



the birth of radar

According to an old Croatian fable, the first experimental radar station was installed 102,000 years ago last Thursday by a tribe of Cro-Magnons. But no sooner had the station been erected than a dinosaur appeared on the scene and gulped down everyone in sight - everyone but one badly frightened survivor.

"Tell the truth, man," the dinosaur said, "or I'll make Filet Cro-Magnon out of you. What is this mess of bones and stones you have here?"

"Ra-ra-radar," was the weak reply.

"Tell me another one," the dinosaur snorted. "If this is radar, I'm a ringtailed brontosaurus. Does it have Varian magnetrons?"

"No... but..."

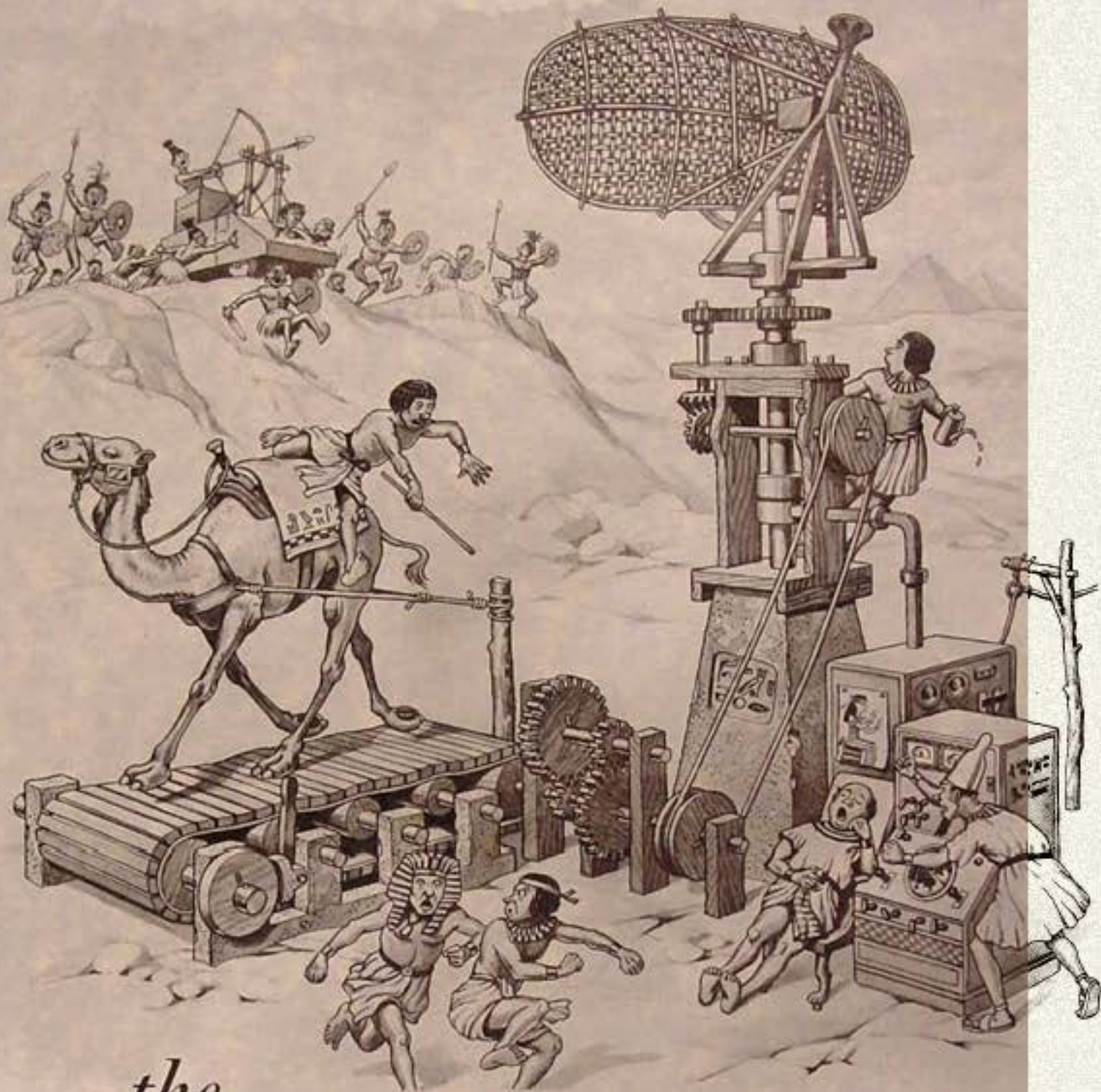
"That does it," the dinosaur said. "Whoever heard of a radar set without Varian magnetrons?" He opened his mouth wide.

"Whoever heard of a talking dinosaur?" the man asked. But he was too far inside the dinosaur to hear the answer.



* VARIAN MAKES THE FINEST MAGNETRONS AND CRT'S SINCE THE BIRTH OF RADIO.

NO. 1 OF A SERIES... VARIAN LOOKS AT BONES THROUGH THE AGES.



the day somebody goofed

NO. 1 OF A SERIES...
MEMAMADON AT BRIDGE THROUGH THE RAJA

On April 7, 45 B.C., during the reign of Cleopatra, Memamadun Ptolemy (pronounced me-ma-ma-done-toll-me), radar operator, fell asleep at just the time chosen by some unfriendly neighbors to make a border raid.

Memamadun (he was the only survivor) was brought before Cleopatra.

"Can you give me any reason why I shouldn't throw you to my pet crocodile, Julius, for letting such a terrible thing happen?" she asked.

Memamadun stifled a yawn.

"Even if I'd been awake, our radar wouldn't have prevented the attack," he said. "Our radar won't work."

