torpedo rams, and frigates.

Under the influence of the forward-thinking Steam Lords of Parliament, the British Navy has been the primary constructor of this type of ship. Since it was designed by them, it seems only fitting for Her Majesty's Forces to have a dominance in this field. Turbine Dreadnoughts are currently deployed in all of the Eight Seas, with the majority of them located near British holdings.

Dreadnought

Cost: 240 days at 24,000c

Size: Immense [200 wounds]

Powered by: A series of Boilers powering several Steam Turbine Engines

Operation time: 1 Month

Operates with: A complex arrangement of Levers, Cables, and a Captain's Wheel.

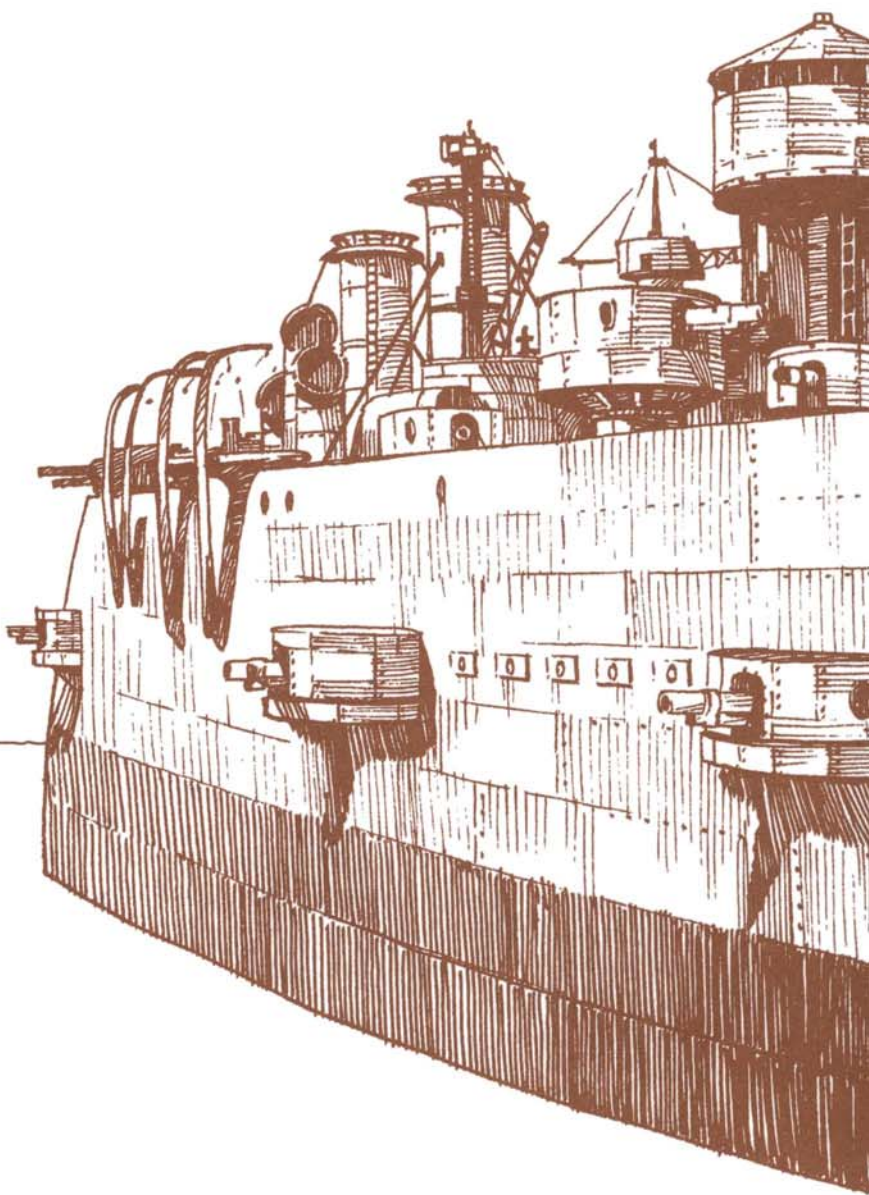
Moves with: Shiny Propellers on Intricate Shafts

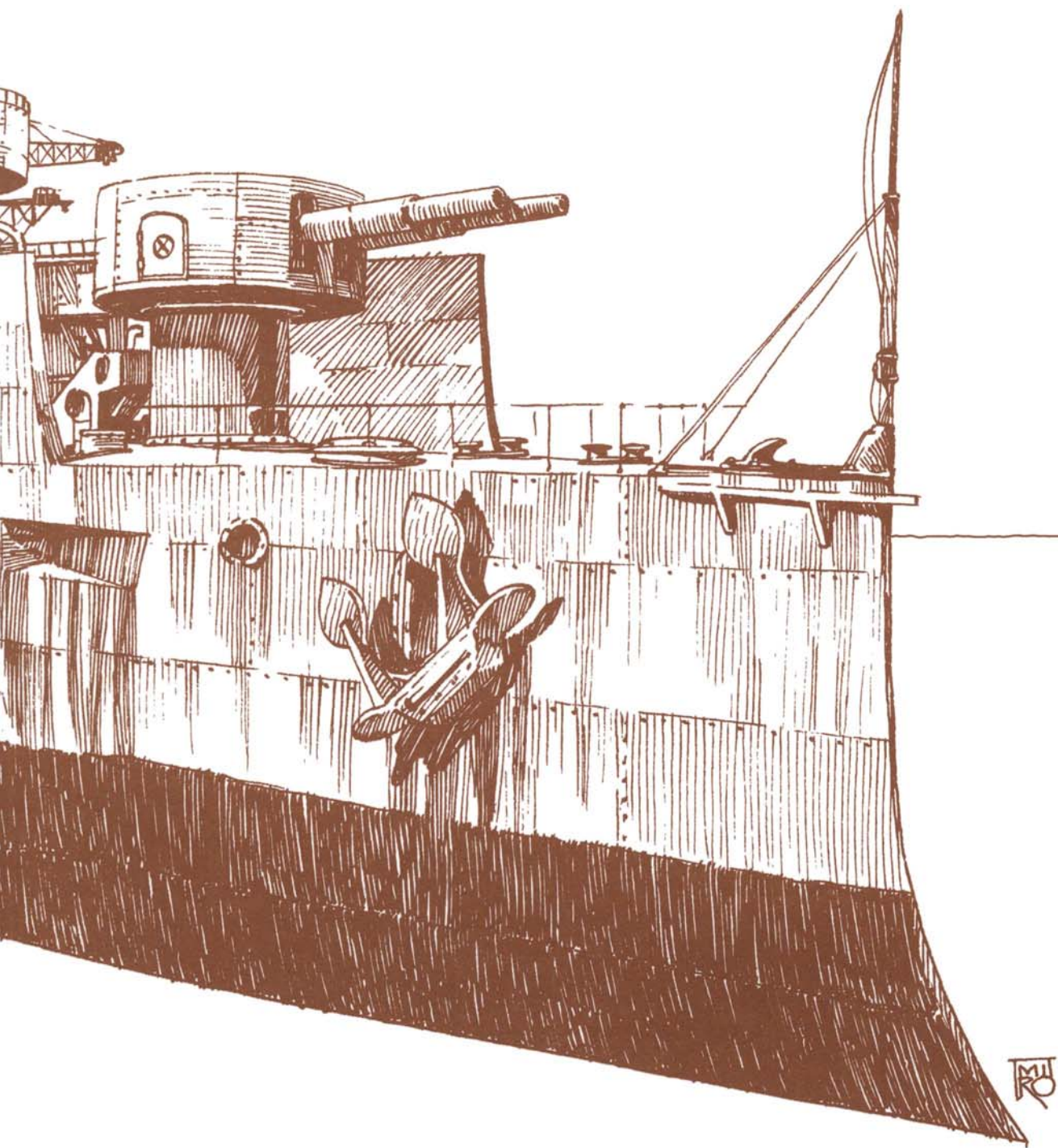
Armed with: 1 two-gun turret and 4 single-gun turrets bearing forward, 2 two-gun turrets bearing aft, 3 single-gun turrets bearing port, 3 single-gun turrets bearing starboard



Dreadnought

If Britannia rules the waves, it is due in no small part to mighty leviathans such as Her Majesty's ship *Trafalgar* (pictured here), one of five of the new Turbine Dreadnought class of warships. Feared by almost any of the warships of the other Imperial Powers, the British Navy's Dreadnoughts are considered to be unmatched in terms of speed, firepower and armour.





RM

Vane Clipper

Recently hailed as one of the most innovative designs in the arena of sailing ships is the Vane Clipper —capable of travelling in ways and at speeds a regular sailing ship could never accomplish. We were of course, somewhat skeptical, until the company that built it, the Inman Line, invited us for a test cruise aboard their flagship, the *City of Paris*.

The ship is built normally enough, primarily wood with some metal reinforcements. It is luxuriously appointed, with the cabins each sporting large floor carpets and fine quality furniture. The object here was a high quality vessel, and in this the Inman designers have easily achieved their mark.

The ship carries forty-five crew members and up to one hundred and ten passengers. Each of the first class cabins (twenty in all) has its own steward, while all the other cabins (forty total) have a steward for every four cabins. As for the other amenities, the ship's French chef-staffed galleys are open quite late, to satisfy every culinary whim at whatever hour it comes in. The stewards also change the linens on a daily basis, and the ship even has a laundry.

The big change from a more conventional sailing ship comes with the addition of the large windmill-like constructs that replace the more traditional sails and masts. There are quite a number of these built all over the top of the ship, and it is from here that the vessel gets its motive power.

Each propeller or "vane" is connected to an elaborate clockwork belowdecks. This clockwork is quite unique. Some of it is built from wood, some from iron, and some from brass. All of the movement of the vanes is mechanically combined by a series of complex gearings to drive two large bearing-mounted shafts which are connected to the ship's several screws.

A certain part of the mechanical energy is also fed into a series of generating engines. These make electrical power that is stored in great batteries for powering the lights, telegraphy and, in the event of calm seas or an emergency, an electrical motor. We could not get a firm answer

on how long the batteries would last, just that "they will function longer than necessary for any emergency that could be foreseen." We wonder whether the vanes will prove to be more fragile than traditional masts during a storm, a question that neither the crew nor Inman Line officers would answer.

The ship is operated from the Control Room, located on the top of the ship near the bow. A pilot is on duty at all times, with a command officer in charge. Down below, the engine room is manned at all times, in case of mechanical breakdown.

Inman already has ten of these Vane Clippers (each named after a capital city of the world) in active service, and has plans to bring ten others into service very soon. Of the ten operational now, several regularly voyage between New Europa and the Americas, stopping at many of the major seaport cities. Still others ply the sea lanes from Africa to India with stops at many of the important coastal ports, including Capetown and New Delhi. Recently several have been employed as rapid cargo transports for the lucrative tea trades of Java, where they rival the legendary American "clippers" for speed and dependability. There has been recent talk among several Imperial Navies of using Vane Clippers for cargo and troop shipping.

Only time will tell if this type of ship will catch on, but with its early success, we think it might!

Vane Clipper

Cost: 140 days at 14000c

Size: Huge [140 wounds w/iron hull]

