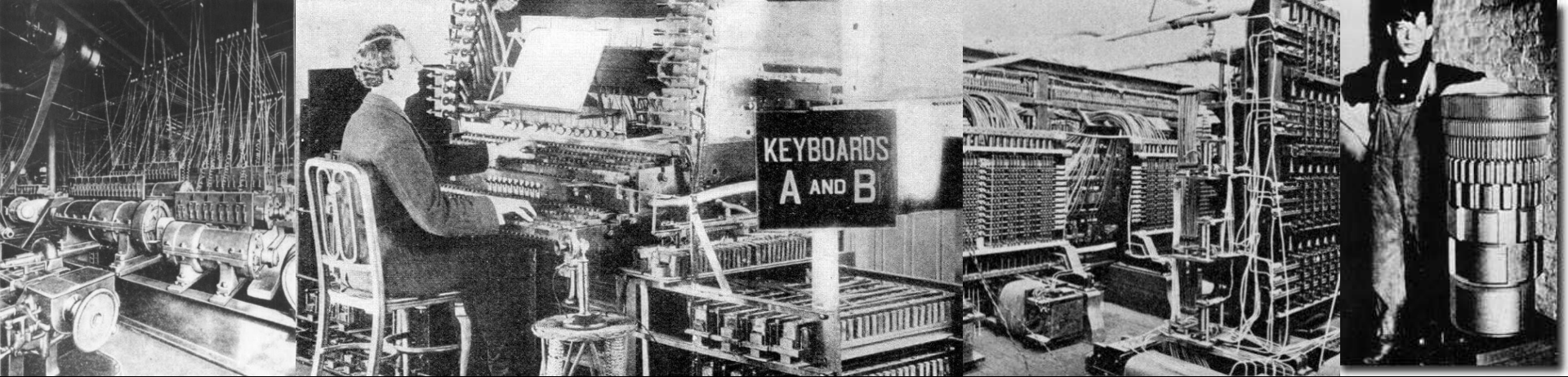




BOOK 2: THE MARK IV TELHARMONIUM

In which our heroes brave molten metals, arctic travels, and a long-departed mentor to resurrect the enormous, long lost ancestor of all electronic music.



The Lost History of the Telharmonium

It's one of the great untold stories. The world's first electronic streaming music service launched a century before Spotify. From 1906 to 1916, the world's first music synthesizer streamed electronic music over primitive telephone lines to thousands of subscribers all over New York City. The giant instrument weighed 200 tons and generated 1.5 million watts of musical power.

This was Thaddeus Cahill's Telharmonium. The whole world was enthralled. Mark Twain announced that he would have to postpone his death so he could hear it over and over. But there is a reason that we don't tell the story of the Telharmonium. And it's a tragedy.

The Telharmonium has disappeared from history. There are no recordings of it. No living person has heard its unusual music. Thaddeus Cahill's final Telharmonium was called the Mark III. It was powered down, decommissioned, and packed away in 1916. And never seen again. Every last piece of it was sold for scrap.

Over the next 100 years, electronic and streaming music took over the world. And the world lost the story of where it all began.



