

Double or Nothing

by Jack Sharkey, 1931-1992

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*The mind quails before certain contemplations?
The existence of infinity, for instance.
Or finity, for that matter.
Or 50,000 batches of cornflakes dumped from the sky.*

I don't know why I listen to Artie Lindstrom. Maybe it's because at times (though certainly not—I hope—on as permanent a basis as Artie) I'm as screwy as he is. At least, I keep letting myself get sucked into his plans, every time he's discovered the "invention that will change the world". He discovers it quite a bit; something new every time. And, Artie having a natural mechanical aptitude that would probably rate as point-nine-nine-ad-infinitum on a scale where one-point-oh was perfection, all his inventions work. Except—

Well, take the last thing we worked on. (He usually includes me in his plans because, while he's the better cooker-upper of these gadgets, I've got the knack for building them. Artie can't seem to slip a radio tube into its socket without shattering the glass, twist a screwdriver without gouging pieces out of his thumb,

nor even solder an electrical connection without needing skin-grafts for the hole he usually burns in his hand.)

So we're a team, Artie and me. He does the planning, I do the constructing. Like, as I mentioned, the last thing we worked on. He invented it; I built it. A cap-remover (like for jars and ketchup bottles). But not just a clamp-plus-handle, like most of the same gadgets. Nope, this was electronic, worked on a tight-beam radio-wave, plus something to do with the expansion coefficients of the metals making up the caps, so that, from anyplace in line-of-sight of her home, the housewife could shove a stud, and come home to find all the caps unscrewed on her kitchen shelves, and the contents ready for getting at. It did, I'll admit, have a nice name: The Teletwist.

Except, where's the point in unscrewing caps unless you're physically present to make use of the contents of the jars? I mentioned this to Artie when I was building the thing, but he said, "Wait and see. It'll be a novelty, like hula hoops a couple of decades back. Novelties always catch on."

Well, he was wrong. When we finally found a manufacturer softheaded enough to mass-produce a few thousand of the gadgets, total sales for the entire country amounted to seventeen. Of course, the price was kind of prohibitive: Thirteen-fifty per Teletwist. Why would a housewife lay that kind of money on the line when she'd already, for a two-buck license, gotten a husband who could be relied upon (well, most of the time) to do the same thing for her?

Not, of course, that we didn't finally make money on the thing. It was just about that time, you'll remember, that the Imperial Martian Fleet decided that the third planet from Sol was getting a bit too powerful, and they started orbiting our planet with ultimatums. And while they were waiting for our answer, our government quietly purchased Artie's patent, made a few little adjustments on his cap-twister, and the *next* thing the Martians knew, all their airlocks were busily unscrewing themselves with nothing outside them except hungry vacuum. It was also the *last* thing the Martians knew.

So Artie's ideas seem to have their uses, all right. Only, for some reason, Artie never thinks of the proper application for his latest newfound principle. That neat little disintegrator pistol carried by the footsoldiers in the Three Day War (with Venus; remember Venus?) was a variation on a cute little battery-powered device of Artie's, of which the original function had been to rid one's house of roaches.

At any rate—at a damned good rate, in fact—the government always ended up paying Artie (and me, as his partner-confederate-cohort) an anything-but-modest fee for his patents. We weren't in the millionaire class, yet, but neither were we very far out of it. And we were much better off than any millionaires, since Artie had persuaded the government to let us, in lieu of payment for another patent of his (for his Nixsal; the thing that was supposed to convert sea-water into something drinkable, and did: Gin.), be tax-free for the rest of our lives.

(It was quite a concession for the government to make. But then, the government-produced "George Washington Gin" is quite a concession in itself.)

So I guess you could say I keep listening to Artie Lindstrom because of the financial rewards. I must admit they're nice. And it's kind of adventurous, when I'm working on Artie's latest brainstorm, to let myself wonder what—since I

generally scrap Artie's prognosis for the gadget's future—the damned thing will *actually* be used for.

Or, at least, it *was* kind of adventurous, until Artie started in on his scheme of three weeks ago: a workable anti-gravity machine. And now, I'm feeling my first tremors of regret that I ever hooked up with the guy. Because—Well, it happened like this:

"It looks great," I said, lifting my face from the blueprint, and nodding across the workbench at Artie. "But what the hell does it do?"

Artie shoved a shock of dust-colored hair back off his broad, dull pink forehead, and jabbed excitedly with a grimy forefinger at the diagram. "Can't you tell, Burt? What does this look like!"

My eyes returned to the conglomeration of sketchy cones beneath his flailing finger, and I said, as truthfully as possible, "A pine forest on a lumpy hill."

"Those," he said, his tone hurt as it always was when I inadvertently belittled his draftsmanship, "are flywheels."