Powered by: Windmill Vanes powering screws through a complex clockwork mechanism

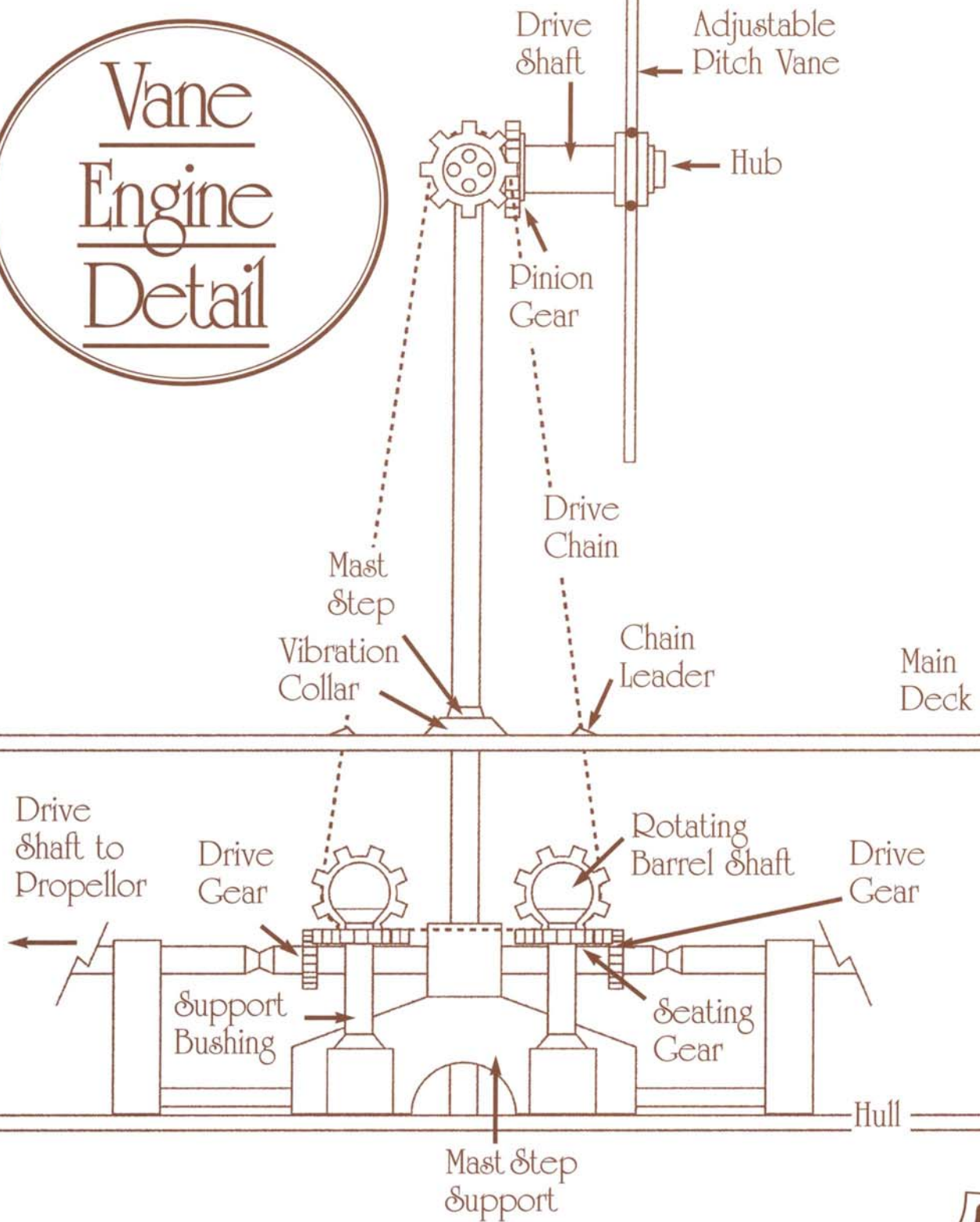
Operation time: Unlimited Range

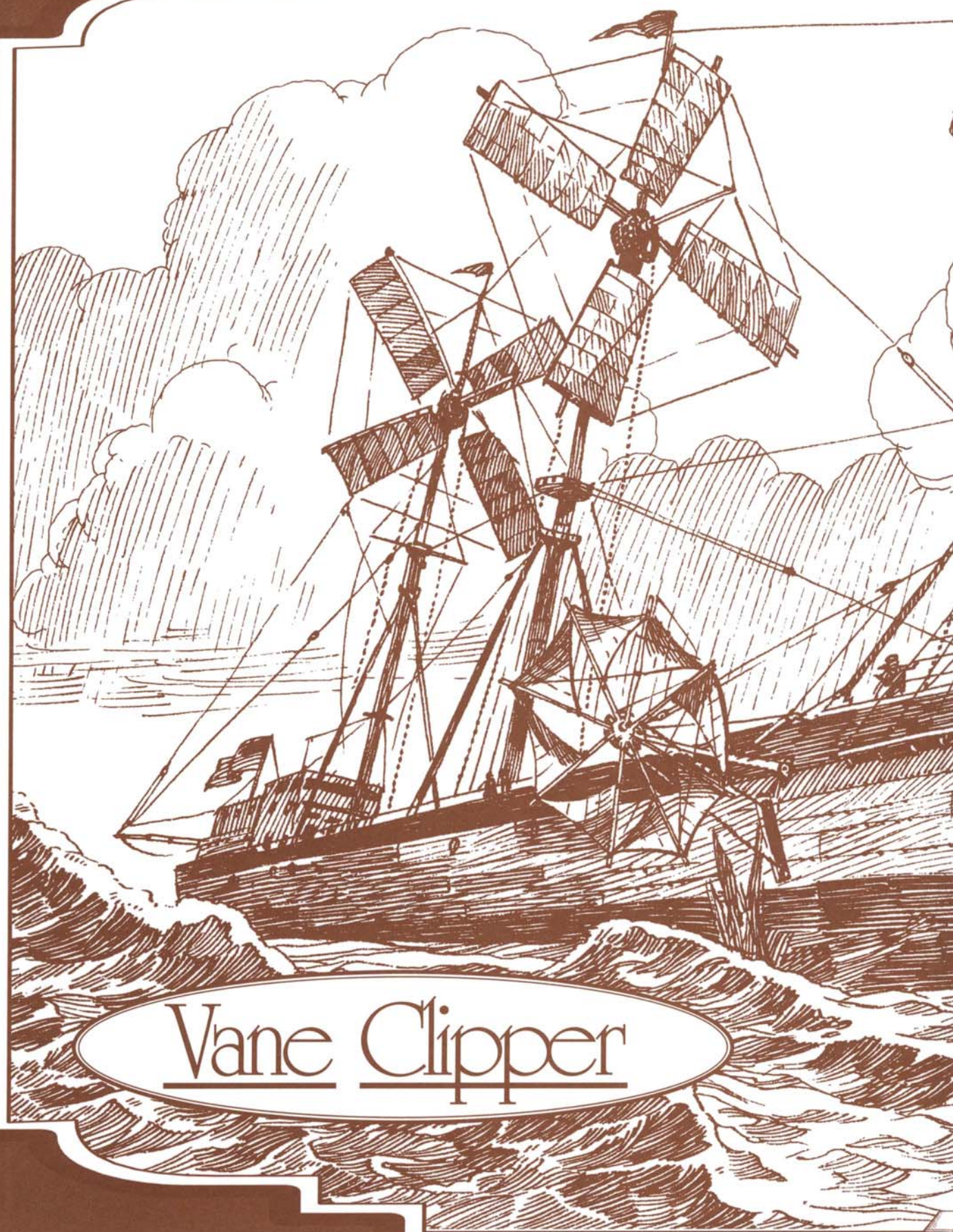
Operates with: A Captain's Wheel

Moves with: Shiny Propellers on Intricate Shafts



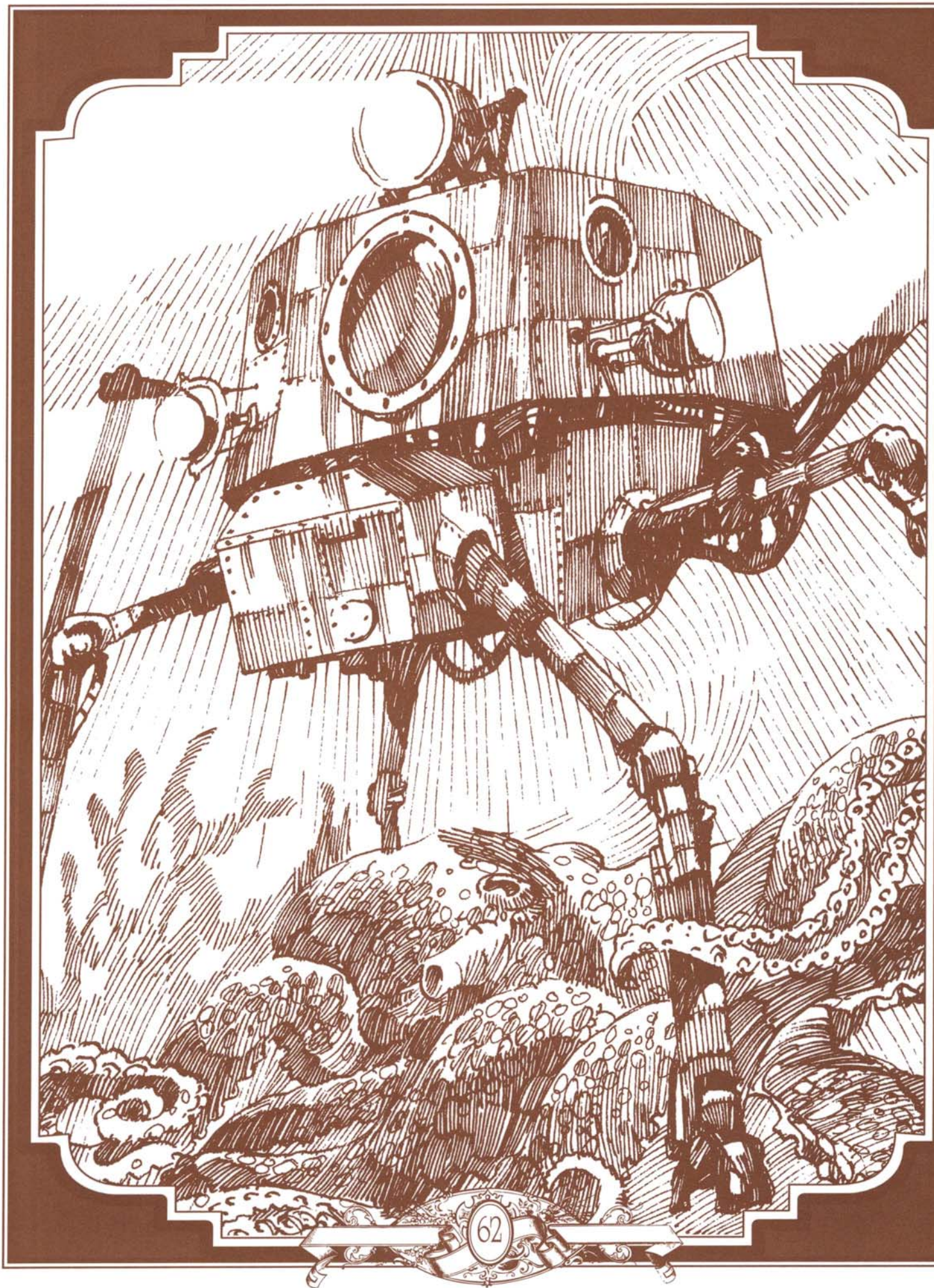
Vane Engine Detail





Vane Clipper





Amazing Undersea Walker

After his thrilling (and still undisclosed) adventures in the Advanced Diving Bell Apparatus, Jake Hollister obviously decided he wanted something a bit more substantial for his next expedition. After tinkering around for a remarkably short time, he came up with our next Invention, the Amazing Undersea Walker Explorer.

Its design is like nothing seen before, and the staff here at *Popular Invention* are truly impressed by its ingenuity. Hollister has combined the movements of a spider with the necessities of undersea travel. Sporting six legs, it will certainly qualify as one of the oddest vehicles we have ever featured in this publication.

The legs are constructed from iron frame works, with heavy steel sheeting around them. The joints of the legs are sealed with India Rubber gaskets, and the seals of all the joints are reinforced with tar. Each of the legs ends in a claw-like foot, designed to automatically latch onto whatever it can. When walking, the Walker must continually open its claws to let loose of what it holds to continue. When we questioned Mr. Hollister regarding the possibility of one of the claws jamming closed on an undersea object, thus trapping the Walker beneath the waves, Mr. Hollister assured us that this could never happen, as the claws can be detached from the leg mountings using a simple mechanical release.

The main cabin is quite spacious and well appointed. Hollister has made his fortune in the Texican cattle market, and is not afraid to spend it lavishly. It has accommodations for six passengers, plus the two pilots. The Walker also has enough air to last for several days below the surface. It carries enough food for twice that long, although for what reason is not known. Large spotlights mounted on the front, combined with large viewports, give spectacular views of undersea vistas to those fortunate enough to ride in this amazing craft.

The Walker itself is powered by electrical motors, run off of batteries. The unique part of this construction is that the batteries are continually being recharged—on the front of the Walker, there are two extendible posts (resembling nothing so much as a pair of bizarre antennae, giving the Walker a distinctive crab-like appearance) capped by propellers. The propellers move with the sea current, and also when the Walker is moving. This spinning of the propellers somehow is translated into power, which is directed into the batteries. When asked where he got the idea, Mr. Hollister would only smile mysteriously.

The overall dimensions of the Walker are 25' long by 25' high. It can move on dry land, but only very slowly, and not for very long. Under the surface, however, is another matter. The buoyancy of the water, combined with strategically placed

air pockets in the hull, make it easy for the Walker to exceed a speed of seven knots on the open ocean floor.

The Walker has so far been tested to depths of 1,000 feet. Hollister believes it can travel much deeper, but few are willing to believe him.

From what we understand, Hollister plans to bring his Walker out to the same spot he went to with the Diving Bell. We, the general populace, and certainly his investors can only guess as to what his motives are, but we here at *Popular Invention* wish him the best of luck, and implore him to share his adventures with us upon his return.

Undersea Walker

Cost: 52 days at 5,200c

Size: Large [140 wounds]

Powered by: A rack of Fuming Acid/Lead Batteries running Powerful Electrical Engines

Operation Time: 7 days

Controlled By: A series of Levers

Moves with: Large Metal Articulated Legs

"Let me say simply that in my previous aquatic investigations, I have uncovered a secret of immense importance—and great danger, which truly concerns all Mankind!"

—Jake Hollister

Jacob Hollister



What more can be said about bon vivant Adventurer and Cattle Baron Jacob Hollister of the Republic of Texas that hasn't been said? He's been more places, done more things, and made more money than most people have ever even thought of, and he's only 32 years old. His holdings in Texas cover 400,000 acres, and he has the largest cattle herds in the Republic. He has factories all across the United States, and a couple in New Europa. He is also a steady fixture at the London Explorers Club and the Berlin Geographic League. And he has a wonderful singing voice.

His story began simply enough. Orphaned at the age of nine, Jake Hollister went to live with his uncle outside Dallas. There he continued his education (between cattle drives), and met his future wife Eloise Carter. At the age of 16, Jake left his uncle and struck out on his own, determined to make his fortune and win the wealthy Dallas debutante's hand.

In his travels through the Southwest, Hollister found a rich vein of gold and worked it for several years, unearthing more than three million dollars in gold to date. Returning to Texas a rich man, Jake married Eloise and set up a ranch outside Fort Worth. Starting with a parcel of only 10,000 acres, he soon built it up to its present 400,000 acres.

While it seems odd that a man this young could accomplish this much so fast, you would not be so surprised if you met him. There is a fire in his eye that would be impossible to extinguish, and a drive like no other. He also has the uncanny ability to turn money into more money.

Jacob met Alphonse Cousteau at a party in London in 1868, and they quickly became fast friends. Cousteau was looking for someone to fund his underwater explorations, and Jake was seeking a way to search for the lost continent of Atlantis. (having recently read a scholarly book about it).

With their Advanced Diving Bell Apparatus (*see the article on page 52*), they could began their search in earnest. Upon their return from the sea floor, however, Jake began work on the Sea Walker, with which he hopes to return to the watery realm he abandoned so mysteriously.

Jake Hollister, Adventurer/Cattle Baron/Inventor

Abilities: Athletics [AV], Connections [GR], Exchequer [EXT], Fisticuffs [AV], Perception [GD], Physique [AV], Tinkering [GD]

An Age of Iron

The Age of Iron ... what a dizzying concept! Until recently, it could be said we were living in an Age of Wood. All the ships and boats were built of wood. Wagons and carts were built of wood. And homes and forts were built of wood. But now we that have embraced the beacon of Progress, we can truly be said to have also become an Age of Iron as well as Steam, for only Iron can fully control such mighty forces completely.

But there is a cautionary note to this great leap Forwards. Besides providing new marvels and creature comforts for our enjoyment, the power of Iron also has the potential to allow us to create newer and better ways to destroy ourselves. The power of Iron and Steam can be turned against us, as the Americans only recently discovered in their own bloody War of Insurrection and the birth of the Ironclad warship.

It seemed only inevitable that with the future of warfare rapidly becoming the stuff of the fantastic, soon mighty metal leviathans would conquer the waves. By the end of the American Civil War, more than one third of the North's Navy was Ironclad, with still more in production. Within a scant two years the vast majority of the United States Navy had become Ironclad in some form.

The success of the Ironclad in that conflict made it certain that we New Europeans would quickly follow suit in the construction of our own Ironclads. Now almost every major Navy in New Europa may boast of at least a few Ironclad vessels, if not more.

The British Navy has been the most successful in modernizing their forces; they were the first to begin the conversion of their Navy to Ironclads, and they have only continued to improve their advantage. While some of their Ironclad ships are still powered by paddle wheels mounted in the back, the majority of them are now driven by massive screws. The British Navy is also the only Imperial Power to have several Steam Dreadnoughts in active service (see the article on page 55 of this issue).

The French embarked on their construction program early as well, but chose a differ-

ent tack. Rather than go for "over-armoured monstrosities" (as Science Minister Verne put it), they chose to develop Torpedo Rams. These are quick and lightly armoured Ironclads that quickly close, launch a motorized or spar-mounted torpedo, and retreat with alacrity. "*Alors*, it doesn't matter how much armour you have," Verne stated in his most recent address to the French Ministry of Science, "if none of it is below the waterline."

The Prussian Navy is similar to the British, but not as advanced. Many of their ships are still paddle wheel-powered, and they have not been fast about refitting them. It appears that the Iron Chancellor is more concerned with the construction of their very successful LandFortresses than with updating their Navy.

The Austrian, Russian, and Italian Navies are hopelessly outdated. Almost none of their ships are ironclad at this time, and they either have not the time or the interest in remedying the problem. In the event of a general conflagration, I suspect that these Navies will find themselves very surprised.

The Bavarian Navy also falls into this category, but for a different reason. Due to the smashing success of their Aerial Battleship, they have found no need to update their Navy.

Yet, what is most disturbing to the observer is that this change from wooden sailing ships has come at a truly mind-numbing pace, with new inventions of destruction seeming to be announced hourly. Indeed, in this writer's opinion, this proliferation of Ironclads holds a greater significance than one might suspect. Those nations that either feel threatened, or appear bent on plans of conquest, have all upgraded their Naval Forces. Those satisfied with their place in the world, or certain they will not be attacked, have not. Yet no one builds up a large military force and then doesn't use it. Indeed, the future takes on a fearsome aspect when viewed in the light of cold Progress and the aggressions of others.

The prudent man must ask, *What will be the cost?* Will it be the lives of our children who will man these weapons of war?



The Monitor

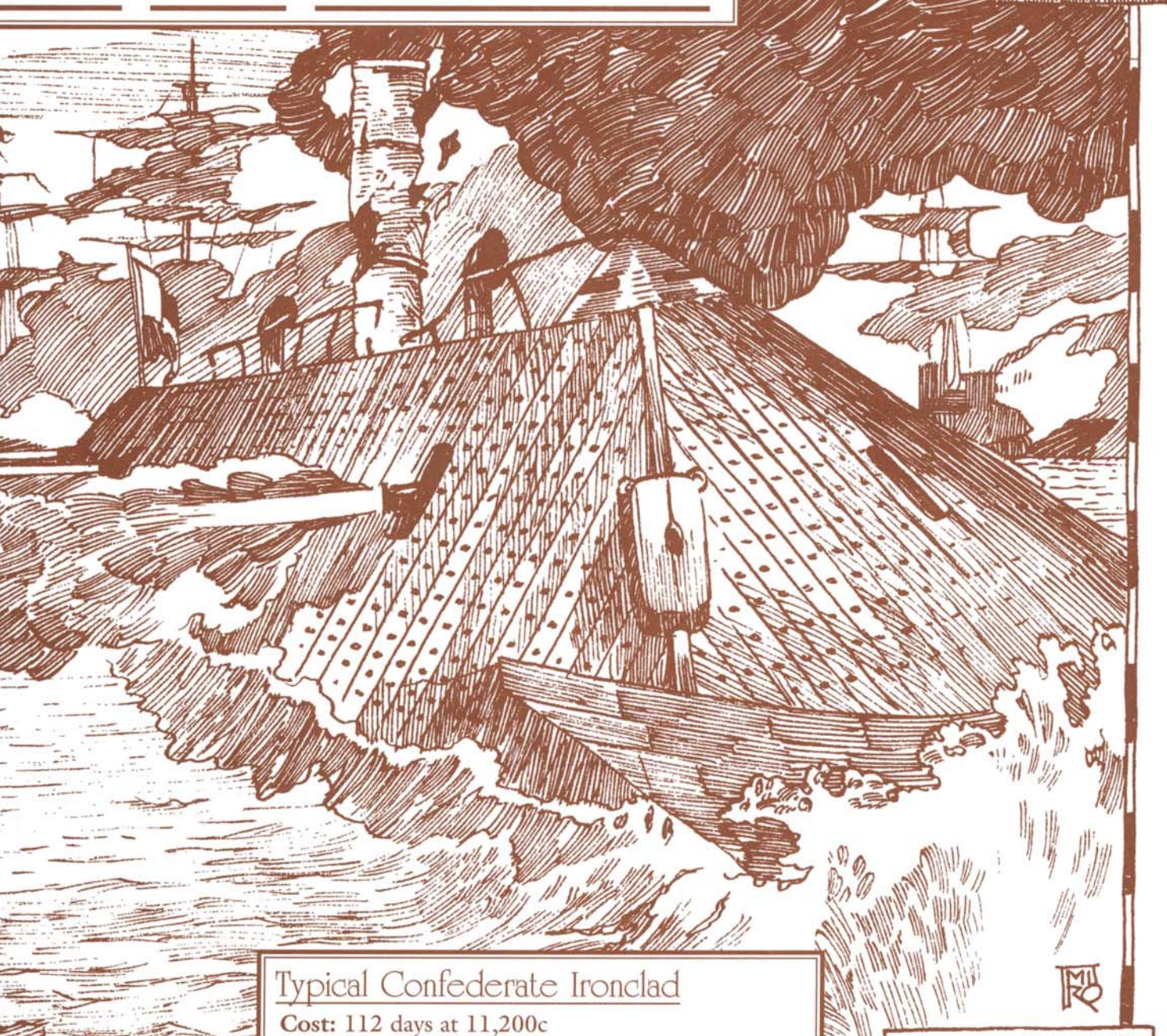
In the most telling conflict of the recent American Civil War, these two armoured leviathans met in a duel of gunnery that changed the very face of naval warfare. Although neither vessel drew a conclusive victory, by the end of the battle, it became clear to all that the Age of Wooden Ships and Iron Men had forever been supplanted by the Age of Iron and Steam.

Typical Union Ironclad

Cost: 62 days at 6,200c
Size: Large [160 wounds]
Powered by: Boilers
and Steam Engines
Operation time: 1 week
Operates with:
Captain's Wheel
Moves with: Propellors
Armed with: 2 Turret
Mounted Guns



and the Merrimack



Typical Confederate Ironclad

Cost: 112 days at 11,200c

Size: Large [170 wounds]

Powered by: Boilers & Steam Engines

Operation time: 1 week

Operates with: Captain's Wheel

Moves with: Propellers

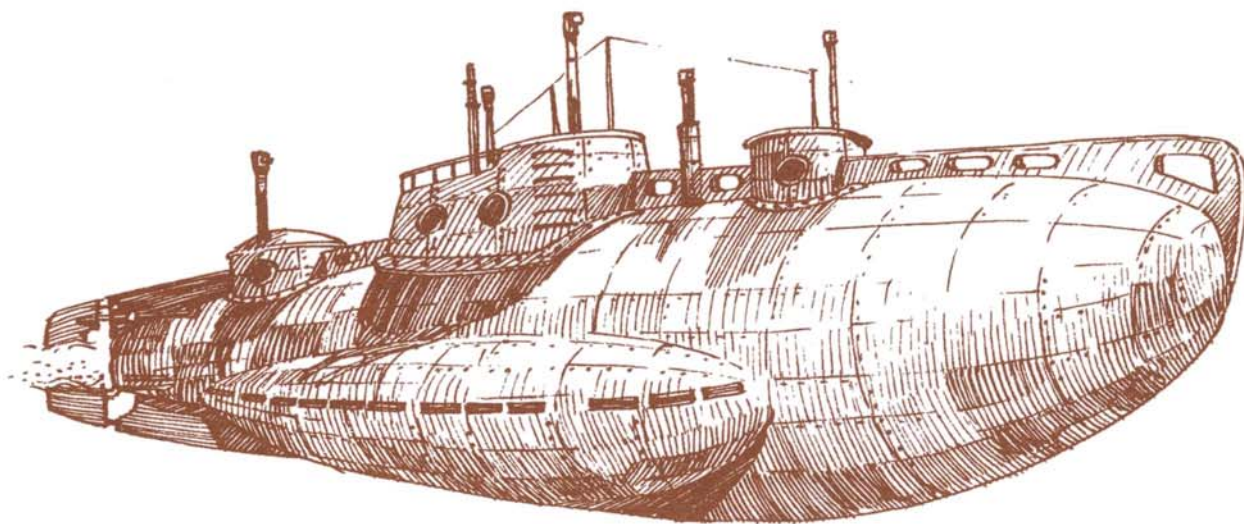
Armed with: 6 cannon

Note: Neither of these types of vessels are capable of sailing in deep water. Rivers and coasts are their domain.



MERRIMACK





Submersible Vehicle

Exploration of the deep reaches of the ocean has never been easier than it is now with the advanced technology Submersible invented by Pierre LaFontaine of Le Havre, France. The mysteries of the sea can now be easily uncovered simply by employing this incredible vehicle.

Constructed of the best quality steel plate, the Submersible is capable of more than six hours of sustained travel under the waves. It is made watertight by a combination of India Rubber gaskets, followed up with a special sealant made from pitch. The Submersible moves with twin screws, powered by electric motors.

The Submersible also features thick glass windows, sturdy enough to withstand the pressures of the deep down to 200 feet. It seats two, allowing one pilot to relieve the other during an arduous journey.

The Submersible is best used from a larger vessel, such as a ship or small tender. Using this as a base, the Submersible can be used to investigate sunken

ships, explore for hidden caverns, or locate dangerous hazards to navigation. We at *Invention* have been informed that Her Majesty's Naval Forces have ordered several of these ships to supplement their fleets.

With the costs being as modest as they are, we expect this Submersible to reach far more than just large companies or military forces. We expect this to be the sport Submersible of the next decade.