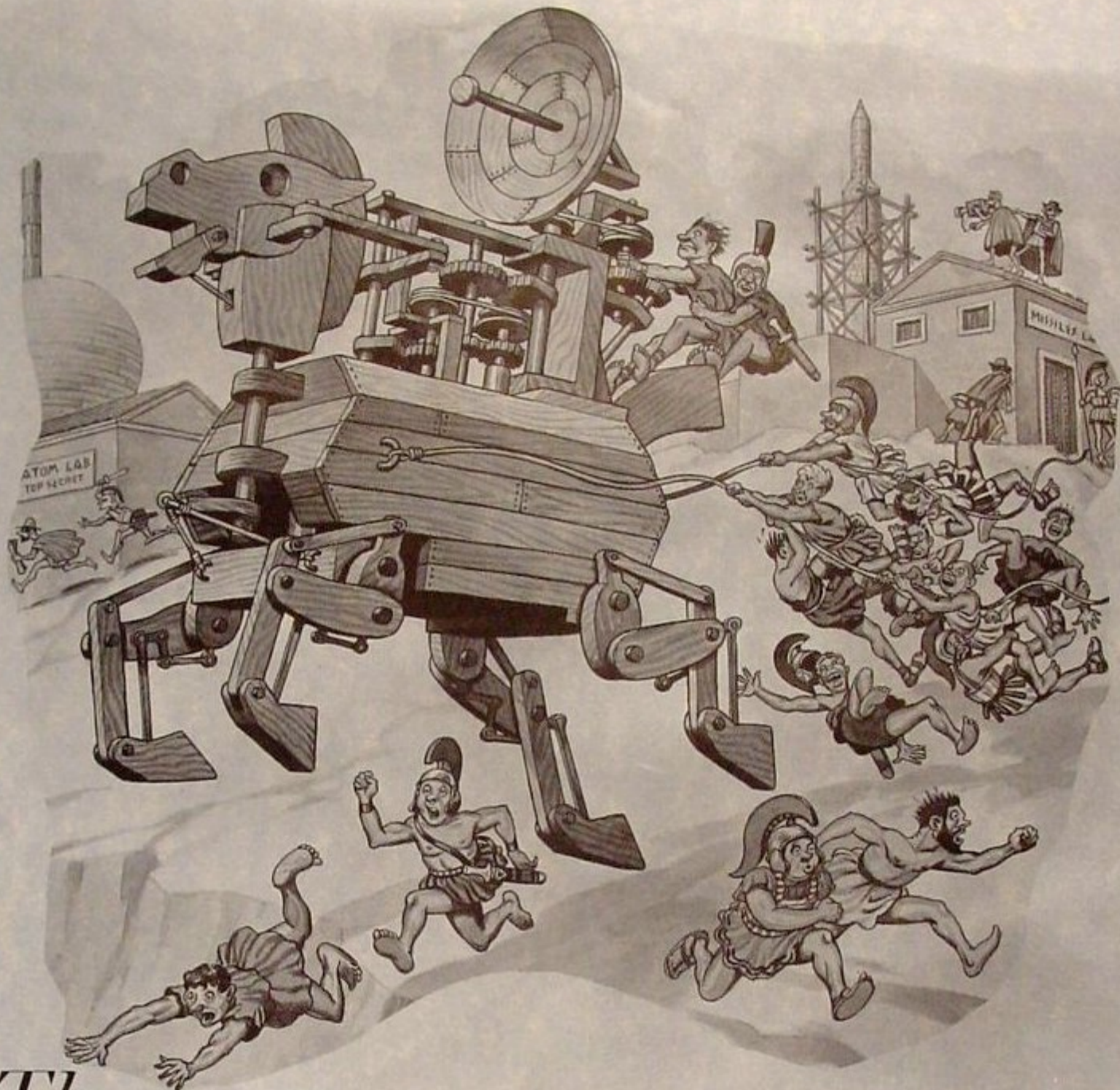
"Why not?" the queen asked, stroking Julius' head.

"It can't," Ptolemy told her. "For one thing, Varian solid state oscillators* haven't been invented yet."

"That's right, too!" Cleopatra said. "Case dismissed."



*VARIAN MAKES THE FIRST SOLID STATE OSCILLATORS, THE START OF THE 60's



The Real Story of the Trojan Horse

NO. 14 OF A SERIES... VARIAN LOOKS AT RADAR THROUGH THE AGES

None of the books will tell you this, but the Trojan War was really brought to an end by radar.

Fact is the Greeks intended to use a radar-controlled horse as a super-weapon against the Trojans. But the scientists assigned to Project Phony Pony never were able to make it work (faulty magnetrons, someone said) - which made the Greek commander Odysseus so mad he had all the scientists sealed up inside the horse and left for dead outside the gates of Troy.

The curious Trojans, neglecting to look this gift hearse in the mouth, dragged it inside the city - their last mistake of the war. That night the scientists managed to escape and open the gates to the sleeping city for the Greek Army.

No one could have been more surprised at this unexpected victory than Odysseus - but he managed to squelch the real story and claim all the credit for himself. Which goes to show that people haven't changed much in 3500 years. But magnetrons have.*



* Today, Varian makes the finest magnetrons and crossed-field amplifiers this side of the Acropolis.



While Nero Fiddled

NO. 15 OF A SERIES... VARIAN LOOKS AT RADAR THROUGH THE AGES

One windy Tuesday in Rome during the reign of the infamous Nero, a new mobile radar unit, on its way for delivery to the emperor's legions outside the city,

suddenly caught fire. A traveling wave tube blew,* the sparks flew, the horses bolted, and soon all Rome was ablaze.

Nero was furious. He had all the members of the ill-fated crew before him. "I'll make the punishment fit the crime!" he roared. While he thought about it, he picked up his violin and began to play. Since he was the vilest of violinists, the feelings of his listeners may better be imagined than described. He scraped his way through 'Keep the Rome Fires Burning' and 'Smoke Gets In Your Eyes.' At last he paused, confronting his trembling listeners.

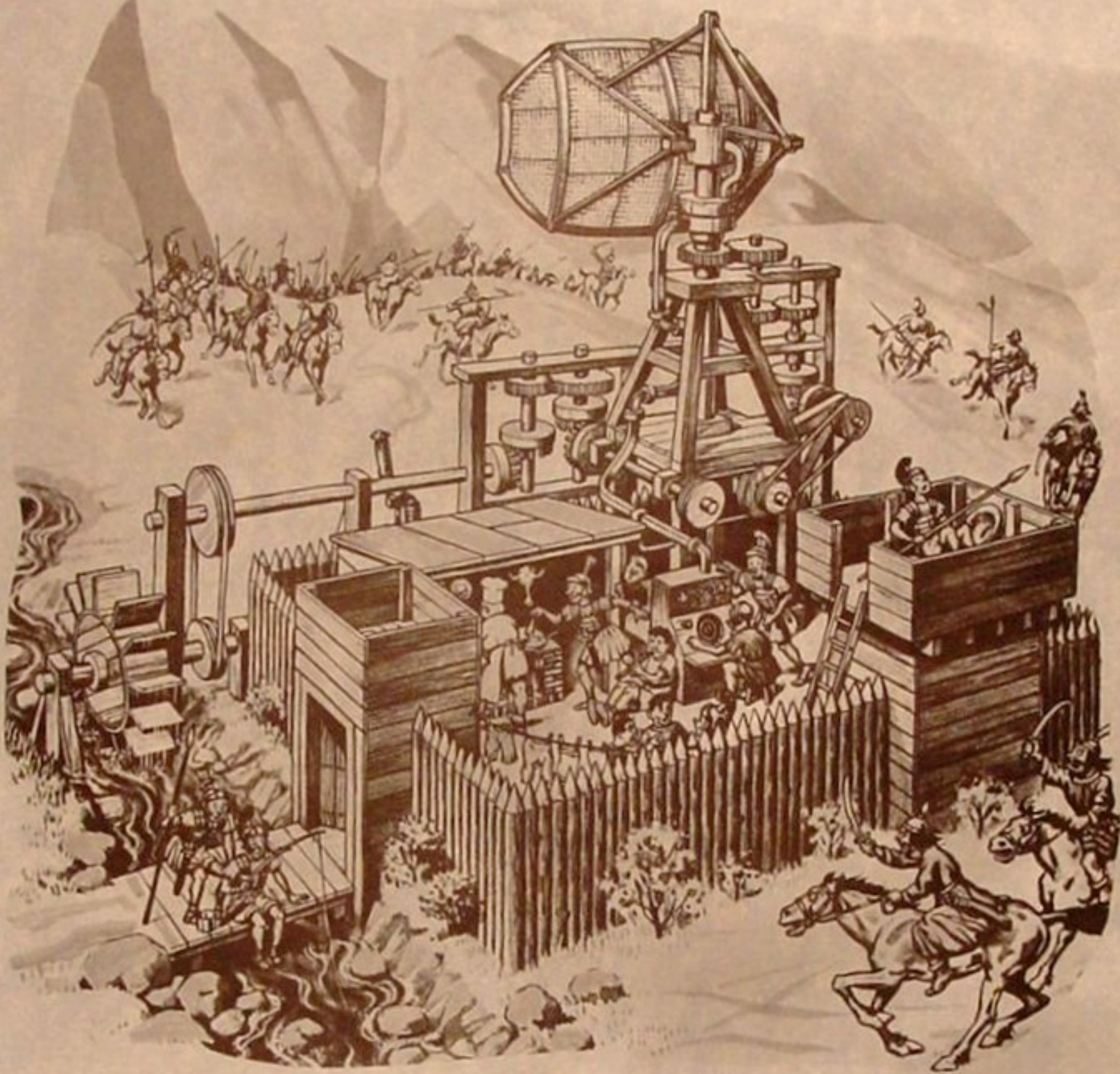
"I'm going to have you all boiled in oil!" he boomed.