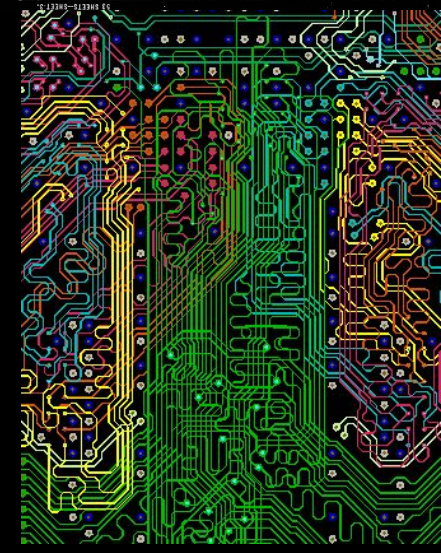
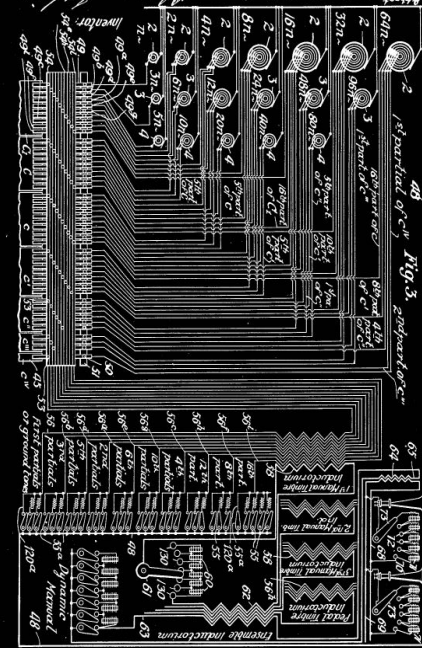
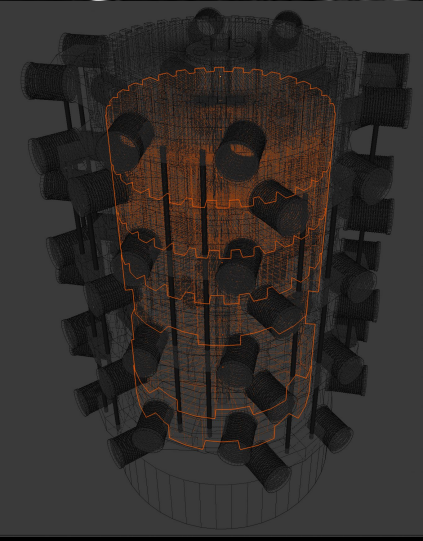
THE MARK IV

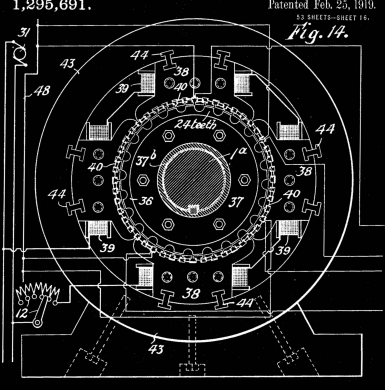
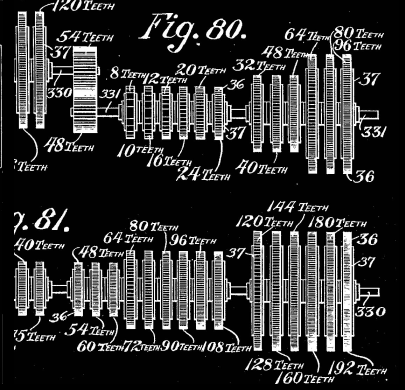
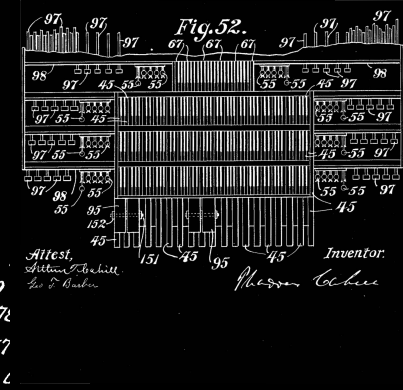
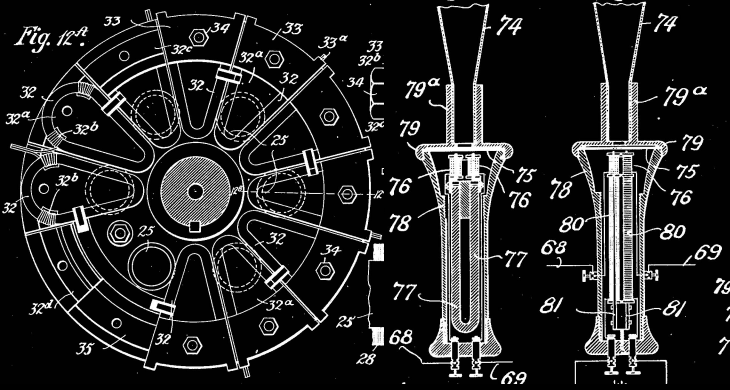
Nobody knows exactly how Cahill made his Telharmonium make such beautiful music. All we have left of it is the breathless reviews of listeners, some grainy old photos, and a collection of beautifully illustrated patents.