Submersible

Cost: 24 days at 2,400c

Size: Small

Powered by: Banks of fuming Acid Lead Batteries driving whirring and sparking Electrical Engines

Operation Time: 24 Hours

Controlled By: A Captain's Wheel and a Complex Arrangement of Levers

Moves with: Shiny Brass Propellers that spin on ornately mounted drive shafts

The Nautilus

The famed *Nautilus* commanded by Captain Nemo ... few on this planet have failed to hear of this astounding machine and its inventor, and all who have breathlessly follow the daring exploits of this enigmatic man as prominently splashed across the tabloid newspapers. Many have marveled at the incredible functions attributed to the *Nautilus* in the press, and wondered if indeed these facts were true. Knowing how important this would be to the readers of *Popular Invention*, we set out to find out what we could about this amazing craft.

Through a series of contacts initiated through the London Explorers Club, we were able to get word to Capt. Nemo of our desire for information. After an amazingly short time, he agreed, after laying out certain terms that we here at *Popular Invention* would have to follow. Included in this issue is information on the *Nautilus*, an interview with the Captain himself, and a brief tour of his Mysterious Isle.

The *Nautilus* itself is a true wonder of the age. Built to stop war, it truly shows what a man can do if he sets his mind to a goal. The original sightings thought the craft to be a large narwhal, or some kind of sea serpent, and justifiably so. The *Nautilus* had destroyed three warships before there was a surviving eyewitness. Before then, all that had been found were pieces of wreckage. Soon after, however, it became known (primarily through the writings of Dr. Verne of the Second Empire, who recounted the now famous tale told to him by countryman Professor Pierre Arronax) that the craft was of a more artificial origin, and not a malignant behemoth risen from the depths.

The *Nautilus* is constructed from a combination of armour plate and steel, making it almost impervious to damage. The basic features (if anything on this vessel can honestly be referred to as basic) include a Radium-based engine capable of powering the ship for an extended duration, air supply for more than thirty days for a crew of fifty, and a hull strong enough to withstand powerful impacts with almost any armoured warship the world can hurl against it. The ship has quarters

and provisions for fifty crew, plus the Captain, and up to six guests. Depending on what sea the vessel is operating in, the provisions can be supplemented by one of Nemo's many underwater farms.

The Radium Engine was developed by Captain Nemo and his assistants. It uses an isotope of Radium found far beneath the waves. This Radium acts as an inexhaustible heat source in the ship's boilers. These boilers run the engines which, in turn, are able to turn massive twin screws and propel the ship along at an

incredible pace. Everything in the engine room is heavily shielded. Nemo would not let us know why. We at *Popular Invention* suspect that it has something to do with the isotope of Radium used in the engines. How long this mighty ship can remain at sea we do not know, but the *Nautilus* has been known to have travelled from the Baltic Sea to the South Pole and back without stopping to refuel.

The craft features large viewing portals near the top, which give it a look like a sea creature. It also features a large spur-like ram, deployed during attacks on shipping and retracted when not in use. This is probably what helped fuel the early "sea monster" claims. Mounted on the top of the vessel, in the rear quarter of the vessel, is a small ship's boat, christened *Nereid*, which is covered when not in use.

The *Nautilus* is a powerful and exciting vessel. The technology he has created for it is second to none. We can only hope that eventually Nemo will see clear to sharing the details of some of its secrets with the world.

"I have
renounced the
land and the soci-
ety of Men! I sail
under my own flag,
alone!!
—Nemo

Nautilus

Cost: 148 days at 14,800c

Size: Huge [180 wounds]

Powered by: A mysterious Radium Engine

Operation time: Unlimited

Operates with: A complex arrangement of Levers, Cables, and a Captain's Wheel

Moves with: Shiny Propellers on Intricate Shafts

Armed with: A huge Ramming Spur

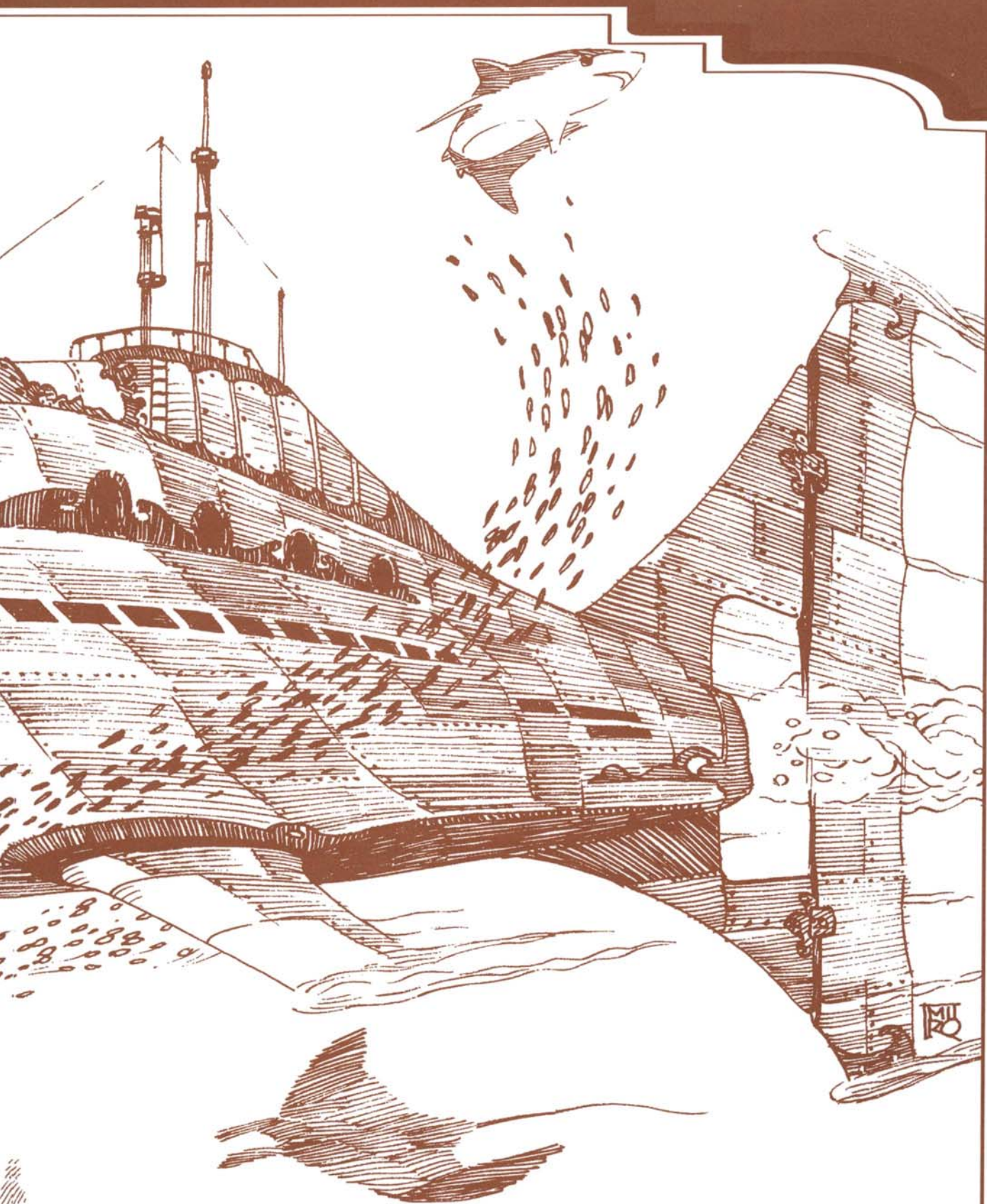


*“The
Nautilus,
carried
along by its
propelling
power, passed
through the
mass of the
vessel, like a
needle
through
sail-cloth!”*

*—20,000 Leagues
under the Sea, by
Jules Verne*

The Nautilus





Captain Nemo



As the second part of our feature on the mysterious Captain Nemo, we present this interview we conducted with him. It has been shortened due to space considerations, but none of the comments has been edited.

Captain Nemo is a figure of legend, and his ship the *Nautilus* will forever fill the history books as the first protestor against war. His large frame, black hair, and dark complexion add an air of mystery to this man. We joined him aboard the *Nautilus*, by special invitation.

PI: Captain, you claim to be against war, yet you have several times destroyed ships, killing innocent crewmen. Isn't this a contradiction?

CN: Not at all. They refuse to end war, so I must help them along the path. The crewmen are not innocent, as they have signed up to assist in the commission of war.

PI: Isn't that a bit extreme?

CN: These are extreme times.

PI: Captain, were you aware that "Nemo" means "no one"?

CN: [At this point, the Captain smiled but gave no response.]

PI: What led you to build the Nautilus, and where did you acquire the technology to do so?

CN: Setting myself on a course to stop war, I chose to begin that quest on the seas. After voyaging for several years, I came across an inventor who had been shipwrecked. We rescued him, and he and I became fast friends. His technical knowledge, along with my concepts, formed the *Nautilus*. I have a technical background of sorts myself, and so between us the creation of this marvelous craft was child's play.

PI: Where did you grow up? What is your national background?

CN: I would rather not say.

PI: What are your plans now? The nations of the world do not appear to be stopping their plans, as evidenced by the recent "adventures" of the Iron Chancellor. Can you stop them?

CN: I can only try. We have several things in the planning stages, and I can safely say that I am certain everyone will be amazed.

Captain Nemo, Mastermind

Abilities: Athletics [AV], Charisma [GD], Fencing [EXC], Fisticuffs [PR], Perception [GR], Physique [PR], Stealth [AV], Submarine Command [EXC], Tinkering [EXT]

The Mysterious Isle

From thence, to the stuff of legends. Nemo's Mysterious Isle has captured the imaginations of New Europa, ever since mention of it was made in the popular media. As part of our Special Feature on Captain Nemo, we present to you a tour of his secret facilities, hidden somewhere in the trackless reaches of the southern Pacific Ocean. While the lucky few from *Popular Invention* who visited the island were not allowed knowledge of where they were, they estimate the island lies in a triangular area whose vertices are defined by India, Australia, and the Philippine Islands. To discourage unwelcome visitors, the waters around the Isle are heavily seeded with mines, and while coming into port we glimpsed something that looked like a shark automaton, easily as long as a railroad engine.

The island itself features a complete and extensive compound, designed to assist Captain Nemo with his goal of the eradication of all warfare across the world. There is a main house, servants' quarters, a maintenance facility for his submarine the *Nautilus*, farms, greenhouses, a state-of-the-art infirmary, and a laboratory.

The Main House is typical of the Captain. Luxuriously appointed on every floor, the house is filled with the uncovered treasure of the ages: items found in the holds of Spanish Galleons that wrecked after looting the New World, brought up from the wrecks of ships returning from Africa, and discovered beneath the waves on what appears to be the lost continent of Atlantis. The house is also fully staffed, and guests want for nothing during their stay.

The house itself has a staff of twenty individuals, mostly people Nemo has liberated from oppressive surroundings. They are extremely loyal to him, and really seem to like living on the Island. They have been provided with their own homes, and they are almost as luxuriously appointed as the main house.

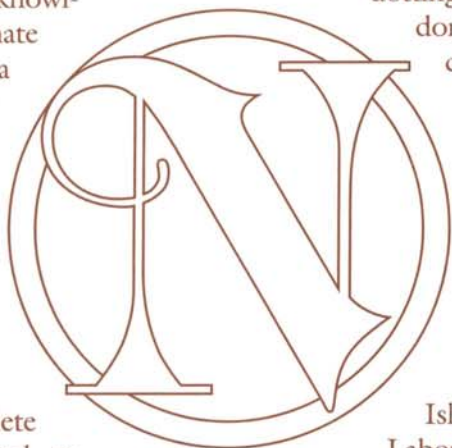
The Maintenance Facility, or "tender" as Captain Nemo calls it, contains the highest qual-

ity materials available to keep the *Nautilus* working at peak performance. Many of the parts of the *Nautilus* have spares stored here, including the massive Bow Ram, which has already been replaced twice. There is a room marked "Engine Maintenance" here that Nemo would not allow us inside, so as to keep the working of his engines a mystery.

The island is self-sufficient, with a series of farms dotting the land to generate crops and raise domestic animals such as chickens and cows for the land-based work crews. Although a steady diet of seafood provides most of the *Nautilus* crew's needs, this is occasionally supplemented by food grown here. Due to the fine weather they experience here year round, the island is able to bring in three or four crops a year.

Another prominent feature of the Island compound is the Captain's Laboratory. Here, he and his assistants dream up and build new and exciting technology for inclusion in the *Nautilus*. They have already developed, for exclusive use of the *Nautilus*' Crew, the following items: a diving suit capable of independent movement and staying under the surface for twenty-four hours, a small runabout submarine vessel that carries two people and can operate independently for more than twenty-four hours, a new type of power source for the *Nautilus*' engines, a new type of drive system that allows the *Nautilus* to move at incredible speeds beneath the waves, and a new underwater torpedo weapon that, launched from a submarine, will actually track its target until it impacts, delivering a powerful explosive charge. Note that this is a significant improvement over the models in use currently by the British and United States navies. Nemo also hinted that he was drawing up plans for a new, more powerful, redesigned *Nautilus*.

We at *Popular Invention* can only hope that eventually this information will be released to the public, sharing these advances with the rest of the world for the betterment of humanity.



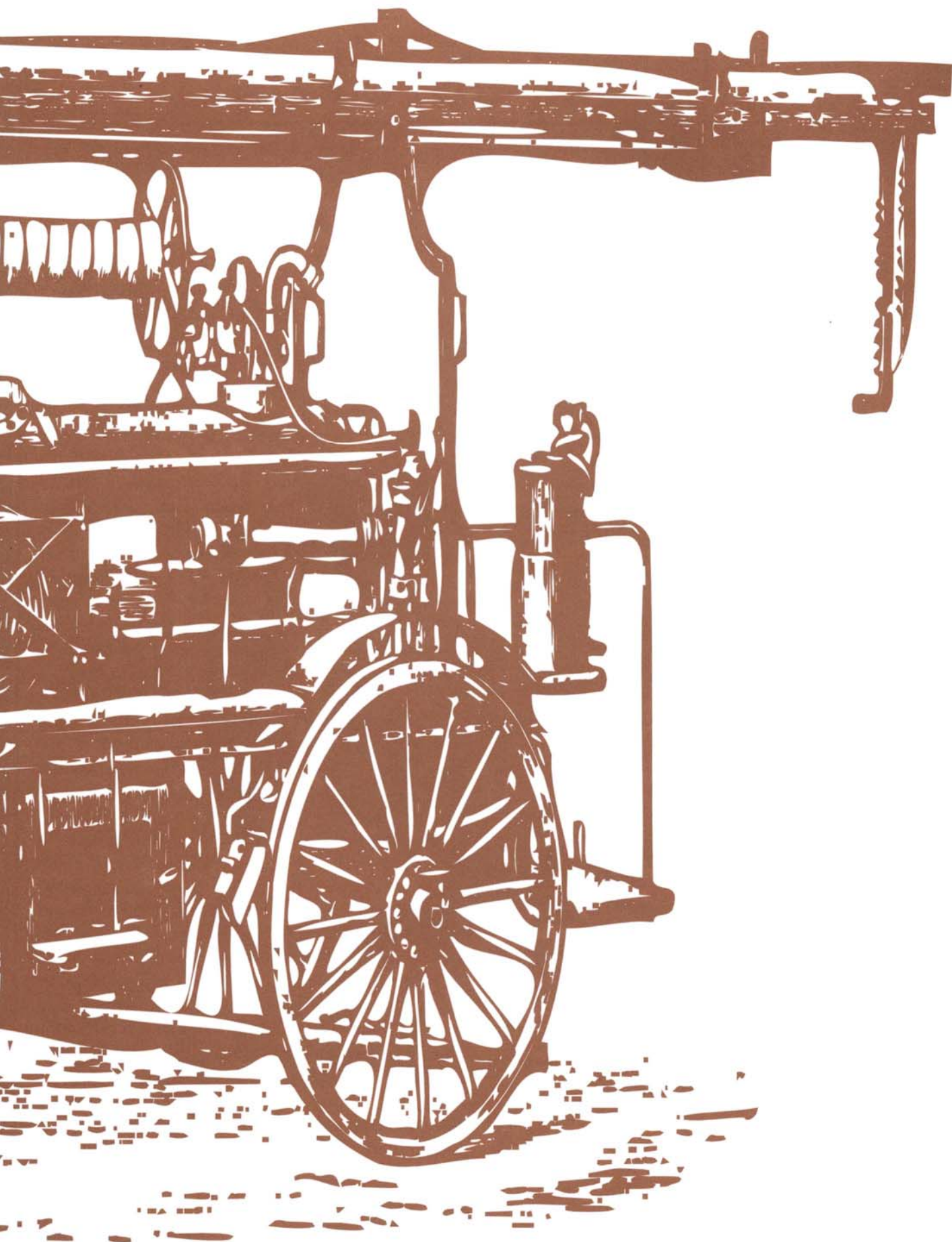
INFERNAL

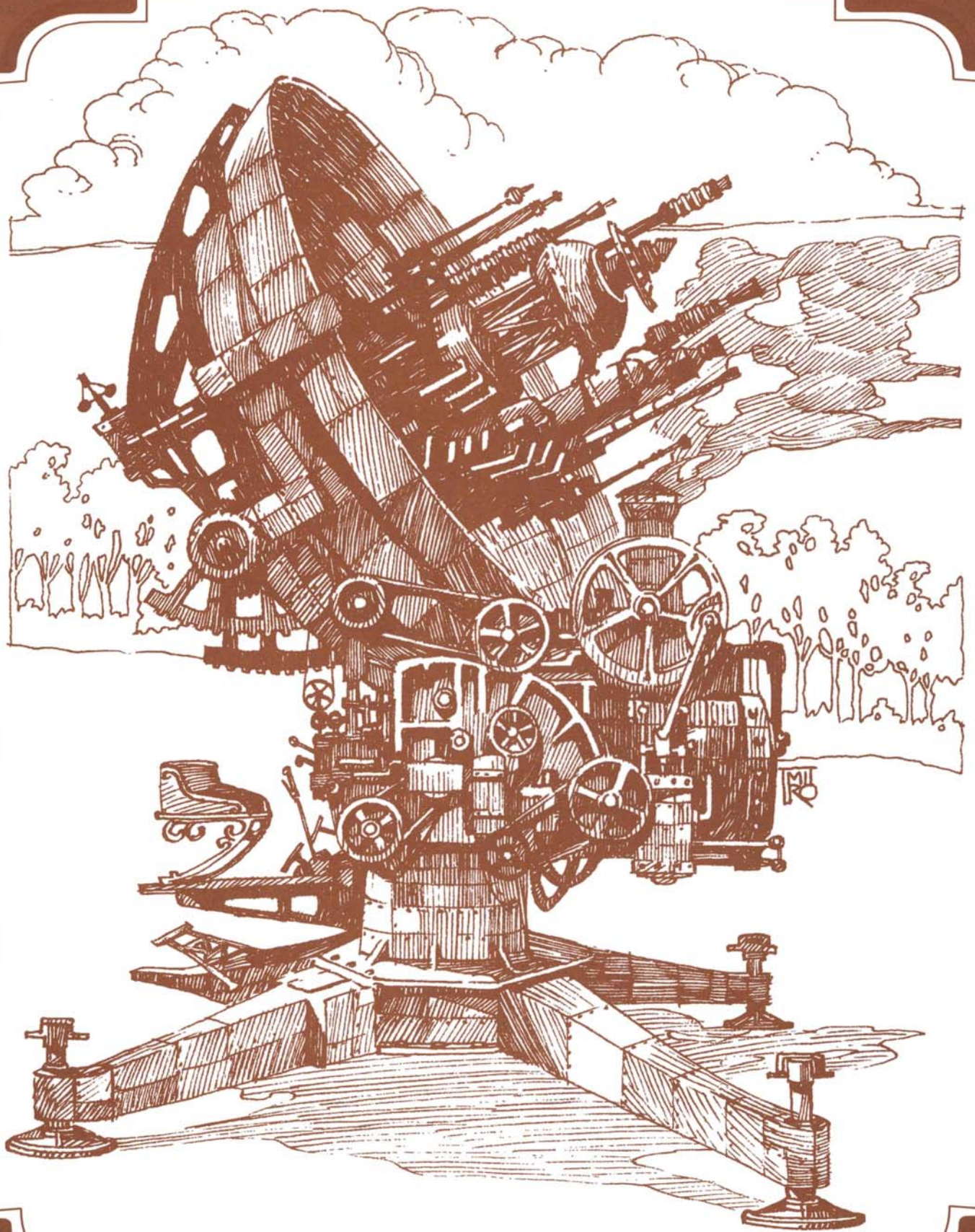
Our last category of Investigation concerns what have become termed, in the popular language, Infernal Engines. This area of discussion includes such Marvelous (and sometimes Unbelievable) creations as Clockwork Servants, Babbage Calculation Engines, Prismatic Light devices and even the new Discoveries in the exciting field of Virtual Realism.