"THANK GOODNESS!" one of the doomed wretches exclaimed fervently as they were being led away. "For a minute I thought he was going to play 'Smoke Gets In Your Eyes' again!"

The obvious moral:
It doesn't pay to go horsing
around with inferior
traveling wave tubes.



*Varian makes the finest traveling wave tubes this side of the Colosseum.



Attila Attacks!

SEE US OF A SERIES... VARIAN LOOKS AT BEAR THROUGH THE NOSE

In 452 AD., the Romans - attempting to stop the fearsome Attila's attack on northern Italy - developed one of the most remarkable military weapons of all time. They called it "nosar" ("sonar" spelled backwards).

"Nosar" was a radar-like* device that took advantage of a characteristic peculiarity of the Huns: the fact that these hordes of unwashed barbarians gave off an aura so awesome it was capable of paralyzing a small dog at 300 feet. Thus "nosar" - which could detect and record on its "nostrilloscope" the tell-tale scent of a single Hun at 10,000 yards - seemed the perfect defense weapon.

Yet, here comes Attila - virtually at the gate of the garrison - and nary a pip shows on the "nostrilloscope"! The horrible Hun has played the dirtiest trick of all - he has ordered his troops to undergo a mass bathing! The garrison is doomed.

The Romans had some consolation, however - Attila and most of his troops fell victims to pneumonia long before they reached Rome. Sometimes, the bath is deadlier than the sword.

* Today Varian makes the finest acid state components and subsystems this side of the Mediterranean.





A Viking Fable

NO. 17 OF A SERIES
 VARIAN LOOKS AT RADAR THROUGH THE MIRE

When the terrible green monster suddenly appeared alongside the good ship Viking Queen, all hands save one disappeared over the side into the chill waters of the North Atlantic. Only

Lief Smorgasbord, radar operator, remained aboard to face the beast.

If we may take a trembling Lief from history, we will follow the conversation that ensued:

Lief (trembling): Why... Why didn't you show up on my scope?

Monster (in a high, feminine voice): I'm enchanted, that's why! Oh, Mr. Viking, I'm just a poor princess who has been bewitched and transformed into a teen-age she-sea serpent! If you could answer the Mysterious Riddle you could break the spell and marry me.

Lief (still trembling): The Mysterious Riddle?

Monster (hopefully): It goes like this.

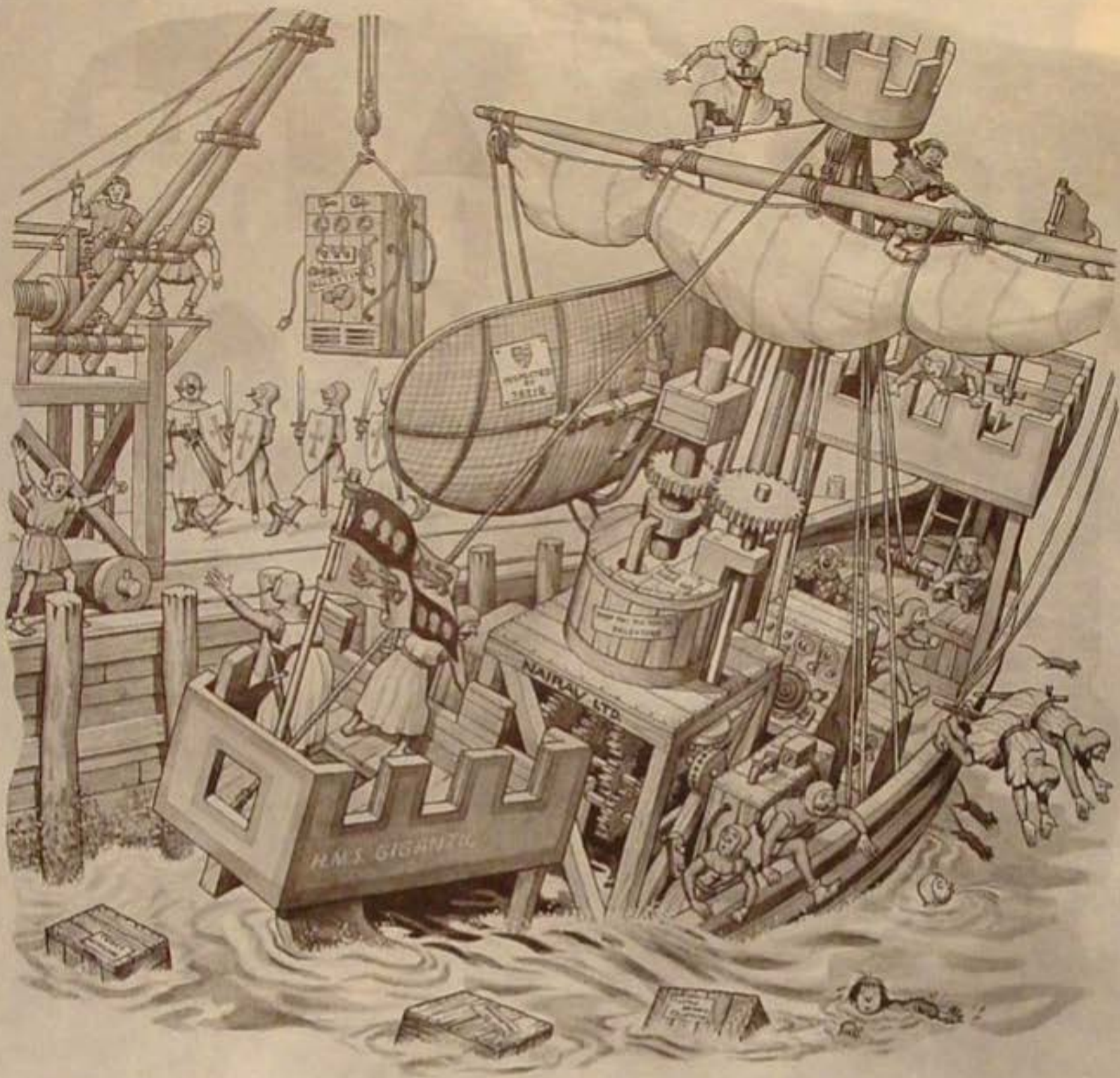
Heart of that which has no ears, but hears;
 No eyes, but sees; no nose, but knows...
 Tube V or not Tube V, that is the question!