"Cone-shaped flywheels?" I said. "Why, for pete's sake?"

"Only," he said, with specious casualness, "in order to develop a centrifugal thrust that runs in a *straight line*!"

"A centr—" I said, then sat back from the drawings, blinking. "That's impossible, Artie."

"And why should it be?" he persisted. "Picture an umbrella, with the fabric removed. Now twirl the handle on its axis. What do the ribs do?"

"I suppose they splay out into a circle?"

"Right," he exulted. "And if they *impeded* from splaying out? If, instead of separate ribs, we have a hollow, bottomless cone of metal? Where does the force go?"

I thought it over, then said, with deliberation, "In *all* directions, Artie. One part shoving up-to-the-right, one part up-to-the-left, like that."

"Sure," he said, his face failing to fight a mischievous grin. "And since none of them move, where does the *resultant* force go?"

I shrugged, "Straight up, I guess—" Then my ears tuned in belatedly on what I'd said, and a moment later I squeaked, "Artie! Straight *up*!"

He nodded eagerly. "Or, of course, straight east, straight west, or whichever way the ferrule of this here theoretical umbrella was pointed at the time the twirling began. The point is, we can generate pure force in *any* direction. What do you think? Can you build it?"

"It'd be child's play. In fact, Artie, it's *too* damned simple to be believed! What's the hitch? Why hasn't anyone tried it before *now*?"

"Who knows?" he said, his blue eyes dancing. "Maybe no one ever thought of it before. You could sit down and twist a paper clip out of a hunk of soft wire, couldn't you? Easy as pie. But someone had to invent the thing, first. All the great inventions have been simple. Look at the wheel."

"Okay, okay," I said, since I'd been sold on his gadget the moment I pictured that umbrella moving ferruleward like a whirling arrow. "Still, it looks like you're getting something for nothing. A kind of by-your-own-bootstraps maneuver..."

"An inventor," said Artie, quoting his favorite self-coined aphorism, "must never think like a scientist!"

"But"—I said, more to stem the tide I expected than to really make a coherent objection.

"An inventor," he went dreamily onward, "is essentially a dreamer; a scientist is an observer. An inventor tries to make a result he wants happen; a scientist tries to tell the inventor that the result cannot be achieved."

"Please. Artie. Don't tell me about the bee again."

But Artie told me about the bumblebee, and how there were still some scientists who insisted, according to the principles of aerodynamics, that it was not constructed properly to enable it to fly. And about how men of this short-sighted ilk were still scoffing at the ancient alchemist's talk of the Philosopher's Stone for transmuting metals, even though transmutation of metals was being done every day in atomic piles. And how he'd theorized that there *was* once a genuine Philosopher's Stone, probably a hunk of pure U-235, that someone had managed to make, which might explain why so many alchemists (lacking, unfortunately, any knowledge of heavy radiations or Geiger counters) sort of died off in their quest for the stone.

It was nearly lunchtime when he finished his spiel, and I was kicking myself in my short-memored brain for having let him get onto the subject, when abruptly the joyous glow behind his eyes damped its sparkle a bit.

"There is one little hitch—"

"I thought it looked too easy," I sighed, waiting for the clinker. "Don't tell me it has to be made out of pure Gallium, which has the regrettable tendency to liquefy at about thirty degrees centigrade? Or perhaps of the most elusive of its eleven isotopes?"

"No, no, nothing like that," he murmured almost distractedly. "It's the force-per-gram part that's weak."

"Don't tell me," I said unhappily, "that this thing'll only generate enough force to lift itself?"

A feeble ghost of his erstwhile grin rode briefly across his lips. "That's the way it works out on paper," he said.

"Which means," I realized aloud, "that it's commercially useless, because what's the good of an anti-gravity machine that can't lift anything except *itself*? It falls into the class of lifeboats that float up to the gunwales in the water while still *empty*. Fun to watch, but impossible to use. Hell, Artie, if that's the setup, then this thing wouldn't be any more help to a space-aiming government than an aborigine's boomerang; it flies beautifully, but not if the aborigine tries to go *with* it."

"However," he said, a bit more brightly, "I've been wrong on paper before. Remember the bumblebee, Burt! *That* theory still holds up on paper. But the bee still flies."

He had me, there. "So you want I should build it anyhow, just on the off-chance that it won't follow the rules of physical logic, and will decide to generate a force above and beyond its own gravitic drag?"

"That's it," he said happily. "And even if it only manages to negate its own weight, we'll have an easier time ironing the bugs out of a model than we would

out of a diagram. After all, who'd have figured that beyond *Mach I*, all the lift-surfaces on a plane work in *reverse*?"