Infernal Engines also include things which are truly infernal—Ray Projectors, the gigantic Verne Cannon, Martian War machines and other instruments of terror that Man is Best not having ken of.

STEAM







Magnetic Ray Projector

Developed by Sir Richard von Ruppelt, a member of King Ludwig of Bavaria's Court, this new and innovative weapon called the Magnetic Ray Projector is capable of everything from pulling a flying apparatus from the clouds to forcing a LandFortress to stop in its tracks, all from the use of a basic force of nature.

From what we can ascertain, the weapon was developed soon after Sir Olam and Rhyme Enginemaster built the Aerial Battleships that came to the world's attention a short time ago. Apparently utilizing some of the same principles of the engines used to lift the Aerial Battleships, the Magnetic Ray Projector takes advantage of the magnetic lines that crisscross our globe. It uses these magnetic lines as a power source, and as its main effect.

While we are not altogether certain how it works (and no one inside the Bavarian Government is talking), we can tell you what the weapon looks like and something of its effect on a target.

The Projector resembles nothing so much as a large dish set on its side, with a large needle in its center. Behind this is a seat, with a two-lever control apparatus. It also uses a unique mirror configuration, much like a periscope, that allows the operator to see what is in front of him, even though he cannot normally see through the dish. Below the seat is a sealed box, and it reportedly contains all the machinery of the Magnetic Ray Projector. No one has seen inside one, and the last person that tried was killed in an explosion as he tried to open it.

The effect of the weapon is quite devastating. Using the Magnetic Forces, the Projector can grab hold of the metal in an object. Once

this is done, it can pull the object toward itself, or push it away. The net effect of this can be to pull a flying machine from the sky, or force a LandFortress treads to "lock up" into immobility. You could also conceivably use this device to disarm an advancing enemy army, by pulling all of their weapons out of their hands, or to cap-

size a battleship. Unfortunately, the ray used by the projector dissipates under water, so submersible vehicles appear to be immune to its effects.

The range on the Projector varies depending on where it is deployed, apparently as a result of the strength of the Magnetic Lines in the area. It has been used at a distance of more than half a mile, and other times it cannot be fired farther than 50 yards.

While these devices were not used in the last great battle between Prussia and the Second Compact forces (as they were not yet constructed at the time), the Bavarians have made plans for construction of a few battlefield mobile versions, apparently in anticipation of further problems with the Iron Chancellor. Also in development is a more portable version. Once completed, it may be small enough to be mounted inside a flying machine, or on a Steam Automobile.



Magnetic Ray Projector

Cost: 108 days at 10,800c [100 wounds]

Operates with: A complex arrangement of Levers

Range: Dozens of Miles

Affects: Huge Targets

Damage Level: Terrible (to metallic objects only)

Richard von Ruppelt



Sir Richard von Ruppelt is something of an enigma. Born in America to a Bavarian father and an American mother, he grew up not altogether certain where his loyalties lay. However, soon after the arrival of Sir Thomas Olam, he realized that his place was with his King.

Richard was born in New York City, during his father's second visit to the United States. His father had met his mother on the first trip. Growing up in the von Ruppelt family was interesting, to say the least. From the start, Richard was forced to learn English and German at the same time. By the time he was five years old, he had also picked up French, Italian, and a collection of

Portuguese swear words his father used when he was particularly upset. His ability to learn languages quickly also translated into a love of learning, and Richard soon absorbed most of the books given him.

By the age of 15 Richard had outpaced every tutor they could find, and was working on his own. He had a particular love for things mechanical, and could often be found tinkering in one of the small workshops he maintained at each of the family estates.

With the ascension of the Regent, the von Ruppelt family left Bavaria. Richard's father was a supporter of Ludwig, and when old King Max died, he saw the writing on the walls.

Travelling to Paris, he settled the family down. Richard continued his tinkering, and started to generate the family a bit of money with the occasional invention. Then Ludwig came back.

Once this was known, the von Ruppelts were nearly the first to sign up with the King's forces and fight the Regent's men. Richard made contributions by attempting to come up with new weapons for the fight.

After the creation of the Aerial Battleship, Richard started to talk to Rhyme about how it worked. After a short discussion, Richard went away for three days. When he came back, the plans for the Magnetic Ray Projector were in his hands. And what a weapon it was!

Sir Richard von Ruppelt, Inventor

Abilities: Athletics [GD], Connections [PR], Education [GD], Exchequer [GD], Fisticuffs [GD], Perception [AV], Tinkering [GR]

Lightning Hurler

In Mankind's quest for bigger and more powerful weaponry, it was inevitable that he would eventually discover how to harness the lightning itself. In the past, several inventors have tried to turn this powerful force of nature into a weapon of war, and all have failed, many at the cost of their very lives. Yet, now from out of Vienna comes the latest entry in the ever more deadly field of weapons research—the Lightning Hurler, known in military jargon as the Focussed Electrical Discharge Cannon, developed (under some coercion, admittedly) by the Volta Laboratories in Italy for the Austrian High Command.

Deployed as a field emplacement, the Lightning Hurler has been used to horrific effect. The sheer power of the energy that it projects has been known to literally burn its targets to ashes, leaving little to identify. The range of the Lightning Hurler is from its emplacement to the horizon, and as it is mounted on a turntable, its utility becomes readily apparent.

The science behind the Lightning Hurler is actually quite simple. Using one of several power supplies, normally a generator or a series of batteries hooked up to a lightning rod, a large charge is stored in storage capacitors for use by the Hurler. This charge is then bled into a Capacitance Circuit, which is capable of letting the charge go all at once. Using a focussing device, the charge is launched at the appropriate target, causing rather horrific damage. The lightning strikes near instantaneously, leaving no time to evade the blast. The weapon can actually be fired by one person, as it requires no loading crews and offers no recoil like a gunpowder-based cannon would.

In order to have the most use, and to avoid dependence on natural lightning strikes, the Hurler is normally hooked into a series of generators. This allows the Hurler to fire multiple charges throughout the course of the same battle. Unfortunately, this use of the weapon is not altogether portable, unless the weapon is mounted on a railroad flatcar. However, this necessitates the proximity of a railway line to the battlefield. Storage batter-

ies can be substituted for a generator, but under normal conditions only one shot can be made from them.

This Infernal Device recently saw action against the forces of the Iron Chancellor in a border dispute in which the Austrians attempted to regain territory won by the Prussians in the 1866 war. Using a medium-sized Lightning Hurler moved into position on a railway line, the Emperor's Army was able to mount an attack on a Prussian border fortress and eventually destroy the walls. Although scores of infantry were killed and many more injured, the outgunned Prussians courageously counterattacked. The battle raged for several days, with the Prussian High Command eventually deploying a LandFortress to "bring the conflict to a reasonable conclusion." The Austrians took aim at the LandFortress, made an easy target by virtue of the fact that it was the largest concentration of metal on the field. However, the Austrians could not have known that, when they discharged the Hurler, it would arc and ground out the Lightning Hurler, destroying it as well as its target! The resulting effect was two dead crews, a non-functional LandFortress, and one completely obliterated Lightning Hurler. The surviving Prussians then overwhelmed the Austrians. Fortunately for the Austrians, the Lightning Hurler had been melted into slag, so the Prussians were unable to obtain any of its secrets.

Although the incident could be considered a defeat for the ambitious Austrians, their Secret Service has considered the results of this battle to be encouraging enough to order the construction of several new Lightning Hurlers, which they hope to use to mount new offensives against their neighbors to the north.

Lightning Hurler

Cost: 58 days at 5,800c [115 wounds]

Operates with: A complex arrangement of Levers and gears

Range: Thousands of Feet

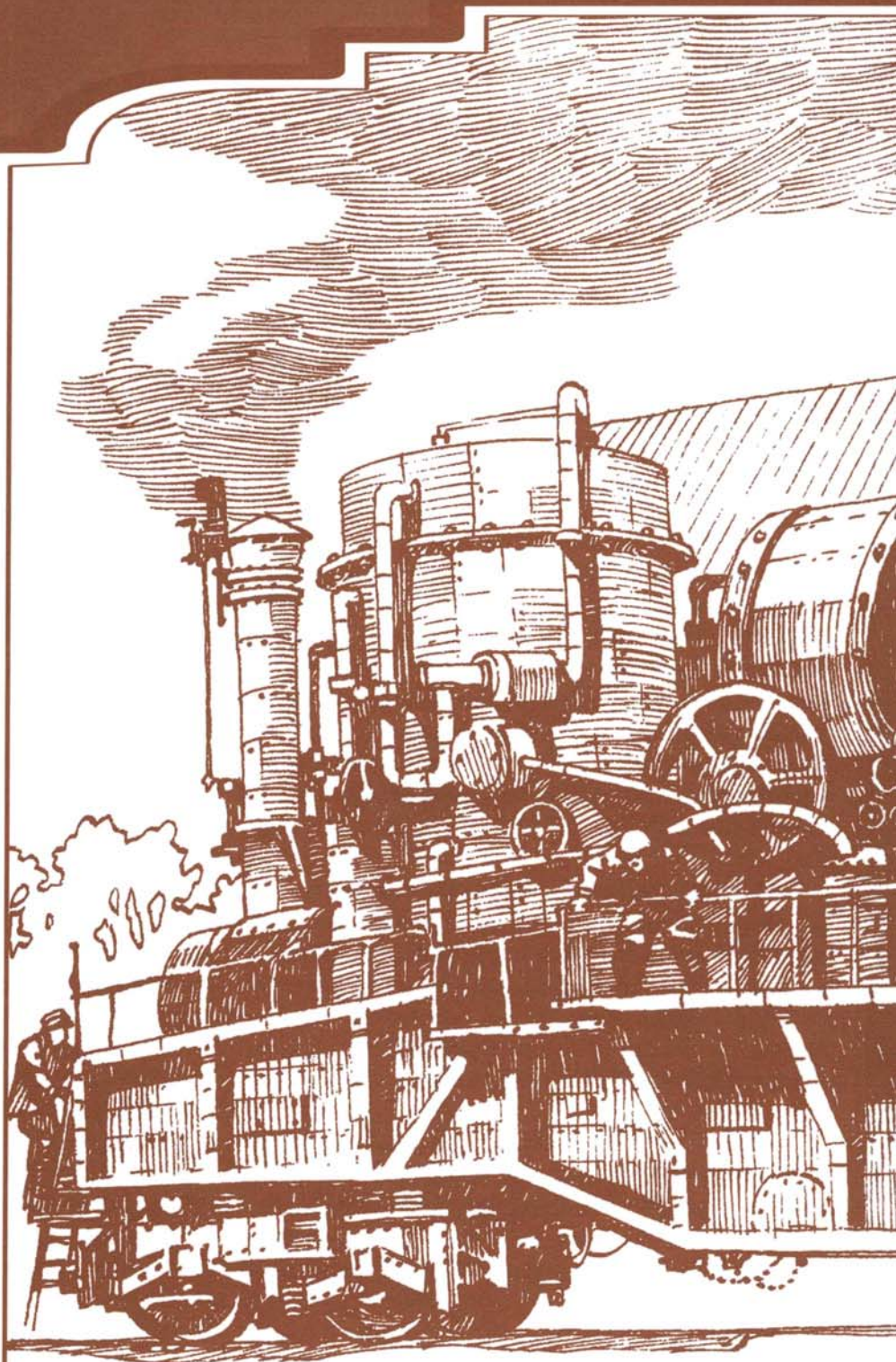
Affects: Medium Size Targets

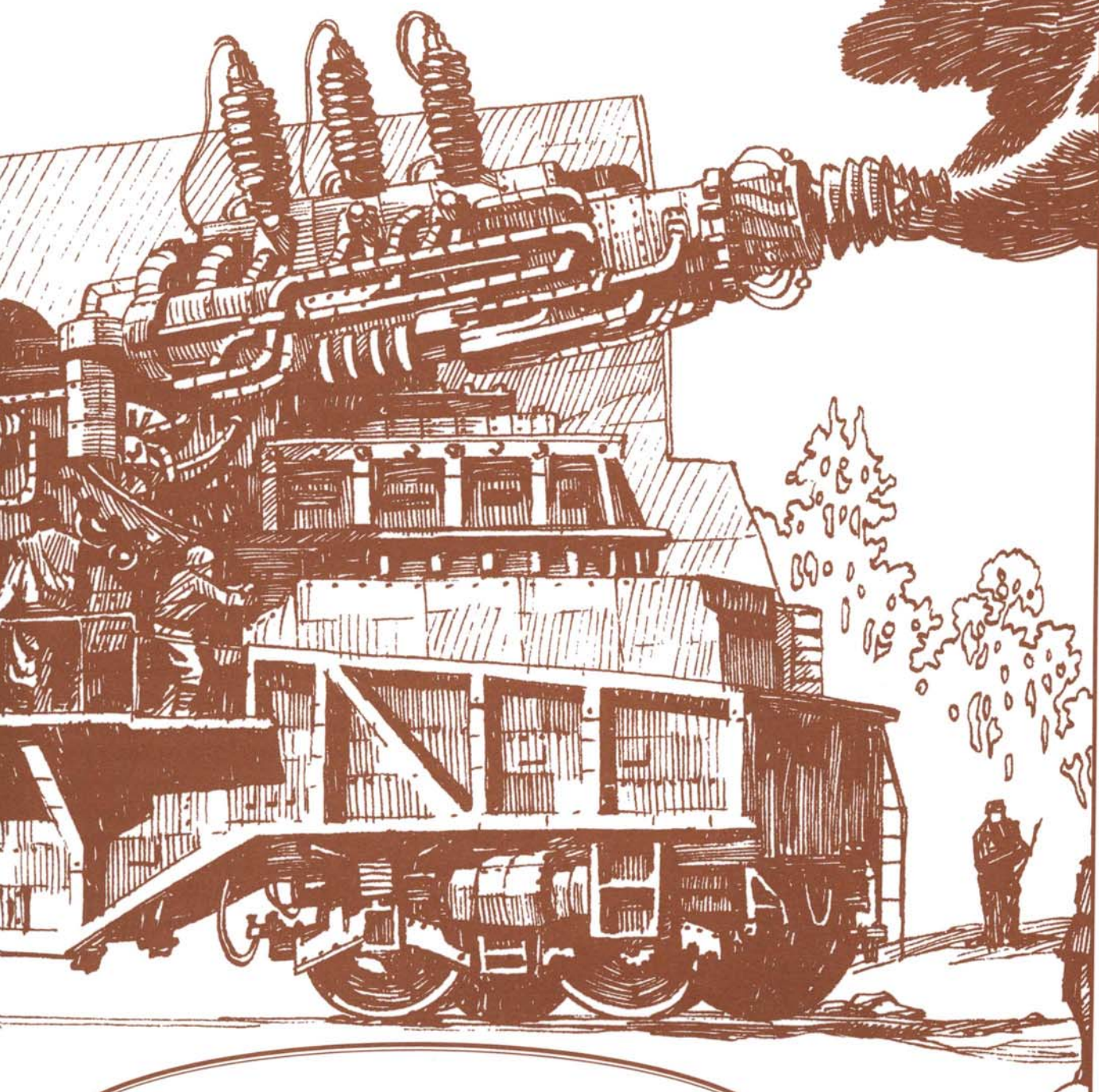
Damage Level: Horrible



*“With
this, we
have the
very force
of Jove
himself at
our com-
mand!”*

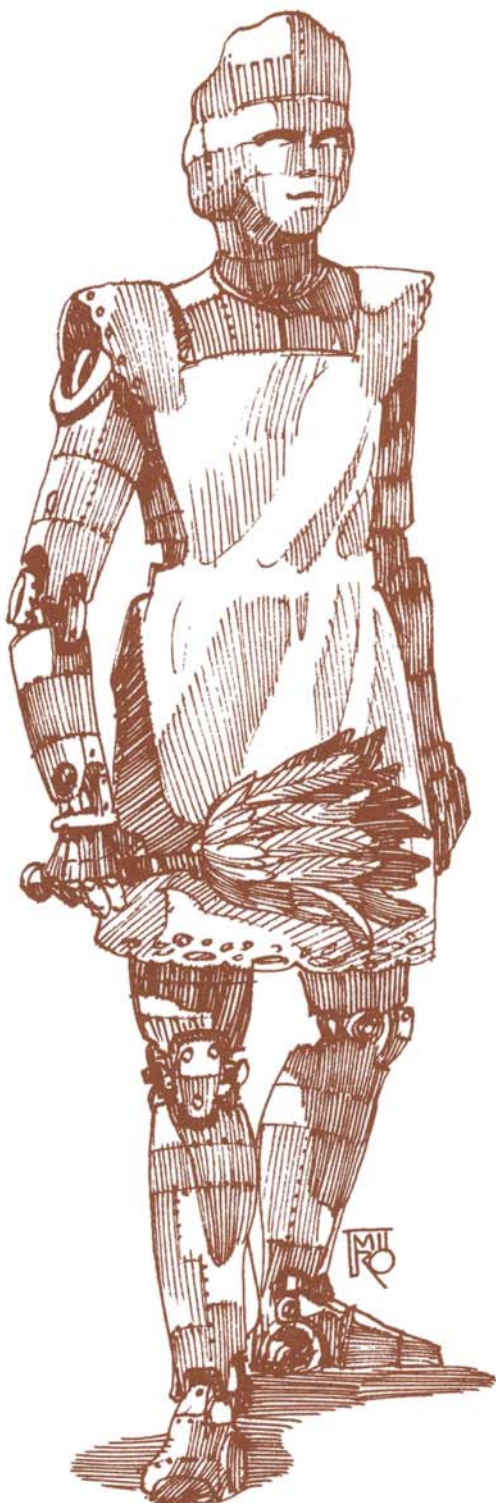
*—General Alfred
Valisky, Austrian
Intelligence
Forces*





Lightning Hurler

Clockwork Servant



Finally a device created to help with those age-old problems of maintaining a home and raising the children—a Clockwork Servant. Originally developed by Elrich ClockworkMaker (see his profile on page 84 of this issue), the Clockwork Servant has been a boon to mankind. The ease at which they can be set upon their tasks and the precision with which they do their jobs make this one of the best items yet developed.