Lief managed to answer the riddle, breaking the spell and instantly transforming the monster into a lovely princess. And so they were married and lived happily ever after. *

* The answer was "Varian", of course. Lief knew "Tube V or not Tube V" must refer to Varian tubes, heart of any radar system ("that which has no ears, but hears, etc.") Smart one that Smorgasbord.



* Varian makes the finest microwave tubes and components either side of the Atlantic.



radar and the crusades

NO. 4 OF A SERIES...
VARIAN LOOKS AT RADAR
THROUGH THE AGES.

The scene: England at the time of the Third Crusade. The date: Tuesday, August 8, 1189. After years of secret preparation, the first radar installations intended for use in the Near East campaign were ready at last to begin their long sea journey. All England was agog with hope and excitement. The newspapers sent their best men to Stoke Poges - on - the - Chutney to cover the story.

The equipment was a towering monument to medieval genius - an achievement of the first water, so to speak. Mountains of stout English oak encased components marvelously wrought of myrrh, dried bat's wings, and the bones of sheep born on Thursday. The tubes were of stained glass, with fireflies inside to make them glow. Unfortunately, however, since this was long before the days of solid state diodes and miniaturization*, the installations were cumbersome as waltzing elephants and heavier than Dr. Jekyll's conscience. As a result, the ship went down faster than you can say "man overboard" - even before loading was completed.

The nation's press reflected the disappointment felt throughout the land. Headlined the august London Times:

"Crusader Radar No Cruise Aider."
Commented Stoke Poges Confidential:

"Confidentially, It Sinks."



* as for example, in modern solid state microwave devices like those made by a company which shall be nameless - called Varian.



The Great Dragon Raid of 1405

NO. 5 OF A SERIES... WE CAN LOOK AT SAGA THROUGH THE AGES

Legend has it that one balmy spring afternoon in 1405, during the Ming Dynasty, a flight of terrain following radar equipped dragons, cruising at a low altitude, swooped down and demolished all the radar stations posted along the Great Wall of China.

Thus the first DEW line (Dragon Early Warning) in history was pulverized at a stroke. But Emperor Ming, who had spared no expense at building his dragon-net, had the last laugh.

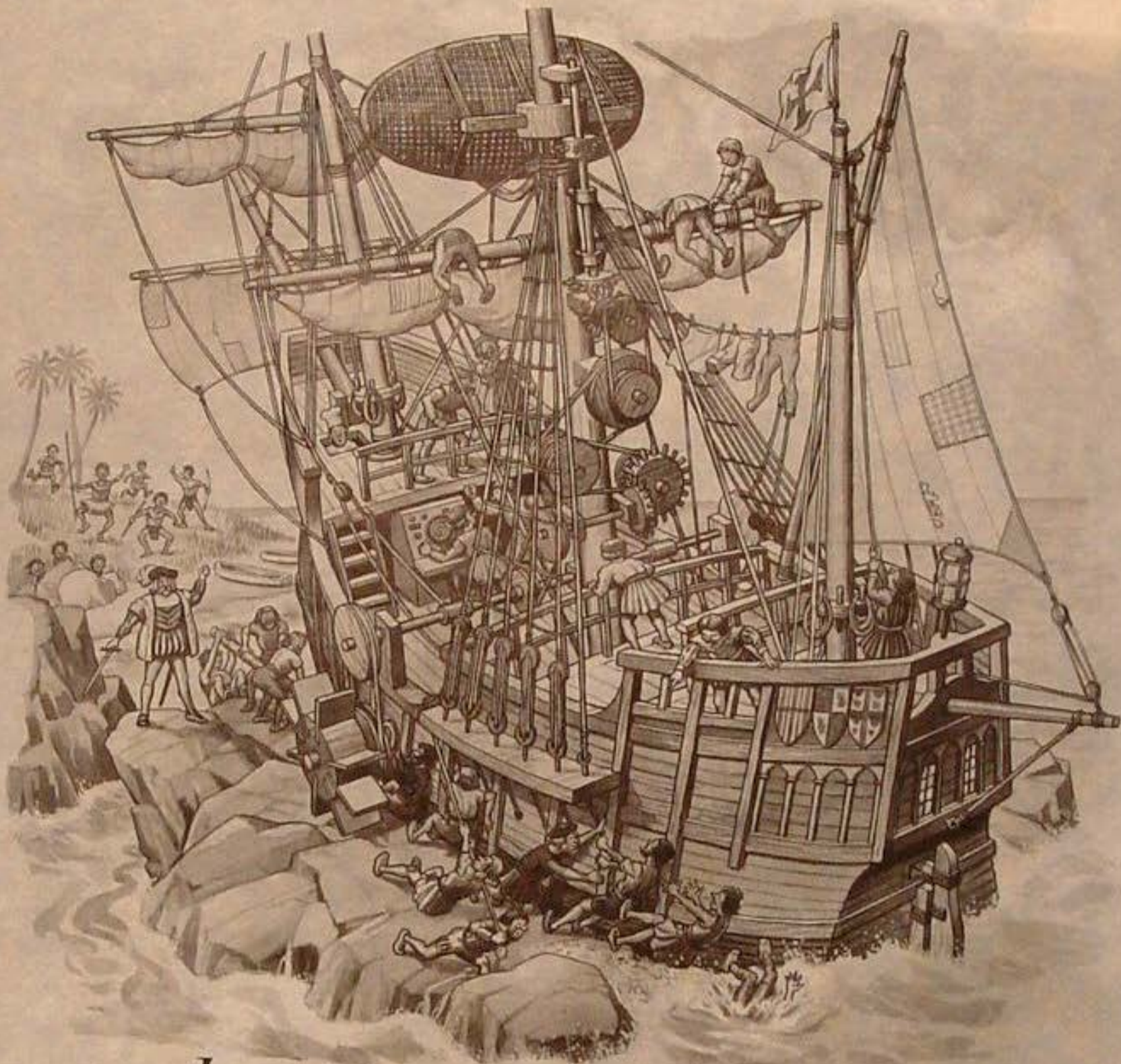
True not a single antenna remained standing. Every last one was eaten to the last savory shoot by the bamboo-loving dragons.