It wasn't, I had to admit, anything that an inventor could have reasonably theorized at the outset... So I locked myself in the lab for a week, and built his gadget, while he spent his time pacing through his fourteen-room mansion across the way from the lab building (the "way" being the flat grassy region on Artie's estate that housed his swimming pool, private heliport, and movie theatre), trying to coin a nifty name for the thing. We both finished in a dead heat.

I unlocked the door of the lab, blinked hard against the sting of warm yellow sunlight after a week of cool blue fluorescents, and just as I wheezed, "Got it," Artie was counterpointing with, "We'll call it The *Uuaa*!" (He made four syllables out of it.)

"The Oo-oo-*ah-ah*?" I glottaled. "In honor of the fiftieth state, or what? I know *aa* is a type of lava, but what the hell's *uu*, besides the noise a man makes getting into an overheated bath?"

Artie pouted. "*Uuaa* is initials. For *Up, up, and away*! I thought it was pretty good."

I shook my head. "Why feed free fodder to the telecomics? I can hear them now, doing monologues about people getting beri-beri flying from Walla Walla to Pago Pago on their Uuaas..."

"So what would *you* call it!" he grunted.

"A bust," I sighed, left-thumbing over my shoulder at the lab. "It sits and twirls and whistles a little, but that's about the size of it, Artie."

He spanieled with his eyes, basset-hounded with his mouth, and orangutaned with his cheeks, then said, with dim hope, "Did you weigh it? Maybe if you weighed it—"

"Oh, it lost, all right," I admitted. "When I connected the batteries, the needle on the scale dropped down to zero, and stopped there. And I found that I could lift the machine into the air, and it'd stay where it was put, just whistling and whirling its cones. But then it started to settle." I beckoned him back inside.

"Settle? Why?" Artie asked.

"Dust," I said. "There's always a little dust settling out of the air. It doesn't weigh *much*, but it made the machine weigh at least what the dust-weight equalled, and down it went. Slow and easy, but down."

Artie looked at the gadget, sitting and whistling on the floor of the lab, then turned a bleak-but-still-hopeful glance my way. "Maybe—If we could make a *guy* take on a cone-shape, and whirled him—"

"Sure," I muttered. "Bend over, grab his ankles, and fly anywhere in the world, with his torso and legs pivoting wildly around his peaked behind." I shook my head. "Besides the manifestly undignified posturing involved, we have to consider the other effects; like having his eyeballs fly out."

"If—If we had a bunch of men lie in a circle around a kind of Maypole-thing, each guy clutching the ankles of the next one..."

"Maybe they'd be weightless, but they *still* wouldn't go *up*," I said. "Unless they could be towed, somehow. And by the time they landed, they'd be too nauseous to be of any use for at least three days. Always assuming, of course, that the weak-

wristed member of the sick circlet didn't lose his grip, and have them end up playing mid-air crack-the-whip before they fell."

"So all right, it's got a couple of bugs!" said Artie. "But the principle's sound, right?"

"Well—Yeah, there you got me, Artie. The thing *cancels* weight, anyhow..."

"Swell. So we work from there," He rubbed his hands together joyously. "And who knows what we'll come up with."

"We never do, that's for sure," I mumbled.

But Artie just shrugged. "I like surprises," he said.

The end of the day—me working, Artie inventing—found us with some new embellishments for the machine. Where it was originally a sort of humped metal box (the engine went inside the hump) studded with toothbrush-bristle rows of counter-revolving cones (lest elementary torque send the machine swinging the other way, and thus destroy the thrust-effect of the cones), it now had an additional feature: A helical flange around each cone.

"You see," Artie explained, while I was torching them to order from plate metal, "the helices will provide *lift* as the cones revolve."

"Only in the atmosphere of the planet," I said.

"Sure, I know. But by the time the outer limits of the air are reached, the machine, with the same mass-thrust, will have less gravity-drag to fight, being that much farther from the Earth. The effect will be cumulative. The higher it gets, the more outward thrust it'll generate. Then nothing'll stop it!"

"You could be right," I admitted, hammering out helix after helix on an electric anvil (another gadget of Artie's; the self-heating anvil—The Thermovil—had begun life as a small inspiration in Artie's mind for a portable toaster).

It was just after sunset when we figured the welds were cool enough so we could test it. Onto the scale it went again, I flicked the toggle, and we stood back to watch the needle as the cones picked up speed. Along with the original whistling sound made by the cones we began to detect a shriller noise, one which abruptly became a genuine pain in the ear. As Artie and I became somewhat busy with screaming (the only thing we could think of on the spur of the moment to counteract the terrible waves of noise assailing our tympana), it was all at once much easier to see the needle of the scale dropping toward zero, as the glass disc facing the dial dissolved into gritty powder, along with the glass panes in every window in the lab, the house, the heliport, and the movie theatre. (Not to mention those of a few farmhouses a couple of miles down the highway, but we didn't find that out till their lawyers showed up with bills for damages.)