The Clockwork Servant is shaped very much like a man, with a sturdy torso, two arms, and two legs. Fine Dwarfish craftsmanship goes into each one, making it a work of art. The torso and legs are covered in fine brass sheeting, riveted with care, and coated with a sturdy enamel. The head is a metal sphere painted with an almost human face, usually smiling.

The propulsion of the Servant is accomplished through the winding of an immense spring mounted inside. Ten minutes of winding yields more than two hours of uninterrupted work.

A Clockwork Servant weighs in at almost 500 pounds, making it a substantial device. The quality India rubber soles on the Servant's feet prevent it from marring your floors.

The tasks this modern golem can perform are simple, but helpful. Washing of the windows, beating of rugs, washing of dishes, answering the door, and sweeping are but a few of the tasks they can be made to accomplish. More advanced models are apparently in the design stages now. Tasks these automatons may be "programmed" for could include changing a baby's diapers, polishing the silver, playing the piano, and maintaining the plants on your property.

Clockwork Servant

Cost: 18 days at 1,800c

Size: Small [40 wounds]

Powered by: Complex and intricate Clockworks, run by a steel spring

Operation Time: 6 Hours

Controlled by: Babbage Engine Punch Cards

Moves with: Articulated Metal Legs

Clockwork Warrior

When Elrich ClockworkMaker decided to build his Clockwork Servant, he did it for the noblest of purposes. When Count Iglio Cagliostro stole the plans, he did it for the lowest of purposes—the construction of a Clockwork Warrior.

The Clockwork Warrior represents an advance in the automated servant arena, to be sure. Capable of carrying out complex instructions, the Warrior can be used to fight with musket or sword, or hand to hand.

Clockwork Warriors have been seen operating muskets, engaged in (uninspired) swordplay, and as line troops with pikes. They are capable of all the tasks normally associated with the Clockwork Servants, and much more. No one has yet tested (as far as we are aware) if the Clockwork Warrior is capable of operating a LandFortress.

The Warriors are very durably constructed. Where the Servants were built from wood and brass, the Warriors are primarily constructed from Iron and Steel, with brass fittings thrown in where necessary. The actual motive works of the Warriors are unknown, as we have never been able to look inside. Should Count Cagliostro happen to be reading this, we would very much appreciate the opportunity to report on this to our readers.

No one is quite sure whether Count Cagliostro is responsible for the advances in the technology (unlikely), if Elrich ClockworkMaker overlooked some simple changes he could have made to make them more efficient (even more unlikely), or if Unseelie Intervention has occurred (the most likely event). Whatever the cause, the Clockwork Warriors have become the newest threat in the New European Theatre, and beyond.

Clockwork Warrior

Cost: 18 days at 1800c

Size: Small [40 wounds]

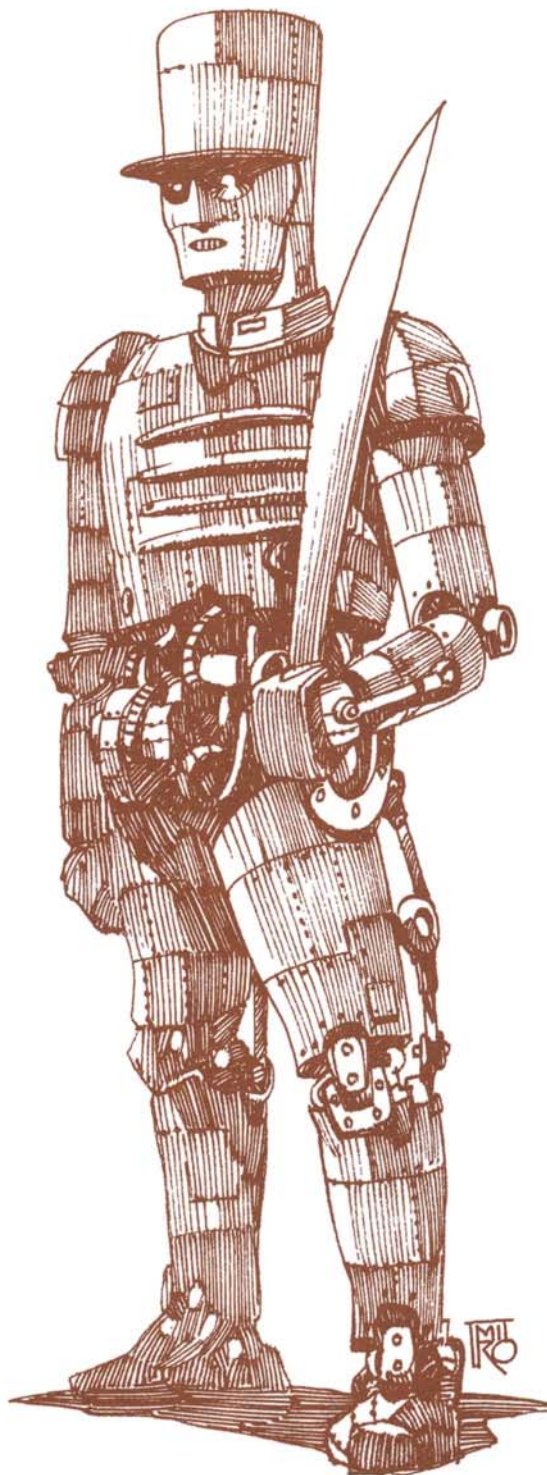
Powered by: Complex and Intricate Arrangement of Clockworks

Operation Time: 6 Hours

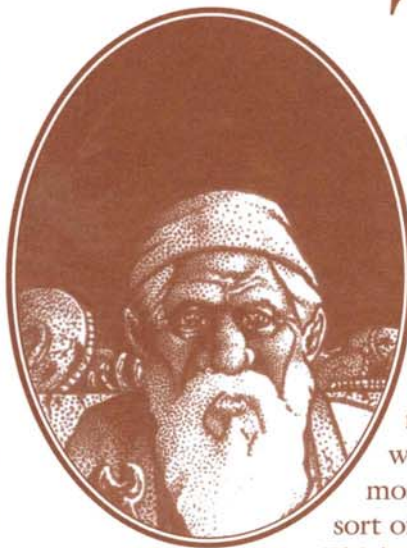
Controlled by: Babbage Engine Punch Cards

Moves with: Articulated Metal Legs

Armed with: All types of Hand Weapons, from swords and axes to guns and rifles



Elrich ClockworkMaker



The designer of the Clockwork Servant and the Clockwork Entertainment, Elrich Clockwork-Maker is quite a talented Dwarf. His abilities with small and complex clockwork mechanisms have not been matched by others. And he truly loves his work.

Elrich was born in the Dwarfhold called Nord Hold. After a few years he set out from there to make his fame and fortune. Finding work as a handyman tinkerer in Paris, Elrich came to understand the various needs of the public. Apparently, skilled help was difficult to get at a reasonable price, and most well-to-do women desired to have some sort of servant.

Elrich thought about this for quite a while, then began work on the first Clockwork Servant. It worked fabulously, and his Dwarfhold awarded him the name "ClockworkMaker." He spent some time and improved on the design, then found a company to build them for the public.

Unfortunately, disaster struck. Count Cagliostro broke into the factory and stole a set of the plans for a servant. This he modified into the Clockwork Assassin, and later into the Clockwork Warrior (see the article on page 83 of this issue).

Elrich was crushed. He had tried so hard to do something for the general betterment of people, and it had been twisted into an awful perversion of what was intended. He immediately began work on a new invention for the public.

The Clockwork Entertainment is truly marvelous to behold. Using a complex arrangement of wires, gears, and control levers, the player is able to play an interactive game. The subject of that game is changeable through the use of "game disks." Each of these disks includes the appropriate sequencing for the game, and new metal representations for play.

The Clockwork Entertainment has caught on in an amazing way. Its portable nature and incredible versatility make it a natural for the youths of New Europa. New game disks are released on a regular basis, and some establishments even allow you to borrow them for a minor fee to "try them out."

Elrich Clockworkmaker, Dwarf Craftsman

Abilities: Athletics [GR], Courage [AV], Education [PR], Fisticuffs [GR], Love of Metal [GR], Perception [AV], Physique [AV]

Prismatic Light Device

From France comes this latest wonder of military technology—the Prismatic Light Device. Used correctly, it can devastate the enemy in a blast of light and heat.

The Prismatic Light Device is not a portable weapon. It must be installed on a building, or around some sort of established position. The Main Aiming Mirror and Prism must be placed on a rotating platform at the highest point, with a clear “field of fire” around it. Supplementary Mirrors are placed all around the compound, each to add to the power of the “blast.” While there are several designs currently in use, they most often use twenty-five to thirty mirrors on the ground.

The Supplementary Mirrors are themselves a collection of smaller mirrors that focus their light into one beam. The light from the Supplementary Mirrors is projected into a large prism located at the base of the Main Aiming Mirror. This prism focusses the light into one coherent beam, and sends it to the Main Aiming Mirror. The Mirror can normally fire in any direction around the facility, assuming there is no blocking terrain or buildings.

This device was first designed by the French Minister of Science, Jules Verne. He theorized that focussing light would result in a powerful weapon, capable of playing the “light energy” over the attacking forces. Using this basic idea, a team of French Inventors spent many months designing the original prototype, which had fifteen regular flat mirrors focussing to a prism and then to the Aiming Mirror.

While it did function, it was felt that the energy focussed was not a significant threat. Verne then came up with the design for the Supplementary Mirrors, and the rest is history.

The main palace in Paris has been outfitted with one of these Prismatic Light Devices, as have certain upper class homes in England.

Prismatic Light Device

Cost: 160 days at 16,000c

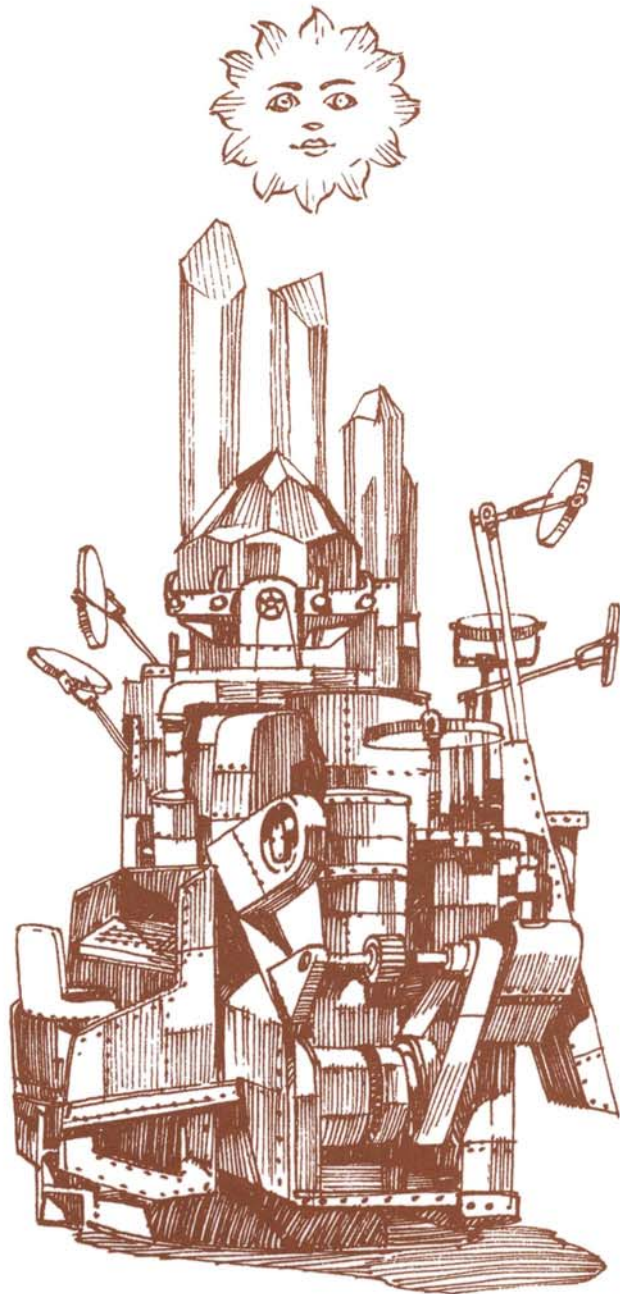
Size: Huge [100 wounds; it's mostly glass]

Powered by: Electrical Dynamo (for Aiming) and The Sun (for power)

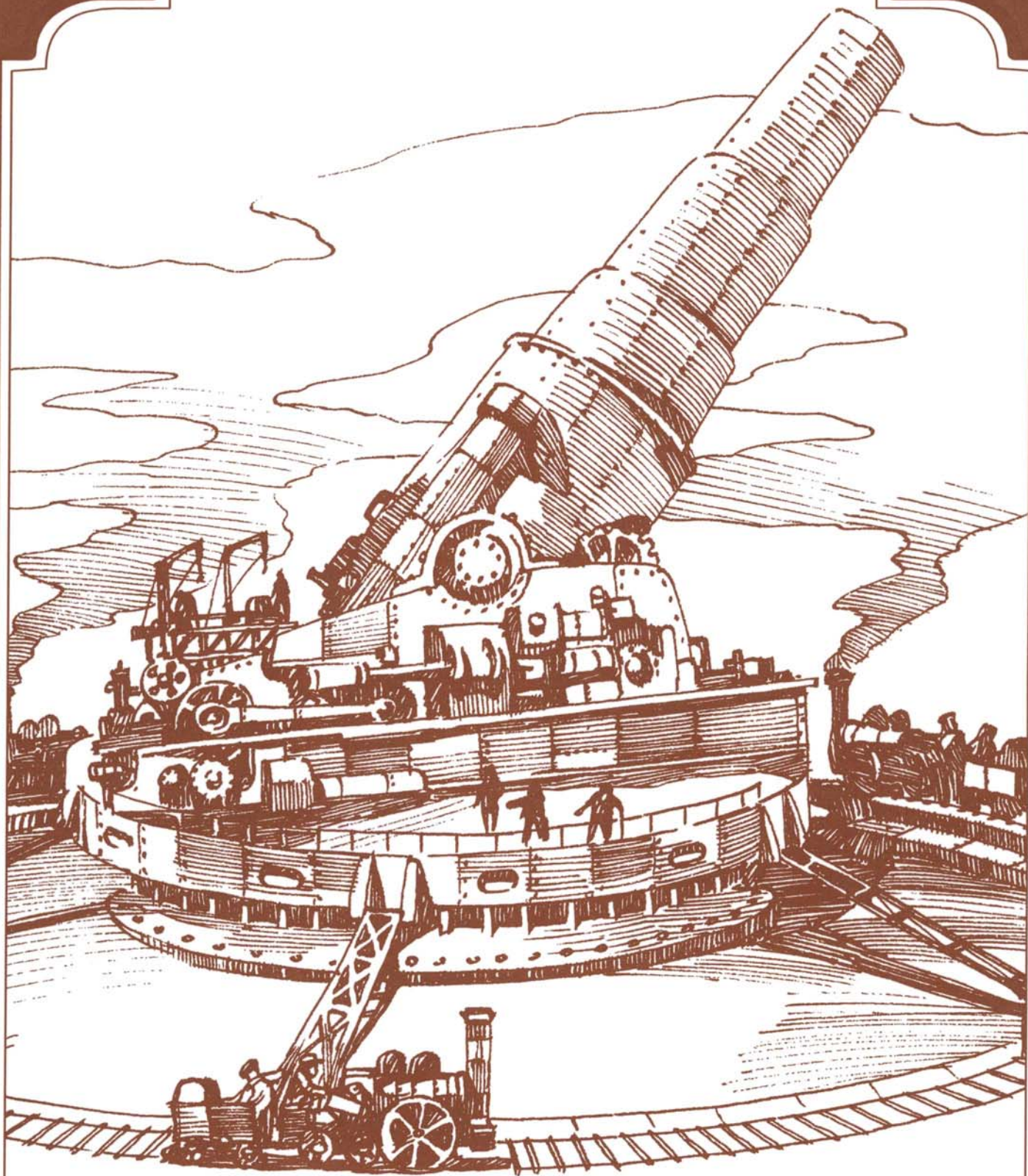
Projects: An Incineration Ray, of Horrible Intensity, at a Range of 5000 feet

Controlled by: A Complex Arrangement of Levers and Cables

Damage: Horrible



MIL



Verne Cannon

The Verne Cannon is the most fearsome weapon on the planet. We say that with all conviction. We shall endeavour to explain why.

Developed by Science Minister Jules Verne of France, the Verne Cannon is designed to be the long range defences of an entire country. Verne's creative mind decided that if a cannon could be used for distant targets, a huge cannon could be used for far-away targets. No longer shall France fear invasion, as the invading army can easily be struck to flinders before they ever reach the border.

The Verne Cannon cannot fire at a target closer than one mile. It cannot be moved. And it is impractical against skirmishing infantry. But a shell fired in France can hit a target anywhere in Austria or Britain! Using an array of advanced Babbage Calculation Engines, the Cannon has an accuracy of within three hundred yards even when fired over distances of hundreds of miles! And it can launch a shell of devastating power.

The Verne Cannon can be used to destroy castles. It can be used to destroy factories. And it can be used to destroy the enemy's will to fight. In short, the Verne Cannon is the best reason NOT to fight a war with France that could ever be devised.

There are limitations, however. As stated above, the cannon cannot be used for close-range attacks. And its accuracy is not well suited for attacks within three miles. It is also a damned expensive weapon to build.

The Cannon itself is built in sections, cast in armourplate. Each section is 25' long, and the

iron is 12" thick. The sections are joined by massive steel plates bolted in place. The entire Cannon rests on a gigantic superstructure. It, in turn, rests on a huge iron and wood turntable. The turntable is operated by a series of six large steam engines.

The Cannon can fire a new shell every five minutes. This time is shortened to three minutes if the shell is being fired at the exact same place. A crew of twenty-five operate the cannon, with an additional twenty support staff to operate the steam engines for the turntable.

Shells for the cannon are not cheap. We were not able to find out how many shells they have at this time, but we understand that the number is quite small. A prolonged battle or massive invasion would rapidly deplete these numbers.

France has built four of these Cannons, and we understand here at *Popular Invention* that several more are in the planning stages. A rumour has it that Minister Verne is also working on a design for an "automatic" cannon, which

would increase the speed of repeat firings to once a minute or faster. Whatever design he eventually brings out, we already know that the face of warfare in New Europa has been changed forever.

"With this weapon, I declare the art of war to be at an end. For what sane man would risk its terrible vengeance when it can wreak utter destruction upon any city, any army, no matter where situated upon this Continent?"
—Jules Verne

Verne Cannon

Cost: 185 days at 18,500c

Size: Huge [250 wounds]

Operates with: A complex arrangement of Levers, moved into place with four small steam engines

Range: Hundreds of Miles

Affects: Immense Targets

Damage Level: Ghastly



Jules Verne

Minister of Science For the Second
Empire of France



Jules Verne... writer of fantastic fiction... scientist... Minister of Science for the Empire of France. An incredible man, with an incredible history.

Verne was born in 1828 near Nantes, France. He was educated in Nantes and later in Paris, with the intention of taking up the law. Fortunately or unfortunately, his combined interests in science and storytelling made a law career unlikely, and Verne became a writer and Journalist.

His first works were published in 1858 and were soon followed by a series of adventure tales, including *Five Weeks in a Balloon*, *20,000 Leagues under the Sea*, and more. Most of his tales (like *20,000 Leagues*) were loosely based on the exploits of real individuals, while others appear to be pure invention. It is this ability to mix the most fantastic stories with the mundane stuff of reality that has made his work so compelling.