However, not a single dragon survived his meal. Every last savory bamboo shoot had been poisoned by the Emperor, who obviously didn't put all his trust in electronics ... as who would in 1405 B.V. (Before Varian)? *

Moral: There are more ways than one to bamboozle dragons.



* Varian makes the finest Green-effect and Dragitt out-games either side of the Great Wall



how radar got its name

NO. 4 OF A SERIES...
VARIAN LOOKS AT RADAR THROUGH THE AGES

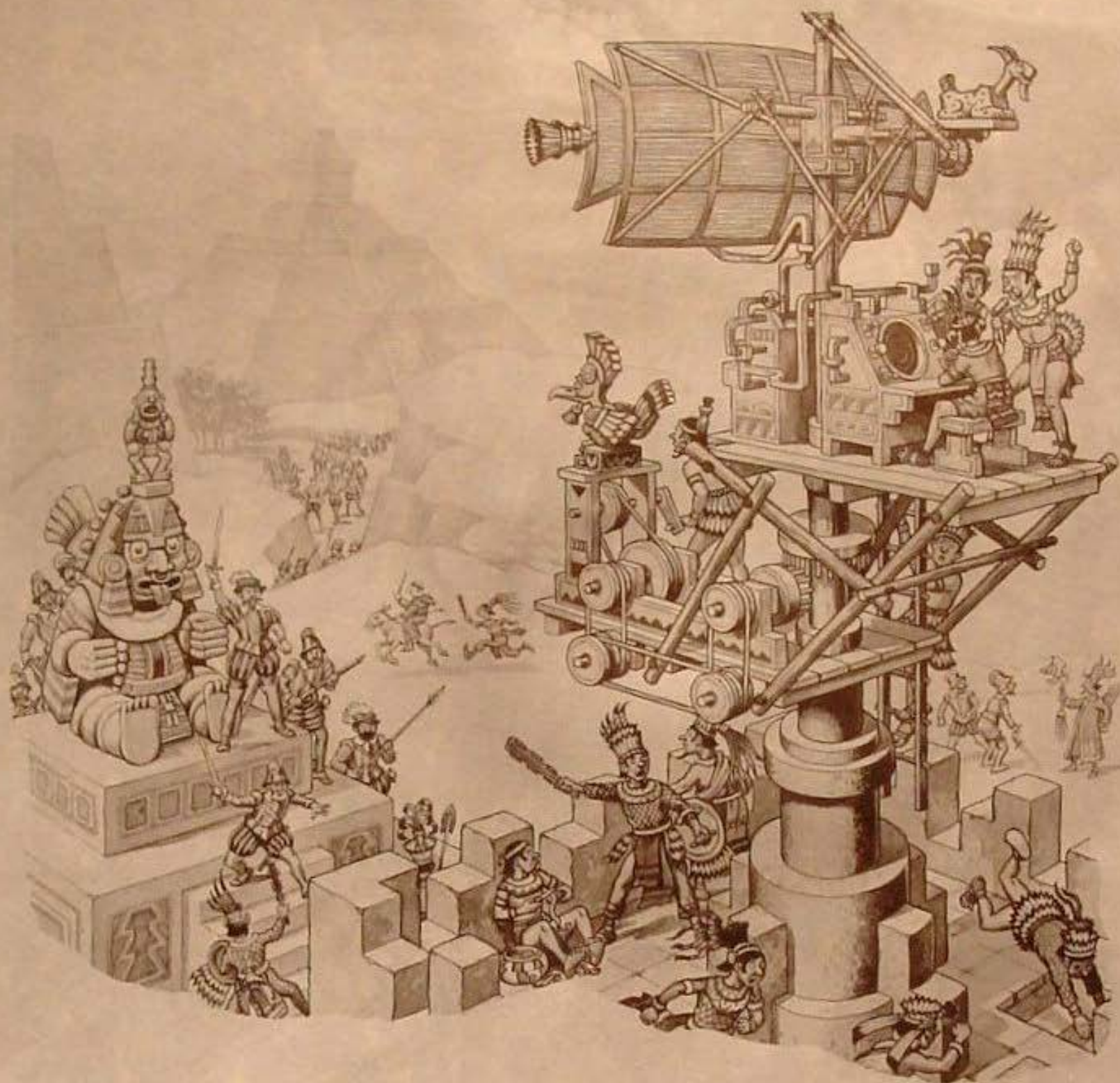
Before Columbus, radar had no name. It was called "the thing with no name." Aboard the *Santa Maria*, however, "the thing with no name" behaved in a most startling manner. No matter which way the antenna was pointed, the scope, like a rear view mirror, showed only where the ship had been - not where it was going. This phenomenon was most unnerving to all hands, since it necessitated the ships going backwards much of the time... a condition that gave rise, among other things, to a peculiar kind of mariner's nausea that came to be known as "throwing down."

So it is hardly surprising that on the morning of October 12, 1492, Columbus found himself on the rocks at San Salvador. Once on land, the crew re-christened the thing with no name and called it "radar" - the thing that looks the same way coming or going.

A few days later, the radar operator discovered the trouble: the klystrons had been inserted upside down. Columbus was so grateful he bestowed upon him the Order of Nairav Snortsulk... which of course is Varian Klystrons spelled backwards.

© VARIAN MAKES THE FIRST KLYSTRONS AND
MISCELLANEOUS COMPONENTS SINCE THE DISCOVERY OF AMERICA





the perfidious electron tube

NO. 2 OF A SERIES... VARIAN LOOKS AT MEXICO THROUGH THE AGES

Langquishing in his cell after his defeat by Cortez, the Aztec emperor Montezuma filled out his lonely hours by penning one of the most remarkable war memoirs of all time.

It was called, strangely enough, "The Perfidious Electron Tube". Only recently discovered after having been lost for centuries, it throws new light on one of the key events in New World history.