Sure enough, though, the thing lifted. Up it bobbed, like a metal dirigible with agonizing gas pains, shrieking louder by the second. When the plaster started to trickle and flake from the walls, and the fillings in my teeth rose to a temperature just short of incandescence, I decided it was time to cancel this phase of the experiment, and, with very little regret, I flung a blanket-like canvas tarpaulin up and over the ascending machine before it started using its helices to screw into the ceiling. The cones bit into the tarpaulin, tangled, jammed, and the machine—mercifully noiseless, now—crashed back onto the scale, and lost a lot of symmetry and a couple of rivets.

"What's Plan C?" I said to Artie.

"*Quiet!*" he said, either because I'd interrupted his thinking or because that was our next goal.

The next four days were spent in the arduous and quite tricky business of reaming acoustically spaced holes along the flanges. Artie's theory was that if we simply ("simply" was his word, not mine) fixed it so that the sound made by each flange (anything whirly with a hole or two in it is bound to make a calculated noise) was of the proper number of vibrations to intermesh with the compression/rarefaction phases of the sounds made by the other flanges, a veritable sphere of silence would be thereby created, since there'd be no room for any sound waves to pass through the already crowded atmosphere about the machine.

"It'll make less noise than a mouse in sneakers drooling on a blotter!" enthused Artie, when I had it rigged again, and ready to go.

"Still," I said uncertainly, "whether we *hear* it or not, all that soundwave-energy has to do *something*, Artie. If it turns ultrasonic, we may suddenly find ourselves in a showerbath of free electrons and even *worse* subatomic particles from disrupted air molecules. Or the lab might turn molten on us. Or—"

"Oh, turn it *on*, Burt!" said Artie. "That's just a chance we have to take."

"Don't see why we *have* to take it..." I groused, but I'm as curious as the next man, so I turned it on. (I could have arranged to do it by remote control, except for two pressing deterrents: One—At a remote point of control, I wouldn't be able to watch what, if anything, the machine did, and Two—Who knows where the *safe* spot is where soundwaves are concerned? With some sonic forces, you're safer the *nearer* you get to the source.) So, like I said, I turned it on.

Silence. Beautiful, blissful, silence. There before us twirled the rows of shiny cones, lifting slowly into the air, and there was nothing to hear at all. Beside me, Artie's lips moved, but I couldn't catch a syllable. This time around, we'd looped a rope through a few metal grommets in the base of the machine, and as it rose, Artie slipped the trailing ends under his arms from behind, and proceeded to lash it across his chest, to test the thing's lift-power. As he fumbled with the knot, I shouted at him, "Use a firm hitch!"

Nothing came out, but Artie wasn't a bad lip-reader. He scowled, and his lips made a "*What?!*" motion, so I repeated my caution. Next thing I knew, he was taking a poke at me, and I, to fend him off, ended up wrestling on the floor with him, while the untended machine burred its way into the ceiling, until the engine overheated and burned away the electrical insulation on the wires, and the machine, plus a good two feet square of lab-ceiling, once more descended to demolish the scale.

"—your language!" Artie was snarling, as sound returned.

"All I said was *Use a firm hitch!*" I pleaded, trying to shove his shins off my floor-pinned biceps.

Artie stared at me, then rocked off my prostrate body, convulsed in a fit of laughter. "Say it silently in front of a mirror, sometime," he choked out. Before I had time to see what he was talking about, I smelled smoke, above and beyond that engendered by the scorched insulation.

I ran to the door, and opened it to observe the last glowing, crackling timbers of the house, the theatre, and the heliport vanish into hot orange sparks, in the grip of a dandy ring of fire that—in a seventy-yard path—had burned up everything in a sixty-five to hundred-thirty-five yard radius of the lab.

"I told you those soundwaves had to do something," I said. "Ready to give up?"

But Artie was already staring at the debris around the scale and making swift notes on a memo pad...

"It looks awfully damned complex—" I hedged, eight days later, looking at the repaired, refurbished, and amended gadget on the table. "Remember, Artie, the more parts to an invention, the more things can go wrong with it. In geometric progression..."

"Unh-uh," he shook his head. "Not the more parts, Burt. The more *moving* parts. All we've done is added a parabolic sound-reflector, to force all the waves the cones make down through a tube in the middle of the machine. And we've insulated the tube to keep extraneous vibration from shattering it with super-induced metal fatigue."

"Yeah," I said, "but about that *insulation*, Artie—"

"You got a *better* idea?" he snapped. "We tried rubber; it charred and flaked away. We tried plastics; they bubbled, melted, extruded, or burned. We tried metal and mineral honeycombs; they distorted, incandescenced, fused or vaporized. Ceramic materials shattered. Fabrics tore, or petrified and cracked. All the regular things failed us. So what's wrong with trying something new?"