In the early 1860's, like many of Verne's other avid fans around the world, Emperor Napoleon the Third of France became an avid reader of Verne's works. After a short time for consideration, the Emperor (who is rarely daunted by the idea of applying the bizzare to matters of practical government) approached Verne with a position—none less than that of Science Minister for the Second Empire! Verne was taken aback—he was no scientist for all of his postulations and research—but after careful consideration, he accepted.

He immediately went to work creating his department, first demanding (and receiving) a large drawing fund for the purpose of furthering scientific work for the betterment of France and the world. With this mandate, Dr. Verne proceeded to gather around himself a large number of the best and most visionary scientists and technicians on earth, whose job it would be to implement and inspire any strange and wondrous ideas that Verne might come up with.

Dr. Jules Verne

The good Minister also created several “satellite” laboratories in addition to his own, to aid in attracting other scientists to his Department. Using his resources as Minister of Science, Verne was able to foster several projects, including the development of the Babbage Calculation Engine and (most importantly) the development of the Verne Cannon.

A very important part—indeed, the very keystone—of the arsenal of France, the Verne Cannon is capable of hitting Berlin from France, and is highly effective as a deterrent against other countries in New Europa. Verne also has other items in development, and with any luck he will be bringing more incredible technology to the table.

Dr. Verne was also one of the first people to see the value in including Dwarfen craftsmen and engineers in his development teams. Their natural tinkering abilities make them quite adept at manipulating small parts and finding innovative solutions to problems. Many problems at the Institute have been solved by the convenient intervention of a Dwarf on a refreshment break.

Dr. Verne is also a strong believer in the Second Compact. When the document was being drafted, Verne was granted permission to be the representative of the French Empire for the ceremony. His vision and assistance have proven invaluable to the forces of the Second

Compact, for although he is a Man of Science, his ability to visualize Progress’ effect on the Future is unmatched.

Even while he acts as the Science Minister for France, Verne continues to interact with adventurers around the globe, gathering information for future adventures about our Steam Age world. He has not stopped publishing since coming to

the government, and has no intention of stopping. His most recent book is *Master of the World*, a somewhat fictionalized account which chronicles the adventures of Robur the Conqueror (see the biography of Robur on page 41 of this issue).

From what we’ve been able to gather, his next book concerns the Mysterious Island of Captain Nemo. We can only hope that Dr. Verne finds that as exciting as we did when we made our visit.

Amazing technologies currently under development in Dr. Verne’s Ministry of Science include more highly efficient steam engines, a teletypographic printer for use with the Babbage Calculation Engine (being developed by Babbage and Lovelace), an improved telegraphic signal recorder, an improved Verne Cannon capable of launching a man into the Ether, a personal ornithopter apparatus, a small submersible especially designed for espionage work, and much more. The future looks very good for Dr. Verne and his team of scientists.

Dr. Jules Verne, Journalist/ Diplomat

Abilities: Athletics [AV], Charisma [GR], Connections [GR], Education [GR], Fisticuffs [GD], Perception [GR], Physique [GD], Stealth [AV], Storytelling [EXT],

Game Note: One of the most influential players in the Great Game of Empires, Dr. Verne is also one of the critical allies of the Second Compact and wields a great amount of power. He may even occasionally call upon Players to accomplish a mission on behalf of the Compact.



Charles Babbage



Inventor of the Babbage Analytical Engine. Holder of the Lucasian Chair in Physics at Cambridge. And the creator of the Computing Age. Charles Babbage is all of these, and more. As a child he was enraptured by mathematics, and they consumed all of his time. He so excelled at his studies that he was named to the Lucasian Chair of Physics (an honour once held by Sir Isaac Newton).

During his time at Cambridge he published several books, including one on using mathematics to predict societal change. Fusing mathematical theory with engineering, he constructed the Difference Engine, a clockwork machine that performed complex mathematical operations rapidly and efficiently. It was soon used

throughout Britain, most notably in the Registrar-

General's Department at Somerset House. Later he started work on what would become his Analytical Engine. Using elaborate clockwork and punch cards, Babbage intended to accomplish complex mathematical computations. There was only one problem. It didn't work.

Enter Jericho Watchmaker, a Dwarf of some reputation who operated a workshop near Cambridge. Watchmaker was on campus one day helping another professor when he came upon Babbage hard at work on his apparatus. One look at the plans (and the half-constructed Engine), and Jericho offered to be involved. The two made out famously, and started work.

The changes Jericho wanted to make were quite minor, and soon the first Analytical Engine was running. Babbage was delighted. Work began on a second machine, this time with more modifications by Jericho. Babbage was apprehensive, but came around when he saw what the improved machine could accomplish.

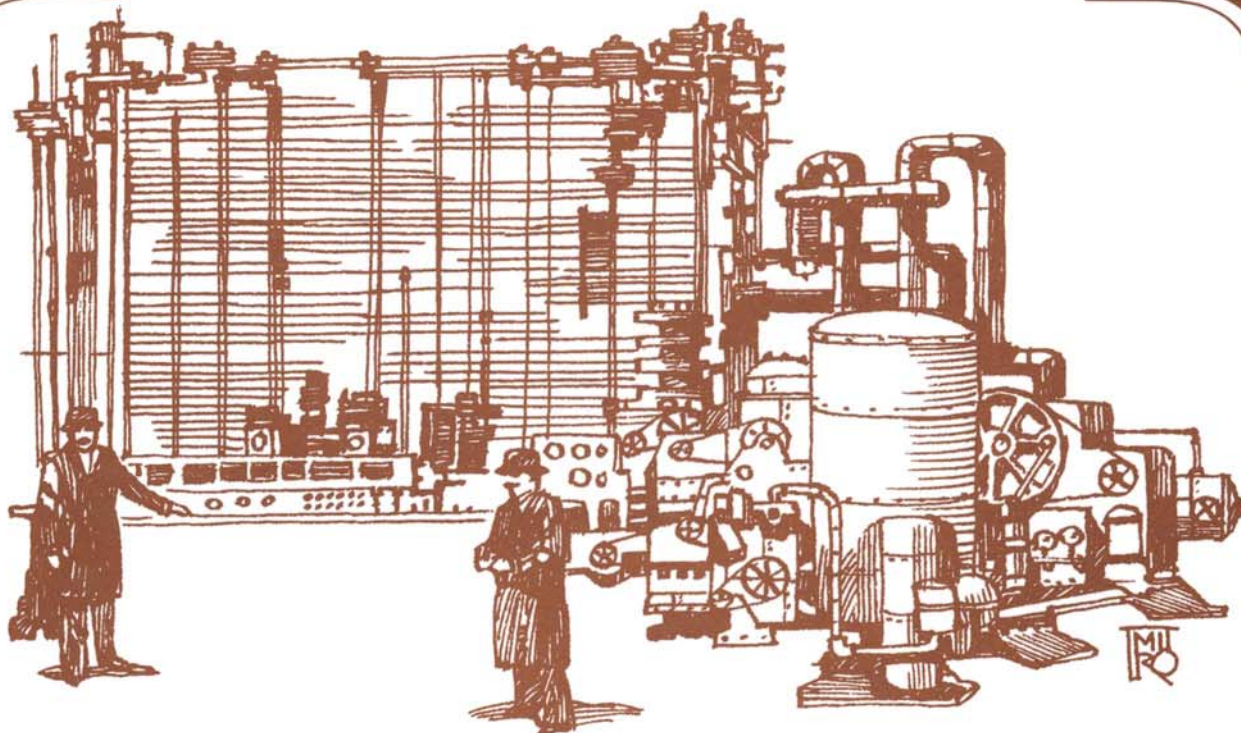
At this point Babbage made the acquaintance of Lady Ada Lovelace. She was fascinated by the Analytical Engine, and understood the mathematics behind it. After a short time she coined the word "program" as a term for a series of instructions for a computing machine. Lady Lovelace became the creator of the world's first programming language, and worked with the professor for many years.

Babbage continues to hold the Lucasian Professorship, despite his advanced age. He continues to work on more complex Analytical Engines, and even more complex mathematical theory.

Charles Babbage, Calculation Engineer

Abilities: Athletics [AV], Education [EXC], Fisticuffs [PR], Perception [GD], Physique [PR], Tinkering [EXC]





Babbage Analytical Engine

Charles Babbage, a mathematics professor at Cambridge, began work on his first Analytical Engine quite a few years ago, after successfully constructing his Difference Engine. After several failures to fabricate the workings using "conventional" means, Babbage contracted a Dwarf craftsman for assistance.

Jericho Watchmaker was well suited to building a device that required more precision than was possible by human hands. He studied the plans carefully, and soon noticed several minor flaws in the design. Not realizing that the design was theoretical, and that it had never been built, Jericho decided to "improve" the design and went ahead and made changes.

The Babbage Analytical Engine Mark I is a true wonder to behold. It stands over 15' high, and 20' in length. The construction was done in a combination of wood and brass. Power for the Engine's operations is provided by a steam engine—one of the changes made by Jericho. Originally, power was to have

been provided by a huge coil spring. That was deemed impractical to the Dwarf due to the short duration of the winding, and the safety issues raised by a spring that might break loose and wreck the Engine.

The Mark I Engine is capable of many complex analyticals, and can be operated continuously for quite a time. According to Babbage, feats the Engine is capable of include: "Sixty additions or subtractions per minute. One multiplication of two numbers, each 50 figures, in one minute. One division of a number having 100 places of figures by another of 50 in one minute." The parts of the machine most prone to wear have been constructed from metal (both iron and steel), making them more durable.

Babbage's Analytical Engine

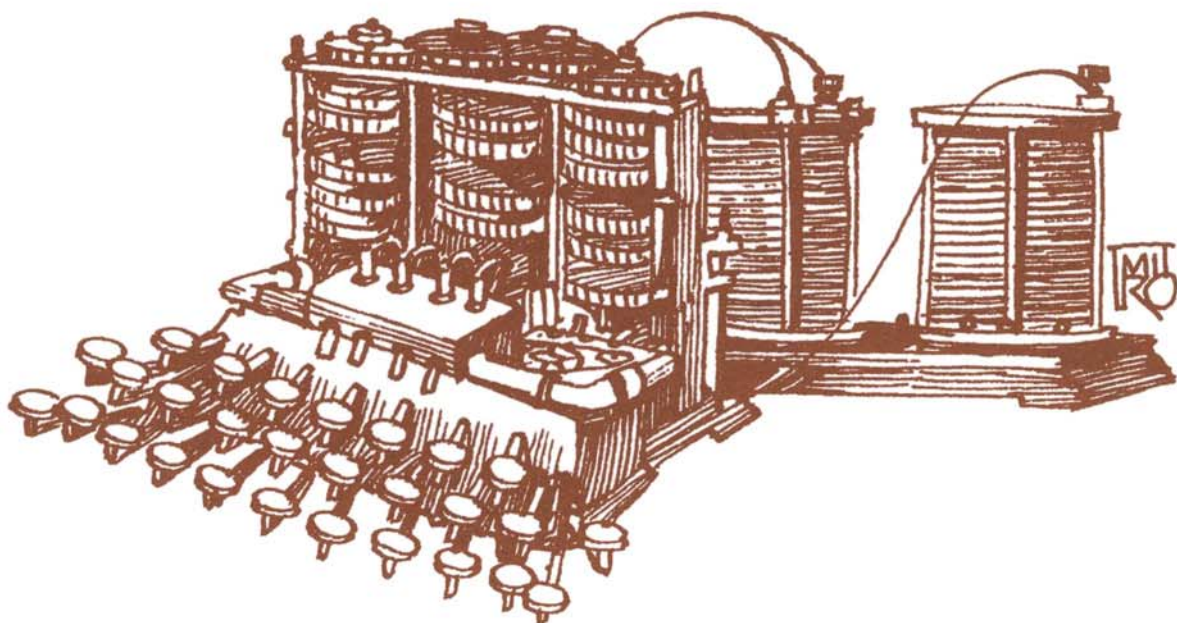
Cost: 19 days at 1,900c

Size: Medium [80 wounds]

Powered by: Steam Engine

Controlled by: Punch Cards





Analytical Engine Mark II

After completing construction for Professor Charles Babbage of his Babbage Analytical Engine Mark I, Jericho Watchmaker offered forth additional ideas for radical improvement of the Analytical & Calculating Engine.

Many had to do with miniaturization of components, as well as removing unnecessary and redundant mechanical parts from the design. At first Prof. Babbage was skeptical, but Jericho soon proved to him that it would work.

The Babbage Analytical Engine Mark II is leaps and bounds better than the Mark I. Motive power for the engine is provided by batteries powering a small electrical motor. This model can also operate longer than the original without attending to the power supply. Operation of the Engine is accomplished with a keyboard not unlike a

typewriter and the results are reported on a series of rotating dials.

Speculation runs rampant as to the possible uses of the Engines. Their primary function is the solving of complex mathematical problems; however, they are also quite adept at keeping track of a bank of numbers, aiding in filing. The possible applications of this are enormous, and we at *Popular Invention* are looking forward to what the Professor and Mr. Watchmaker are able to do with it in the future.

Mark Two Analytical Engine

Cost: 19 days at 1,900c

Size: Small [30 wounds]

Powered by: A Rack Of Fuming Batteries running a Powerful Electrical Engine

Controlled by: Punch Cards



Lady Ada Lovelace



What an incredible woman! The creator of the term “program.” The creator of the first “programming language.” And the builder of the Virtual Realism Engine. One has to wonder what is next for this renaissance woman.

The daughter of Lord Byron, Lady Ada is a remarkable woman. Her knowledge of things mathematic is unquestioned, and her intuition while working on the Calculation Engines with Professor Babbage has saved the day more than once.

When she first came to work with Prof. Babbage, she merely assisted with the creation of complex formulae. But when she saw how the input was being done (on punch cards), she suggested the idea that several cards could be placed into the hopper in sequence, thus working a series of calculations using the results of the previous calculation. This “program” of events could help save hours of time.

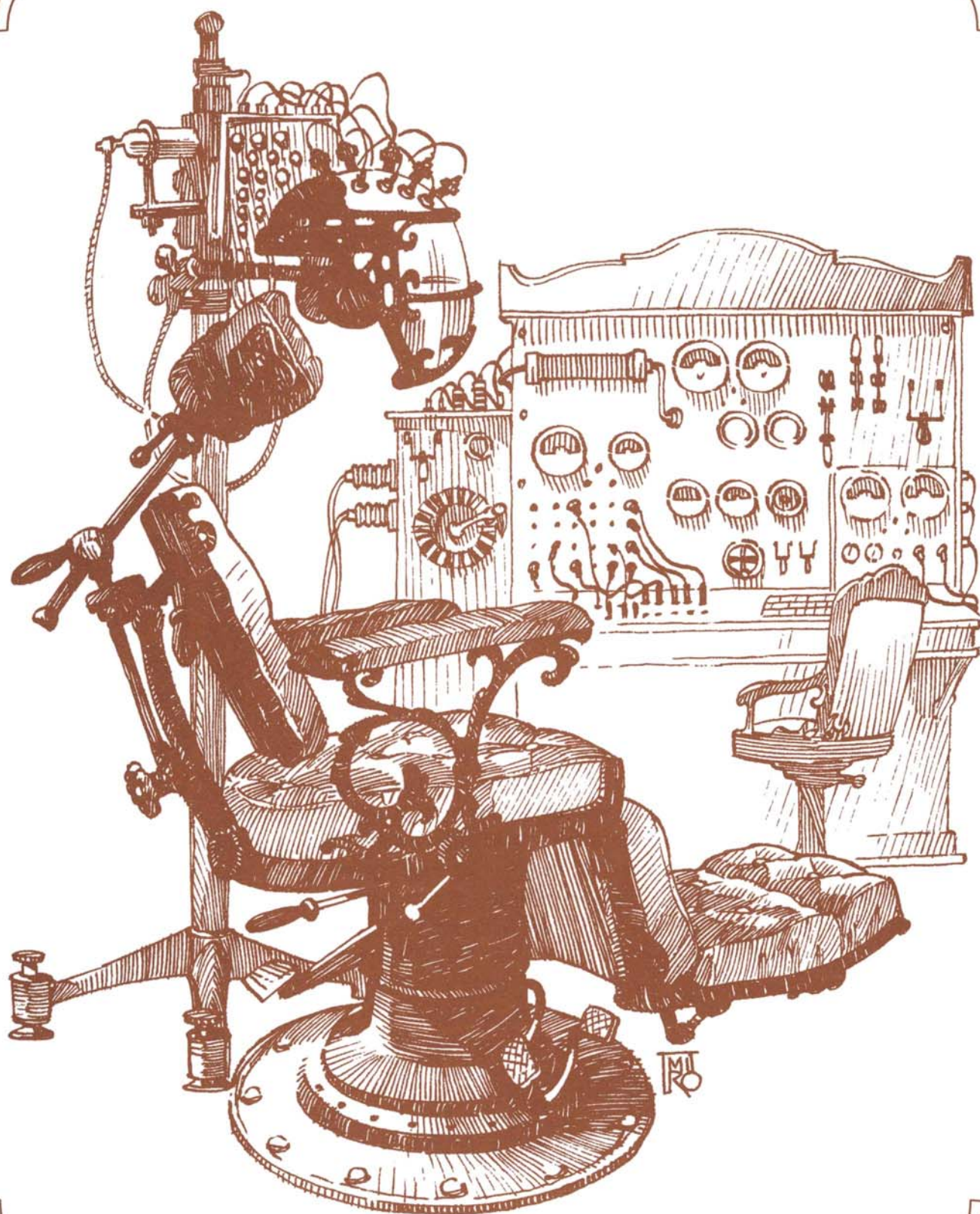
Soon after she had made that contribution, she made another. Using special sequences on the punch cards, Lady Ada was able to make the machinery accomplish an almost unlimited series of calculations. These special sequences became the world’s first “programming language.” In fact, currently Lady Ada and Babbage are working on a teletypographic printer for the Babbage Engine which will replace even these cards.

Lady Ada’s connection to the sorcerous Temple of Ra is a very recent thing, and not very public. The Temple believes in the superiority of science assisted by sorcery. It was her connection with these people that led to the initial development of the Virtual Realism Engine.

This Engine (see accompanying article on page 95) is an interesting step toward escapism. Is it just a complex mechanical contrivance? Or does it have an unmentioned sorcerous side to it that she never talks about? The world may never know, and the Lady is not telling.

Lady Ada Lovelace, Calculation Engineer

Abilities: Athletics [AV], Education [EXC], Exchequer [GD], Fisticuffs [PR], Perception [GD], Programming [EXT], Stealth [AV], Tinkering [GR]



Virtual Realism Engine

And now we present (with some misgivings and a sense of trepidation), the following incredible development in technology for your edification: a development with as many possible beneficial applications (such as entertainment and employment training) as darker ones (Mental Domination and psychological experimentation).

The invention we are discussing is, of course, the Virtual Realism Engine, whose primary Inventor is Lady Ada Lovelace, daughter of the late Lord Byron, whom readers may know best from her work on Dr. Charles Babbage's Calculating Engine. In fact, the original work upon the Virtual Realism Engine was accomplished while Lady Lovelace was still working with the good doctor in the capacity of developing a punched card instruction system Lady Ada later dubbed "programming."