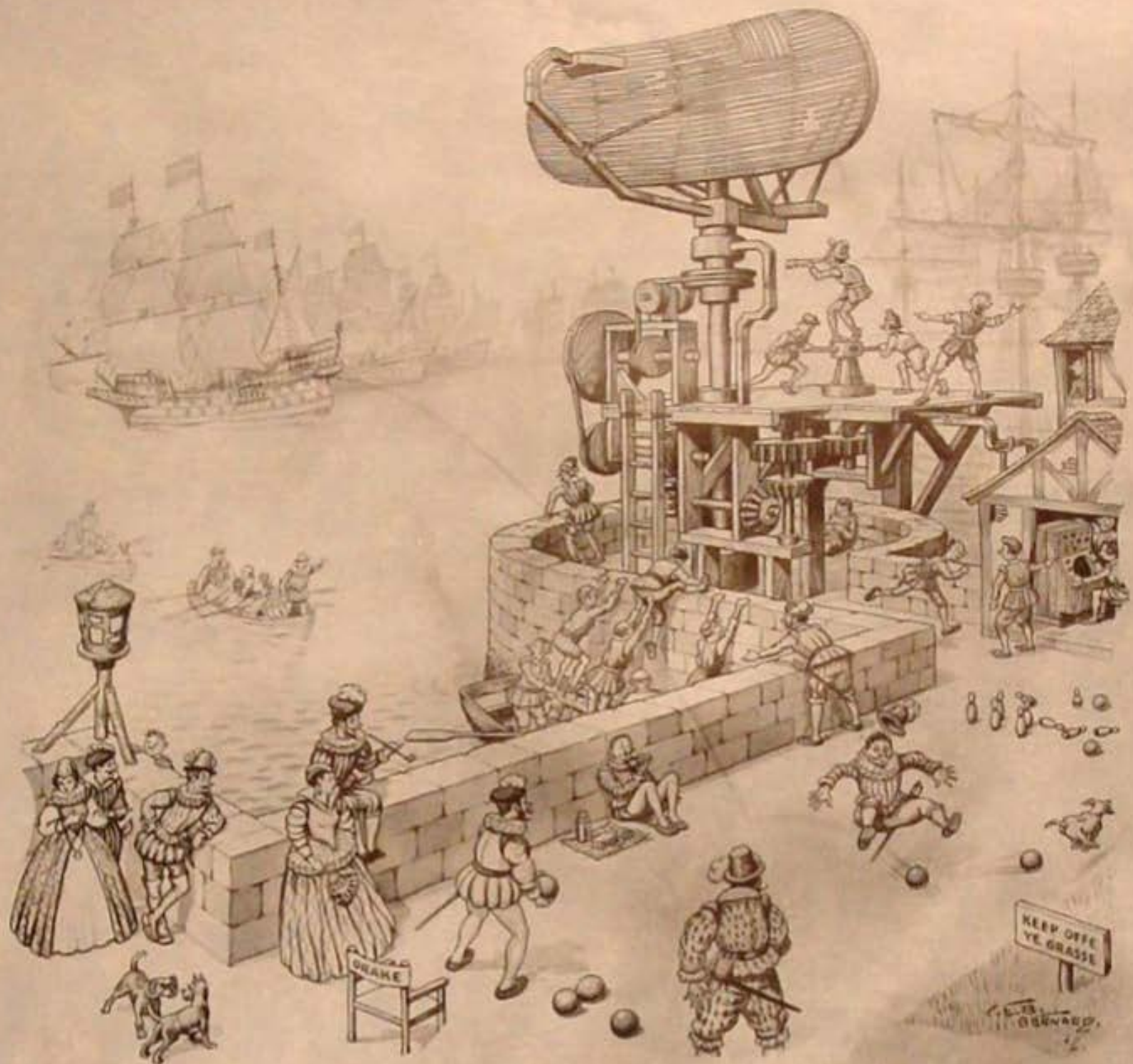
In it, Montezuma sums up his defeat in one word: "Skaflanggz". For those of you whose Aztec isn't what it might be, the word means "radar".* (And for those of you who may feel a commercial coming on, you just may have something there. But honest, that's what the man said.)

As Monty saw it, his radar tubes zigged when they should have zagged. Today, more sophisticated electronics people would simply say the radar was unable to obtain a fix on moving targets. Monty simply had obsolete magnetrons. But the truth is clear. A few Varian coaxial magnetrons in the right place might have changed history. Your children might now be studying Aztec in school instead of Spanish. You yourself might be eating Aztec omelettes - or wearing feathers for trousers.

Come to think of it, maybe it's better things turned out the way they did.*



* TODAY VARIAN MAKES THE FINEST MAGNETRONS AND CATHODE-TUBE AMPLIFIERS FOR THE USE OF MEXICO CITY.



Sir Francis Drake cracks a case

One foggy day in 1588, a single ship of the Spanish Armada managed to sneak behind Drake's entire British fleet lying in the English Channel off Plymouth Hoe, and drop a 10 pounder smack in the middle of a bowling match between Sir Francis and his friend Walter Raleigh.

NO. 10 OF A SERIES... VARIAN LOOKS AT RADAR THROUGH THE AGES

The new radar was caught completely by surprise. Had the IFF (Identification: Francis or Foe?) system failed? Was the operator tuned to the wrong Channel? Was there something wrong with the tubes? Drake was determined to find out. He was inside the shack in a trice, whatever that is. "Avast" he roared at the radarman, "I must inspect those tubes!"

Drake picked up a magnetron and looked at it. "Aha!" he exclaimed. "Just as my razor-keen mind suspected!" With that he seized the hapless operator and shook him by the throat like a tumblerful of sidecars. "I arrest you for stealing our magnetrons* and substituting these inferior substitutes, WILLIAM SHAKESPEARE!"

"I confess, how'd you guess?" said Shakespeare, ever the poet.

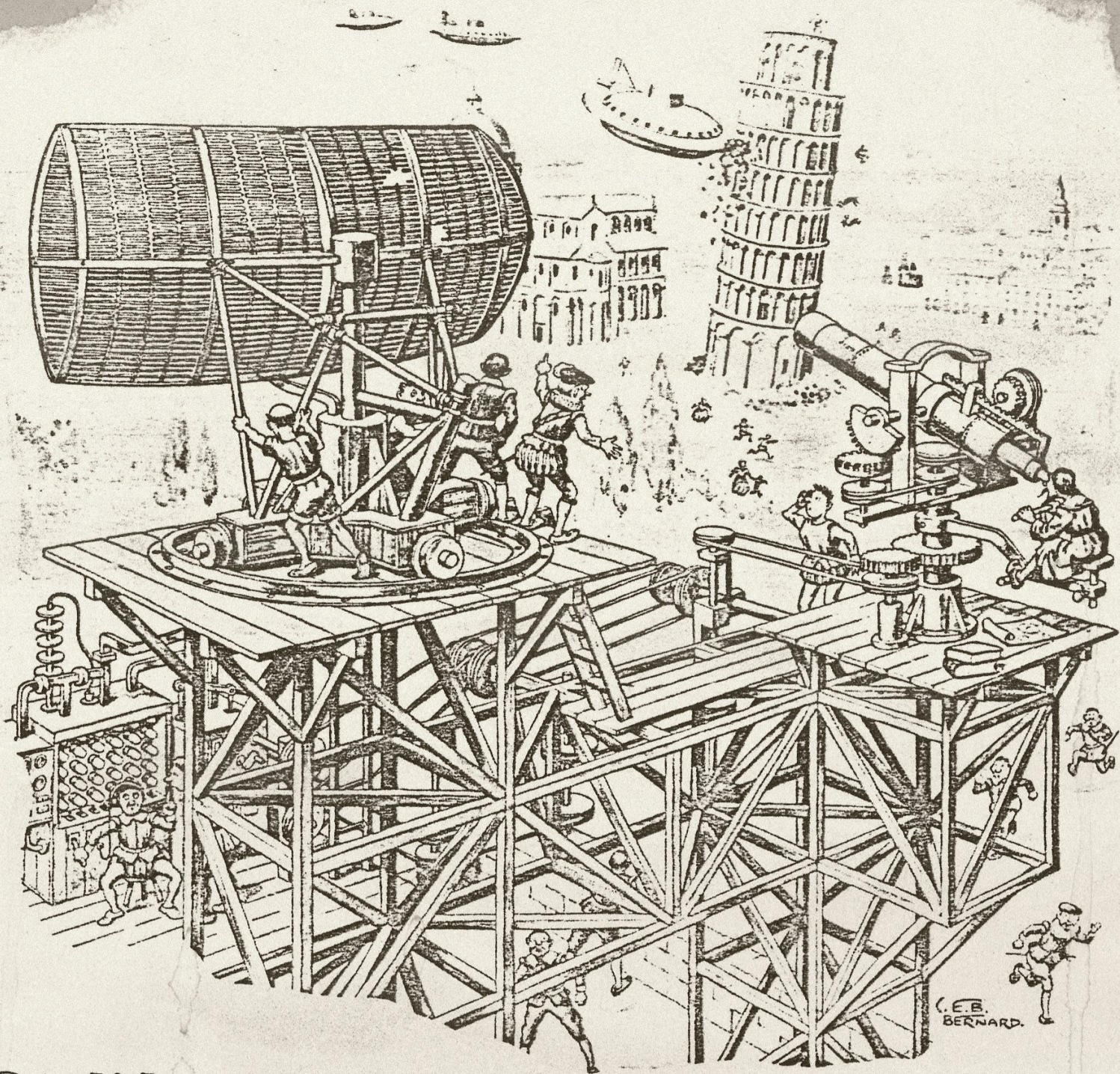
"Elementary for a razor-keen mind like mine," answered Drake. "Only you could have conceived the cunning scheme of replacing Varian magnetrons with factory seconds labeled "Bethmac" as a publicity stunt for your new play — Macbeth!"