"Nothing, Artie, nothing. But—*Cornflakes*?"

"Well, we sogged 'em down good with water, right? And they've still got enough interstices between the particles to act as sound-baffles, right? And by the time they get good and hot and dry, they'll cook onto the metal, right? (Ask anyone who ever tried to clean a pot after scorching cereal just how hard they'll stick!) And even when most of them flake away, the random distribution of char will circumvent any chance the soundwaves have of setting up the regular pulse-beat necessary to fatigue the metal in the tube, okay?"

"Yeah, sure, Artie, it's okay, but—*Cornflakes*?"

"I take it your objections are less scientific than they are esthetic?" he inquired.

"Well, something like that," I admitted. "I mean, aw—For pete's sake, Artie! The patent office'll laugh at us. They'll start referring us to the copyright people, as inventors of cookbooks!"

"Maybe not," he said philosophically. "The thing *still* may not *work*, you know."

"Well, *there's* one bright spot, anyhow!" I agreed, fiddling with the starting switch. "So okay, I'm game if you are."

"Let 'er rip," he pontificated, and I flicked the switch.

It worked beautifully. Not even a faint hum. The only way we could tell it was working was from the needle on the—rebuilt again—scale, as it dropped lazily down to the zero mark. Our ears didn't sting, no glass went dusting into crystalline powder, and a quick peek through the door showed no ring of fire surrounding the lab.

"We may just have *done* it!" I said, hopefully, as the silver-nosed machine began to float upward (We hadn't *had* to mount the parabolic reflector in the position of a nose-cone, but it made the thing look neater, somehow.)

It seemed a little torpid in its ascent, but that could be credited to the extra weight of the reflector and cornflakes, not to mention the fact that the helices had to suck all their air in under the lip of the silvery nose-cone before they could thrust properly. But its rise was steady. Six inches, ten inches—

Then, at precisely one foot in height, something unexpected happened. Under the base of the machine, where the sound-heated air was at its most torrid, a shimmering disc-like thing began to materialize, and warp, and hollow out slightly, and beside it, a glinting metal rod-thing flattened at one end, then the flat end went concave in the center and kind of oval about the perimeter, and something brownish and shreddy plopped and hissed into the now-very-concave disc-like thing.

"Artie—!" I said, uneasily, but by then, he, too, had recognized the objects for what they were.

"Burt—" he said excitedly. "Do you realize what we've done? We've invented a *syntheticizer*!"

Even as he was saying it, the objects completed their mid-air materialization (time: five seconds, start to finish), and clattered and clinked onto the scale. We stood and looked down at them: A bowl of cornflakes and a silver spoon.

"How—?" I said, but Artie was already figuring it out, aloud.

"It's the soundwaves," he said. "At ultrasonic, molecule-disrupting vibrations, they're doing just what that Philosopher's Stone was supposed to: Transmuting. Somehow, we didn't clean out the reflector sufficiently, and some of the traces of our other trial insulations remained inside. The ceramics formed the bowl, the metals formed the spoon, the cornflakes formed the cornflakes!"

"But," I said logically (or as logically as could be expected under the circumstances), "what about the rubber, or the fabrics?"

Artie's face lit up, and he nodded toward the machine, still hovering at one foot above the scale. In its wake, amid the distorting turbulence of the sound-tortured air, two more objects were materializing: a neatly folded damask napkin, and a small rubber toothpick. As they dropped down to join their predecessors, the machine gave a satisfied shake, and rose steadily to the two-foot level. I was scribbling frantically in my notebook: *Bowl + cereal + spoon: 5 seconds. Lag: 10 seconds. Napkin + toothpick: 3 seconds. Total synthesizing time: 18 seconds. Allowance for rise of machine per foot: 2 seconds.*

"Burt—!" Artie yelled joyously, just as I completed the last item, "Look at that, will you?!"

I looked, and had my first presentiment of disaster. At two feet, the machine was busily fabricating—out of the air molecules themselves, for all I knew—*two* bowls, *two* spoons, and *two* bowlfuls of cereal.

"Hey, Artie—" I began, but he was too busy figuring out this latest development.

"It's the altimeter," he said. "We had it gauged by the foot, but it's taking the numerical calibrations as a kind of output-quota, instead!"

"Look, Artie," I interrupted, as twin napkins and toothpicks dropped down beside the new bowls on the table where the scale lay. "We're going to have a little problem—"

"You're telling *me*!" he sighed, unhappily. "All those damned *random* factors! How many times did the machine have to be repaired after each faulty test! What thickness of ceramics, or fabric, or rubber, or metal remained! What was the precise distribution and dampness of each of those soggy cornflakes! Hell, Burt, we may be *forever* trying to make a duplicate of this!"