This brilliant "enchantress of numbers" has often stated a desire to create an invention that would allow a user to feel that he had been transported to another place, either of pure fancy, or of fact. By using a bright, repeating light and a modified music box, Lady Lovelace hoped to be able to mentally "transport" a subject to another place in a manner perhaps analogous to Mesmerism. While her initial methods and effects were crude, they did show great promise. Calling upon her associates in the Mystic Lodge of the Temple of Ra, Lady Lovelace set about improving on her technology. Encouraged, she and her allies subsequently spent a large amount of time and money on improving the experience, and the results appear to have paid off very well.

The machinery of the most recent apparatus (now dubbed the Virtual Realism Engine) is very self-contained, and resembles a dental chair in many respects. The subject sits down on the seat in the apparatus, then sits back, placing his head in the cushions provided, and tries to relax. After a short wait (necessitated by the preparations to operate the machinery) the session begins. A steady, droning tone is played and a rapidly flashing light is shown in front of the subject. After a few minutes the subject starts to hear appropriate sounds and smell appropriate smells, appropriate to the hallucination the participant is experiencing.

When we asked Lady Lovelace to explain what Virtual Realism was, and what led her to develop it, this was the excited, enthusiastic response we received:

"What is Virtual Realism? It is the ability to make a person feel that he is in another place by changing what he perceives through his Five Senses. Therefore, could it not instead alter how those experiences are perceived? What you see and hear is real, but how you see and feel it is different? If so, I have invented the greatest tool for magical Experimentation the world has ever seen!"

"Postulate this—if the Brain and Body believe that a scene or feeling is real, then its effects on the Psyche and Physicality of the body might be real as well. If such a statement is true, then the Virtual Realism can be used as follows: Let us assume that a Magickally Adept person wishes to travel to a far-distant place, of which a description is known. This environment is then created through the medium of the Virtual Realism Engine. The Adept, once immersed in the Environment, and using it as a focus, might be able to Observe and Explore anywhere—our Solar System, our Universe, perhaps even other Planes of Existence or the Faerie Veil itself!

"The discovery of Magickal Adepts among the Indians of India and the Americas, who are capable of altering their bodies and minds using Magick, opens a new line of inquiry: Using Magickal or Alchemical catalysts, can Physical or Mental Alteration or Transformation be achieved through immersion in Virtual Realism Environments? Such things, achieved in Creatures of Fey, have long eluded Sorcerors in many lands. Now, by altering the very Sensory methods of Perception themselves we can establish a State in which 'The Mind Leads and the Body Follows', as observed amongst the Fakirs and Mystics of the Far East.

"If the Body is properly prepared Magically and or Alchemically, before and during the Experience; and the aforementioned State of Mind and Body are achieved with the aid of the Virtual Realism Engine; could we not Write upon the very Physical and Mental Corpus of Man Himself—and see those Writings step Forth into the very World Itself?"

But when we here at *Popular Invention* commented that this sounded suspiciously like the doctrines of the Temple of Ra, and inquired about her connections with the Order, Lady Ada swiftly regained her composure and politely informed us that the interview was at an end. This exchange with Lady Ada leaves us with suspicions and dreads that politeness prohibits us from voicing about a Lady of such quality and breeding. Yet we cannot help but wonder if the Virtual Realism Engine is a boon, as Lady Ada professes, or simply an Infernal Device in disguise. Only time will resolve this question.

Virtual Realism Engine

Cost: 33 days at 3,300c

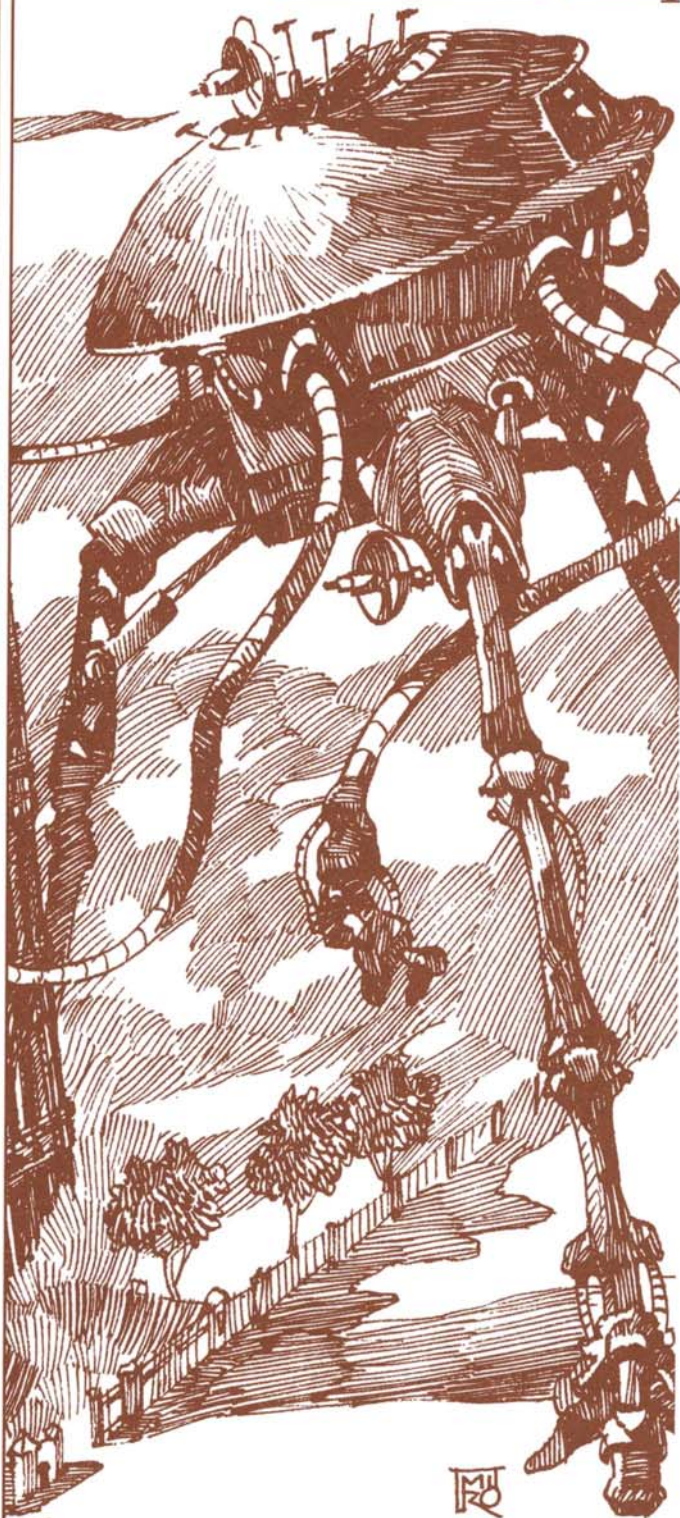
Size: Small [40 wounds]

Powered by: Complex and Intricate Clockworks

Controlled by: A Series of Levers and Pedals, some controlled by subject, some controlled by operator



Martian Tripod Walker



Our final report was filed by our intrepid reporting staff only after long and arduous investigations in the field. It seems that a short time ago, in Sussex, England, something quite odd occurred. An unknown number of bizarre conveyances, reportedly said to resemble some sort of immense tripod, arrived in the countryside outside this quiet suburb and started to cause a bit of trouble. Size estimates ranged from the height of a cottage to over 100 feet. No two witnesses reported seeing the same thing.

Reports indicate that these conveyances, or "Walkers" as some of the locals have taken to calling them, caused a large amount of damage in a very short time. Several farms were burned by some sort of "Heat Ray", and a number of buildings had evidence of recent damage.

The destruction continued until members of Her Majesty's Armed Forces arrived to combat these terrible Devices. Upon their defeat, it was reported to us, one of them survived intact enough to take a look inside. Apparently what they saw was no Human, nor any of the known Faerie Race. Could they have been creatures from beyond the pull of Earth, possibly even from Mars?

The really curious part of this story is the reaction by City Officials. Initially they rebuffed our attempts at getting their thoughts. When it became obvious that we would not be denied, a spokesman reported to us that it was all rumour and speculation, and nothing of that sort had indeed occurred. When pressed, he became nervous and fled inside.

Several days later, while interviewing some of the "eyewitnesses", we were approached by members of Her Majesty's Armed Forces. We were informed that nothing had occurred, and to look elsewhere for scandalous stories.

This had us quite taken aback, as Sussex is not currently the sight of a military establishment. Why would they be interested in what we were doing, and better still, what were they doing there themselves? We will not rest until we have tracked down the particulars of this incident for you, our loyal readers.

Martian Tripod Walker

Cost: Unknown

Size: Between 30' and 100'. in height.[200+ wounds]

Description: Smooth metallic disks mounted on three spindly (yet sturdy) legs

Powered by: Unknown

Operation Time: Unknown

Controlled by: Martians?

Moves with: Tall metal legs, crushing all beneath them

Armed with: Heat Ray (Horrible Infernal Weapon)

Damage Level: Horrible

The Scientist

Reprinted from *Popular Invention*

In this age of Scientific Marvels, it seems that everyone wishes to become a Scientist or Inventor. Yet, what are the important steps to a Scientific Career? What choices should an enterprising young person make to set his feet upon the road of Science? Here are a few suggestions we at *Popular Invention* might make to guide our Readers to the Future they desire.

First, Acquire a Great Education

This means availing yourself of the scholastic resources of your native land. Most every modern nation has a Public School system in which the rudiments of an average education in Mathematics, History, Literature and Latin can be gained. To achieve a good education, however, requires more study: in Prussia, Austria and Bayern, this would involve attending Gymnasium (equivalent to a British or American preparatory school), and graduating to attend the Universität (University) for an advanced degree. A proper four year course of study will give you the equivalent of a Great education, while an additional four years will gain you an Exceptional one. At the end of your studies you will certainly know enough to become a real Scientist (although Inventors often skip these steps and begin inventing immediately).

Next, Select Your Area of Endeavour

As a Scientist (or the related and more practical career of Inventor) your goal must become your first concern. After all, what is the purpose of being a Scientist, if not to advance the Cause of Science? Whether you are a distinguished University Professor or a workshop tinkerer, you too must have your view of how you will employ yourself in the service of Scientific Advancement:

- Science to Improve the Lot of Mankind: Your goal is to make everyday life better for your fellow man. Your interests may most likely be in such matters as Medical Research, Natural History, Alienism, Botany (in the areas of useful plants) or Social Theory.

- Science for Profit (Invention): Your desire is to invent things which are useful enough to earn a dollar. Your fields of interest might be Chemistry (as applied to textiles, medicines or new materials), Mechanical Science (as applied to machines, inventions or vehicles), or Physical Science (as applied to new power sources and applications).

- Science for Its Own Sake: You care little for profit or Mankind; knowledge is enough. Your interests

span those of Physics, Mathematics, Astronomy and other types of abstract conceptual sciences.

- Science Man Was Not Meant To Know: You are fascinated by the areas of science others fear; Biology (with an eye towards reanimation of the dead), Physics (to communicate with other planes of reality), Astronomy (to travel into the Ether), Mendelian Genetics (to breed animal and human mutations). Important Note: You will most likely be unable to secure a University position with this as your avenue of research.

Your Laboratory, Crucible of Science.

In the Pursuit of Science, where you are located is every bit as important as what you are Studying. While a Scientist may establish his "digs" in a University-sponsored laboratory or a home workshop in his basement, such arrangements are not automatically to be assumed. You must have a place to work, for Science is not a thing to be performed on street corners like a hurdy-gurdy show. Here, then, are a few of the best methods of establishing a Laboratory:

- The University-Sponsored Laboratory is often the best place for an ambitious Scientist of the "non-mad" sort. Its advantages are that most materials are provided free of charge, and there are often hordes of eager graduate students hanging about to attend to the more mundane tasks, such as washing the glassware and sweeping up. The disadvantage to a University Position is that one will be required to teach classes upon one's area of expertise, usually at least two a day, which will take up to four hours of your daily routine. In addition, there are always examinations to be prepared, administered and graded, which also cut into valuable research time. Most damning of all, many Universities actually require their staff members to prepare and publish Research papers on regular basis (at least once a year). In addition, there is the difficulty of securing a position in a suitable University, which requires a minimum of a Great Education or higher and a bit of good fortune.

- The Home Workshop is a reliable option for both the traditional scientist and his "mad" relations. Depending on the state of your Exchequer (a Good one is sufficient), the Home Workshop can be as simple as a long table, a few racks of glassware, and an Electrical Generator, or as elaborate as any University Laboratory, with assistants, a chemical factory and a huge VanDeGraff generator sparking in the corner. While most Home Workshops tend towards the former, there are numerous

“workshops” constructed by wealthy hobbyists who dabble in Science and Invention for the fun of it; perhaps you may fall into this category.

- The Patronage Laboratory is an option, particularly for Inventors and Scientists who plan to create a marketable product, such as transparent Indian rubber windows. By acquiring a Patron, the Scientist gains a reliable source of funding. He also gains someone who will probably want results in rapid order, and will feel the right to storm into his lab unannounced and rant unknowledgeably at time. Finding a Patron requires travelling among the Courts and Industrial Captains of New Europa peddling your ideas until someone is sufficiently intrigued.

- The Mad Scientist option requires that one solve one’s housing problems as a Mastermind or Mad Scientist would: by appropriating an Abandoned Ruin, Warehouse or Deserted Island (details, page 99). As these solutions often involve great privation, danger and some illegality, they are not recommended by these authors.

Financing Your Science

As there are rarely “grants” available for pure research, a Scientist must often round up funding for his or her studies. Personal fortunes and an Exceptional Exchequer are the best method; short of this, the next best option is to seek out the Patronage of someone who has an Exceptional Exchequer. Be prepared to demonstrate your ideas to members of the aristocracy or the Government whenever the opportunity arises; a portfolio with drawing and simple diagrams is best for the limited non-scientific mind. If dealing with the Government, be prepared to expect their agents to require a military use for your research; if you are not prepared for this eventuality, you had best be prepared to limp along on meagre handouts.

But these are only minor travails of a career in Science. For the diligent and determined, such obstacles can only whet the appetite for success. Remember—many are Called. But only a few will ever truly be worthy of the Mantle of Knowledge. And with pluck and grit, you too can be one of them!

The Mastermind

Reprinted from “*So They Laughed at You at University? The Fools!*”, a Rather Subversive Tract issued by the World Crime League.

So you have decided to become a Mastermind. Bravo for you! In this age of Invention and Adventure, becoming a Mastermind is quite a suitable career for a young man of Grit and Ambition; a career for those who are willing to dare to defy convention (and not a few paltry laws) to gain fame (or infamy) and Fortune beyond their wildest dreams. And it is a career of opportunity for the Ladies as well; for the ranks of the Mastermind value intellectual prowess and ruthlessness above any mere limits Society places upon the fair sex!

Yet, because of the narrow-minded prejudices of others, it has frequently been the lot of those seeking to become Masterminds to wander in the wilderness seeking the best way in which to achieve their aims. Spurred by sympathy for their plight, the officers of the World Crime League have thus compiled this

handy pamphlet for the edification of those hardy few who feel They Alone have what it takes to be a Mastermind.

Firstly, What is Your Motivation?

Before embarking on a Career as a Mastermind (or perhaps the related occupation of Mad Scientist), it is most important that you establish your motivation for this choice of Career. Difficult, dangerous and fraught with Perils such as malfunctioning Infernal Devices, Misguided Heroes and Lengthly Terms of Imprisonment (if Captured), the life of a Mastermind, especially a Criminally minded one, is simply not for everyone. Before you set out to enact your first Master Plan, ask yourself: *who or what is it I truly hate? How much is this matter worth to me personally? Will it truly require inverting the magnetic field of the Earth (and incidentally, destroying all life upon it) to avenge myself upon this person, or will a good public snubbing at the Club suffice?*

All successful Masterminds have a solid motivation, whether it is to conquer the world (a solid and honest motivation with the weight of tradition firmly behind it), establish world peace through selective destruction (fashionable right now among this ide-



alistic generation of the '70's), or to gain vengeance upon a particular person, place or thing (we suggest a large or powerful Nemesis, as a small one will hardly require more than a momentary use of your Infernal Death Ray Projector, rendering the question moot). Your first step is to choose yours, and stick by it firmly.

Henchmen

Your next step in becoming a successful Mastermind is to gather about yourself a loyal cadre of like-minded souls, known in the Mastermind trade as henchmen. Much like the students that surround the Scientist, henchmen are useful for dealing with mundane tasks (such as Infernal Device construction, petty theft and administering thrashings to those who dare oppose you), freeing the Mastermind to get on with the important areas of Planning and Inventing. As with students, Henchmen should not be too bright; otherwise you may soon find yourself dealing with an ambitious one who seeks to take your job. In general, brutish, base men whose only desire is for the money (or other illicit pleasures which only you can provide) work best in the henchman capacity. Do not concern yourself with the money required for these things, as these are the sort of men who will readily join you for a chance to share in the spoils of your Plans. (But never more than a 1% share, understand!)

Location

Motivation established and Henchmen gathered, establishing a base of operations is the next important step in becoming a successful Mastermind. Traditionally, a Mastermind should locate his establishment in a place which will be off of the beaten path; this is because what he will be about will often be quite dangerous and most often against the laws of both Man and Nature. In addition, many Masterminds and Mad Scientists soon discover that an Infernal Device such as a Radium Submarine or Magnetic Ray Projector requires more room than can comfortably be provided in the typical two-room flat.

One of the most common solutions to this question is the Abandoned Ruin, be it a castle, schloss, fortress or factory. The advantage to this choice of accommodations is that inhabiting ruins is quite inexpensive (usually there is no owner of record, and as such, no rent), and also secluded, as only the hardest soul would ever desire to visit a moldering, vermin-infested pile of dank stone. To locate a suitable abandoned ruin, we suggest that you examine areas recently ravaged by war, famine or other disasters, with an eye towards those structures of large size which have an unsavoury reputation. After finding such a place, visit the local church recorder or burgermeister's office on a pretext, and search the deeds on file

there while the official is distracted with other matters (this is a good use of your henchmen, as it will keep them entertained and out of mischief). Appropriate the deed to the place you have designs upon, arrange to have a clever forgery inserted in its place at a later time, and you should have little or no problem setting up shop.

A more congenial location for both the Mastermind and the determined Mad Scientist is a Deserted Warehouse in the City. While it is subject to greater public scrutiny than the abandoned ruin, the deserted warehouse has the advantage of being closer to chemical and electrical supply shops, better restaurants, and (especially important if your work requires cadavers or other specialized materials) morgues, graveyards, hospitals and so on. In most cases, it is no problem to move directly into the structure without a title search first, as warehouses are constantly being abandoned by bankrupt firms. And if there is an owner, it is usually a small matter to buy him off for a pittance or eliminate him altogether (another constructive use of idle henchmen).

Finally, there is much to recommend the Deserted Island for those Masterminds requiring great amounts of space in which to operate. The Deserted Island (or its cousins, the Extinct Volcano and Underground Cave) takes advantage of a natural feature in which to hide your Base of Operations. The rare visitor can easily be disposed of, and you are unlikely to be disturbed by the Police or other agents of the law.

The Plan

However, you cannot truly call yourself a Mastermind until you have Set Out Upon a Plan. Remember, every plan actually involves many smaller plans. For example, if your Plan involves the construction of an Infernal device of any size, you will need to gather funds together to build it. (Unless you are possessed of an Exceptional Exchequer or have discovered a river of molten gold, this will often require extreme measures, such as first holding up the Bank of England or absconding with the Hannoveran Crown Jewels—both adventures in themselves.) Expect these methods to, of course, gain you new Nemeses in the form of secret agents, Policemen and other unsavoury sorts.