"Yours is a razor-keen mind indeed!" marveled Shakespeare as they led him away, "I haven't written Macbeth yet!"

"Plenty of time where you're going," Drake said — and went off to bowl over the Armada.



* Varian makes the finest magnetrons and crowd-field amplifiers, either side of the English Channel.



Galileo meets the Martians

NO. 11 OF A SERIES... VARIAN LOOKS AT RADAR THROUGH THE AGES

One memorable day in 1633, 5 space ships suddenly materialized in the sunny Italian sky over Pisa and landed directly under the nose of Galileo's telescope. Three creatures alighted from the lead ship and made straight for Galileo.

"Good morning Signor Galileo," they chorused in unison. "We are..."

"Don't tell me, let me guess," interrupted the scientist. "The Mars Brothers?"

"In the flesh, more or less," leered the green one in the middle, brandishing a cigar. "I'm Sloucho. Sorry about the accident. We seem to have knocked off a Pisa the Tower."

"Good for the tourist trade," Galileo smiled.

"Now for business," went on Sloucho. "The boys upstairs are fascinated with your radar*. They sent us down here to find out how you make it work without Varian power klystrons."

"I'm sorry to say it doesn't work at all," Galileo answered. "Or rather - it didn't until the instant your ship hit the tower."

Sloucho's cigar was aglitter with excitement. "What happened then?" he asked.

"See for yourself," Galileo said pointing a bony finger at the radar console. There, blinking crazily, like so many overstimulated lightning bugs, the tubes were actually spelling out a single word.

The word was "TILT."



* Varian makes the firm this side of the



shaggy fish story

NO. 3 OF A SERIES... (PREVIOUSLY AT BOSTON THROUGH THE AGENTS)

At the height of the Boston TWTea Party, while the "Indians" were busy throwing everything in sight over the side, the British radar operator suddenly found himself pitched overboard.

Since he couldn't swim, he clung precariously to a wooden tea case bobbing in the water, and floating aimlessly around, thrashing wildly and yelling for help. Just as he was about to lose his grip on his precious raft, a codfish surfaced nearby.

"What's going on here?" the codfish asked.

"Some wild Indians surprised our radar, overran the ship, and threw all the tea overboard," the radar man gasped.

"Well," the codfish said, "Bet you a fin you didn't have any Varian TWT's* in that radar of yours."

"Good cod, here I am drowning in front of your eyes and you have to give me a commercial," the man said. "I can't hang on much longer!"

The fish ignored him "... Anybody knows Varian makes the finest TWT's and TWT-A's either side of the Boston Harbor," he said.

"Look," the man said. "I've just about haddock. But tell me this: How do you know so much about microwaves?"

"I'm no expert," the codfish said. "I just dabble in it for the halibut."

"O," the man said. And he sank slowly into the sea.



* HENRY JAMES THE PEOPLE'S TV'S AND TWT'S...
LIFER... SOUP OF THE BOSTON HARBOR



george at the forge

NO. 8 OF A SERIES...
VARIAN LOOKS AT HISTORY
THROUGH THE AGES.

The day the mobile radar was delivered to Washington at Valley Forge, it was so cold a man's shadow froze to the ground. Nevertheless, the Father of his Country managed to work up a good head of steam when he saw the unit.

"Idiots!" he stormed. "Why do they send me radar when we need food and shelter and clothing? What good is it? Does it have Varian High Power Klystrons? *

"No sir," his orderly shivered, "It doesn't seem to have any tubes at all. But it might make a nice warm fire."

"I was thinking the same," Washington said. And without another word he went and got a little hatchet and chopped and chopped. The wind blew and the chips flew. Soon, the installation was reduced to kindling.

"That's more like it," the General said when he was done. "Now, if someone will hand me a match . . ."

But he never finished the sentence. The ice on which he was standing suddenly gave way, and he disappeared into the frigid water.

"General, general are you all right?" the orderly asked as he fished him out.