These patents can be used to resurrect Cahill's invention like some musical equivalent of Jurassic Park.

Our Mark IV Telharmonium will be more than a historical re-creation. It will be a collaboration across a century between our team and Thaddeus Cahill. We will rediscover his exotic and visionary technologies while solving problems that eluded him in his own time. The result will be a mix of old and new.

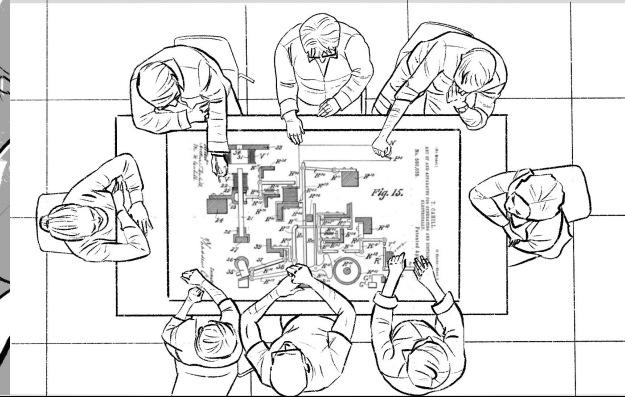
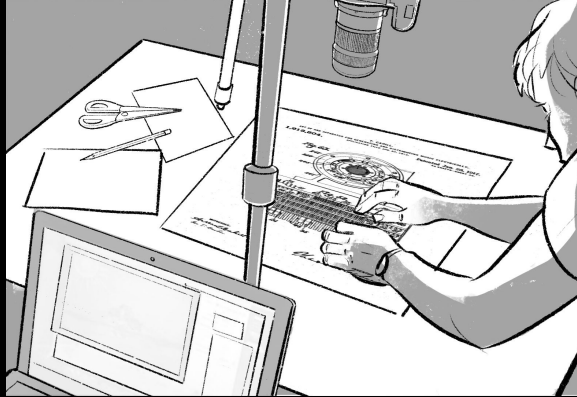
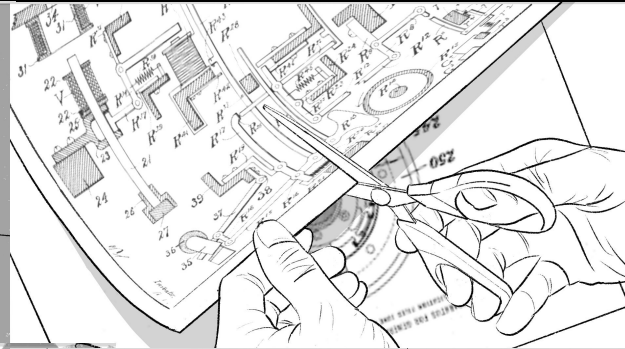
Together, the crew and friends dive deep into a world of lost histories, invisible fields, cryptic clues, fire and iron and high voltage. In this story's climax, we invite famous electronic musicians to compose and perform on this resurrected mythic beast in a series of concerts.