"Artie—" I said, as three toothpick-napkin combinations joined the shattered remains of triple bowl-cereal-spoon disasters from the one-yard mark over the scale, "that is *not* the problem I had in mind."

"Oh?" he said, as four shimmering discs began to coalesce and shape themselves. "What, then?"

"It's not that I don't appreciate the side-effect benefits of free cornflake dinners," I said, speaking carefully and somberly, to hold his attention. "But isn't it going to put a crimp in our anti-gravity machine sales? Even at a mere mile in height, it means that the spot beneath it is due for a deluge of five-thousand-two-hundred-eighty bowls of cornflakes. Not to mention all those toothpicks, napkins and spoons!"

Artie's face went grave. "Not to mention the five-thousand-two-hundred-seventy-nine of the same that the spot beneath would get from the gadget when it was just one foot *short* of the mile!"

"Of course," I said, calculating rapidly as the five-foot mark produced a neat quintet of everything, a quintet which crashed noisily onto the ten lookalikes below it as the machine bobbed silently to the six-foot mark, "we have one interesting thing in our favor: the time element."

"How so?" said Artie, craning over my shoulder to try and read my lousy calligraphics on the pad.

"Well," I said, pointing to each notation in turn, "the first batch, bowl-to-toothpick, took twenty seconds, if we include the time-lapse while the machine was ascending to the one-foot mark."

"Uh-huh," he nodded. "I see. So?"

"So the second batch took double. Forty seconds. Not only did it require thirty-six seconds for the formation of the stuff, it took the machine twice as many seconds to reach the two-foot mark."

"I get it," he said. "So I suppose it took three times the base number for the third batch?"

"Right. A full minute. And the materialization of the objects is—Boy, that's noisy!" I interrupted myself as batch number six came smashing down. "—always at a point where the objects fit into a theoretical conical section below the machine."

"How's that again?" said Artie.

"Well, bowl number one formed just below the exhaust vent of the central cylinder. Bowls two and three, or—if you prefer—bowl-batch two, formed about six inches lower, edge to edge, at the cross-section of an imaginary cone (whose rather

truncated apex is the exhaust vent) that seems to form a vertical angle of thirty degrees."

"In other words," said Artie, "each new formation comes in a spot beneath this cone where it's possible for the new formations to materialize side-by-side, right?" When I nodded, he said, "Fine. But so what?"

"It means that each new materialization occurs at a steadily increasing height, but one which—" I calculated briefly on the pad "—is never greater than two-thirds the height of the machine itself."

Artie looked blank. "Thank you very kindly for the math lesson," he said finally, "but I still don't see what you are driving at, Burt. How does this present a problem?"

I pointed toward the un-repaired hole in the lab ceiling, where the machine, after dutifully disgorging the number-seven load, was slowly heading. "It means that unless we grab that thing before it gets too much higher, the whole damn planet'll be up to its ears in cornflakes. And the one-third machine-height gap between artifacts and machine means that we can't even use the mounding products to climb on and get it. We'd always be too low, and an *increasing* too-low at that!"

"Are you trying to say, in your roundabout mathematical way, let's grab that thing, fast?"

"Right," I said, glad I had gotten through to him. "I would've said as much sooner, only you never listen until somebody supplies you with all the pertinent data on a crisis first."

Load number nine banged and splintered down into the lab, bringing the cumulative total of bowl-cereal-spoon-napkin-toothpick debris up to forty-five.

"Come on, Burt," said Artie. "We'll have to get to the roof of the lab. There's a ladder up at the—"

He'd been going to say "house", but realized that there wasn't a house anymore. "Quick!" he rasped, anxiously. "We can still get there by—" He stopped before saying "helicopter", for similar reasons.

"Burt—" he said, after a pause that allowed the total to rise to fifty-five with a crash. "What'll we *do*?"

"As usual with your inventions," I said, "we get on the phone and alert the government."

"The phone," said Burt, his face grey, "was in the house."

I felt the hue of my face match his, then. "The car," I blurted. "We'll have to drive someplace where there's a phone!"

We ran out of the lab, dodged a few flying shards of pottery that sprayed out after us from load-eleven-total-sixty-six, and roared off down the road in Artie's roadster. He did the driving, I kept my eyes on my watch, timing the arrivals of each new load. (Formula: $n \times 20 = \text{lag between loads in seconds}$.)

By the time Artie discovered we were out of gas in the middle of a deserted country road, load number twenty had fallen.

By the time we arrived on foot at the nearest farmhouse, and were ordered off the property by the irate farmer who still had bare boards on his windowless house, and a shotgun in his gnarled brown hands, load twenty-five had fallen.