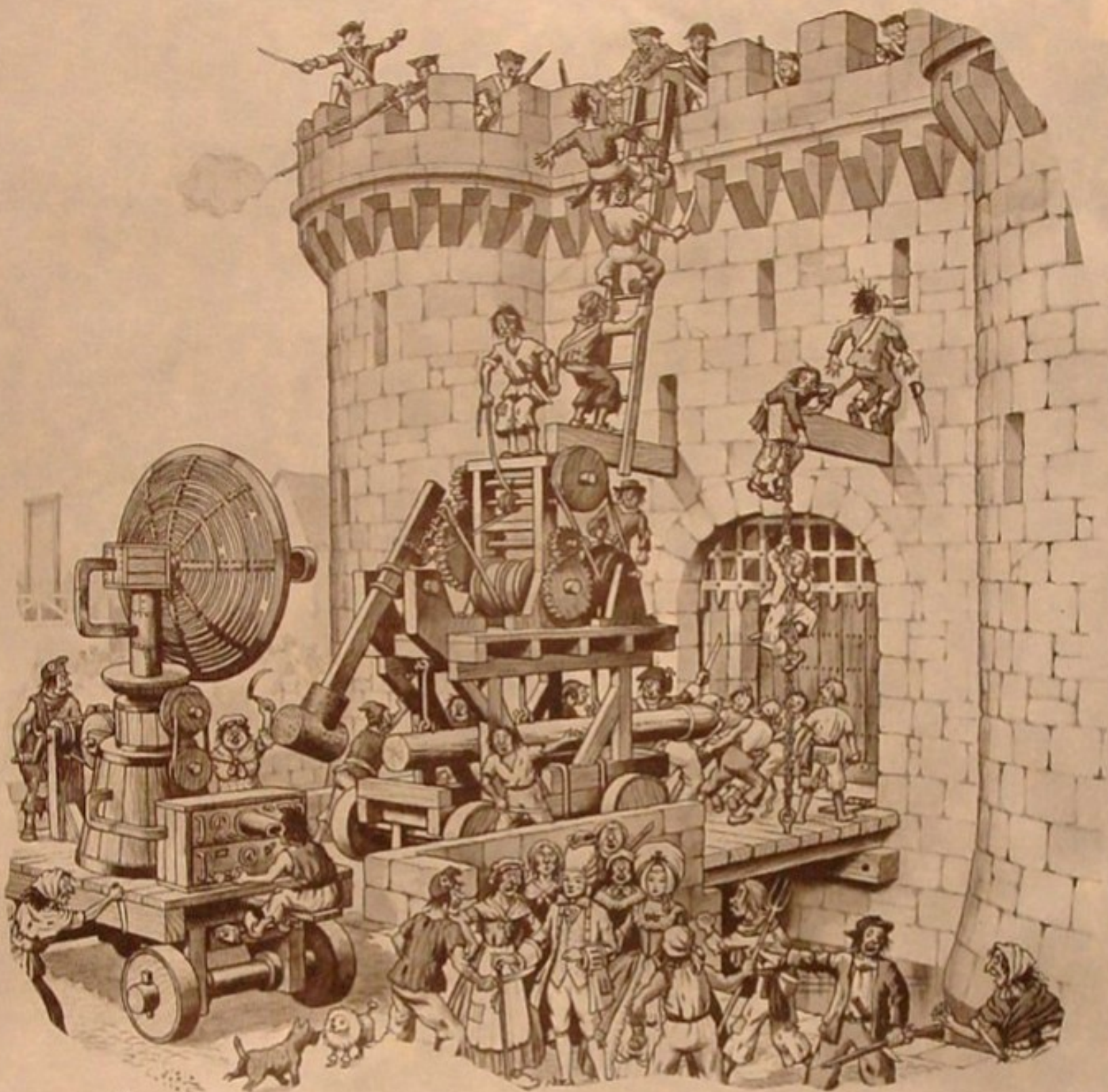
"I'm afraid so," Washington said. "But you'd better put a sign here to warn the others."

So that was why the famous sign was put up—the sign you can see today when you visit Valley Forge. You know the one.

It reads "George Washington slipped here."



* VARIAN MAKES THE FINEST
MICROWAVE TUBES AND COMPONENTS
EITHER SIDE OF VALLEY FORGE.



radar & the Bastille

NO. 12 OF A SERIES... VARIAN LOOKS AT "RADAR" THROUGH THE AGES

One sweltering July afternoon in 1789, a tattered, raggedy mob appeared outside the gates of the Bastille, the formidable prison of Paris, and demanded entrance. "Go away," the guard shouted, "or we'll have to arrest you." "That's exactly the idea!" a voice came back. "We're starving to death. All we want is a little of that moldy bread and Seine River water you feed your prisoners."

Word was passed to the prison commandant, one Maurice Antoinette. "If they want their just desserts," he smiled, "let them eat cake!"

It was this remark that sparked the Revolution. The mob grew ugly. "Force the gate!" shouted a sickle-wielding daughter of France named Brigitte Sourdough. A radar controlled battering ram, appropriated from the local armory, swung into play. In moments the Bastille gate had been hammered into shambles, and the unfortunate Maurice Antoinette was at the mercy of the mob.

"Observe the instrument of your defeat!" sneered Brigitte Sourdough, pointing at the radar.

"Pfui," the commandant replied, calm and disdainful. "No Beaumac (Ancient French for Varian*) diodes!" Brigitte was furious. "The commandant wants Beaumac"? He shall have Beaumac!"

With that Antoinette was led to a second instrument of the people—a device consisting of a heavy blade, poised between grooved uprights. It had no tubes at all.

"This is your Beaumac?" the commandant asked.

"Oui, monsieur," Brigitte Sourdough leered. "This is Beau Mac—the knife." No sooner had Maurice Antoinette heard these words than his icy calm vanished. Matter of fact, he lost his head completely.

*Varian makes the finest solid state lenses and subsystems since the storming of the Bastille.



about waterloo...

NO. 1 OF A SERIES... VARIAN LIVES AT ETON THROUGH THE NIGHT

Shortly after Waterloo, the Duke of Wellington received a letter, postmarked St. Helena. It was from Napoleon.

It read: "Excellency: I was amused to hear your recent remark that 'The Battle of Waterloo was won on the playing fields of Eton'. To have won an engagement in Belgium from a field in England, you must have been further back of the battle lines than I thought."

"The reasons for my defeat were two, and Eton was neither. In the first place, the radar broke down for two hours in the heat of battle. Not even a Napoleon can be expected to make radar work without Varian TWT's.*"

"But I might easily have defeated you, faulty tubes and all, had I not been persuaded to partake of a bottle of Scotch on the evening before the battle. I have reason to suspect my drink was tainted. At any rate, on the day of Waterloo, I did not display my usual energy and decisiveness."

"It appears, in short, that you owe the battle to the bottle. (signed,) N."

The Emperor received a brief reply by return boat. It read: "Excellency: In view of the fact that your loss at Waterloo appears to have been less a matter of Eton than of Drinking, I am withdrawing my original statement. I have released the following in its place, which I here submit for your approval:

'You can mix Scotch and Water
And Water and Scotch
But don't whatever you do
Make the mistake Napoleon did,
And mix Scotch and Waterloo.'

(signed,) Wellington



* VARIAN MAKES THE FINEST TRAVELING WAVE TUBES
THE SIDE OF ADVANCE.



Tall Tale From Texas

NO. 14 OF A SERIES ... VARIAN LOOKS AT
RADAR THROUGH THE AGES

A few years after the Battle of the Alamo, a Texan was showing a friend from Oklahoma around the famed battle site. Everything was preserved just as it had been on the historic day. The donkey was plodding patiently on his treadmill, making the great radar antenna turn round and round.

"What's that?" the man from Oklahoma asked.

"Why anybody knows what that is!" the Texan said. "That's radar. * Invented right here in Texas. It can see in the dark, this radar can. You can't make a move without its knowing it, no matter if you're two miles away."

"If that's what radar is - some ass on a treadmill, goin' nowhere... for some thing that can see in the dark and you can't get away from - we've had them in Oklahoma for years."

"You've had radar for years?"

"Sure," the Oklahoman said. "Only we call 'em husbands and wives."



* Today, Varian makes the finest microwave oscillators and TWT components since Texas invented radar.