Once you have financed your Plan, you must, of course, still implement the steps: locate your target, establish your demands (if global extortion is your goal), build and place any Infernal Devices, and train henchmen. But if done with diligence and care, the financial results can be quite gratifying, not to mention the thrill you will feel in your soul when you see your name emblazoned across the *London Times*, as **DARING MASTERMIND HOLDS ALL NEW EUROPA AT BAY!** And just think—it all could happen to you!



Scourge of the Skies: Aero-Pirates

When the Montgolfier brothers first flew their hot-air balloon over Paris, they had no idea that airships would one day be used for piracy. This despicable practice, once confined to the seas and oceans of the world, first took to the air during the American Civil War with one of the first aerial raiders, CAS (Confederate Air Ship) *Macon*, commissioned as a privateer.

The first true act of sky piracy was committed during the war by an independent party. Unfortunately, as with any pestilence, once it started, it spread rapidly. With the end of the Civil War, several renegade Confederate crews made off with their airships (now converted to hydrogen) and turned to open piracy. Following the example of Jean Lafitte, terror of the high seas, some of these pirates moved their base from New Orleans to Galveston, an island off the coast of the Texican Republic. Texas initially turned a blind eye towards these activities, but under pressure from the Union, the Texans eventually moved against the former Confederates. The Gulf of Mexico provided little refuge, and the former residents of Galveston found themselves driven into the Caribbean. Eventually, most aero-piracy in the Caribbean and the Atlantic died out, although there are still some who dare to ply the skies in that area. There have also been reports of one of the former Confederate airships sighted over England and another, or perhaps the same one, soon after that over northernmost Norway. It is obvious, due to the limited flying range of such a craft, that the airship must have been shipped across the Atlantic to some point in New Europa.

Those from Galveston who arrived in the Unorganized Territories began to make small raids across the border of the Bear Flag Empire. It was not until the daring night raid against the Imperial Mint in San Francisco that the Bear Flag Empire took the threat of aero-piracy seriously.

Meanwhile, sky pirates have begun to appear along the Barbary Coast of Africa and at various other spots around the Mediterranean, introducing a new form of

craft to their trade: ornithopters. Although incapable of carrying as many armaments as slower moving lighter-than-air vessels, the greater speed and maneuverability of this type of craft proved invaluable for purposes of fast raids and escaping from pursuit. The French government, which put down the last vestiges of organized sea piracy in the area in 1830, have all but declared war on this new breed of Mediterranean Corsairs. But recent political developments on the continent have prevented them from throwing the full weight of Empire at the problem.

By now sky piracy has become well established, but there are several factors which prevent it from reaching the endemic

proportions which sea piracy had almost 150 years ago. First is the scarcity of aircraft of any type. Most sailing vessels, commonplace for several centuries, turned to piracy as a result of crew mutiny or capture by pirates. Suitable airships are less than 20 years old. The only airships known to have mutinied have been one-time Confederates. The newness of air travel means that very few craft have been

captured or stolen for use as pirate vessels. Fortunately, even the smallest practical airships are beyond the financial means of most would-be pirates to construct. Finally, there is the problem of size. Small airships, of necessity, have rather limited flight ranges and crew complements. The limited range of smaller airships means that either a band of sky pirates will operate out of a secure base in one area for a period of time (which could lead to their eventual capture) or that they would move from place to place very slowly. The only privately owned airship of a size to be a genuine threat currently known to exist is the *Albatross*, captained by the mysterious Robur. While Robur has been known to ally himself with the World Crime League, he has not typically engaged in acts of aero-piracy.

Although the rise in the popularity of airships of all types is working to erode the effectiveness of these limitations it will be some time before sky pirates represent a true threat to the world at large.

Typical Air Pirate

Beauregard Zebulon Alexander

Abilities: Athletics [AV], Charisma [AV], Courage [GD], Fencing [GD], Fisticuffs [GD], Helmsman [GR], Perception [AV], Physique [GD], Sorcery [PR], Stealth [AV], Tinkering [AV]

Captain Alexander served with the Confederate Army Air Corps during the Civil War. When the War ended he and his three-man crew made off with their airship, the CAS *Spirit of Dixie**, and took to piracy in the Caribbean.

**Dixie*'s stats are the same as those of the Prussian Steam Zeppelin (pg. 34).



Babbage Engines & Their Effects Upon Society

(An Excerpt from "*Harper's Weekly*")

A New Solution to an Old Dilemma

With this march into the new Industrial Age comes much progress and wonderful inventions that bring with them a complete change in our society's structure. These changes, while wonderful in the extreme, do bring with them some small growing pangs. The mainly agricultural nature of our beloved land has changed and families who have worked the land as tenant farmers for generations are leaving that life behind them to take jobs in the factories of our Industrial cities.

While all these changes are certainly exciting, they have caused a bit of distress among the landed gentry who have depended so long upon the tenant farmers' devotion to the land. In fact, a great many of those whose sole income has been the rents they charge are in bad situations, financially. And as a gentleman simply cannot soil his hands with labor or commerce, a tragic dilemma has resulted. Does one labor and destroy one's standing in society, or suffer penury in gentlemanly leisure?

Now, however, a new answer has arisen to help solve this difficult puzzle. Lady Augusta Lovelace has proved that the aristocracy can receive money to protect their titles and property without stooping to common labor. The high demand for mathematically minded individuals to compose programs for the Calculating Engines of Prof. Babbage has opened a whole new avenue of endeavour for the forward-thinking aristocrat.

What an excellent opportunity has arrived not only to solve certain pecuniary difficulties, but to advance the frontiers of human knowledge through Mathematics and the Physical Sciences. Professor Babbage's Engine has the potential to change our very perceptions of the world around us in the most exiting manner, and we British are once again on the forefront of Scientific Endeavour.

This new science that Lady Lovelace has christened "Programming" requires educated individuals with a bent towards the Sciences and who have a good grasp of Mathematics. What could be more perfect than for the educated ranks of the Aristocracy to take up the torch and aid the Lovely Ada and the fine Professor in this fascinating endeavour?

Lady Lovelace has expressed enthusiasm at the idea of teaching others the intricacies of "Programming" and declares that once the basics are learned, the practise of it is quite satisfyingly simple and a great many wonders may ensue.

The proof of this can be found at the London Institute of Calculation and Sciences, the school founded by the good professor for the purpose of training a force of labour capable of utilizing the Babbage Engine. The graduates of this estimable establishment have gone forth to take the labour pool by storm. Composed mainly of the middle classes, these highly trained operators have revolutionized bookkeeping and inventory throughout Britain.

By allowing all the information on various companies' activities to be entered methodically on the Calculating Engine, many errors and inefficiencies of human memory, and the possibility of physical destruction of valuable records, become a thing of the past. Babbage's Institute is struggling mightily to provide a nation desperate for trained operators a sufficient quantity as to keep up with demand.

This is creating a thriving new group among the middle classes and—perhaps not surprisingly—many ladies are also flocking to this new endeavour in equal numbers to their male counterparts. Much like the typewriter girls, these are women who have finally found a ladylike profession that brings independence and respect while not decreasing their standing in society or their attractiveness as potential wives.

The highly efficient systems that they operate and maintain, however, are all due to the efforts of Lady Lovelace, who has composed the elegant "Programs" that the operators utilize. Her ceaseless devotion to the cause of Scientific Progress is an inspiration to all of her class, and to all England. Certainly those of the Upper Classes could do worse than to emulate her example.

Indeed, there has already been a flurry of interest generated by Lady Lovelace's demonstration of the famed Engine at the Marchioness Ely's London home during a meeting of the Ladies' Aid Society. When Lady Lovelace showed her aristocratic audience how the Calculating Engine could aid them in their charitable work, the Duchess of Devonshire and the Hon. Jessie Caroline (sister of the Earl of Latham) immediately wished to learn the practise of such a fascinating pastime. Lady Lovelace was pleased to oblige and these two ladies are now becoming quite adept in their compositions.

Adventures in Steam

London, England, 1872. Late one foggy night, a man is admitted to your library, where you are spending a quiet evening by the fire. He staggers in. His body is hidden by an Inverness Cloak, and he appears to be very pale and drawn. As you give him a snifter of brandy, he hands you a leather satchel from beneath his cloak, and collapses into your arms. When you pull open his blood-soaked shirt, you discover a large, messy pattern of bullet wounds, characteristic of a Reciprocator. You find one piece of identification on the man: his cigarette case contains not cigarettes, but an engraved gold card, at the center of which is a large ankh carved in relief. This item marks him as a member of the Mystic Lodge of the Temple of Ra, an order of which you are also a part. You have never seen him before, but that is not uncommon.

Drawing the curtains, you examine the contents of the satchel. Within are secret government documents relating to the contents of a dockside warehouse. According to the papers, the Royal Navy Engineering Corps recovered a "Martian" War Machine from the murky bottom of the Thames. This, as well as the preserved bodies of the operators, are what is being kept hidden in said warehouse. There are other documents relating to experiments, dissections, and potential military uses for these artifacts from another world. You immediately put pen to paper, and commence summoning your friends.

- If you are British, perhaps you are a Journalist, seeking to expose this cover-up. Perhaps you are an Inventor or a Scientist (Mad or otherwise), and you burn with a need to get your hands on this technology. Or, if you are loyal to the Temple, perhaps this secret cache belongs in the hands of the Temple rather than the British government.

- If you are not British, in addition to the motivations listed above, you might attempt to "liberate" the contents of the warehouse and transport them to your home country. Prussia could certainly use these examples of advanced technology.

- If you are Fey, what are you going to do about this? Infernal things like this certainly should not be left lying around, perhaps to fall into Unseelie hands...



Edo, Japan, 1872. You are on holiday in scenic Edo, strolling down the narrow streets, enjoying the cherry blossoms, the women in kimonos, the quaint buildings, and the friendly people. Suddenly, the whistle of rockets fills the air, and the peaceful scene is rocked by loud explosions, throwing everyone violently to the street. When your vision clears, you see that a portion of the city is in flames, and is burning rapidly to the ground. Out of the thick black smoke comes a rhythmic thudding noise—rising through the flames strides a large, metallic, humanoid shape! Surely, this could not be the dreaded Steam Automaton of Lord Tomino that you have heard about! You gather enough from the screams of the fleeing crowd that it is, indeed, the dreaded Automaton! The Automaton steps through the wreckage and ponderously marches down the street towards the palace of the Emperor! Nothing seems to stop its advance! The army has been routed. The local constabulary is ineffectual. It is up to you now!

- As a loyal retainer to the Shogunate, you know that your first duty is to capture this infernal machine and hand it over to your liege to be used as he sees fit. Or do you throw your lot in with Tomino, hoping to share in the glory and conquest of Japan?

- As a masterless ronin, you are aware that capturing such a prize could make your fortune. Whether given to the Shogun, a suitable daimyo, or returned to Lord Tomino, this machine is what you need to be restored to your rightful position as a samurai. Or dare you consider—such a tool in your own hands might give you the power to become a daimyo—or even Shogun—yourself!

- As a Westerner visiting Nippon, you realize that such a powerful machine can be used in many ways. Certainly any of the Empires of New Europa would pay a great deal to possess such a device. Or, in the right hands, you might even use it to advance your own imperial designs upon the Far East!

- As a loyal retainer of Lord Tomino, perhaps you have been sent to this very place to await the appearance of the Automaton. Only a few days before, your Liege Lord's traitorous daughter, Ai, fled in the company of the young mechanic Hikaru! Even now, the Army has attacked them with rockets, little dreaming their true intent to turn the Automaton over to the Emperor! But you know better—soon, you will recapture your Lord's property and cut his traitorous daughter to ribbons in the bargain!

ARTICLES OF SPECIAL INTEREST: ADVENTURE SEEDS FOR THE GREAT GAME

Paris, France, 1872. Otto von Bismarck, the Iron Chancellor, has been planning several strategies to subjugate Bayern and unify the German states. All attempts so far have failed, thanks to the rapid deployment of the Bayernese AeroNavy. So Bismarck has decided to take care of other matters. Ever since the days of Cardinal Richelieu, the stated policy of France has been "There will never be a united Germany." Therefore, if Bismarck ever manages to unify Germany, it is reasonable to assume that France will do its best to prevent this unity or break it once it is formed.

The only thing that prevents Bismarck from marching on France, defeating its disorganized army, and removing his enemy as a threat are the vaunted Verne Cannon that protect the Second Empire. Four of these continental-range guns are positioned around Paris, where they are kept in a state of constant vigilance for any attack from the East. These are obvious targets for sabotage, and the wily Chancellor intends to insert a crack espionage team into the very heart of the Empire with the neutralization of the Cannon as its goal.

- If you are Prussian (or a Prussian sympathizer), you may well be an agent for the Prussian crown sent to scout out, steal the plans for, and, if possible, destroy Paris' Verne Guns! Or, you might be a skillful individual who has been requested by the Prussian Crown to help insert a Prussian agent into Paris for the same purpose.

- If you are French, or a French sympathizer, you might well be a government agent (or other person of some importance) who has been tipped off that Prussia is going to make an attempt to disable or destroy the great Guns. You must locate and neutralize the agents before they succeed in their task, even though they will be doing their best to eliminate you first!

- If you are Seelie, you may well be an agent of the Second Compact, who knows that it is most important to find these agents and eliminate them. After all, in the Great Scheme of King Auberon, a threat to the Verne Cannons is a threat to La Belle France, which in turn is a threat to the safety of Bayern, which is a threat to the Compact! Great Events hinge on tiny things, and you are certain that in this case, a single fallen piece may well bring the whole house of cards tumbling down!

The North Sea, 1872. You are attending a private party held on the opening evening of the 1872 Paris Exposition of Science and Industry. All of the most important people in New Europa are there, especially members of the royal families of several nations, including Russia, England, France and Austria. Suddenly, the sky overhead darkens, as a mighty shape drops out of the clouds and descends swiftly towards the garden where you are all gathered. Hatchways in the bottom of the *Albatross*—for it is indeed that fantastic vessel—disgorge hundreds of fuming canisters of gas, which tumble to earth and overwhelm your consciousness with their vile fumes! When you awaken you find yourself and your companions securely chained to the wall, while the view from the portholes shows only the vast expanse of the North Sea from 20,000 feet in the air.

The door opens and your saturnine captor enters, to gloat and reveal his plan. You and your Royal companions have been fiendishly kidnapped by the arch mastermind Robur the Conqueror, who intends to hold you for a ransom of one million pounds—from each of your respective governments!

- As a Faerie member of the Compact, you may well feel it is your duty to thwart Robur's dastardly plan, particularly as it concerns your allies. His chains mean little to one capable of ethereal travel, but your responsibilities to the mortals you've befriended requires that you stay long enough to free them.

- Perhaps you are an Agent of the Prussian Secret Service, who was infiltrating the party on your own mission when captured. If there are any members of the Royal Hollernzollern House present, your first duty is, of course, to rescue them. But you also know what a mighty weapon this airship might make in the service of the Iron Chancellor, if you can just capture it intact.

- As a kidnapped guest, your first mission is to free your family and retainers. But this may be the only chance you will get to capture the wily Robur and bring him to justice! Will you take it?

- Or perhaps you are merely intrigued by Robur and his craft. If you can free the hostages, you may be able to convince the mercurial mastermind to let you continue to travel with him. *What a vessel for exploration!* one part of you thinks, while another part adds, *or for ... air piracy*



Red Sea, 1871. For years, Captain Nemo has been traveling through a secret, underwater tunnel between the Red and the Mediterranean Seas, a channel that has recently been paralleled by the construction of the Suez Canal by the French. But on a recent trip, the Captain made a frightening discovery: The secret tunnel, weakened from above, is about to collapse and plunge the entire Canal thousands of feet below the desert, not only engulfing any ships afloat on it, but also causing a massive earthquake that may destroy Port Said and the ecosystem of the entire Red Sea!

Now Nemo has come secretly to the Lycée Scientifique to speak with his friend Jules Verne, hoping to discover a way to avert the catastrophe. The two plan to mount an expedition to the site aboard the *Nautilus*, as soon as possible. Knowing that a great many people would prefer to have Nemo dead or imprisoned and his amazing submarine machine put to their own uses, they have so far organized this trip in the strictest secrecy.

- You may well be one of Dr. Verne's fellow scientists, specializing in engineering or geology. Your aid may be required on the journey to figure out a way to reinforce the collapsing tunnel. Or you may well be a fellow aquanaut who can't possibly turn down a chance to travel aboard the most revolutionary submersible of the age.

- You may possibly be a writer with *Popular Invention* or another scientific journal, who wishes to clear the Captain's good name. Chronicling the story of how Nemo saved the Suez may be just the trick. Or you may be convinced that he is really a blackhearted villain, and intend to expose his treacherous sabotage of the Canal as the proof.

- As a member of the Compact, you may be able to call upon your Dwarfish or Faerie allies to help avert the catastrophe. Or you may even know of Faerie civilizations and creatures far below who may be threatened by such a calamity.

- You may be an agent from another Government (or even the Sureté), who has joined the Staff of the Lycée just to keep an eye on Dr. Verne's activities. Now you have a chance to join an expedition led by one of the most reclusive masterminds of the Steam Age, and a chance to steal the secret of his mighty submarine warship!

Austria, 1872. You are on board the Aerovette *Swan Princess*, on course for Vienna, carrying vital treaties and information vital to Austria's alliance with the Second Compact. But a sudden, eerie storm engulfs the airship and carries it northeastward to the Russian border, where it is forced to land for repairs in a remote mountain valley. You disembark to effect repairs in a thick mist—several times during the next hour, members of the crew report unearthly, ethereal shapes swirling through the fog on the edge of vision. A foraging party reports that they were stalked for a period of time by a large, unknown creature. Suddenly, a voice hails you out of the mist. Coming across the snow towards your now-vulnerable vessel is a force of Imperial Russian soldiers, including some burly Cossacks, who “offer their services” in the name of the Tsar. Your paranoia runs higher as the Cossack chieftain reports that another, larger unit of the Russian Army is coming to “ensure the safety” of the vessel. Could the Tsar be trying to capture an Aeroship for his own purposes? And what of the strange, ethereal shapes the crew has seen lurking in the forested passes surrounding the ship? You pray that repairs can be completed quickly, for another storm seems to be gathering, and from the hackles rising on the back of your neck, it has nothing to do with the weather...

- If you are part of the Second Compact, then you may have been with the *Princess'* entourage, originally enroute to Vienna, but now forced to deal with a possible hijacking of a valuable piece of Bayernese technology. But who is behind it? Or you may be one of the command crew, now walking a fine line between diplomacy and necessity as a diabolical trap may—or may not—be closing around your vessel. Will you risk an international incident to ensure the safety of your ship? Are you the ranking diplomat? What sensitive information are you carrying?

- If you are a Russian agent, you may have been given orders by the Secret Police to prevent the Aeroship from leaving Russian soil without obtaining its secrets—namely, Engine Magick. This will undoubtedly start a war with Bayern, but you have been assured that Russia is prepared for this. You may even be the saboteur who carried the talisman that allowed the Russian sorcerer to track the Aeroship. Can you maintain your cover while assuring that the craft does not make repairs in time?

- And the Faerie have interests here as well: The magical maelstrom has attracted the attention of the local Leshye, Illiomos, who has sent agents to observe the situation and determine if this device should be allowed to fall into the hands of the Tsar. As one of these Fey, can you tip the scales one way or another without drawing the retribution of the Imperial State?



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