By the time we hitchhiked into town and got on the phone in time to find all the governmental agencies had closed their offices for the day, load thirty had fallen.

By the time we finally convinced the Washington Operator that this was a national emergency that could *not* (though she kept suggesting it) be handled by the ordinary Civil Defense members (the town had a population of two hundred, and a one-percent enrollment in CD. Those two guys wouldn't be any more help than we were, ourselves.), and were able to locate Artie's congressional contact (he was out at a movie), load fifty had dropped, and I was bone-tired, and it was (since load fifty took a thousand seconds to form, load one had taken twenty, and their total—one thousand twenty seconds—divided by two made an average formulation-time of five hundred ten seconds per formulation) over seven hours since that first bowl had started to appear, and my mind, whether I wanted it to or not, gave me the distressing information that by now Artie's estate was cluttered with a numbing totality of one-thousand-two-hundred-seventy-five bowl-cereal-spoon-napkin-toothpick sets. And fifty-one more due in seventeen minutes.

"What's he say?" I asked Artie, leaning into the phone booth.

"He thinks I'm drunk!" Artie groaned, slamming down the receiver. "I only wish I were!"

I gave a stoical shrug, and pointed to the bright red neon lure across the street. "Don't just stand there wishing. Join me?" I started across toward the bar.

"But Burt—" Artie babbled, hurrying along beside me. "We can't just *forget* about it..."

"We did our bit," I said. "You told your contact, right? Well, by tomorrow morning, when the total is up to over three thousand (I calculated five-thousand-fifty sets by the time the machine reaches the hundred-foot mark, a little better than twenty-eight hours from the starting time), somebody's sure to notice all the birds in the region, if only an ornithologist, and—"

"Birds?"

"Eating the cornflakes," I said, and when he nodded in comprehension, went on, "—pretty soon the word'll get to the government."

"Or," said Artie, hopefully, "the batteries and engine'll wear out... Won't they?"

"It's a radium-powered motor," I said, as we slipped into the coolness of a booth at the rear of the bar. "The power-source will deplete itself by half in about six hundred years, maybe. Meantime, what'll we do with all those cornflakes?"

The waiter came by and we ordered two beers.

"Wait—" said Artie, gripping my sleeve. "As the machine reaches the upper atmosphere, the soundwaves'll thin out, weaken, as the medium grows scarce."

"Sure," I said, prying my cuff free of his fingers, "so we only get bombarded with *badly made* artifacts by the time the thing gets ten miles up. But that's about fifty-thousand artifacts per foot rise, Artie, at that height! No, I take that back. Fifty thousand *sets*! And at five items per set (if we don't count the precise number of flakes per batch of cereal), we have twenty-five thousand items per foot per batch, merely a *rough* estimate!"

The beers came, and we ordered two more, the orders to keep coming until we said whoa.

"You know," said Artie, after draining half the bottle, "I just had a horrible thought—"

"Horrible above and beyond the present horrors?" I said, horrified.

He nodded, thoughtfully. "What happens to anything that gets sucked into the machine under the lip of the reflector? Does the machine just use it as more raw material ... Or does it start duplicating *that*?"

"Holy hell!" I choked. "As if there weren't too many pigeons already!"

"There's no room for a pigeon to fit under that lip," said Artie, patting the back of my hand as though he thought it was soothing me (it wasn't), "or any other bird, for that matter. What I was thinking of was stuff like nits and gnats and mosquitoes and—"

"Stop!" I shuddered, reaching for my beer and finding the bottle empty. I looked for the waiter, but he was at the front window, watching a crowd that was gathering in the street. They were looking in the direction of the lab. It was a few miles away, of course, but that machine was—if on time, and why shouldn't it be?—due to deliver fifty-two sets just about now, and even a few miles away, fifty-two bowl-spoon-napkin-toothpick-cereal combinations, shimmering in the air as they took form, would be hard to miss if you were looking in the right direction. I said as much to Artie, but he shook his head.

"It's ten o'clock of a moonless night, Burt. They couldn't see a damned thing, unless there were some kind of illumination—" I saw by his face that he'd thought of a possible source.

"What?" I said.

"Fireflies?" he hypothesized weakly.

We got out of the booth and joined our waiter as he hurried out into the street. And there, in the distant blackness of the skies, was a sight like a Fourth of July celebration gone berserk. From the number of those fireflies, I figure the first one got sucked in at about the fifteen mark, and possibly a few of his pals with him.

"Despite everything—" said Artie, softly, "it sure is beautiful."

"A gorgeous sight," I had to agree. "But—What the hell is that thing in the air under the fireflies? You can just make it out in the reflected flashes. It kind of looks like the—the *lab*..."