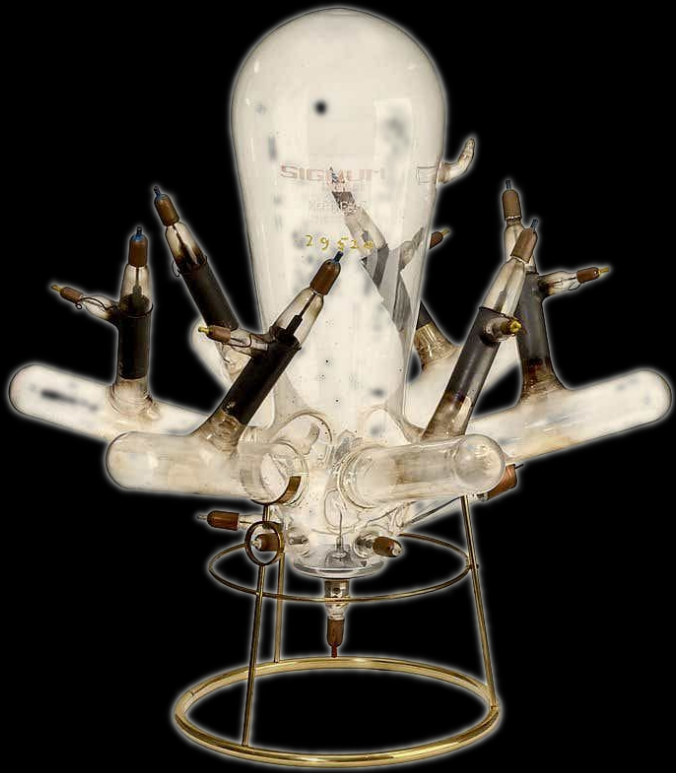




THE COLD CASE

Armed only with cryptic and extensively detailed patents, the crew are going on an adventure into the mind and world of visionary inventor Thaddeus Cahill. The Telharmonium contains dozens of exotic inventions, long before their time. The crew needs to get inside all of the details in Thaddeus Cahill's head. As usual, they learn by making things.





A GLASS HEART THAT PUMPS LIGHTNING

We start our search at the source of the Telharmonium's power. The mercury arc rectifier (MAR). These torso-sized vacuum tubes from electricity's Frankenstein era look like glass octopuses filled with bristling blue lightning. They are beautiful relics filled with gaseous mercury. There are almost none left in the world.

Yvette will trek to a toxic waste reclamation center near the Arctic Circle in search of an original MAR. Bus journey loneliness and introspection. Blizzards and rumors of bears. Winter skies full of Northern Lights. A tour of the facility with everyone dressed in arctic gear.

Back at the workshop, Andy and Marina are learning about glassblowing, vacuums, and high voltage while trying to build a MAR from scratch.



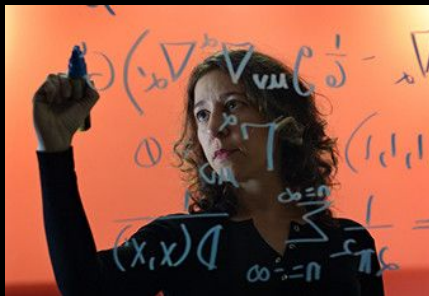
DESIGN | ENGINEERING | FAB

Many of the stories will be about the processes of designing, engineering and fabricating the Mark IV Telharmonium.



AN INVISIBLE MACHINE

The core of the Telharmonium is invisible. The real machine is its aura of hundreds of vibrating electromagnetic fields pushing and pulling on each other. This machine was originally visible only in the imagination of Thaddeus Cahill. These tons of spinning iron and copper are just support structure for this invisible world.



Astrophysicist Dr. Janna Levin joins us as we convert Docubot into a sort of camera that can see electromagnetic fields. Its advanced new sensors bring the electromagnetic world of the Mark IV to light.

Dr. Levin walks the floor around a projected animation of the fields, explaining the invisible aura of vibrating energy that is the true purpose of all of these organs of iron and copper.

THE MUSIC BEGINS

There is not an electronic musician alive who doesn't want to play the Mark IV Telharmonium. Though most of them don't know it yet.

The crew invites many prominent electronic musicians to visit and play the Mark IV. All of them will be excited. Some of them will choose to write for it and participate in the upcoming concerts.





THE READINESS IS ALL

The workshop is filling up with more people, more ideas, and more music.

The crew works frantically to finish and stabilize the Mark IV for in time for its big debut.

THE BIG NIGHT

On the big night, the Mark IV is covered with an enormous shroud. The crowd fills the venue. The shroud is lifted. The performers climb the stairs and insert their keys, lighting up the mercury arc rectifier and bringing the Mark IV to life.

While three separate performances ensue, the crew is backstage, working to solve problems and keep the Mark IV together.

In the afterglow backstage, Marina interviews the musicians with probing philosophical and hilariously personal questions.