Artie's fingers sank into my forearm. "But. It *is* the lab! Not *the* lab, but another like it! With all those falling bowls and things, enough plaster-dust and wood-splinters and glass-spicules must've been sucked in to let the machine make a dupl—*There it goes!*"

A one-story building dropping from a height of around thirty feet onto another one-story building covered over with spoons, crunchy cereal, and broken pottery makes much more racket than can be absorbed by the cushioning effect of thousands of napkins and rubber toothpicks. We were a few miles off, so the sound—when it finally got to us—was muted by distance, but it was still a lulu.

"And to think," Artie murmured, "that this is happening because we tried to make it *noiseless!*"

"What I'm worried about," I said sickly, "is that new cloud of dust rising from the latest debris. There are crumbs of *two* smashed buildings in it, Artie. And in

roughly twenty minutes the process is going to repeat, and there'll be crumbs from *four* labs in the air; two labs that'll be the second duplicate of the original, and two that'll be the first duplicate of the original-plus-first-duplicate!"

Artie shook his head sadly. "Crumbs from *six*, Burt. Remember, when those four new labs fall in twenty minutes, they're going to raise dust from the wreckage of the two *already* on the ground!"

"Maybe," I said, less lackadaisically than I'd spoken when we left the phone booth for the bar, "you'd better get your man in Washington, again."

"He'll never believe I'm sober, *now*!" Artie complained.

"Oops—Never mind, Artie," I said, resignedly, looking at the latest development in the distant sky. "He'll get the word indirectly, from the forest rangers."

"Huh?" said Artie, and looked toward the machine.

Amid the sparking cloud of fireflies, fluttering cornflakes, glinting spoons, and a foursome of hazy, still-processing new labs, there was a newcomer to the chaos. Something in one of the plunging artifacts must have rubbed something else the wrong way, made a spark, and—Well, the machine was complacently sucking in raw blazing energy, now, tongue upon tongue of orange flame and black, spiralling smoke that rose from the pyre of shattered synthetics. It was the first geometrically cone-shaped blaze I'd ever seen in my life, but that suction was going pretty good, now. And all that glaring heat was going to be suddenly re-created going in the *other* direction in about twenty minutes. But—

"Flames go *up*," said Artie, his thought-processes apparently running parallel to mine. "So the new fires..."

"Will be sucked in with the next batch," I finished. "And come out double-strength next time around."

"Burt—" said Artie, "What's the temperature at which water breaks down into free hydrogen and oxygen again?"

"A little less than the melting point of iron," I said. "Figure about fifteen hundred degrees Centigrade. Why?"

"I just wondered if perhaps the machine might not only double the amount of the fire, but its temperature as well..."

I didn't *want* to theorize about *that*. It was summer, and the air was pretty humid, and that meant an awful lot of free hydrogen and oxygen, all at once, ready to re-combine explosively in the heat from the flames that had separated them in the first place, thence to become disrupted again, thence to explode again... The mind refuses certain contemplations. I turned away from the chaotic display in the distant skies, and said to Artie, "How's chances of the *machine* getting melted down?"

He shook his head with great sadness. "We made it out of damn near heat-proof metals, remember? So it wouldn't burn up at entry speeds from outer space?"

"Oh, yeah," I said. "So what'll we do, now?"

He glanced at the increasing holocaust on the horizon. "Pray for rain?"

Well, that was yesterday. Today, as I write this, the government has finally gotten wind of the thing, and the area is under martial law. Not that all those uniformed men standing just out of heat-range about the ever-increasing

perimeter are going to be of much help. Maybe to keep the crowds back, they'd help, except no one in his right mind is heading any direction but away from the mound. A few trees went up in smoke during the blaze, too, and now, every n-times-twenty seconds, a whole uprooted forest is joining the crash.

No one knows quite what to do about it. The best weapon we possess is Artie's inadvertent disintegrator pistol (remember Venus?), and ever since the Three Day War, they've been banned. There's a proposition up before Congress to un-ban the things and blast the machine, of course, but the opposition keeps putting the kibosh on things by simply asking, "What if the machine doesn't vanish? And what if, during the attempted shooting, it starts duplicating disintegrator-beams?"

The vote was negative.

We figure it'll take quite a few years before the machine gets beyond the point where the atmosphere stops acting as a medium for the soundwaves. And that, of course, is only if the machine isn't duplicating the atmosphere, too. And why couldn't it be?

In the meantime, the avian population in the region is on the increase, thanks to all those cornflakes-and-firefly dinners. Not to mention the birds the machine has started to produce since a few foolish sparrows got incinerated in the blaze.

Artie figures that if enough snow falls on the machine, it may weight it down and stop the process. So far, that's the only hope we have. Meantime, it's still the middle of June.

It looks like a long summer.

